

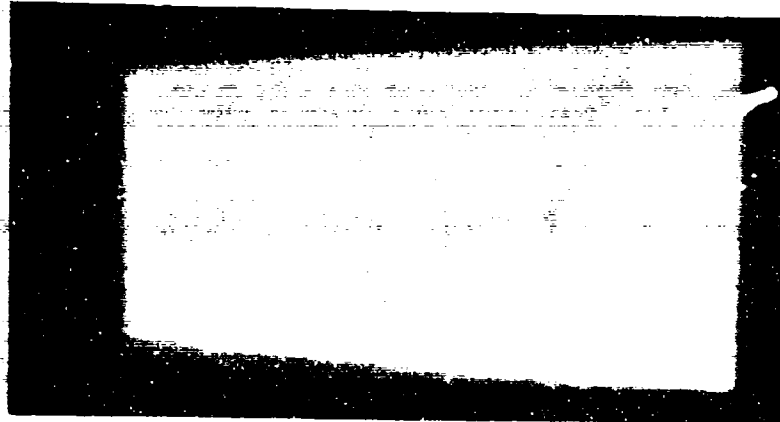
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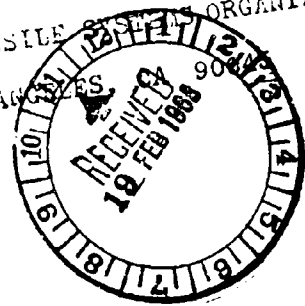
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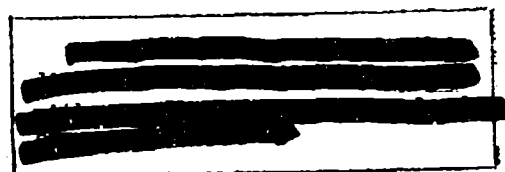
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AD856900

GEMINI B RE-ENTRY MODULE/ADAPTER  
ATTACHMENT FAIRING AERODYNAMIC HEATING  
AND PRESSURE TESTS IN THE McDONNELL  
HYPERVELOCITY IMPULSE TUNNEL - SERIES I

REPORT G004, Volume I

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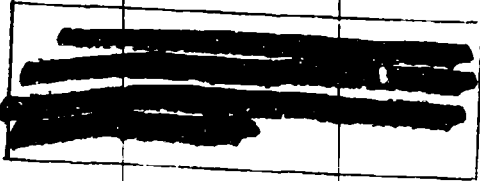
McDONNELL AIRCRAFT CORPORATION  
LANCASTER - ST. LOUIS MUNICIPAL AIRPORT, BOX 510, ST. LOUIS 66, MO

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MODEL Gemini B

| INDEX OF REVISIONS                                                                   |                        |       |         |                                                                                |                                 |                                 |
|--------------------------------------------------------------------------------------|------------------------|-------|---------|--------------------------------------------------------------------------------|---------------------------------|---------------------------------|
| DATE                                                                                 | PAGES AFFECTED         |       |         | REMARKS                                                                        | REVISED BY                      | APPROVED                        |
|                                                                                      | REVISED                | ADDED | REMOVED |                                                                                |                                 |                                 |
| (A)<br>24 May<br>1968                                                                | Title<br>1<br>iii<br>8 | 28.1  |         | Incorporate index<br>of valid data times<br>for pressure in-<br>strumentation. | <i>A. Kaufman</i><br>A. Kaufman | <i>E. D. Hale</i><br>E. D. Hale |
|  |                        |       |         |                                                                                |                                 |                                 |



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MODEL Gemini B

ABSTRACT

Tests of a 9 percent Gemini B model were conducted in the McDonnell Hypervelocity Impulse Tunnel from 15 May to 18 May 1967 and from 1 November to 15 November 1967. A total of 25 data producing shots were made at Mach numbers ranging from 13 to 17, and Reynolds number per foot ranging from  $1.0 \times 10^6$  to  $2.0 \times 10^6$ . The model was tested at angles of attack of  $160^\circ$ ,  $165^\circ$ , and  $170^\circ$ .

The initial three test shots assisted in determining the heat transfer and pressure gage locations by determining the areas of high heating behind the lower re-entry module/adapter fairing. This was accomplished by the use of thermographic phosphor temperature mapping techniques.

The remaining 22 test shots determined the heat transfer rate and pressure distributions on the re-entry module in the area behind the noted fairing and along the windward centerline. ( ) <

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MODEL Gemini B

## 1. INTRODUCTION

### 1.1 IDENTIFICATION OF TEST

Model: Gemini B

Scale: 9 Percent

Series: I

Test Dates: Phase I - 15 May through 18 May 1967  
Phase II - 1 November through 15 November 1967

Type of Test: Heat Transfer and Pressure

Security Classification:

|             |                |
|-------------|----------------|
| Model       | - Unclassified |
| Photographs | - Unclassified |
| Sketches    | - Unclassified |
| Data        | - Unclassified |
| Report      | - Unclassified |

Test Request Number: TR 058-ATD.02

1.2 BACKGROUND. The lower re-entry module/adaptor interconnect fairing was redesigned for the Gemini B program in an effort to reduce the heating on the afterbody shingles. Wind tunnel testing was required to determine the effect of the redesigned fairing on the afterbody heating.

1.3 PURPOSE OF TEST. The purpose of these tests was to locate and quantitatively define the areas of high aerothermodynamic heating on the Gemini B afterbody behind the re-entry module/adaptor interconnect fairing, and to obtain comparative data on a NASA Gemini re-entry module to adaptor fairing configuration and on a no fairing configuration. One-view thermographic phosphor photographs were taken on the first three shots to determine the areas of high heating. Heat transfer and pressure data were taken in the area behind the fairing and along the windward centerline of the model.

1.4 SCOPE. A 9 percent model of the Gemini B re-entry module was instrumented with 20 heat transfer and 20 pressure gages at their locations

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were determined by thermographic mapping photographs and other wind tunnel tests (Reference 1). Heat transfer and pressure data were recorded throughout the tests.

A total of 25 data producing shots were made at angles of attack of 160, 165, and 170 degrees. Mach numbers ranging from 13 to 17 were used with Reynolds numbers per foot of from  $1.0 \times 10^6$  to  $2.0 \times 10^6$ . Details of these tests are outlined in the Run Schedule on page 12.

#### 1.5 TEST PERSONNEL

Test Director: R. D. Hardin

Test Engineer: A. F. Kaufman

Data Engineer: R. K. Morford

Thermodynamics Representative: G. L. Lacanski

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## 2. TEST SETUP

2.1 FACILITY. These tests were conducted in the McDonnell Hypervelocity Impulse Tunnel (HIT). This tunnel is an arc discharge "hotshot" type tunnel employing a contoured (parallel flow) nozzle with a free jet test cabin. Nitrogen is used as the test gas and the duration of a normal run is approximately 100 milliseconds. The facility is shown in the sketch on page 17.

2.2 MODEL DESCRIPTION. The model used for these tests was a sting supported 9 percent scale model of the Gemini B spacecraft. It consisted of a heavy-wall aluminum afterbody and heat shield with provision for interchangeable NASA Gemini and Gemini B interconnect fairings. The recovery section and the reaction control system compartment were built as an integral part of the sting. See sketch on page 18. The model was fabricated in such a way as to allow access to the required instrumentation through the heat shield. The model was coated with an insulating epoxy paint (DeSoto Super 521-002) for all shots on which thermographic mapping photographs were required.

Three heat transfer gages were used behind the fairing during the three Phase I shots. Their locations can be found in Table I, page 14. The subsequent 22 shots made use of 20 heat transfer gages and 20 pressure gages located in the region affected by the noted fairing and on the windward side of the model. Their locations can be found in Table II, page 15, and on the sketch on page 20. The photograph on page 27 shows the gage locations behind the fairing and on the windward centerline.

2.3 MODEL INSTALLATION. The model was installed in the tunnel on the HF-6200 inertial support system, as shown in the sketch on page 21. In order to obtain thermographic mapping photographs in the region of interest, the

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model was rolled, and pitched in a plane which is inclined 45 degrees relative to the tunnel vertical centerline, as shown in the sketch on page 22.

The 58W0300065 Sector Support Mechanism allows the model to be tested at 160°, 165°, and 170° angle of attack.

To obtain optimum lighting for the thermographic mapping photographs the model heat shield was located at tunnel station 971.5.

To keep the model movement to a minimum, cables were used to retard axial movement of the support system. For the restriction of vertical movement, the springs on the inertial support pod were locked out of the system.

2.4 INSTRUMENTATION. Heat transfer gages of the n-p germanium type (Reference 2) were used at all points on the model. A sketch of this gage can be found on page 25.

Twenty Hidyne variable reluctance pressure transducers (Reference 3) were used for the pressure measurements. A sketch of this gage can be found on page 26.

The test section instrumentation consisted of two hemisphere cylinder heat transfer probes and two pitot probes. Each one-inch diameter hemisphere cylinder contained a standard Mo-Re' surface thermocouple gage located at the stagnation point. Two variable reluctance Hidyne transducers were used to instrument the pitot probes mounted on the north and south side of the tunnel. The location of the hemisphere cylinders and pitot probes can be seen on the sketch on page 24.

The arc chamber pressures were measured using two 0 to 30,000 psi McDonnell fabricated transducers.

The sketches on page 26 show the temperature and pressure measuring devices used during these tests.

2.5 THERMOGRAPHIC MAPPING SYSTEM. The HIT thermographic mapping system provides an optical method of determining areas of high heat transfer rates on model surfaces.

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The instrumentation on the model was masked and the model was coated with Radelin 1607, a low temperature phosphor, approximately 8 to 25 microns thick. When illuminated with ultraviolet (UV) light, the surface of the model fluoresces in the yellow-green spectrum at a level which is a function of the local temperature. Low-temperature regions appear bright while higher temperature regions are darkened.

**2.6 CAMERA AND LIGHTING SETUP.** The required photographic equipment and arrangement is presented in a sketch on page 23. A Calumet Model CC-400 view camera equipped with a 7-inch focal-length  $f/2.5$  lens was used to obtain thermographic photographs. A mercury vapor ultraviolet light source, powered by a 1200 volt DC power supply, was installed next to the camera on the south side of the test cabin. A backlighting fixture was installed on the north side of the test cabin to provide a contrast between the quenched (darkened) portion of the model and the darkened tunnel.

An approximate 20 millisecond exposure time using ASA 3000 Polaroid film was required to obtain the desired photographic result.

**2.7 DATA SYSTEM.** All raw data were amplified through the HIT 20 KC Plug-In carrier amplifier system or the 2.4 KC Sanborn carrier amplifier system. Data were recorded in analog form on magnetic tape using a Honeywell FM tape recorder. The analog-to-digital conversion of the recorded data was made on a multichannel data processor which is part of the McDonnell Central Data Acquisition System. The test section conditions, arc chamber conditions, and heat transfer rates were computed at the McDonnell Automation Center on the IEM 360 computer using the 109G data reduction program.

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MODEL Gemini B

### 3. RECORD OF OPERATIONS

#### 3.1 MODEL. 9 Percent Gemini B

Type of Test: Heat Transfer and Thermographic Phosphor (Phase I)

|      |                            |
|------|----------------------------|
| 3    | DATA PRODUCING SHOTS FIRED |
| 11.4 | OCCUPANCY HOURS (1)        |
| .263 | DATA SHOTS/OCCUPANCY HOUR  |

#### 3.2 MODEL. 9 Percent Gemini B

Type of Test: Pressure and Heat Transfer (Phase II)

|      |                            |
|------|----------------------------|
| 22   | DATA PRODUCING SHOTS FIRED |
| 81.9 | OCCUPANCY HOURS (1)        |
| .269 | DATA SHOTS/OCCUPANCY HOUR  |

(1) Occupancy hours minus repair and maintenance and downtime.



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PAGE 7REPORT G004, Vol. IMODEL Gemini B**4. TEST PROCEDURE**

A total of 25 data producing shots were fired during these tests. The first three shots were made at a Mach number of 13 and a Reynolds number per foot of  $2.0 \times 10^6$  and at angles of attack of  $160^\circ$ ,  $165^\circ$ , and  $170^\circ$ . Thermographic phosphor data from these runs were used to assist in determining the heat transfer and pressure gage locations.

The remaining 22 shots were used to quantitatively determine the heat transfer rate and pressure distributions behind the fairing at angles of attack of  $160^\circ$ ,  $165^\circ$ , and  $170^\circ$ . Mach numbers ranged from 13 to 17 and Reynolds numbers per foot ranged from  $1.0 \times 10^6$  to  $2.0 \times 10^6$  as noted in the Run Schedule on page 12.

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MODEL Gemini B

## 5. TEST RESULTS

5.1 DATA REDUCTION. All data computed on the IBM systems 360 digital computer were reduced from raw data which were automatically faired using a second order polynomial curve fit routine. Computed arc chamber and test section data are based on three measured parameters: arc chamber pressure ( $P_0$ ), stagnation pressure behind the normal shock ( $P_0^*$ ), and the stagnation point time-temperature history on a one-inch diameter hemisphere cylinder, which yields a value for test section heat transfer rate ( $\dot{q}$ ).

5.2 DATA ACCURACY. The accuracy of the measuring devices are listed below:

Macwood Pressure Transducer: Linear to  $\pm 1$  percent full scale.

Hidyne Pressure Transducer: Linear to  $\pm 1$  percent full scale.

Germanium Surface Thermocouple: 5 percent at 1 Btu/ft<sup>2</sup>-sec.

Standard Mo-Rc<sup>1</sup> Thermocouple: 5 percent at 100 Btu/ft<sup>2</sup>-sec.

The HIT raw digital data, as processed by the HIT data handling system, is repeatable to within  $\pm 1$  percent ( $\pm 10$  readout counts) of the systems full scale capacity.

5.3 PRESENTATION OF DATA. Photographic results from a typical thermographic phosphor shot can be seen on page 28. Other photographs were forwarded to the Thermodynamics group.

Tabulated data is presented according to shot sequence. Following each set of tunnel conditions, the model heat transfer rates and pressures are presented for each condition. This data can be found on pages 29 through 372 of Volume I and on pages 373 through 694 of Volume II. A shot index is shown on pages 28.1 and 372.1 to indicate the valid run times of the pressure data for each gage during each run.

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## 6. REFERENCES

1. Report No. 058-ATD.02.01, Re-entry Module/Adapter Interconnect Fairing Heat Transfer Wind Tunnel Test - AEDC Tunnel B, by Gerald J. Sheldon.
2. IEEE Transactions on Aerospace and Electronic Systems, Volume AES-3, No. 4, July 1967, pages 596 - 603, by Kendall, Dixon, and Shulte.
3. Report No. AEDC-TDR-63-135. Variable Reluctance Pressure Transducer Development, July 1963.

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MODEL Gemini B7. SYMBOLS AND NOMENCLATURE7.1 GENERAL

|                    |                                                                                                                                                  |                                   |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| A                  | Average of North and South Heat Transfer Gages                                                                                                   |                                   |
| $H_o$              | Stagnation Enthalpy                                                                                                                              | ft <sup>2</sup> /sec <sup>2</sup> |
| $M_1$              | Mach Number                                                                                                                                      |                                   |
| M.S.               | Model Station                                                                                                                                    | Inch                              |
| N                  | Gage Number                                                                                                                                      |                                   |
| $P_o$              | Arc Chamber Pressure                                                                                                                             | psi                               |
| $P_{o2}$ or $P_o'$ | Test Section Stagnation Pressure                                                                                                                 | psi                               |
| $P_{oT}$           | Model Gage Surface Pressure                                                                                                                      | psi                               |
| $P_1$              | Freestream Static Pressure                                                                                                                       | psi                               |
| $Q_1$              | Test Section Dynamic Pressure                                                                                                                    | psi                               |
| Q-Dot              | (q) Heat Transfer Rate                                                                                                                           | Btu/ft <sup>2</sup> sec           |
| RE/FT              | Free Stream Reynolds Number Per Foot                                                                                                             |                                   |
| T                  | Time                                                                                                                                             | seconds                           |
| $T_o$              | Arc Chamber Temperature                                                                                                                          | °K                                |
| $T_1$              | Freestream Static Temperature                                                                                                                    | °K                                |
| T.S.               | Tunnel Station                                                                                                                                   | Inch                              |
| U                  | Freestream Velocity                                                                                                                              | ft/sec                            |
| $\alpha$           | (Alpha) Angle of Attack                                                                                                                          | degrees                           |
| $\phi$             | (Phi) Yaw Angle                                                                                                                                  | degrees                           |
| $\psi$             | (Psi) Angular distance on the model measured from the windward center-line of the model, toward the right being positive. See sketch on page 22. | degrees                           |

\* No data obtained

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## 7.2 MODEL DRAWINGS

McDonnell  
Drawing Number

Description

58W0300060

General Assembly

58W0300061

Heat Shield

58W0300062

Fairings (NASA)

58W0300063

Afterbody

58W0300064

Sting

58W0300065

Model Attachment Hardware

52-03220

Fairings (Gemini B)

## 7.3 COMPUTER NOTATION

E 01 = 10

E - 01 = .10

E 02 = 100

E - 02 = .01

etc.

etc.

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## 8. RUN SCHEDULE

| SHOT NO. | CONFIGURATION     | $\alpha$ (deg) | M    | FE X 10 <sup>-6</sup> (per ft) | Popeak (psi) | T <sub>peak</sub> (°K) | TYPE RUN                 | REMARKS                         |
|----------|-------------------|----------------|------|--------------------------------|--------------|------------------------|--------------------------|---------------------------------|
| 2202     | Gemini B Fairings | 160            | 13.2 | 2.0                            | 18,000       | 2,000                  | Heat Transfer            | Phase I, Thermographic Phosphor |
| 2203     |                   | 165            |      |                                |              |                        |                          |                                 |
| 2205     |                   | 170            |      |                                |              |                        |                          |                                 |
| 2306     |                   | 165            |      |                                |              |                        | Heat Transfer & Pressure | Phase II                        |
| 2307     |                   |                | 13.6 | 1.5                            | 1,400        |                        |                          |                                 |
| 2308     |                   |                | 13.3 | 1.0                            | 15,600       | 2,500                  |                          |                                 |
| 2309     |                   |                | 13.2 | 2.0                            | 18,000       | 2,000                  |                          | Repeatability                   |
| 2311     | NASA Fairings     |                | 13.6 | 1.5                            | 14,000       |                        |                          |                                 |
| 2312     |                   |                | 13.2 | 2.0                            | 18,000       |                        |                          |                                 |
| 2314     |                   |                |      |                                |              |                        |                          | Repeatability                   |
| 2315     |                   |                | 13.3 | 1.0                            | 15,600       | 2,500                  |                          |                                 |
| 2316     | No Fairings       |                | 13.2 | 2.0                            | 18,000       | 2,000                  |                          |                                 |
| 2317     | Gemini B Fairings | 170            |      |                                |              |                        |                          |                                 |
| 2318     |                   |                | 13.6 | 1.5                            | 14,000       |                        |                          |                                 |
| 2319     |                   |                | 13.3 | 1.0                            | 15,600       | 2,500                  |                          |                                 |
| 2320     |                   | 160            |      |                                |              |                        |                          |                                 |
| 2321     |                   |                | 13.6 | 1.5                            | 14,000       | 2,000                  |                          |                                 |
| 2322     |                   |                | 13.2 | 2.0                            | 18,000       |                        |                          |                                 |
| 2323     |                   |                | 15.6 | 1.0                            | 14,700       | 2,400                  |                          |                                 |
| 2324     |                   |                | 17.4 |                                | 16,000       | 2,000                  |                          |                                 |
| 2325     |                   | 165            | 15.6 |                                | 14,700       | 2,400                  |                          |                                 |

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MODEL Gemini F

## RUN SCHEDULE - (continued)

| RUN SCHEDULE (CONTINUED) |                   |                |      |                                |                           |                          |                          |          |  |
|--------------------------|-------------------|----------------|------|--------------------------------|---------------------------|--------------------------|--------------------------|----------|--|
| SHOT NO.                 | CONFIGURATION     | $\alpha$ (deg) | M    | RE X 10 <sup>-6</sup> (per ft) | P <sub>o</sub> peak (psi) | T <sub>o</sub> peak (°K) | TYPE RUN                 | REMARKS  |  |
| 2326                     | Gemini B Fairings | 165            | 17.4 | 1.0                            | 16,000                    | 2,000                    | Heat Transfer & Pressure | Phase II |  |
| 2327                     | NASA Fairings     |                |      |                                |                           |                          |                          |          |  |
| 2328                     | Gemini B Fairings | 170            | 15.6 |                                | 14,700                    | 2,400                    |                          |          |  |
| 2329                     |                   |                | 17.4 |                                | 16,000                    | 2,000                    |                          |          |  |

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MODEL Gemini B

TABLE I

## MODEL GAGE LOCATION - PHASE I

| GAGE<br>NUMBER | TYPE OF<br>GAGE | ↓      | MODEL<br>STATION |
|----------------|-----------------|--------|------------------|
| 1              | Thermocouple    | 54° 0' | 12.330           |
| 2              | Thermocouple    | 48° 0' | 12.330           |
| 3              | Thermocouple    | 48° 0' | 11.457           |



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MODEL Gemini BTABLE II  
MODEL GAGE LOCATION - PHASE II

| PAIR NO. | TYPE OF GAGE                  | RANGE      | ↓                  | MODEL STATION    |
|----------|-------------------------------|------------|--------------------|------------------|
| 1        | Pressure Gage<br>Thermocouple | 0 - .5 psi | 45°<br>47° 30'     | 11.106<br>11.106 |
| 2        | Pressure Gage<br>Thermocouple | 0 - .5 psi | 48°<br>50° 40'     | 11.457<br>11.457 |
| 3        | Pressure Gage<br>Thermocouple | 0 - .5 psi | 40° 45'<br>43° 30' | 11.457<br>11.457 |
| 4        | Pressure Gage<br>Thermocouple | 0 - .5 psi | 53° 0'<br>50° 20'  | 11.790<br>11.790 |
| 5        | Pressure Gage<br>Thermocouple | 0 - .5 psi | 45° 30'<br>42° 45' | 11.790<br>11.790 |
| 6        | Pressure Gage<br>Thermocouple | 0 - .5 psi | 54° 0'<br>57° 0'   | 12.330<br>12.330 |
| 7        | Pressure Gage<br>Thermocouple | 0 - .5 psi | 45° 0'<br>48° 0'   | 12.330<br>12.330 |
| 8        | Pressure Gage<br>Thermocouple | 0 - .5 psi | 62° 0'<br>65° 0'   | 12.870<br>12.870 |
| 9        | Pressure Gage<br>Thermocouple | 0 - .5 psi | 54° 0'<br>57° 0'   | 12.870<br>12.870 |
| 10       | Pressure Gage<br>Thermocouple | 0 - .5 psi | 46° 0'<br>49° 0'   | 12.870<br>12.870 |
| 11       | Pressure Gage<br>Thermocouple | 0 - .5 psi | 65° 0'<br>68° 25'  | 13.275<br>13.275 |

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REPORT GC04, Vol. I

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MODEL Gemini FTABLE II - (continued)  
MODEL GAGE LOCATION - PHASE II

|    |                               |            |                    |                  |
|----|-------------------------------|------------|--------------------|------------------|
| 12 | Pressure Gage<br>Thermocouple | 0 - .5 psi | 55° 35'<br>59° 0'  | 13.275<br>13.275 |
| 13 | Pressure Gage<br>Thermocouple | 0 - .5 psi | 63° 0'<br>66° 40'  | 13.770<br>13.770 |
| 14 | Pressure Gage<br>Thermocouple | 0 - .5 psi | 52° 50'<br>56° 35' | 13.770<br>13.770 |
| 15 | Pressure Gage<br>Thermocouple | 0 - .5 psi | 1° 30'<br>-1° 30'  | 10.620<br>10.620 |
| 16 | Pressure Gage<br>Thermocouple | 0 - .5 psi | -1° 45'<br>1° 45'  | 11.070<br>11.070 |
| 17 | Pressure Gage<br>Thermocouple | 0 - .5 psi | -1° 50'<br>1° 50'  | 11.970<br>11.970 |
| 18 | Pressure Gage<br>Thermocouple | 0 - .5 psi | -3° 0'<br>3° 0'    | 14.670<br>14.670 |
| 19 | Pressure Gage<br>Thermocouple | 0 - .5 psi | 90° 0'<br>90° 0'   | 14.670<br>14.802 |
| 20 | Pressure Gage<br>Thermocouple | 0 - 3 psi  | 0° 0'<br>0° 0'     | 16.110<br>16.223 |



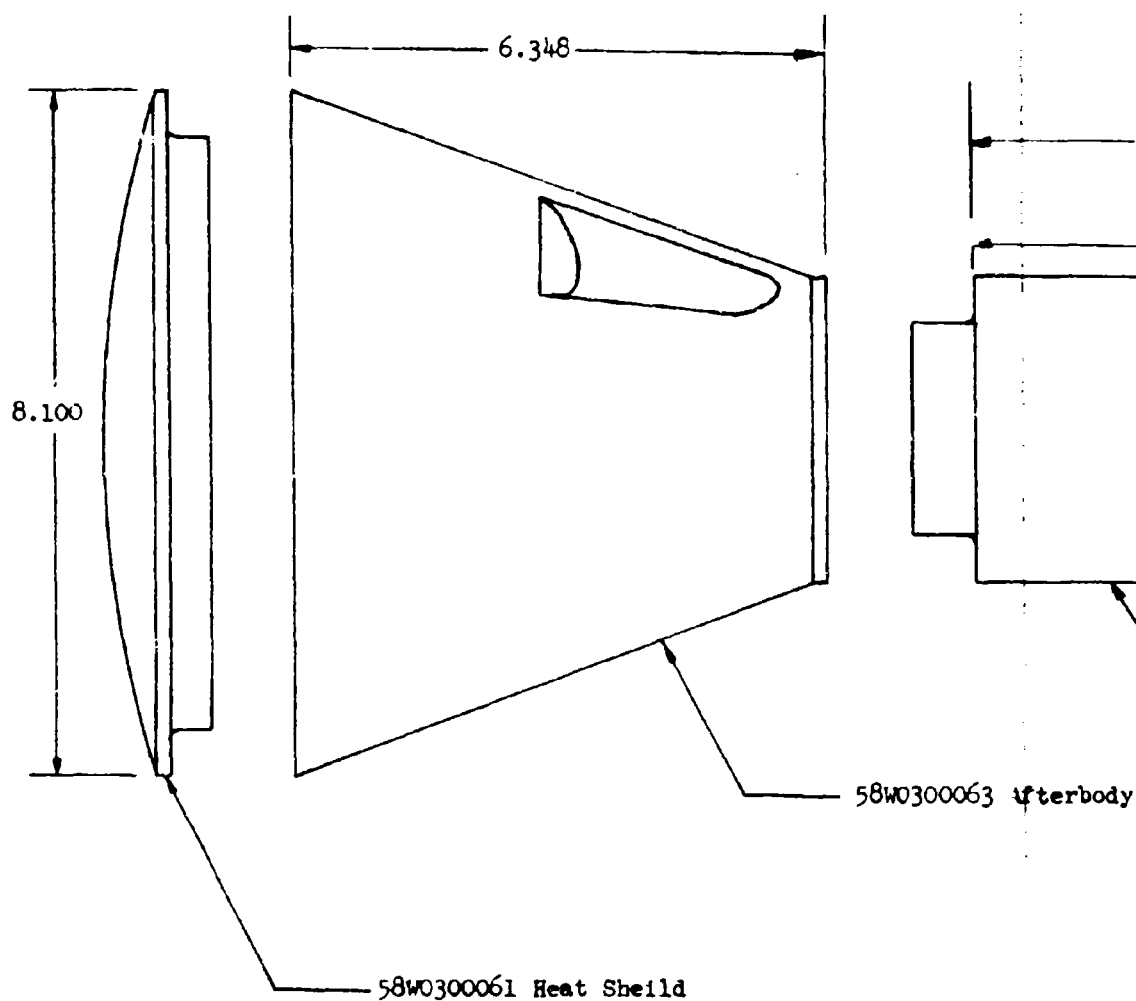
DATE 29 December 1967

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REVISED \_\_\_\_\_

**MCDONNELL**

ST. LOUIS, MISSOURI



Ref. McDonnell Dwg. 58W0300060

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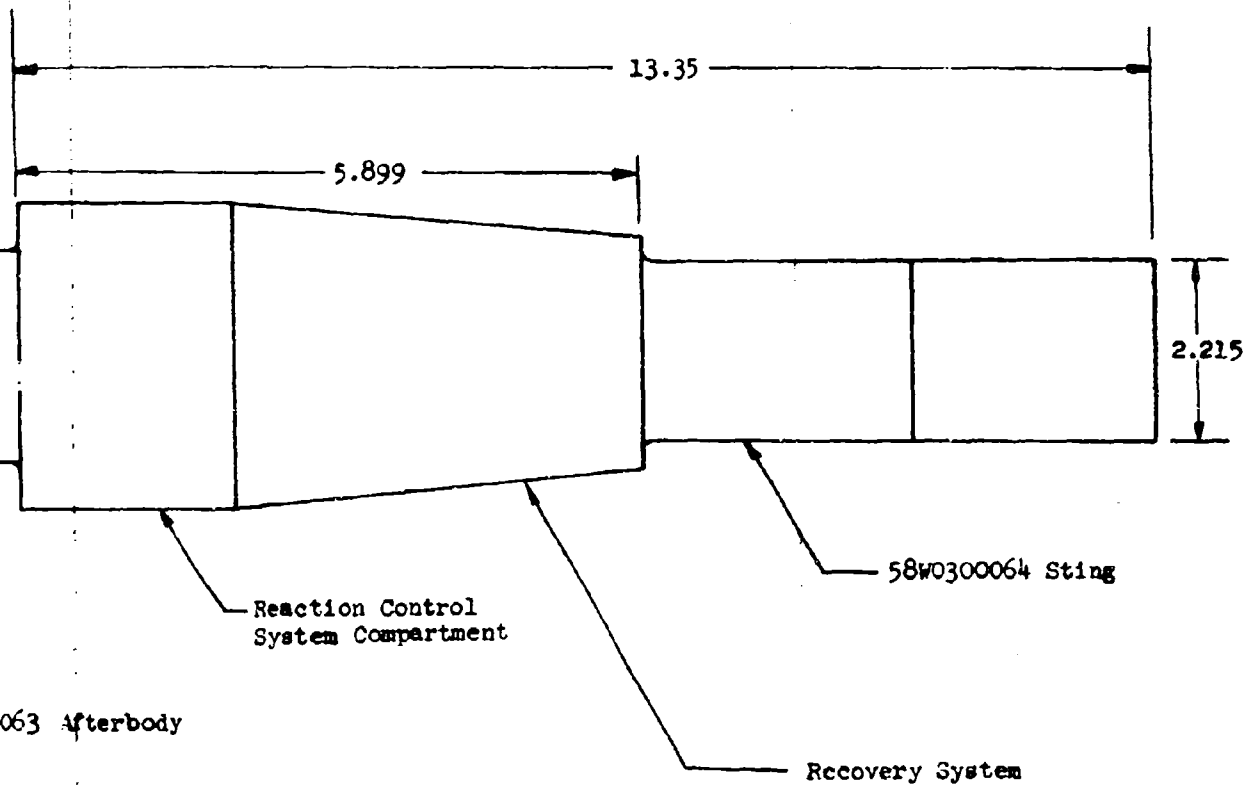
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MODEL Gemini B

9 PERCENT GEMINI B MODEL WITH STING



Scale = 1/2

B

27.76

DATE 29 December 1967

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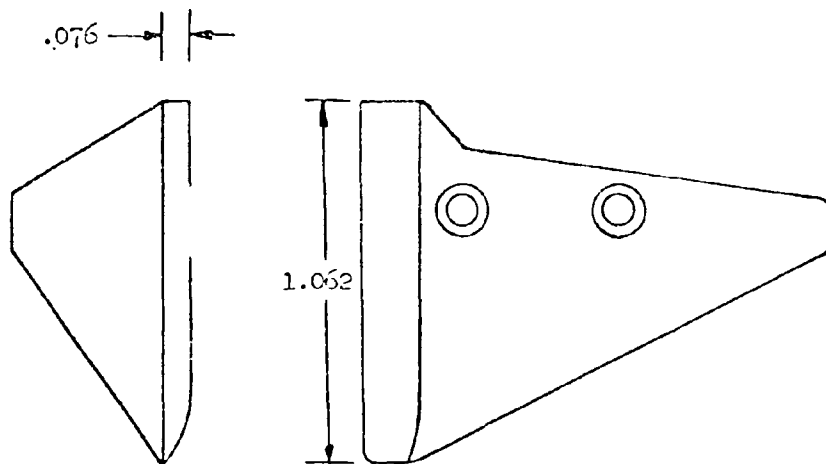
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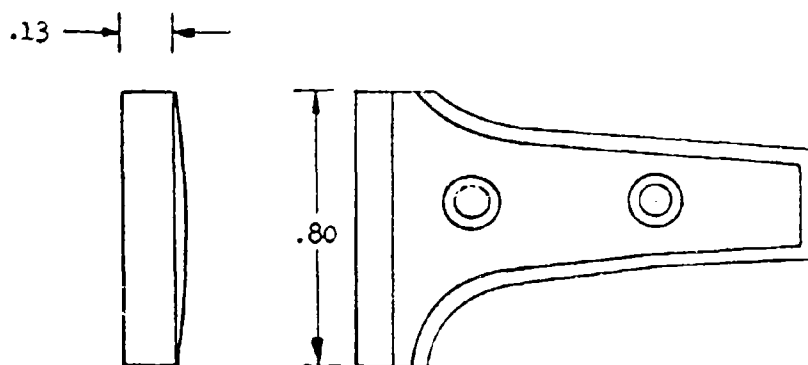
REPORT G004, Vol. I

MODEL Gemini B

LOWER FAIRINGS USED ON 9 PERCENT GEMINI MODEL



GEMINI B FAIRING



NASA FAIRING

Scale: 2x

Ref. McDonnell Drgs. 52-03220 and 58W0300062

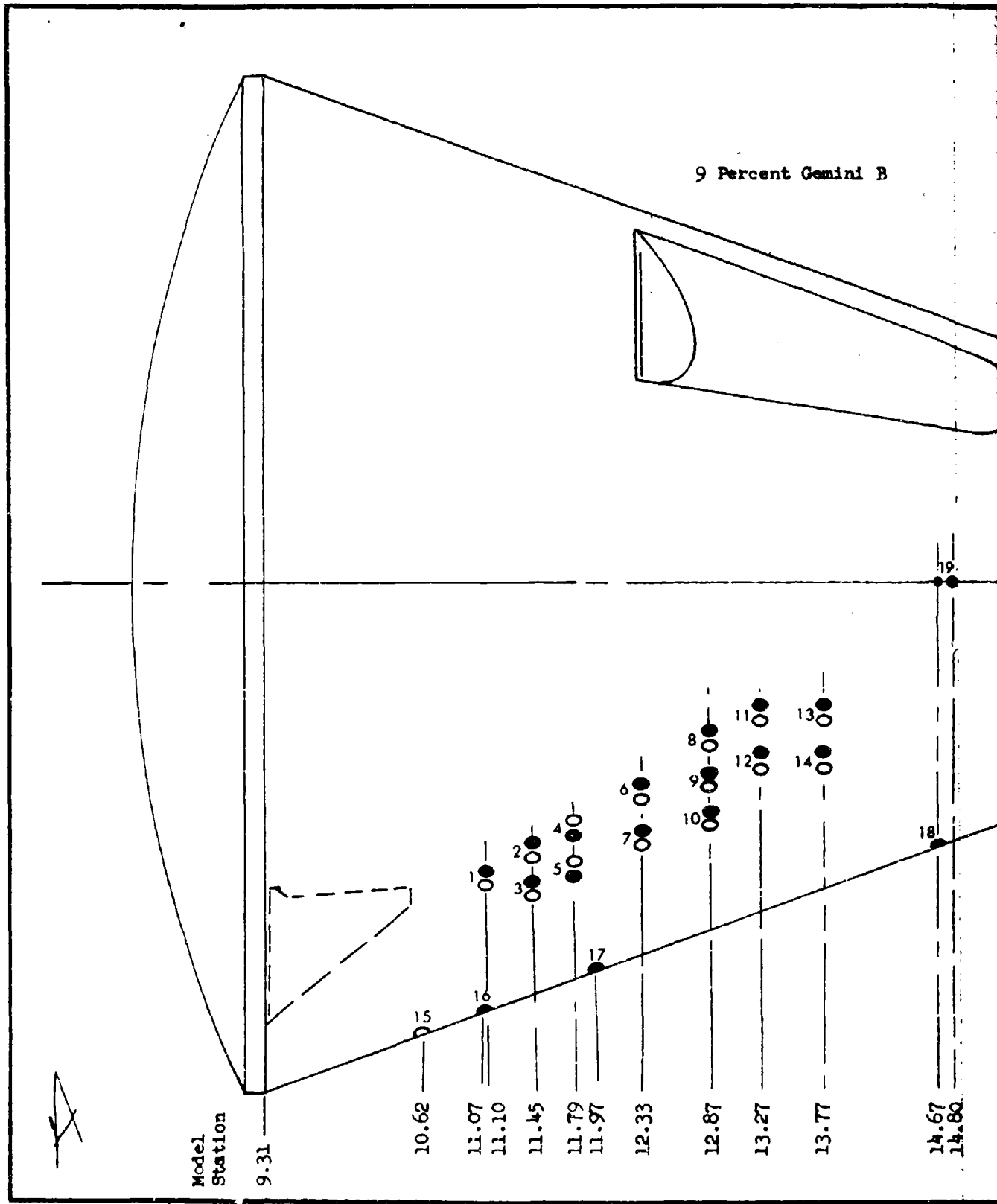
a.f.x.

DATE 29 December 1967

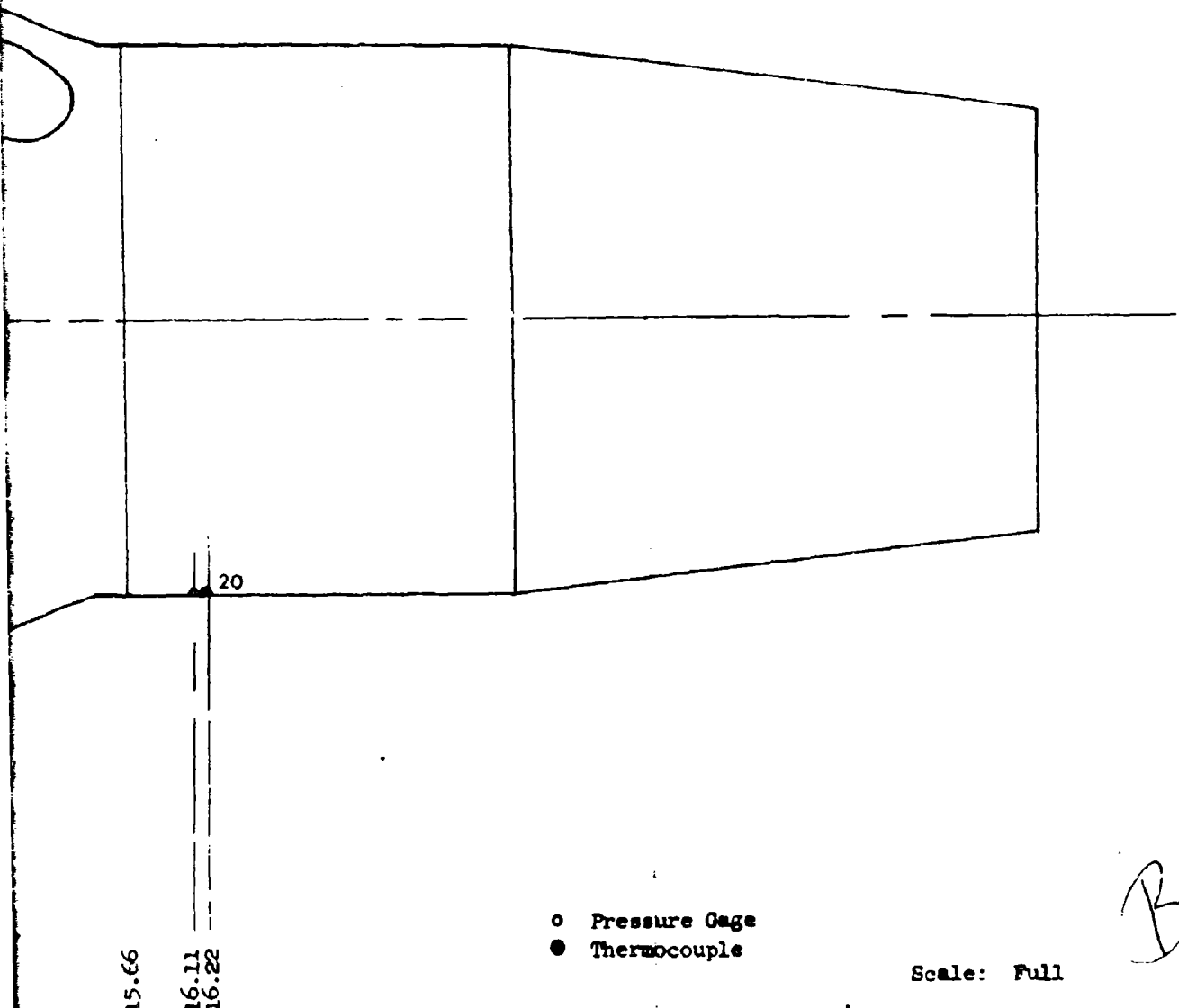
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REVISED \_\_\_\_\_

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GEMINI B PRESSURE GAGE AND  
THERMOCOUPLE LOCATION



15.66  
16.11  
16.22

- Pressure Gage
- Thermocouple

Scale: Full

Note: Gages 15 - 18 occur in pairs symmetrically about the windward centerline.

G.F.Z.

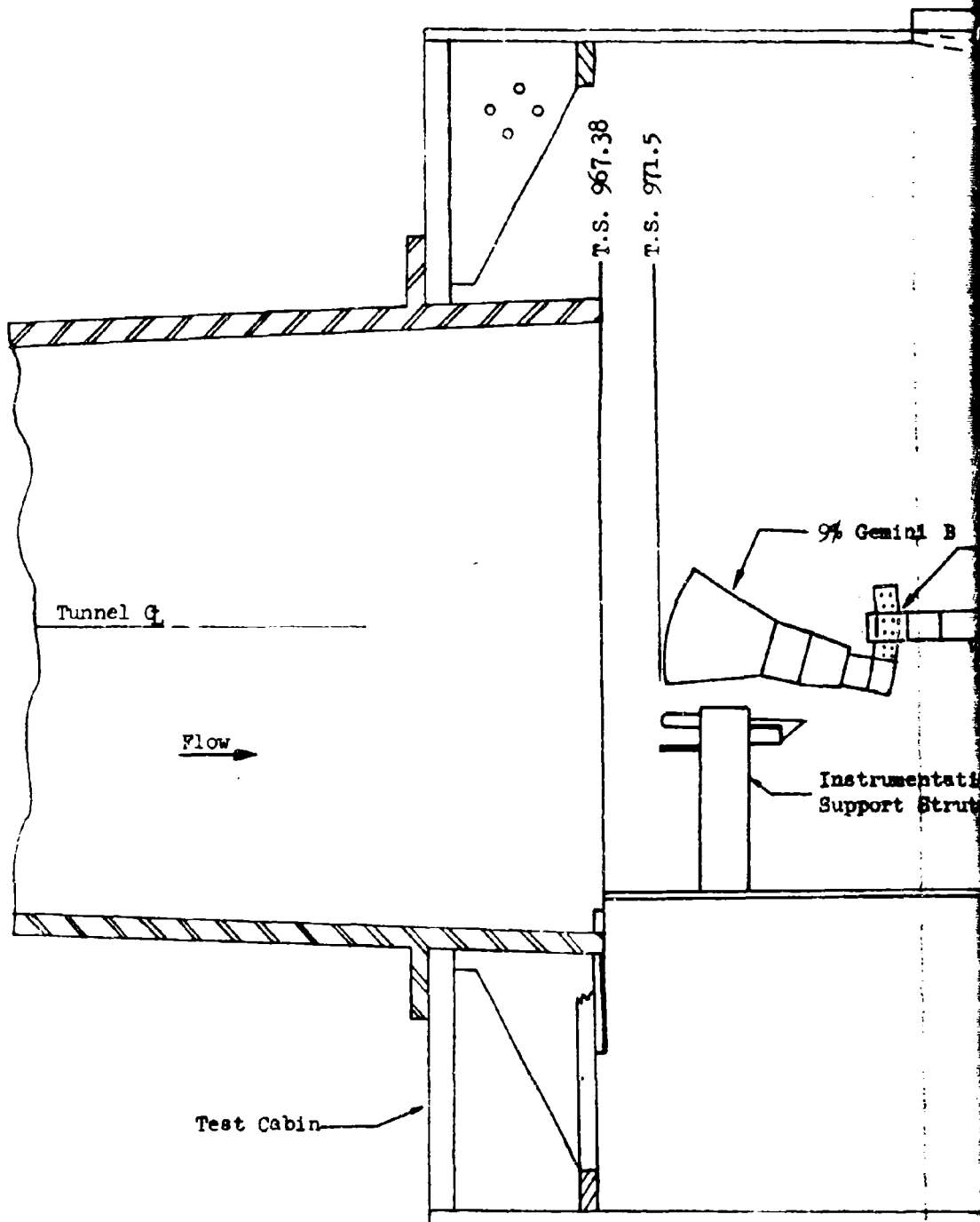


DATE 29 December 1967

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ST. LOUIS, MO

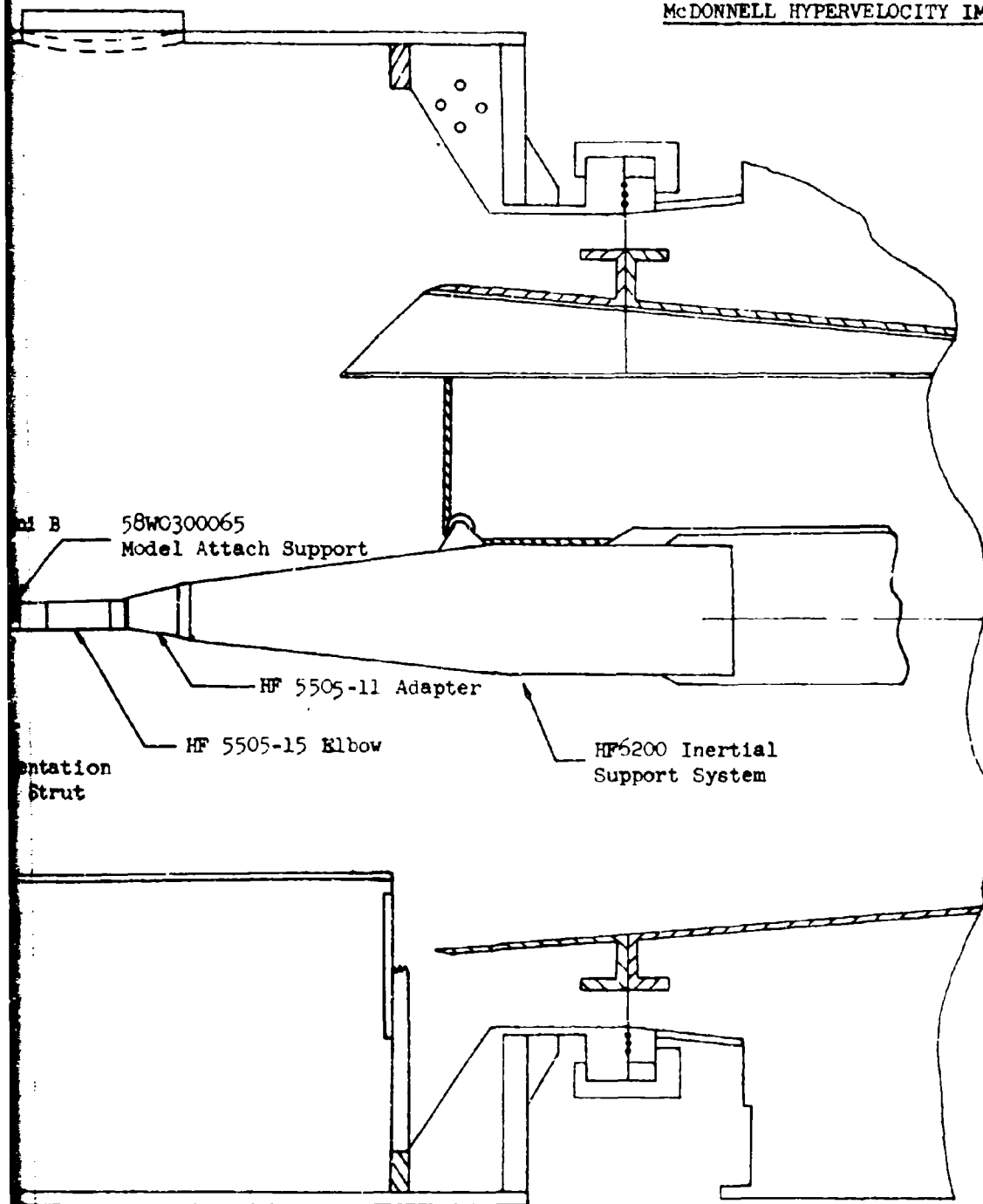


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Aircraft Division

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REPORT G004, Vol. I  
MODEL Gemini B

GEMINI B TUNNEL INSTALLATION  
McDONNELL HYPERVELOCITY IMPULSE TUNNEL



B

10/14/67 G.S.K.

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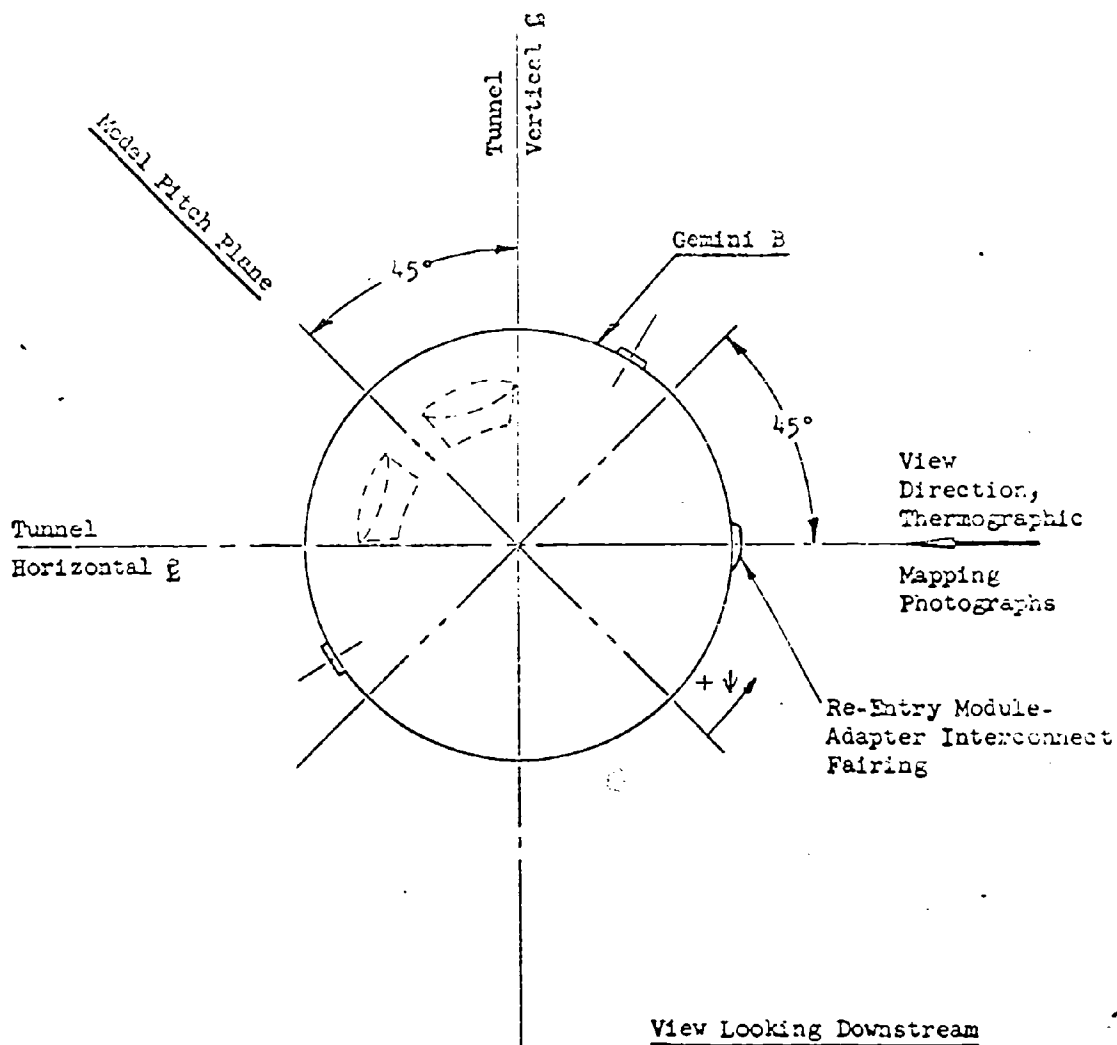
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MODEL Gemini B

DOWNSTREAM VIEW OF  
GEMINI B TUNNEL INSTALLATION



Note: Not to scale

474 21 Feb 68

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DATE 29 December 1967

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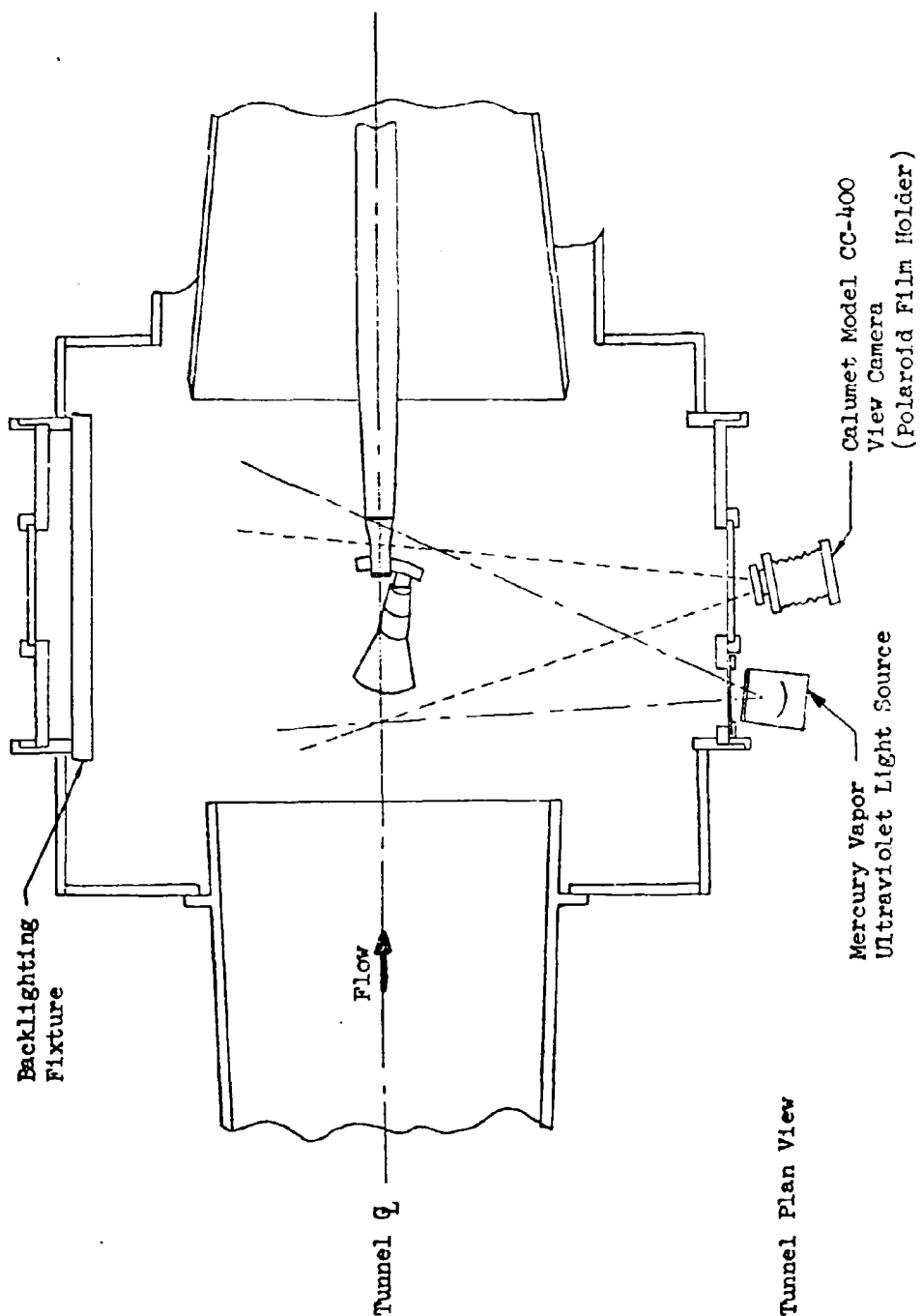
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MODEL Gemini B

## SCHEMATIC OF THERMOGRAPHIC MAPPING SYSTEM SETUP



Tunnel Plan View

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DATE 29 December 1967

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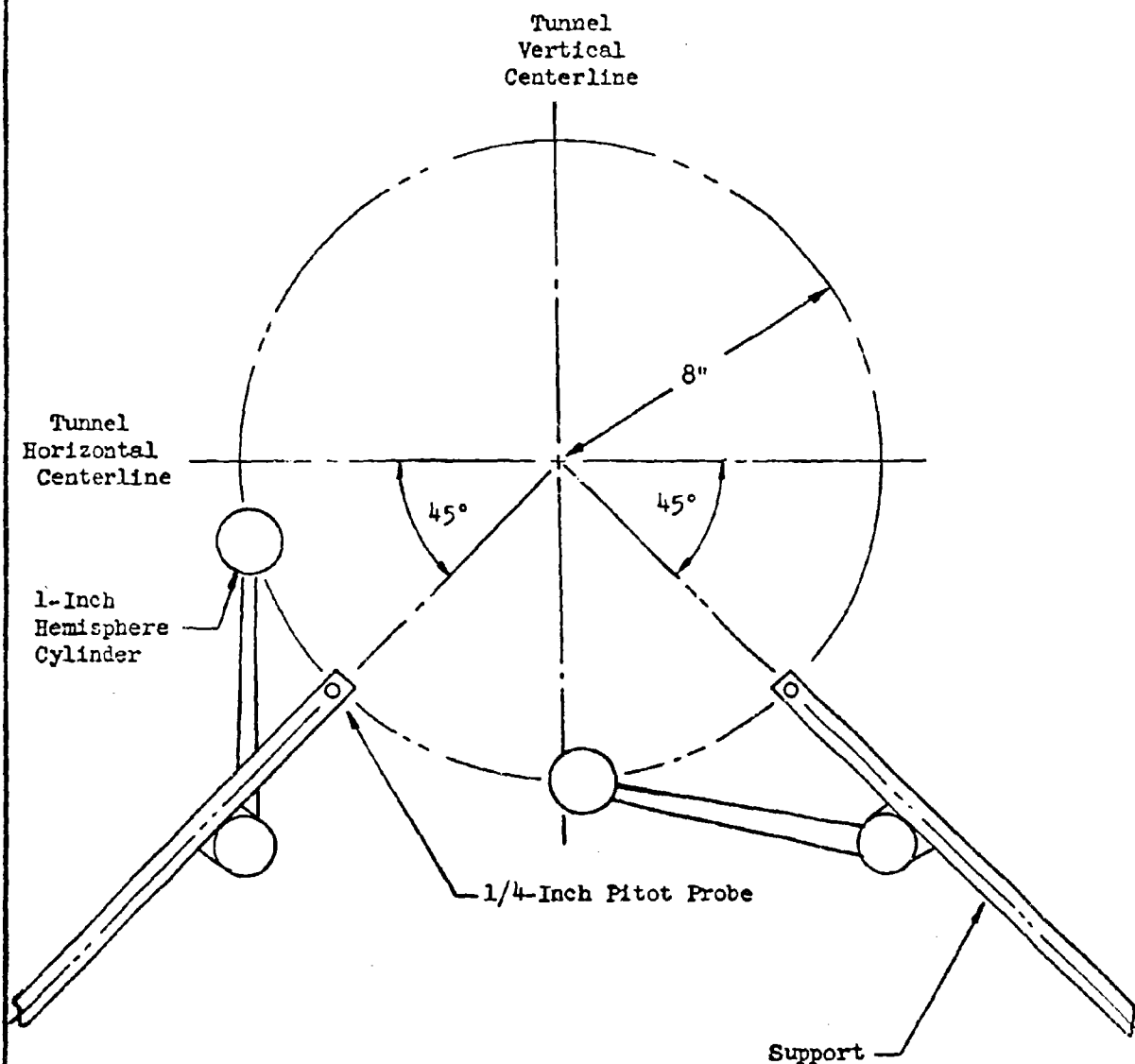
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MODEL Gemini B

TEST SECTION INSTRUMENTATION  
VIEW LOOKING DOWNSTREAM



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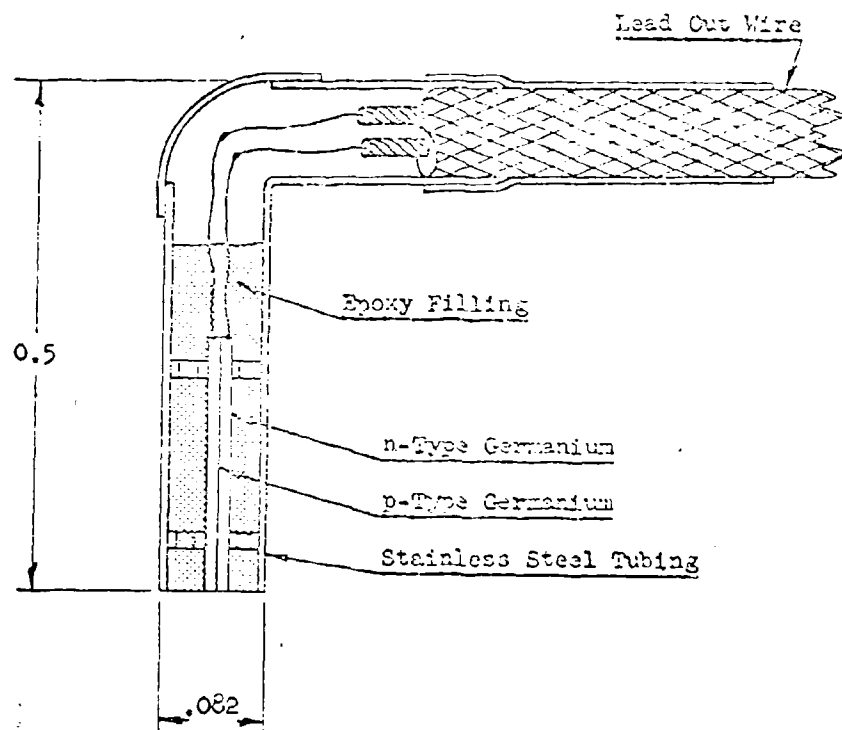
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MODEL Germini B

n-p TYPE GERMANIUM  
HEAT TRANSFER GAGE



No Scale

*15 56'67*

DATE 29 December 1967

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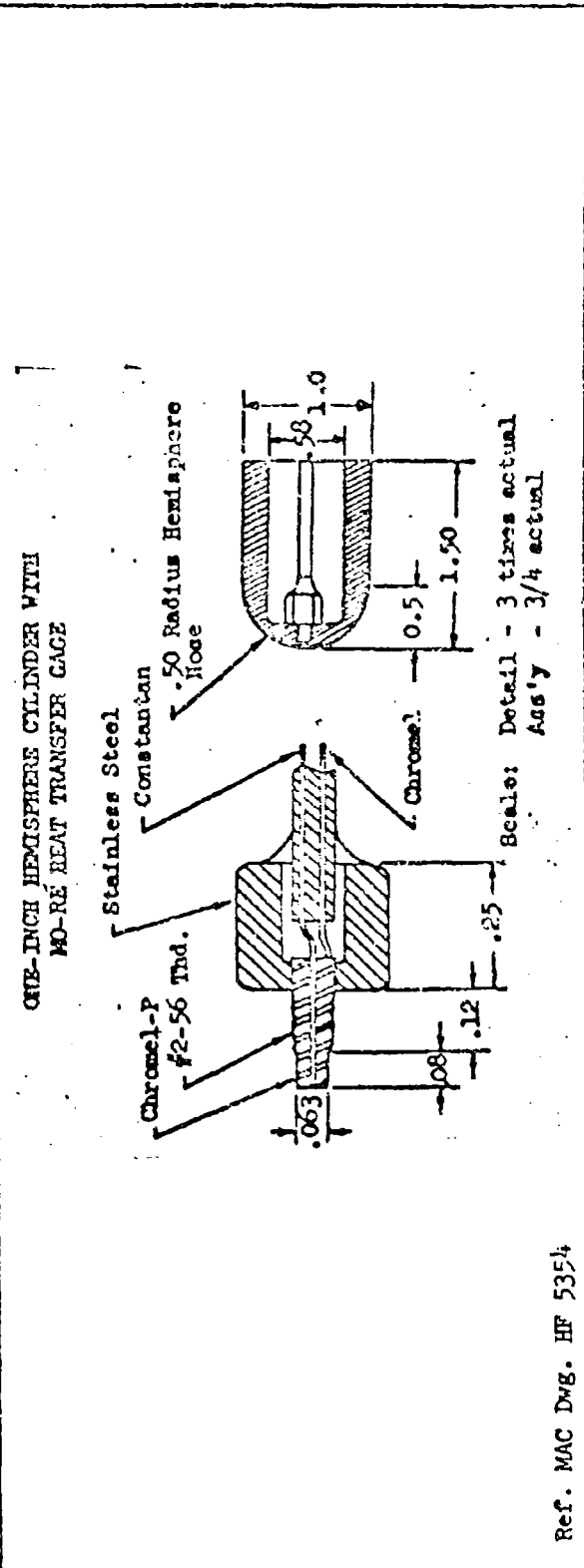
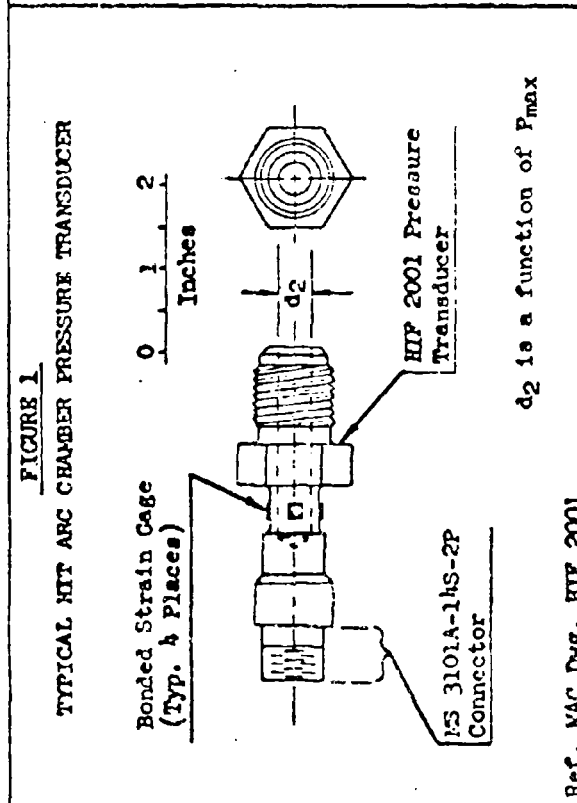
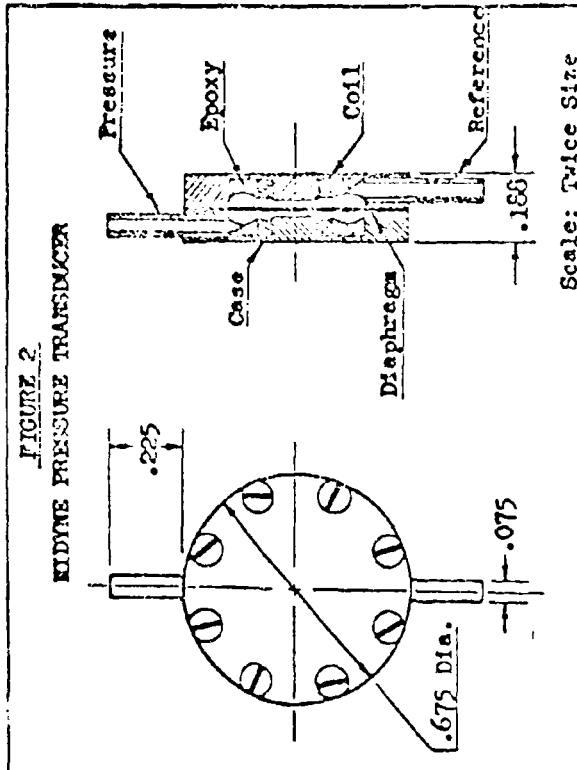
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REPORT G304, Vol. I

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MODEL Gemini B



DATE 22 December 1967

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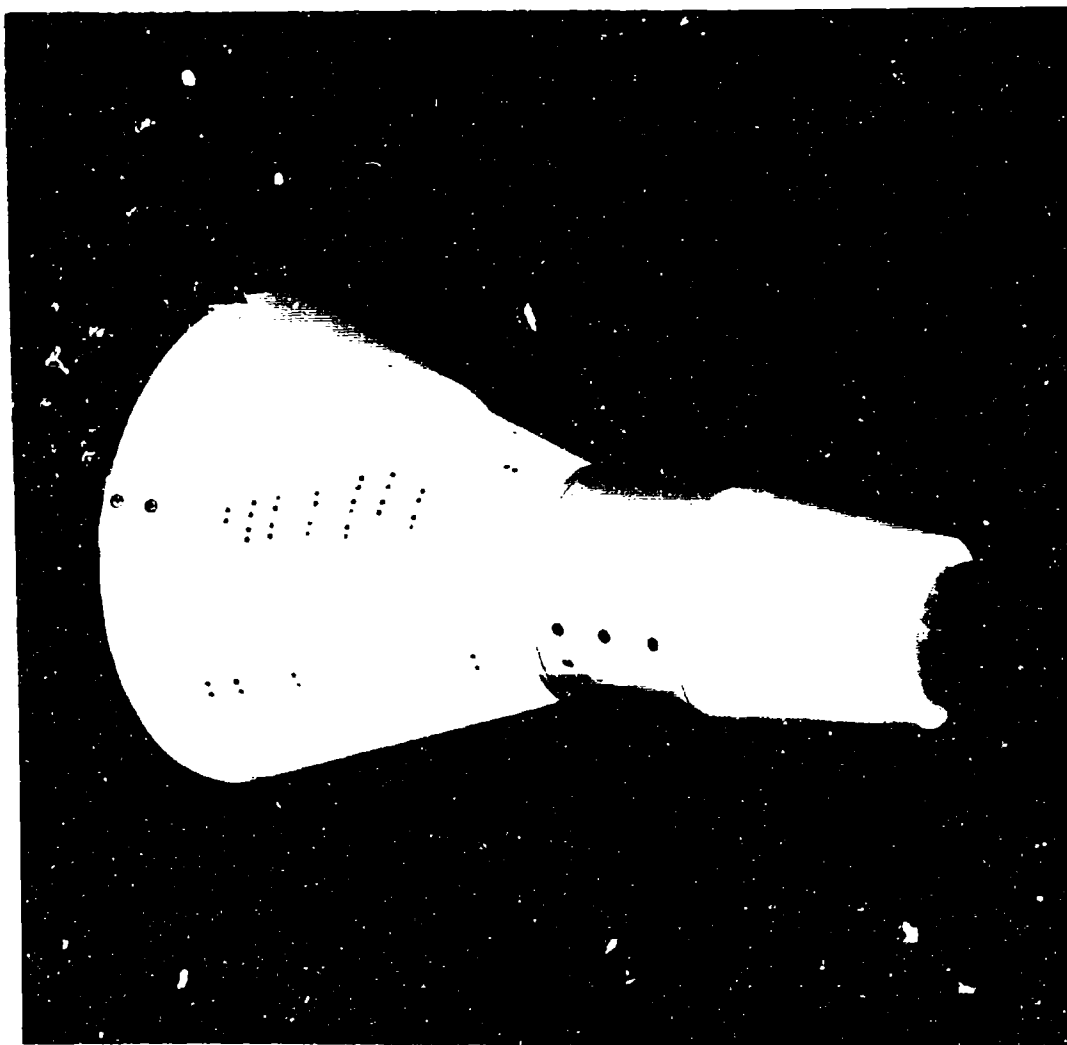
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REPORT G204, Vol. I

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MODEL Gemini B

THERMOCOUPLE AND PRESSURE GAGE LOCATIONS ON  
THE 9 PERCENT GEMINI B MODEL





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DATE 10/10/77

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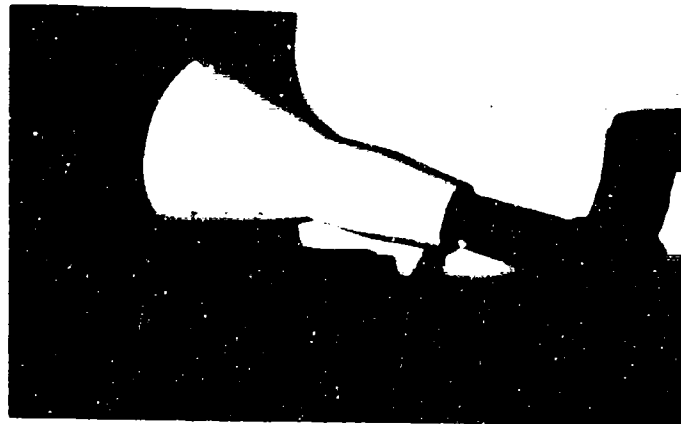
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MODEL Gemini P

PHERMOGRAPHIC PHOSPHOR PHOTOGRAPHS



PRE SHOT 2202



SHOT 2202

Note darker area behind fairing indicating high heating.

$\alpha = 20^\circ$

Mach No. = 13.2

Re X = 0.1 X 1

DATE (A) 24 May 1960

REVISED

REVISION

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REPORT COO, Vol. I

MODEL Gemini 3

INDEX OF VALID DATA TIMES FOR PRESSURE INSTRUMENTATION

| Vol. I          |         |       |      |       |      |       |       |        |        |       |       | Vol. II |      |       |       |      |       |      |        |        |      |      |  |
|-----------------|---------|-------|------|-------|------|-------|-------|--------|--------|-------|-------|---------|------|-------|-------|------|-------|------|--------|--------|------|------|--|
| Press. Case     | 2306    | 2307  | 2303 | 2309  | 2311 | 2312  | 2314  | 2315   | 2316   | 2317  | 2318  | 2319    | 2320 | 2321  | 2322  | 2323 | 2324  | 2325 | 2326   | 2327   | 2328 | 2329 |  |
| P <sub>1</sub>  | 60 - 80 | •     | 95   | 50-70 | 95   | •     | 40-60 | 80     | 60-110 | 60-80 | •     | •       | •    | •     | •     | •    | 60    | •    | •      | •      | •    | Out  |  |
| P <sub>2</sub>  | 60 - 80 | •     | Out  | 60-75 | 95   | •     | 40-60 | 80     | 60-110 | •     | •     | •       | Out  | •     | Out   | •    | 60    | •    | •      | •      | •    | Out  |  |
| P <sub>3</sub>  | •       | •     | 95   | 55-75 | 95   | •     | 40-60 | 80     | 80-110 | •     | •     | •       | •    | •     | •     | •    | 60    | •    | •      | 60-100 | •    | •    |  |
| P <sub>4</sub>  | 45 - 75 | •     | 95   | 55-75 | 95   | •     | 40-60 | 80     | 80-110 | 60-70 | •     | •       | •    | •     | •     | •    | 60    | •    | •      | 60-100 | •    | •    |  |
| P <sub>5</sub>  | Out     | •     | 95   | 55-75 | 95   | •     | 40-60 | 80     | 80-110 | •     | •     | •       | •    | •     | •     | •    | 60    | •    | •      | 60-100 | •    | •    |  |
| P <sub>6</sub>  | Out     | •     | 95   | 55-75 | 95   | •     | 40-60 | 80     | 60-110 | •     | •     | •       | •    | •     | •     | •    | 60    | •    | •      | 60-100 | •    | •    |  |
| P <sub>7</sub>  | 60 & 90 | •     | 95   | 60-90 | 90   | •     | 40-60 | 70-100 | 80-110 | •     | •     | •       | •    | •     | 40-65 | •    | •     | •    | 80-120 | 60-110 | •    | •    |  |
| P <sub>8</sub>  | 60 & 90 | •     | 95   | 60-90 | 90   | 60-95 | 40-60 | 70-100 | 100    | 70-90 | •     | •       | •    | •     | 40-65 | •    | 60-80 | •    | 80-120 | 60-110 | •    | •    |  |
| P <sub>9</sub>  | 50 - 90 | •     | 95   | 60-90 | 90   | •     | 90    | 70-100 | 80-110 | 70-90 | •     | •       | •    | •     | 40-65 | •    | 60-80 | •    | 80-120 | 60-110 | •    | •    |  |
| P <sub>10</sub> | 60 & 90 | •     | 95   | 60-90 | 90   | •     | 90    | 70-100 | 80-110 | •     | •     | •       | •    | •     | 40-65 | •    | 60-80 | •    | 80-120 | 60-110 | •    | •    |  |
| P <sub>11</sub> | 50 & 90 | •     | 95   | 60-90 | 90   | •     | 40-60 | 70-100 | 80-110 | •     | •     | •       | •    | •     | 40-65 | •    | 60-80 | •    | 80-120 | 60-110 | •    | •    |  |
| P <sub>12</sub> | 60 & 90 | •     | 95   | 60-90 | 90   | •     | 40-60 | 70-100 | 80-110 | •     | •     | •       | •    | •     | 40-65 | •    | 60-80 | •    | 80-120 | 60-110 | •    | •    |  |
| P <sub>13</sub> | 50 & 90 | •     | 95   | 60-80 | •    | 60-95 | 40-60 | 70-100 | •      | •     | •     | •       | •    | •     | •     | •    | •     | •    | •      | 70-110 | •    | •    |  |
| P <sub>14</sub> | 60 & 90 | •     | 95   | 60-80 | •    | 60-95 | 40-60 | 70-100 | •      | •     | •     | •       | •    | •     | •     | •    | •     | •    | •      | 60-100 | •    | •    |  |
| P <sub>15</sub> | 60 - 90 | 50-80 | 95   | 60-60 | •    | 70-95 | 60    | 60-100 | 80     | 60-70 | •     | Out     | •    | 60-80 | 40-65 | •    | •     | •    | 70-120 | Out    | •    | 80   |  |
| P <sub>16</sub> | 60 - 90 | •     | 95   | 60-80 | •    | 70-95 | 40-60 | 60-100 | 80     | 60-70 | •     | •       | •    | 60-80 | 40-65 | •    | •     | •    | •      | •      | •    | 80   |  |
| P <sub>17</sub> | •       | •     | 95   | 60-80 | •    | 70-95 | 40-60 | 60-100 | 80     | 60-90 | 60-90 | 70-90   | •    | •     | 40-65 | •    | •     | •    | •      | •      | •    | 80   |  |
| P <sub>18</sub> | •       | •     | 95   | 60-80 | •    | 70-95 | 40-60 | 60-100 | 80     | 60-90 | •     | •       | •    | •     | 40-65 | •    | •     | •    | •      | •      | •    | 80   |  |
| P <sub>19</sub> | 60 - 90 | 50-80 | 95   | •     | •    | 50-95 | 40-60 | 60-100 | •      | •     | •     | •       | •    | •     | •     | •    | •     | •    | •      | •      | •    | •    |  |
| P <sub>20</sub> | •       | •     | 95   | 60-90 | •    | 50-95 | •     | •      | •      | •     | •     | 70-90   | •    | •     | •     | •    | •     | •    | •      | •      | •    | •    |  |

- NOTES
1. Data are valid for all times above
  2. Above times are milliseconds

RUN NO. 2202  
DATE 05/18/67  
G579  
MCDONNELL  
TUNNEL PARAMETERS

| T<br>(SEC) | P0<br>(PSI) | T0<br>(OK) | M0<br>(SFT/SSEC) | Q-00T<br>(B/SF-S) | P02<br>(PSI) | P1<br>(PSI) | T1<br>(OK) | U<br>(FT/S) | M1    | RE/FT    | OL    | ALPHA<br>(DEG) |
|------------|-------------|------------|------------------|-------------------|--------------|-------------|------------|-------------|-------|----------|-------|----------------|
| -0300      | 9913.       | 1755.      | 0.23094E+08      | 105.34            | 7.372        | 0.03140     | 53.57      | 6587.       | 13.46 | 2262754. | 3.978 | 20.00          |
| -0350      | 9294.       | 1740.      | 0.22845E+08      | 100.65            | 6.954        | 0.02974     | 53.11      | 6546.       | 13.43 | 2166846. | 3.753 | 20.00          |
| -0400      | 8706.       | 1722.      | 0.22576E+08      | 95.97             | 6.553        | 0.02812     | 52.58      | 6501.       | 13.41 | 2077024. | 3.537 | 20.00          |
| -0450      | 8151.       | 1702.      | 0.22286E+08      | 91.28             | 6.169        | 0.02655     | 51.96      | 6453.       | 13.38 | 1993482. | 3.330 | 20.00          |
| -0500      | 7627.       | 1680.      | 0.21970E+08      | 86.60             | 5.800        | 0.02504     | 51.24      | 6400.       | 13.37 | 1916772. | 3.132 | 20.00          |
| -0550      | 7134.       | 1656.      | 0.21628E+08      | 81.91             | 5.449        | 0.02357     | 50.43      | 6342.       | 13.35 | 1846470. | 2.942 | 20.00          |
| -0600      | 6674.       | 1629.      | 0.21257E+08      | 77.22             | 5.113        | 0.02215     | 49.49      | 6274.       | 13.34 | 1783541. | 2.761 | 20.00          |
| -0650      | 6245.       | 1701.      | 0.22108E+08      | 79.49             | 4.794        | 0.02102     | 52.41      | 6421.       | 13.26 | 1543811. | 2.588 | 20.00          |
| -0700      | 5848.       | 1656.      | 0.21512E+08      | 73.75             | 4.542        | 0.01966     | 50.68      | 6321.       | 13.28 | 1519618. | 2.425 | 20.00          |
| -0750      | 5482.       | 1606.      | 0.20865E+08      | 68.00             | 4.205        | 0.01835     | 48.76      | 6214.       | 13.30 | 1505233. | 2.272 | 20.00          |
| -0800      | 5149.       | 1536.      | 0.20162E+08      | 62.26             | 3.936        | 0.01706     | 48.08      | 6059.       | 13.34 | 1528853. | 2.127 | 20.00          |
| -0850      | 4847.       | 1472.      | 0.19398E+08      | 56.52             | 3.682        | 0.01586     | 43.64      | 5917.       | 13.39 | 1547249. | 1.991 | 20.00          |
| -0900      | 4577.       | 1401.      | 0.18588E+08      | 50.77             | 3.445        | 0.01471     | 40.95      | 5759.       | 13.45 | 1586145. | 1.864 | 20.00          |
| -0950      | 4339.       | 1333.      | 0.17667E+08      | 45.03             | 3.225        | 0.01363     | 38.46      | 5609.       | 13.52 | 1623881. | 1.745 | 20.00          |
| -1000      | 4132.       | 1248.      | 0.16690E+08      | 39.29             | 3.021        | 0.01261     | 35.42      | 5420.       | 13.62 | 1710172. | 1.636 | 20.00          |
| -1050      | 3957.       | 1134.      | 0.15632E+08      | 33.54             | 2.833        | 0.01162     | 31.67      | 5172.       | 13.74 | 1881518. | 1.536 | 20.00          |

RUN NO. 2202  
DATE 05/18/67  
G379

MCDONNELL

HEAT TRANSFER RATES  
(B/SF-S)

PAGE NO. 30, VOL. I  
REP. NO. 6004

| CHANNEL | 1    | 2    | 3    |
|---------|------|------|------|
| 0.0300  | 4.38 | 3.95 | 9.53 |
| 0.0350  | 4.21 | 3.78 | 5.29 |
| 0.0400  | 4.04 | 3.62 | 5.05 |
| 0.0450  | 3.86 | 3.45 | 4.81 |
| 0.0500  | 3.69 | 3.29 | 4.57 |
| 0.0550  | 3.52 | 3.13 | 4.33 |
| 0.0600  | 3.35 | 2.96 | 4.09 |
| 0.0650  | 3.18 | 2.80 | 3.85 |
| 0.0700  | 3.01 | 2.63 | 3.61 |
| 0.0750  | 2.84 | 2.47 | 3.37 |
| 0.0800  | 2.67 | 2.30 | 3.13 |
| 0.0850  | 2.50 | 2.14 | 2.89 |
| 0.0900  | 2.32 | 1.97 | 2.65 |
| 0.0950  | 2.15 | 1.81 | 2.41 |
| 0.1000  | 1.98 | 1.64 | 2.17 |
| 0.1050  | 1.81 | 1.48 | 1.92 |

RUN NO-2203  
DATE 05/18/67  
G579

MCDONNELL  
TUNNEL PARAMETERS

| T<br>(SEC) | P0<br>(PSI) | TO<br>(OK) | MO<br>(SFT/SSEC) | O-DOT<br>(B/SF-S) | P02<br>(PSI) | P1<br>(PSI) | T1<br>(OK) | U<br>(FT/S) | M1    | RE/FT    | Q1    | ALPHA<br>(DEG) |
|------------|-------------|------------|------------------|-------------------|--------------|-------------|------------|-------------|-------|----------|-------|----------------|
| -0300      | 10703.      | 2081.      | 0.27355E+08      | 139.34            | 7.901        | 0.03470     | 66.67      | 7230.       | 13.24 | 1772738. | 4.257 | 15.00          |
| -0350      | 9998.       | 2065.      | 0.27103E+08      | 132.78            | 7.363        | 0.03235     | 65.98      | 7191.       | 13.24 | 1678244. | 3.960 | 15.00          |
| -0400      | 9333.       | 2046.      | 0.26816E+08      | 126.23            | 6.856        | 0.03012     | 65.17      | 7147.       | 13.24 | 1591941. | 3.694 | 15.00          |
| -0450      | 8706.       | 2024.      | 0.26490E+08      | 119.67            | 6.379        | 0.02802     | 64.42      | 7096.       | 13.24 | 1514112. | 3.430 | 15.00          |
| -0500      | 8117.       | 1997.      | 0.26118E+08      | 113.12            | 5.932        | 0.02604     | 63.10      | 7038.       | 13.25 | 1445145. | 3.190 | 15.00          |
| -0550      | 7568.       | 1966.      | 0.25694E+08      | 106.56            | 5.517        | 0.02418     | 61.81      | 6971.       | 13.26 | 1385565. | 2.974 | 15.00          |
| -0600      | 7058.       | 1929.      | 0.25211E+08      | 100.01            | 5.131        | 0.02244     | 60.30      | 6893.       | 13.27 | 1336093. | 2.767 | 15.00          |
| -0650      | 6586.       | 1887.      | 0.24661E+08      | 93.45             | 4.777        | 0.02084     | 58.57      | 6803.       | 13.29 | 1297717. | 2.576 | 15.00          |
| -0700      | 6153.       | 1857.      | 0.24037E+08      | 86.90             | 4.453        | 0.01940     | 57.35      | 6737.       | 13.30 | 1247891. | 2.402 | 15.00          |
| -0750      | 5759.       | 1803.      | 0.23330E+08      | 80.34             | 4.159        | 0.01805     | 55.20      | 6623.       | 13.33 | 1232031. | 2.244 | 15.00          |
| -0800      | 5404.       | 1741.      | 0.22534E+08      | 73.79             | 3.897        | 0.01683     | 52.79      | 6493.       | 13.36 | 1231467. | 2.103 | 15.00          |
| -0850      | 5087.       | 1671.      | 0.21641E+08      | 67.23             | 3.664        | 0.01574     | 50.10      | 6345.       | 13.40 | 1249355. | 1.979 | 15.00          |
| -0900      | 4810.       | 1593.      | 0.20646E+08      | 60.68             | 3.463        | 0.01478     | 47.15      | 6176.       | 13.45 | 1289389. | 1.871 | 15.00          |
| -0950      | 4571.       | 1487.      | 0.19548E+08      | 54.12             | 3.292        | 0.01392     | 43.30      | 5947.       | 13.51 | 1387036. | 1.779 | 15.00          |
| -1000      | 4371.       | 1382.      | 0.18348E+08      | 47.57             | 3.151        | 0.01322     | 39.64      | 5717.       | 13.58 | 1509870. | 1.705 | 15.00          |
| -1050      | 4210.       | 1280.      | 0.17051E+08      | 41.02             | 3.041        | 0.01266     | 36.27      | 5491.       | 13.63 | 1659576. | 1.647 | 15.00          |

MCDONNELL

HEAT TRANSFER RATES  
 (B/SF-S)

RUN NO. 2203  
 DATE 05/18/67  
 G579

| CHANNEL | 1    | 2    | 3    |
|---------|------|------|------|
| 0.0300  | 3.14 | 3.52 | 3.01 |
| 0.0350  | 3.03 | 3.37 | 2.93 |
| 0.0400  | 2.92 | 3.23 | 2.85 |
| 0.0450  | 2.80 | 3.08 | 2.78 |
| 0.0500  | 2.69 | 2.93 | 2.70 |
| 0.0550  | 2.57 | 2.78 | 2.62 |
| 0.0600  | 2.46 | 2.64 | 2.55 |
| 0.0650  | 2.35 | 2.49 | 2.47 |
| 0.0700  | 2.23 | 2.34 | 2.39 |
| 0.0750  | 2.12 | 2.19 | 2.32 |
| 0.0800  | 2.00 | 2.05 | 2.24 |
| 0.0850  | 1.89 | 1.90 | 2.16 |
| 0.0900  | 1.78 | 1.75 | 2.09 |
| 0.0950  | 1.66 | 1.60 | 2.01 |
| 0.1000  | 1.55 | 1.46 | 1.93 |
| 0.1050  | 1.43 | 1.31 | 1.86 |

MCDONNELL  
TUNNEL PARAMETERS

RUN NO. 2205  
DATE 05/18/67  
GST9

| T<br>(SEC) | P0<br>(PSI) | TO<br>(OK) | HO<br>(SFT/SSEC) | Q-UOT<br>(U/SF-S) | P02<br>(PSI) | P1<br>(PSI) | T1<br>(OK) | U<br>(FT/S) | M1    | RE/ET    | Q1    | ALPHA<br>(DEG) |
|------------|-------------|------------|------------------|-------------------|--------------|-------------|------------|-------------|-------|----------|-------|----------------|
| 0300       | 10484.      | 1812.      | 0.23851E+08      | 116.57            | 8.199        | 0.03579     | 56.96      | 6707.       | 13.29 | 2323941. | 4.423 | 10.00          |
| 0350       | 9795.       | 1799.      | 0.23628E+08      | 110.91            | 7.632        | 0.03333     | 56.37      | 6671.       | 13.29 | 2197878. | 4.118 | 10.00          |
| 0400       | 9144.       | 1783.      | 0.23374E+08      | 105.25            | 7.099        | 0.03101     | 55.67      | 6630.       | 13.29 | 2083050. | 3.830 | 10.00          |
| 0450       | 8532.       | 1764.      | 0.23083E+08      | 99.60             | 6.600        | 0.02882     | 54.85      | 6583.       | 13.29 | 1979805. | 3.562 | 10.00          |
| 0500       | 7958.       | 1741.      | 0.22750E+08      | 93.94             | 6.135        | 0.02677     | 53.90      | 6528.       | 13.29 | 1888618. | 3.311 | 10.00          |
| 0550       | 7424.       | 1714.      | 0.22369E+08      | 88.28             | 5.704        | 0.02486     | 52.81      | 6466.       | 13.30 | 1810132. | 3.079 | 10.00          |
| 0600       | 6928.       | 1682.      | 0.21935E+08      | 82.62             | 5.307        | 0.02309     | 51.54      | 6393.       | 13.32 | 1745476. | 2.865 | 10.00          |
| 0650       | 6471.       | 1646.      | 0.21440E+08      | 76.96             | 4.943        | 0.02146     | 50.09      | 6310.       | 13.33 | 1695266. | 2.669 | 10.00          |
| 0700       | 6053.       | 1603.      | 0.20879E+08      | 71.31             | 4.614        | 0.01998     | 48.45      | 6215.       | 13.35 | 1661366. | 2.492 | 10.00          |
| 0750       | 5674.       | 1540.      | 0.20244E+08      | 65.65             | 4.319        | 0.01862     | 46.05      | 6074.       | 13.38 | 1674403. | 2.334 | 10.00          |
| 0800       | 5333.       | 1480.      | 0.19529E+08      | 59.99             | 4.057        | 0.01742     | 43.89      | 5942.       | 13.41 | 1688078. | 2.193 | 10.00          |
| 0850       | 5031.       | 1412.      | 0.18730E+08      | 54.33             | 3.830        | 0.01637     | 41.47      | 5790.       | 13.44 | 1731513. | 2.071 | 10.00          |
| 0900       | 4768.       | 1333.      | 0.17845E+08      | 48.67             | 3.636        | 0.01547     | 38.78      | 5615.       | 13.48 | 1813453. | 1.968 | 10.00          |
| 0950       | 4544.       | 1262.      | 0.16875E+08      | 43.02             | 3.476        | 0.01474     | 36.45      | 5455.       | 13.51 | 1899674. | 1.882 | 10.00          |
| 1000       | 4358.       | 1151.      | 0.15822E+08      | 37.36             | 3.350        | 0.01411     | 33.03      | 5212.       | 13.56 | 2116690. | 1.816 | 10.00          |

MCDONNELL

RUN NO. 2205  
DATE 05/18/67  
G579

HEAT TRANSFER RATES  
(B/SF-S)

| CHANNEL | 1    | 2    | 3 |
|---------|------|------|---|
| 0.0300  | 3.01 | 3.47 | * |
| 0.0350  | 2.87 | 3.29 |   |
| 0.0400  | 2.73 | 3.11 |   |
| 0.0450  | 2.59 | 2.92 |   |
| 0.0500  | 2.45 | 2.74 |   |
| 0.0550  | 2.31 | 2.56 |   |
| 0.0600  | 2.17 | 2.37 |   |
| 0.0650  | 2.03 | 2.19 |   |
| 0.0700  | 1.89 | 2.01 |   |
| 0.0750  | 1.75 | 1.82 |   |
| 0.0800  | 1.61 | 1.64 |   |
| 0.0850  | 1.46 | 1.46 |   |
| 0.0900  | 1.32 | 1.27 |   |
| 0.0950  | 1.18 | 1.09 |   |
| 0.1000  | 1.04 | 0.91 |   |



TIME 9.17.34  
PAGE NO. 35, VOL. I  
REP. NO. 6004  
11/08/67

TITLE  
MCDONNELL

RUN NO. 2306

HIT TEST NO. 67  
TUNNEL PARAMETERS

| T<br>(SEC) | PO<br>(PSI) | TO<br>(OK) | HO<br>(SFT/SEC) | Q-DOT<br>(8/SF-S) | P02<br>(PSI) | P1<br>(PSI) | T1<br>(CK) | U<br>(FT/S) | M1    | RE/FT    | O1<br>(PSI) | ALPHA<br>(DEG) |
|------------|-------------|------------|-----------------|-------------------|--------------|-------------|------------|-------------|-------|----------|-------------|----------------|
| .0300      | 10044.      | 1811.      | 0.23122E 08     | 112.72            | 7.669        | 0.03323     | 54.54      | 4707.       | 13.34 | 2189934. | 4.137       | 15.00          |
| .0350      | 9390.       | 1750.      | 0.22783E 08     | 107.36            | 7.230        | 0.03147     | 55.94      | 6557.       | 13.31 | 2102314. | 3.901       | 15.00          |
| .0400      | 8771.       | 1766.      | 0.22412E 08     | 102.00            | 6.813        | 0.02978     | 55.26      | 6603.       | 13.28 | 2022509. | 3.676       | 15.00          |
| .0450      | 8189.       | 1744.      | 0.22005E 08     | 96.64             | 6.417        | 0.02816     | 54.46      | 6542.       | 13.25 | 1951049. | 3.463       | 15.00          |
| .0500      | 7643.       | 1712.      | 0.21561E 08     | 91.28             | 6.042        | 0.02662     | 53.55      | 6475.       | 13.23 | 1888341. | 3.262       | 15.00          |
| .0550      | 7133.       | 1684.      | 0.21077E 08     | 85.92             | 5.649        | 0.02515     | 52.50      | 6402.       | 13.21 | 1834209. | 3.072       | 15.00          |
| .0600      | 6659.       | 1647.      | 0.20547E 08     | 80.55             | 5.358        | 0.02375     | 51.31      | 6321.       | 13.19 | 1790456. | 2.893       | 15.00          |
| .0650      | 6221.       | 1607.      | 0.19969E 08     | 75.19             | 5.048        | 0.02243     | 49.97      | 6231.       | 13.18 | 1757746. | 2.727       | 15.00          |
| .0700      | 5819.       | 1563.      | 0.19339E 08     | 69.83             | 4.759        | 0.02118     | 48.45      | 6132.       | 13.17 | 1737388. | 2.571       | 15.00          |
| .0750      | 5453.       | 1499.      | 0.18433E 08     | 64.47             | 4.492        | 0.01996     | 46.10      | 5987.       | 13.18 | 1765679. | 2.428       | 15.00          |
| .0800      | 5123.       | 1440.      | 0.17646E 08     | 59.11             | 4.246        | 0.01886     | 44.09      | 5358.       | 13.19 | 1784714. | 2.296       | 15.00          |
| .0850      | 4830.       | 1377.      | 0.16785E 08     | 53.75             | 4.022        | 0.01792     | 41.83      | 5713.       | 13.21 | 1827449. | 2.176       | 15.00          |
| .0900      | 4572.       | 1318.      | 0.16022E 08     | 48.39             | 3.819        | 0.01689     | 39.83      | 5582.       | 13.22 | 1866066. | 2.067       | 15.00          |
| .0950      | 4350.       | 1241.      | 0.15065E 08     | 43.03             | 3.617        | 0.01601     | 37.26      | 5413.       | 13.26 | 1960658. | 1.970       | 15.00          |
| .1000      | 4164.       | 1138.      | 0.13853E 08     | 37.67             | 3.477        | 0.01518     | 33.97      | 5191.       | 13.32 | 2145203. | 1.805       | 15.00          |

TIME 9.17.35  
PAGE NO. 37, VOL. I  
REP. NO. G004  
11/08/67

RUN NO. 2306

TITLE

MC DONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=.0350 PD= 9390. PQ2= 7.230 PL=.03147 QDOT-A=107.36

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF. |
|----|--------------------|---------------|----------------|-------------|
| 1  | 2.3520             | 0.02191       | 0.02191        | 2.3520      |
| 2  | 3.1731             | 0.02956       | 0.02956        | 3.1731      |
| 3  | 3.3723             | 0.03141       | 0.03141        | 3.3723      |
| 4  | 3.2887             | 0.03063       | 0.03063        | 3.2887      |
| 5  | 3.9186             | 0.03650       | 0.03650        | 3.9186      |
| 6  | 3.3629             | 0.03132       | 0.03132        | 3.3629      |
| 7  | 3.8871             | 0.03621       | 0.03621        | 3.8871      |
| 8  | 2.7921             | 0.02601       | 0.02601        | 2.7921      |
| 9  | 3.5115             | 0.03271       | 0.03271        | 3.5115      |
| 10 | 3.2903             | 0.03065       | 0.03065        | 3.2903      |
| 11 | 3.1779             | 0.02960       | 0.02960        | 3.1779      |
| 12 | 2.9330             | 0.02732       | 0.02732        | 2.9330      |
| 13 | 3.2756             | 0.03051       | 0.03051        | 3.2756      |
| 14 | 2.4906             | 0.02320       | 0.02320        | 2.4906      |
| 15 | 3.8851             | 0.03619       | 0.03619        | 3.8851      |
| 16 | 4.7390             | 0.04413       | 0.04413        | 4.7390      |
| 17 | 4.7331             | 0.04409       | 0.04409        | 4.7331      |
| 18 | 4.6680             | 0.04348       | 0.04348        | 4.6680      |
| 19 | 2.1256             | 0.01980       | 0.01980        | 2.1256      |
| 20 | 20.4681            | 0.19065       | 0.19065        | 20.4681     |

TIME 0.17.35  
PAGE NO. 37, VOL. 3  
REP. NO. 0004  
11/08/67

MC DONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER PATES

TIME=0.0350 PO= 9390. P02= 7.230 PI=0.03147 QDOT-A=107.36

QDOT-N/QDOT-A QDOT-N/K QDOT-A QDOT-N/RCF

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/K QDOT-A | QDOT-N/RCF |
|----|--------------------|---------------|-----------------|------------|
| 1  | 2.3520             | 0.02191       | 0.02191         | 2.3520     |
| 2  | 3.1731             | 0.02956       | 0.02956         | 3.1731     |
| 3  | 3.3723             | 0.03141       | 0.03141         | 3.3723     |
| 4  | 3.2887             | 0.03063       | 0.03063         | 3.2887     |
| 5  | 3.5184             | 0.03650       | 0.03650         | 3.5184     |
| 6  | 3.3629             | 0.03132       | 0.03132         | 3.3629     |
| 7  | 3.8871             | 0.03621       | 0.03621         | 3.8871     |
| 8  | 2.7921             | 0.02601       | 0.02601         | 2.7921     |
| 9  | 3.5115             | 0.03271       | 0.03271         | 3.5115     |
| 10 | 3.2903             | 0.03065       | 0.03065         | 3.2903     |
| 11 | 3.1779             | 0.02960       | 0.02960         | 3.1779     |
| 12 | 2.9330             | 0.02732       | 0.02732         | 2.9330     |
| 13 | 3.2756             | 0.03051       | 0.03051         | 3.2756     |
| 14 | 2.4906             | 0.02320       | 0.02320         | 2.4906     |
| 15 | 3.8651             | 0.03619       | 0.03619         | 3.8651     |
| 16 | 4.7390             | 0.04413       | 0.04413         | 4.7390     |
| 17 | 4.7331             | 0.04409       | 0.04409         | 4.7331     |
| 18 | 4.6640             | 0.04348       | 0.04348         | 4.6640     |
| 19 | 2.1256             | 0.01980       | 0.01980         | 2.1256     |
| 20 | 20.4681            | 0.19065       | 0.19065         | 20.4681    |

**— RUN NO. 2306 —**

HIT TEST NC. 67  
MODEL HEAT TRANSFER RATES

TIME=-.0400 PO= 8771. PQ2= 6.813 P1=.02978 CDOY-A=107.00

| N  | QDIT-N<br>(U/SI - S) | QDIT-N/QDIT-A | QDIT-N/KQDIT-A | QDIT-N/PDIT |
|----|----------------------|---------------|----------------|-------------|
| 1  | 2.3059               | 0.02261       | 0.02261        | 2.3059      |
| 2  | 3.3921               | 0.03032       | 0.03032        | 3.0921      |
| 3  | 3.2272               | 0.03164       | 0.03164        | 3.2272      |
| 4  | 3.1715               | 0.03109       | 0.03109        | 3.1715      |
| 5  | 3.7529               | 0.03679       | 0.03679        | 3.7529      |
| 6  | 3.2424               | 0.03179       | 0.03179        | 3.2424      |
| 7  | 3.7240               | 0.03651       | 0.03651        | 3.7240      |
| 8  | 2.6804               | 0.02624       | 0.02624        | 2.6804      |
| 9  | 3.3572               | 0.03291       | 0.03291        | 3.3572      |
| 10 | 3.1723               | 0.03110       | 0.03110        | 3.1723      |
| 11 | 3.0411               | 0.02987       | 0.02987        | 3.0411      |
| 12 | 2.8065               | 0.02752       | 0.02752        | 2.8065      |
| 13 | 3.1222               | 0.03261       | 0.03261        | 3.1222      |
| 14 | 2.4085               | 0.02361       | 0.02361        | 2.4085      |
| 15 | 3.7362               | 0.03663       | 0.03663        | 3.7362      |
| 16 | 4.531                | 0.04462       | 0.04462        | 4.5310      |
| 17 | 4.5226               | 0.04436       | 0.04436        | 4.5241      |
| 18 | 4.4818               | 0.04394       | 0.04394        | 4.4818      |
| 19 | 2.0326               | 0.01993       | 0.01993        | 2.0326      |
| 20 | 19.5443              | 0.19162       | 0.19162        | 19.5443     |

RUN NO. 2306

TITLE

MCDONNELL

TIME 2.17.35  
PAGE NO. 39, VOL. I  
REP. NO. 6028  
11/08/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| TIME=0.450 |                     | PO= 5189.     | PO2= 6.417     | PI=0.2916  | QDOT-A= 96.64 |
|------------|---------------------|---------------|----------------|------------|---------------|
| N          | QDOT-N<br>(10/5F-5) | QDOT-N/QDOT-A | CNOT-N/KQDOT-A | QDOT-N/REF |               |
| 1          | 2.2598              | 0.32339       | 0.02339        | 2.2598     |               |
| 2          | 3.0110              | 0.03116       | 0.03116        | 3.0110     |               |
| 3          | 3.0920              | 0.03169       | 0.03169        | 3.0920     |               |
| 4          | 3.0542              | 0.03162       | 0.03162        | 3.0542     |               |
| 5          | 3.5873              | 0.03712       | 0.03712        | 3.5873     |               |
| 6          | 3.1220              | 0.03231       | 0.03231        | 3.1220     |               |
| 7          | 3.5609              | 0.03695       | 0.03695        | 3.5609     |               |
| 8          | 2.5687              | 0.02658       | 0.02658        | 2.5687     |               |
| 9          | 3.2029              | 0.03314       | 0.03314        | 3.2029     |               |
| 10         | 3.0542              | 0.03161       | 0.03161        | 3.0542     |               |
| 11         | 2.9043              | 0.03035       | 0.03035        | 2.9043     |               |
| 12         | 2.6801              | 0.02773       | 0.02773        | 2.6801     |               |
| 13         | 2.9689              | 0.03772       | 0.03772        | 2.9689     |               |
| 14         | 2.3264              | 0.02407       | 0.02407        | 2.3264     |               |
| 15         | 3.5872              | 0.03712       | 0.03712        | 3.5872     |               |
| 16         | 4.3239              | 0.04474       | 0.04474        | 4.3239     |               |
| 17         | 4.3151              | 0.04465       | 0.04465        | 4.3151     |               |
| 18         | 4.2956              | 0.04465       | 0.04465        | 4.2956     |               |
| 19         | 1.9397              | 0.02207       | 0.02207        | 1.9397     |               |
| 20         | 18.6206             | 0.19269       | 0.19269        | 18.6206    |               |

TIME 9.17.35  
 PAGE NO. 40, VOL. I  
 REP. NO. 0004  
 11/08/67

TITLE  
 MCDONNELL

HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

RUN NO. 2306

TIME=0500 PD= 7643. PD2= 6.042. PI=02662 QDOT-A= 91.28

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | CDCT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.2137             | 0.02425       | 0.02425        | 2.2137     |
| 2  | 2.9300             | 0.03210       | 0.03210        | 2.9300     |
| 3  | 2.9369             | 0.03218       | 0.03218        | 2.9369     |
| 4  | 2.9369             | 0.03214       | 0.03214        | 2.9369     |
| 5  | 3.4216             | 0.03769       | 0.03769        | 3.4216     |
| 6  | 3.0016             | 0.03244       | 0.03244        | 3.0016     |
| 7  | 3.3977             | 0.03722       | 0.03722        | 3.3977     |
| 8  | 2.4571             | 0.02692       | 0.02692        | 2.4571     |
| 9  | 3.0487             | 0.03360       | 0.03360        | 3.0487     |
| 10 | 2.9362             | 0.03217       | 0.03217        | 2.9362     |
| 11 | 2.7675             | 0.03032       | 0.03032        | 2.7675     |
| 12 | 2.5536             | 0.02794       | 0.02794        | 2.5536     |
| 13 | 2.4155             | 0.03085       | 0.03085        | 2.4155     |
| 14 | 2.2443             | 0.02459       | 0.02459        | 2.2443     |
| 15 | 3.4383             | 0.03767       | 0.03767        | 3.4383     |
| 16 | 4.1169             | 0.04510       | 0.04510        | 4.1169     |
| 17 | 4.1061             | 0.04499       | 0.04499        | 4.1061     |
| 18 | 4.1095             | 0.04502       | 0.04502        | 4.1095     |
| 19 | 1.8467             | 0.02023       | 0.02023        | 1.8467     |
| 20 | 17.6968            | 0.19388       | 0.19388        | 17.6968    |

RUN NO. 2306

TIME 9.17.35  
PAGE NO. 41, VOL. I  
REP. NO. 0004  
11/04/67

TITLE MCDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.0550 PO= 7133. PO2= 5.649 PI=02515 QOOT-A= 85.92

| N  | QOOT-N<br>(R/SF-S) | QOOT-N/QOOT-A | QOOT-N/KQOOT-A | QOOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.1676             | 0.02523       | 0.02523        | 2.1676     |
| 2  | 2.8489             | 0.03316       | 0.03316        | 2.8489     |
| 3  | 2.7917             | 0.03249       | 0.03249        | 2.7917     |
| 4  | 2.8196             | 0.04282       | 0.04282        | 2.8196     |
| 5  | 3.2560             | 0.03790       | 0.03790        | 3.2560     |
| 6  | 2.9011             | 0.03353       | 0.03353        | 2.9011     |
| 7  | 3.2346             | 0.03765       | 0.03765        | 3.2346     |
| 8  | 2.3454             | 0.02730       | 0.02730        | 2.3454     |
| 9  | 2.8944             | 0.03369       | 0.03369        | 2.8944     |
| 10 | 2.8181             | 0.03280       | 0.03280        | 2.8181     |
| 11 | 2.6306             | 0.03062       | 0.03062        | 2.6306     |
| 12 | 2.4272             | 0.02825       | 0.02825        | 2.4272     |
| 13 | 2.6622             | 0.03099       | 0.03099        | 2.6622     |
| 14 | 2.1623             | 0.02517       | 0.02517        | 2.1623     |
| 15 | 3.2894             | 0.03829       | 0.03829        | 3.2894     |
| 16 | 3.9098             | 0.04551       | 0.04551        | 3.9098     |
| 17 | 3.8971             | 0.04536       | 0.04536        | 3.8971     |
| 18 | 3.9233             | 0.04566       | 0.04566        | 3.9233     |
| 19 | 1.7538             | 0.02041       | 0.02041        | 1.7538     |
| 20 | 16.7731            | 0.19523       | 0.19523        | 16.7731    |

TIME 9.17.35  
PAGE NO. 42, VOL. I  
REP. NO. 600A  
11/08/67

TITLE  
MCDONNELL

RUN NO. 2306

MIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0600 PD= 6659. P02= 5.358 PI= 0.7375 QDOT-A= 80.55

| N  | QDOT-N<br>ID/SF-SI | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.1215             | 0.02634       | 0.02634        | 2.1215     |
| 2  | 2.7679             | 0.03434       | 0.03434        | 2.7679     |
| 3  | 2.5465             | 0.03285       | 0.03285        | 2.5465     |
| 4  | 2.7024             | 0.03355       | 0.03355        | 2.7024     |
| 5  | 3.0903             | 0.03934       | 0.03934        | 3.0903     |
| 6  | 2.7607             | 0.03477       | 0.03477        | 2.7607     |
| 7  | 3.0214             | 0.03813       | 0.03813        | 3.0214     |
| 8  | 2.2337             | 0.02773       | 0.02773        | 2.2337     |
| 9  | 2.7402             | 0.03402       | 0.03402        | 2.7402     |
| 10 | 2.7000             | 0.03352       | 0.03352        | 2.7000     |
| 11 | 2.4388             | 0.03204       | 0.03204        | 2.4388     |
| 12 | 2.3007             | 0.02856       | 0.02856        | 2.3007     |
| 13 | 2.5098             | 0.03114       | 0.03114        | 2.5098     |
| 14 | 2.0802             | 0.02582       | 0.02582        | 2.0802     |
| 15 | 3.1405             | 0.03909       | 0.03909        | 3.1405     |
| 16 | 3.7627             | 0.04597       | 0.04597        | 3.7627     |
| 17 | 3.6881             | 0.04578       | 0.04578        | 3.6881     |
| 18 | 3.7371             | 0.04639       | 0.04639        | 3.7371     |
| 19 | 1.6609             | 0.02062       | 0.02062        | 1.6609     |
| 20 | 15.8493            | 0.19675       | 0.19675        | 15.8493    |



RUN NO. 2306

TITLE

MCDONNELL

TIME 9.17.35  
PAGE NO. 43, VOL. I  
REP. NO. 6004  
11/08/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=.0650 PD= 6221. PD2= 5.048 PI=.02243 QDOT-A= 75.19

| N  | QDOT-N<br>(8/SF-S) | QDOT-N/QDOT-A | QDOT-N/KDOT-A | QDOT-N/REF |
|----|--------------------|---------------|---------------|------------|
| 1  | 2.0754             | 0.02760       | 0.02760       | 2.0754     |
| 2  | 2.6868             | 0.03573       | 0.03573       | 2.6868     |
| 3  | 2.5014             | 0.03327       | 0.03327       | 2.5014     |
| 4  | 2.5851             | 0.03438       | 0.03438       | 2.5851     |
| 5  | 2.9247             | 0.03890       | 0.03890       | 2.9247     |
| 6  | 2.6403             | 0.03511       | 0.03511       | 2.6403     |
| 7  | 2.9083             | 0.03868       | 0.03868       | 2.9083     |
| 8  | 2.1220             | 0.02822       | 0.02822       | 2.1220     |
| 9  | 2.5859             | 0.03439       | 0.03439       | 2.5859     |
| 10 | 2.5820             | 0.03434       | 0.03434       | 2.5820     |
| 11 | 2.3570             | 0.03135       | 0.03135       | 2.3570     |
| 12 | 2.1743             | 0.02892       | 0.02892       | 2.1743     |
| 13 | 2.3555             | 0.03133       | 0.03133       | 2.3555     |
| 14 | 1.9981             | 0.02657       | 0.02657       | 1.9981     |
| 15 | 2.9915             | 0.03978       | 0.03978       | 2.9915     |
| 16 | 3.4957             | 0.04649       | 0.04649       | 3.4957     |
| 17 | 3.4792             | 0.04627       | 0.04627       | 3.4792     |
| 18 | 3.5510             | 0.04722       | 0.04722       | 3.5510     |
| 19 | 1.5679             | 0.02085       | 0.02085       | 1.5679     |
| 20 | 14.9255            | 0.19849       | 0.19849       | 14.9255    |

RUN NO. 2306

TIME 9.17.36  
PAGE NO. 44, VOL. I  
REP. NO. 6004  
11/08/67

TITLE

MC DONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0700 PO= 5819. PO2= 4.759 PI=02118 QDOT-A= 69.83

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-V/KDOT-A | QDOT-N/PEF |
|----|--------------------|---------------|---------------|------------|
| 1  | 2.0293             | 0.02905       | 0.02905       | 2.0293     |
| 2  | 2.6058             | 0.03731       | 0.03731       | 2.6058     |
| 3  | 2.3562             | 0.03374       | 0.03374       | 2.3562     |
| 4  | 2.4678             | 0.03534       | 0.03534       | 2.4678     |
| 5  | 2.7590             | 0.03951       | 0.03951       | 2.7590     |
| 6  | 2.5199             | 0.03608       | 0.03608       | 2.5198     |
| 7  | 2.7452             | 0.03931       | 0.03931       | 2.7452     |
| 8  | 2.0103             | 0.02879       | 0.02879       | 2.0103     |
| 9  | 2.4316             | 0.03482       | 0.03482       | 2.4316     |
| 10 | 2.4639             | 0.03528       | 0.03528       | 2.4639     |
| 11 | 2.7202             | 0.03179       | 0.03179       | 2.7202     |
| 12 | 2.0474             | 0.02933       | 0.02933       | 2.0474     |
| 13 | 2.2021             | 0.03153       | 0.03153       | 2.2021     |
| 14 | 1.9160             | 0.02744       | 0.02744       | 1.9160     |
| 15 | 2.8426             | 0.04071       | 0.04071       | 2.8426     |
| 16 | 3.2986             | 0.04709       | 0.04709       | 3.2986     |
| 17 | 3.2702             | 0.04683       | 0.04683       | 3.2702     |
| 18 | 3.3648             | 0.04918       | 0.04918       | 3.3648     |
| 19 | 1.4750             | 0.02112       | 0.02112       | 1.4750     |
| 20 | 14.0018            | 0.20050       | 0.20050       | 14.0018    |

TIME 9.17.36  
PAGE NO. 45, VOL. I  
REP. NO. 0004  
11/08/67

RUN NO. 1305

FILE

MC DONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME-.0750 PD= 5453. PDZ= 4.492 PL=01996 QMT-A= 64.47

| N  | QDOT-N<br>(B/SK-S) | QDOT-N/QDOT-A | QDOT-N/QDOT-A | QDOT-N/REF |
|----|--------------------|---------------|---------------|------------|
| 1  | 1.9832             | 0.03076       | 0.03076       | 1.9832     |
| 2  | 2.5247             | 0.03916       | 0.03916       | 2.5247     |
| 3  | 2.2110             | 0.03429       | 0.03429       | 2.2110     |
| 4  | 2.3505             | 0.03646       | 0.03646       | 2.3505     |
| 5  | 2.5934             | 0.04022       | 0.04022       | 2.5934     |
| 6  | 2.3994             | 0.03727       | 0.03727       | 2.3994     |
| 7  | 2.5820             | 0.04025       | 0.04025       | 2.5820     |
| 8  | 1.9986             | 0.02945       | 0.02945       | 1.9986     |
| 9  | 2.2774             | 0.03532       | 0.03532       | 2.2774     |
| 10 | 2.3459             | 0.03639       | 0.03639       | 2.3459     |
| 11 | 2.0814             | 0.03231       | 0.03231       | 2.0814     |
| 12 | 1.9214             | 0.02980       | 0.02980       | 1.9214     |
| 13 | 2.0408             | 0.03178       | 0.03178       | 2.0408     |
| 14 | 1.8339             | 0.02845       | 0.02845       | 1.8339     |
| 15 | 2.6937             | 0.04178       | 0.04178       | 2.6937     |
| 16 | 3.0815             | 0.04782       | 0.04782       | 3.0815     |
| 17 | 3.0612             | 0.04748       | 0.04748       | 3.0612     |
| 18 | 3.1786             | 0.04930       | 0.04930       | 3.1786     |
| 19 | 1.3821             | 0.02144       | 0.02144       | 1.3821     |
| 20 | 13.0780            | 0.20295       | 0.20295       | 13.0780    |

TIME 9.17.36  
PAGE NO. 46, VOL. I  
REP. NO. 0004  
11/08/67

TITLE

RUN NO. 2306

MCDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME = .0800 PD = 5123. P02 = 4.246 P1 = 0.1886 QDUT-A = 59.11

| N  | QDUT-N<br>(0/56-S) | QDUT-W/QDUT-A | QDUT-N/K QDUT-A | QDUT-N/REF |
|----|--------------------|---------------|-----------------|------------|
| 1  | 1.9371             | 0.03277       | 0.03277         | 1.9371     |
| 2  | 2.4437             | 0.04134       | 0.04134         | 2.4437     |
| 3  | 2.0659             | 0.03495       | 0.03495         | 2.0659     |
| 4  | 2.2333             | 0.03774       | 0.03774         | 2.2333     |
| 5  | 2.4277             | 0.04107       | 0.04107         | 2.4277     |
| 6  | 2.2789             | 0.03855       | 0.03855         | 2.2789     |
| 7  | 2.4189             | 0.04092       | 0.04092         | 2.4189     |
| 8  | 1.7869             | 0.03023       | 0.03023         | 1.7869     |
| 9  | 2.1231             | 0.03592       | 0.03592         | 2.1231     |
| 10 | 2.2278             | 0.03769       | 0.03769         | 2.2278     |
| 11 | 1.9466             | 0.03293       | 0.03293         | 1.9466     |
| 12 | 1.7550             | 0.03037       | 0.03037         | 1.7550     |
| 13 | 1.8954             | 0.03207       | 0.03207         | 1.8954     |
| 14 | 1.7519             | 0.02964       | 0.02964         | 1.7519     |
| 15 | 2.5447             | 0.04305       | 0.04305         | 2.5447     |
| 16 | 2.8745             | 0.04863       | 0.04863         | 2.8745     |
| 17 | 2.9522             | 0.04825       | 0.04825         | 2.9522     |
| 18 | 2.9924             | 0.05062       | 0.05062         | 2.9924     |
| 19 | 1.2891             | 0.02181       | 0.02181         | 1.2891     |
| 20 | 12.1543            | 0.20562       | 0.20562         | 12.1543    |

TIME 9.17.36  
PAGE NO. 47, VOL. I  
REP. NO. 6004  
11/08/67

RUN NO. 2306  
TITLE  
MCDONNELL  
HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES  
TIME=0.0850 PD= 4.830. PD2= 4.022 PL=0.1787 QDOT-A= 53.75

| N  | QDOT-N<br>(B/SF-S) | QDOT-M/QDOT-A | QDOT-N/QDOT-A | QDOT-N/REF |
|----|--------------------|---------------|---------------|------------|
| 1  | 1.8910             | 0.03518       | 0.03518       | 1.8910     |
| 2  | 2.3626             | 0.04396       | 0.04396       | 2.3626     |
| 3  | 1.9207             | 0.03573       | 0.03573       | 1.9207     |
| 4  | 2.1160             | 0.03937       | 0.03937       | 2.1160     |
| 5  | 2.2620             | 0.04208       | 0.04208       | 2.2620     |
| 6  | 2.1585             | 0.04016       | 0.04016       | 2.1585     |
| 7  | 2.2558             | 0.04197       | 0.04197       | 2.2558     |
| 8  | 1.6752             | 0.03117       | 0.03117       | 1.6752     |
| 9  | 1.9689             | 0.03663       | 0.03663       | 1.9689     |
| 10 | 2.1097             | 0.03925       | 0.03925       | 2.1097     |
| 11 | 1.8597             | 0.03367       | 0.03367       | 1.8597     |
| 12 | 1.6685             | 0.03104       | 0.03104       | 1.6685     |
| 13 | 1.7421             | 0.03241       | 0.03241       | 1.7421     |
| 14 | 1.6698             | 0.03107       | 0.03107       | 1.6698     |
| 15 | 2.3958             | 0.04457       | 0.04457       | 2.3958     |
| 16 | 2.6674             | 0.04963       | 0.04963       | 2.6674     |
| 17 | 2.6632             | 0.04917       | 0.04917       | 2.6632     |
| 18 | 2.8063             | 0.05221       | 0.05221       | 2.8063     |
| 19 | 1.1967             | 0.02225       | 0.02225       | 1.1962     |
| 20 | 11.2305            | 0.20894       | 0.20894       | 11.2305    |

TIME 9.17.36  
 PAGE NO. 40, VOL. I  
 REP. NO. 0004  
 11/08/67

TITLE  
 MC DONNELL

RUN NO. 2306

HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

TIME=0.0900 PD= 4572. P02= 3.819 P1=0.01689 ODOT-A= 48.39

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-V/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.8649             | 0.03813       | 0.03813        | 1.8449     |
| 2  | 2.2316             | 0.04715       | 0.04715        | 2.2816     |
| 3  | 1.7756             | 0.03669       | 0.03669        | 1.7756     |
| 4  | 1.9787             | 0.04130       | 0.04130        | 1.9287     |
| 5  | 2.0584             | 0.04332       | 0.04332        | 2.0964     |
| 6  | 2.0381             | 0.04212       | 0.04212        | 2.0381     |
| 7  | 2.0026             | 0.04324       | 0.04324        | 2.0026     |
| 8  | 1.5635             | 0.03231       | 0.03231        | 1.5635     |
| 9  | 1.8166             | 0.03750       | 0.03750        | 1.8166     |
| 10 | 1.9917             | 0.04116       | 0.04116        | 1.9917     |
| 11 | 1.6729             | 0.03457       | 0.03457        | 1.6729     |
| 12 | 1.5621             | 0.03187       | 0.03187        | 1.5621     |
| 13 | 1.5887             | 0.03283       | 0.03283        | 1.5887     |
| 14 | 1.5877             | 0.03241       | 0.03281        | 1.5877     |
| 15 | 2.2469             | 0.04643       | 0.04643        | 2.2469     |
| 16 | 2.4604             | 0.05084       | 0.05084        | 2.4604     |
| 17 | 2.4342             | 0.05030       | 0.05030        | 2.4342     |
| 18 | 2.6201             | 0.05415       | 0.05415        | 2.6201     |
| 19 | 1.1032             | 0.02280       | 0.02280        | 1.1032     |
| 20 | 10.3067            | 0.21299       | 0.21299        | 10.3067    |

RUN NO. 2306

TIME 9.17.36  
PAGE NO. 49, VOL. I  
REP. NO. 5004  
11/08/67

TITLE MCDONNELL  
HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.950 PN= 4350. P02= 3.637 PI=01601 QDOT-A= 43.03

| N  | QDOT-N<br>(B/SE-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.7988             | 0.04180       | 0.04180        | 1.7988     |
| 2  | 2.2005             | 0.05114       | 0.05114        | 2.2005     |
| 3  | 1.6304             | 0.03789       | 0.03789        | 1.6304     |
| 4  | 1.8014             | 0.04372       | 0.04372        | 1.8014     |
| 5  | 1.9307             | 0.04487       | 0.04487        | 1.9307     |
| 6  | 1.9176             | 0.04457       | 0.04457        | 1.9176     |
| 7  | 1.9295             | 0.04484       | 0.04484        | 1.9295     |
| 8  | 1.4519             | 0.03374       | 0.03374        | 1.4519     |
| 9  | 1.6603             | 0.03859       | 0.03859        | 1.6603     |
| 10 | 1.8736             | 0.04354       | 0.04354        | 1.8736     |
| 11 | 1.5361             | 0.03570       | 0.03570        | 1.5361     |
| 12 | 1.4156             | 0.03290       | 0.03290        | 1.4156     |
| 13 | 1.4354             | 0.03336       | 0.03336        | 1.4354     |
| 14 | 1.5056             | 0.03499       | 0.03499        | 1.5056     |
| 15 | 2.0979             | 0.04874       | 0.04874        | 2.0979     |
| 16 | 2.2533             | 0.05237       | 0.05237        | 2.2533     |
| 17 | 2.2252             | 0.05171       | 0.05171        | 2.2252     |
| 18 | 2.6339             | 0.05656       | 0.05656        | 2.6339     |
| 19 | 1.0103             | 0.02348       | 0.02348        | 1.0103     |
| 20 | 9.3830             | 0.21806       | 0.21806        | 9.3830     |

RUN NO. 2306

TITLE

MC DONNELL

TIME 2.17.36  
PAGE NO. 50, VOL. 2  
REP. NO. 0030  
11/20/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=1000 P0= 4164. P02= 3.477 P1=01518 QDOT-A= 37.67

| N  | QDOT-N<br>(R/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.7527             | 0.04653       | 0.04653        | 1.7527     |
| 2  | 2.1195             | 0.05627       | 0.05627        | 2.1195     |
| 3  | 1.4852             | 0.03943       | 0.03943        | 1.4852     |
| 4  | 1.7642             | 0.04683       | 0.04683        | 1.7642     |
| 5  | 1.7651             | 0.04685       | 0.04686        | 1.7651     |
| 6  | 1.7972             | 0.04771       | 0.04771        | 1.7972     |
| 7  | 1.7663             | 0.04689       | 0.04689        | 1.7663     |
| 8  | 1.3402             | 0.03558       | 0.03559        | 1.3402     |
| 9  | 1.5061             | 0.03998       | 0.03998        | 1.5061     |
| 10 | 1.7555             | 0.04661       | 0.04661        | 1.7555     |
| 11 | 1.3993             | 0.03715       | 0.03715        | 1.3993     |
| 12 | 1.2892             | 0.03423       | 0.03423        | 1.2892     |
| 13 | 1.2820             | 0.03403       | 0.03403        | 1.2820     |
| 14 | 1.4236             | 0.03779       | 0.03779        | 1.4236     |
| 15 | 1.9490             | 0.05176       | 0.05176        | 1.9490     |
| 16 | 2.0462             | 0.05432       | 0.05432        | 2.0462     |
| 17 | 2.0162             | 0.05352       | 0.05352        | 2.0162     |
| 18 | 2.2478             | 0.05967       | 0.05967        | 2.2478     |
| 19 | 0.9174             | 0.02435       | 0.02435        | 0.9174     |
| 20 | 8.4592             | 0.22457       | 0.22457        | 8.4592     |



TIME 9.17.37  
PAGE NO. 51, VOL. I  
REP. NO. 6004  
11/08/67

MC DONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2306

TIME = 0.0300 PO=10643.80 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | C.117022 | 0.117E-04 | C.153E-01 | 0.352E 01 | 0.203E-01   |
| 2     | 0.0 | C.143390 | 0.142E-04 | 0.187E-01 | 0.431E 01 | 0.266E-01   |
| 3     | 0.0 | C.151176 | 0.151E-04 | 0.197E-01 | 0.456E 01 | 0.286E-01   |
| 4     | 0.0 | C.142237 | 0.142E-04 | 0.185E-01 | 0.428E 01 | 0.263E-01   |
| 5     | 0.0 | C.239742 | 0.238E-04 | 0.312E-01 | 0.720E 01 | 0.498E-01   |
| 6     | 0.0 | C.151136 | 0.150E-04 | 0.197E-01 | 0.455E 01 | 0.285E-01   |
| 7     | 0.0 | C.166701 | 0.166E-04 | 0.217E-01 | 0.502E 01 | 0.323E-01   |
| 8     | 0.0 | C.146025 | 0.146E-04 | 0.183E-01 | 0.422E 01 | 0.259E-01   |
| 9     | 0.0 | C.164495 | 0.164E-04 | 0.215E-01 | 0.495E 01 | 0.317E-01   |
| 10    | 0.0 | C.177689 | 0.177E-04 | 0.231E-01 | 0.534E 01 | 0.349E-01   |
| 11    | 0.0 | C.138049 | 0.137E-04 | 0.180E-01 | 0.415E 01 | 0.253E-01   |
| 12    | 0.0 | C.158400 | 0.158E-04 | 0.207E-01 | 0.477E 01 | 0.303E-01   |
| 13    | 0.0 | C.153558 | 0.153E-04 | 0.200E-01 | 0.462E 01 | 0.291E-01   |
| 14    | 0.0 | C.164513 | 0.164E-04 | 0.215E-01 | 0.495E 01 | 0.317E-01   |
| 15    | 0.0 | C.200714 | 0.200E-04 | 0.262E-01 | 0.604E 01 | 0.405E-01   |
| 16    | 0.0 | C.225165 | 0.225E-04 | 0.296E-01 | 0.679E 01 | 0.465E-01   |
| 17    | 0.0 | C.252350 | 0.251E-04 | 0.320E-01 | 0.754E 01 | 0.530E-01   |
| 18    | 0.0 | C.224782 | 0.224E-04 | 0.293E-01 | 0.676E 01 | 0.463E-01   |
| 19    | 0.0 | C.095098 | 0.947E-05 | 0.124E-01 | 0.284E 01 | 0.150E-01   |
| 20    | 0.0 | C.673585 | 0.671E-04 | 0.878E-01 | 0.203E 02 | 0.155E 00   |

TIME 9.17.37  
PAGE NO. 52, VOL. I  
REP. NO. COOL  
11/08/67

TITLE  
MCDONNELL

RUN NO. 2306

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0350 PO = 9389.62 ALPHA = 15.00

| PROBE | PHT | PON      | PON/PO    | PON/PO7   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.111818 | 0.119E-04 | 0.155E-01 | 0.355E 01 | 0.206E-01   |
| 2     | 0.0 | C.132284 | 0.141E-04 | 0.183E-01 | 0.420E 01 | 0.259E-01   |
| 3     | 0.0 | C.141302 | 0.150E-04 | 0.195E-01 | 0.449E 01 | 0.282E-01   |
| 4     | 0.0 | C.130213 | 0.139E-04 | 0.180E-01 | 0.414E 01 | 0.253E-01   |
| 5     | 0.0 | C.202024 | 0.215E-04 | 0.279E-01 | 0.642E 01 | 0.437E-01   |
| 6     | 0.0 | C.134767 | 0.144E-04 | 0.180E-01 | 0.428E 01 | 0.265E-01   |
| 7     | 0.0 | C.149627 | 0.159E-04 | 0.207E-01 | 0.475E 01 | 0.303E-01   |
| 8     | 0.0 | C.124663 | 0.133E-04 | 0.172E-01 | 0.396E 01 | 0.239E-01   |
| 9     | 0.0 | C.145558 | 0.155E-04 | 0.201E-01 | 0.463E 01 | 0.292E-01   |
| 10    | 0.0 | C.150942 | 0.169E-04 | 0.220E-01 | 0.505E 01 | 0.327E-01   |
| 11    | 0.0 | C.122696 | 0.131E-04 | 0.170E-01 | 0.390E 01 | 0.234E-01   |
| 12    | 0.0 | C.139830 | 0.149E-04 | 0.193E-01 | 0.444E 01 | 0.278E-01   |
| 13    | 0.0 | C.135636 | 0.144E-04 | 0.188E-01 | 0.431E 01 | 0.267E-01   |
| 14    | 0.0 | C.148361 | 0.158E-04 | 0.205E-01 | 0.471E 01 | 0.300E-01   |
| 15    | 0.0 | C.145735 | 0.198E-04 | 0.257E-01 | 0.590E 01 | 0.395E-01   |
| 16    | 0.0 | C.206760 | 0.220E-04 | 0.286E-01 | 0.657E 01 | 0.449E-01   |
| 17    | 0.0 | C.228067 | 0.243E-04 | 0.315E-01 | 0.725E 01 | 0.504E-01   |
| 18    | 0.0 | C.204430 | 0.218E-04 | 0.283E-01 | 0.650E 01 | 0.443E-01   |
| 19    | 0.0 | C.094087 | 0.496E-05 | 0.116E-01 | 0.267E 01 | 0.135E-01   |
| 20    | 0.0 | C.620688 | 0.661E-04 | 0.859E-01 | 0.197E 02 | 0.151E 00   |

TIME 9.17.37  
PAGE NO. 53, VOL. I  
REP. NO. 6004  
11/08/67

TITLE  
MCDONNELL

RUN NO. 3306

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0400 PO = 8771.47 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.106841 | 0.172E-04 | 0.157E-01 | 0.359E 01 | 0.210E-01   |
| 2     | 0.0 | 0.127504 | 0.140E-04 | 0.180E-01 | 0.411E 01 | 0.252E-01   |
| 3     | 0.0 | 0.131880 | 0.150E-04 | 0.194E-01 | 0.443E 01 | 0.278E-01   |
| 4     | 0.0 | 0.119295 | 0.136E-04 | 0.175E-01 | 0.401E 01 | 0.243E-01   |
| 5     | 0.0 | 0.168716 | 0.192E-04 | 0.248E-01 | 0.566E 01 | 0.378E-01   |
| 6     | 0.0 | 0.120023 | 0.137E-04 | 0.176E-01 | 0.403E 01 | 0.245E-01   |
| 7     | 0.0 | 0.134159 | 0.153E-04 | 0.197E-01 | 0.450E 01 | 0.284E-01   |
| 8     | 0.0 | 0.110668 | 0.126E-04 | 0.162E-01 | 0.372E 01 | 0.220E-01   |
| 9     | 0.0 | 0.124537 | 0.147E-04 | 0.189E-01 | 0.432E 01 | 0.269E-01   |
| 10    | 0.0 | 0.142071 | 0.162E-04 | 0.209E-01 | 0.477E 01 | 0.305E-01   |
| 11    | 0.0 | 0.108870 | 0.124E-04 | 0.160E-01 | 0.366E 01 | 0.215E-01   |
| 12    | 0.0 | 0.123089 | 0.140E-04 | 0.181E-01 | 0.413E 01 | 0.254E-01   |
| 13    | 0.0 | 0.119631 | 0.136E-04 | 0.175E-01 | 0.401E 01 | 0.244E-01   |
| 14    | 0.0 | 0.133672 | 0.152E-04 | 0.196E-01 | 0.443E 01 | 0.283E-01   |
| 15    | 0.0 | 0.171698 | 0.196E-04 | 0.252E-01 | 0.577E 01 | 0.386E-01   |
| 16    | 0.0 | 0.189288 | 0.216E-04 | 0.278E-01 | 0.636E 01 | 0.434E-01   |
| 17    | 0.0 | 0.205723 | 0.235E-04 | 0.302E-01 | 0.691E 01 | 0.479E-01   |
| 18    | 0.0 | 0.185617 | 0.212E-04 | 0.272E-01 | 0.623E 01 | 0.424E-01   |
| 19    | 0.0 | 0.074182 | 0.046E-04 | 0.109E-01 | 0.249E 01 | 0.121E-01   |
| 20    | 0.0 | 0.571841 | 0.652E-04 | 0.839E-01 | 0.192E 02 | 0.147E 00   |

RUN NO. 2306

TITLE

MCDONNELL

TIME 9.17.38  
PAGE NO. 54, VOL. I  
REP. NO. G004  
11/08/67

HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.0450 PO= 8189.35 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | C.102092 | 0.125E-04 | 0.159E-01 | 0.362E 01 | 0.213E-01   |
| 2     | 0.0 | 0.113751 | 0.139E-04 | 0.177E-01 | 0.404E 01 | 0.247E-01   |
| 3     | 0.0 | 0.123109 | 0.150E-04 | 0.192E-01 | 0.437E 01 | 0.276E-01   |
| 4     | 0.0 | C.109483 | 0.134E-04 | 0.171E-01 | 0.389E 01 | 0.235E-01   |
| 5     | 0.0 | C.139318 | 0.170E-04 | 0.217E-01 | 0.495E 01 | 0.321E-01   |
| 6     | 0.0 | C.106904 | 0.131E-04 | 0.167E-01 | 0.340E 01 | 0.221E-01   |
| 7     | 0.0 | 0.120299 | 0.147E-04 | 0.187E-01 | 0.427E 01 | 0.266E-01   |
| 8     | 0.0 | C.098239 | 0.120E-04 | 0.153E-01 | 0.362E 01 | 0.202E-01   |
| 9     | 0.0 | C.113436 | 0.139E-04 | 0.177E-01 | 0.403E 01 | 0.246E-01   |
| 10    | 0.0 | C.126876 | 0.155E-04 | 0.194E-01 | 0.450E 01 | 0.285E-01   |
| 11    | 0.0 | C.096573 | 0.116E-04 | 0.151E-01 | 0.353E 01 | 0.198E-01   |
| 12    | 0.0 | C.108178 | 0.132E-04 | 0.169E-01 | 0.384E 01 | 0.231E-01   |
| 13    | 0.0 | 0.105242 | 0.129E-04 | 0.164E-01 | 0.374E 01 | 0.223E-01   |
| 14    | 0.0 | C.120647 | 0.147E-04 | 0.188E-01 | 0.428E 01 | 0.269E-01   |
| 15    | 0.0 | C.158604 | 0.194E-04 | 0.247E-01 | 0.563E 01 | 0.377E-01   |
| 16    | 0.0 | C.173150 | 0.211E-04 | 0.270E-01 | 0.615E 01 | 0.419E-01   |
| 17    | 0.0 | C.185321 | 0.226E-04 | 0.289E-01 | 0.658E 01 | 0.456E-01   |
| 18    | 0.0 | 0.168343 | 0.206E-04 | 0.262E-01 | 0.598E 01 | 0.405E-01   |
| 19    | 0.0 | C.065384 | 0.798E-05 | 0.102E-01 | 0.232E 01 | 0.107E-01   |
| 20    | 0.0 | C.527042 | 0.644E-04 | C.821E-01 | 0.187E 02 | 0.144E 00   |

RUN NO. 2306

TITLE

MC DONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME 0.17.38  
PAGE NO. 55, VOL. I  
REP. NO. 6004  
11/08/67

TIME = 0.0500 PD = 7643.27 ALPHA = 15.00

| PROBE | PMT | PON      | PON/PO    | PON/PO2   | PON/PI    | (POI-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.097570 | 0.128E-04 | 0.161E-01 | 0.367E 01 | 0.218E-01   |
| 2     | 0.0 | 0.106025 | 0.119E-04 | 0.175E-01 | 0.398E 01 | 0.243E-01   |
| 3     | 0.0 | 0.114990 | 0.150E-04 | 0.192E-01 | 0.432E 01 | 0.271E-01   |
| 4     | 0.0 | 0.100777 | 0.132E-04 | 0.167E-01 | 0.379E 01 | 0.277E-01   |
| 5     | 0.0 | 0.113030 | 0.149E-04 | 0.188E-01 | 0.428E 01 | 0.247E-01   |
| 6     | 0.0 | 0.096410 | 0.125E-04 | 0.154E-01 | 0.358E 01 | 0.211E-01   |
| 7     | 0.0 | 0.108045 | 0.141E-04 | 0.179E-01 | 0.404E 01 | 0.250E-01   |
| 8     | 0.0 | 0.083376 | 0.114E-04 | 0.145E-01 | 0.328E 01 | 0.194E-01   |
| 9     | 0.0 | 0.100254 | 0.131E-04 | 0.166E-01 | 0.377E 01 | 0.224E-01   |
| 10    | 0.0 | 0.113356 | 0.148E-04 | 0.188E-01 | 0.426E 01 | 0.244E-01   |
| 11    | 0.0 | 0.085903 | 0.112E-04 | 0.142E-01 | 0.322E 01 | 0.181E-01   |
| 12    | 0.0 | 0.095097 | 0.124E-04 | 0.157E-01 | 0.357E 01 | 0.210E-01   |
| 13    | 0.0 | 0.092769 | 0.121E-04 | 0.154E-01 | 0.348E 01 | 0.203E-01   |
| 14    | 0.0 | 0.108686 | 0.142E-04 | 0.180E-01 | 0.408E 01 | 0.252E-01   |
| 15    | 0.0 | 0.146451 | 0.192E-04 | 0.242E-01 | 0.550E 01 | 0.367E-01   |
| 16    | 0.0 | 0.158345 | 0.207E-04 | 0.262E-01 | 0.595E 01 | 0.406E-01   |
| 17    | 0.0 | 0.166858 | 0.218E-04 | 0.276E-01 | 0.627E 01 | 0.430E-01   |
| 18    | 0.0 | 0.152610 | 0.200E-04 | 0.253E-01 | 0.573E 01 | 0.386E-01   |
| 19    | 0.0 | 0.057690 | 0.755E-05 | 0.955E-02 | 0.217E 01 | 0.953E-02   |
| 20    | 0.0 | 0.486292 | 0.636E-04 | 0.805E-01 | 0.183E 02 | 0.141E 00   |

TIME 9.17.39  
PAGE NO. 56, VOL. I  
REP. NO. 6004  
11/08/67

TITLE

RUN NO. 2306

MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.0550 PO= 7133.21 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO     | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|------------|-----------|-----------|-------------|
| 1     | C.0 | 0.093275 | 0.131E-04  | 0.166E-01 | 0.371E 01 | 0.222E-01   |
| 2     | C.0 | 0.099326 | 0.139E-04  | 0.175E-01 | 0.395E 01 | 0.241E-01   |
| 3     | C.0 | 0.107523 | 0.151E-04  | 0.189E-01 | 0.429E 01 | 0.261E-01   |
| 4     | C.0 | 0.093176 | 0.131E-04  | 0.166E-01 | 0.370E 01 | 0.221E-01   |
| 5     | C.0 | 0.092251 | 0.129E-04  | 0.162E-01 | 0.367E 01 | 0.219E-01   |
| 6     | C.0 | 0.095941 | 0.120E-04  | 0.150E-01 | 0.340E 01 | 0.197E-01   |
| 7     | C.0 | 0.093398 | 0.137E-04  | 0.171E-01 | 0.387E 01 | 0.235E-01   |
| 8     | C.0 | 0.078079 | 0.109E-04  | 0.137E-01 | 0.310E 01 | 0.172E-01   |
| 9     | C.0 | 0.088992 | 0.125E-04  | 0.156E-01 | 0.354E 01 | 0.208E-01   |
| 10    | C.0 | 0.101512 | 0.142E-04  | 0.178E-01 | 0.404E 01 | 0.242E-01   |
| 11    | C.0 | 0.076562 | 0.107E-04  | 0.135E-01 | 0.304E 01 | 0.167E-01   |
| 12    | C.0 | 0.083046 | 0.118E-04  | 0.147E-01 | 0.333E 01 | 0.191E-01   |
| 13    | C.0 | 0.082113 | 0.115E-04  | 0.144E-01 | 0.327E 01 | 0.185E-01   |
| 14    | C.0 | 0.098388 | 0.134E-04  | 0.173E-01 | 0.391E 01 | 0.238E-01   |
| 15    | C.0 | 0.134239 | 0.190E-04  | 0.230E-01 | 0.538E 01 | 0.358E-01   |
| 16    | C.0 | 0.144874 | 0.203E-04  | 0.255E-01 | 0.576E 01 | 0.390E-01   |
| 17    | C.0 | 0.150336 | 0.211E-04  | 0.266E-01 | 0.598E 01 | 0.408E-01   |
| 18    | C.0 | 0.138415 | 0.194E-04  | 0.243E-01 | 0.550E 01 | 0.369E-01   |
| 19    | C.0 | 0.051103 | 0.0716E-05 | 0.089E-02 | 0.203E 01 | 0.845E-02   |
| 20    | C.0 | 0.449190 | 0.630E-04  | 0.790E-01 | 0.179E 02 | 0.138E 00   |

TIME 9.17.39  
PAGE NO. 57, VOL. I  
REP. NO. 0004  
11/09/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 3306

TIME= 0.0600 PD= 6659.20 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO    | PCN/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | C.0 | G.089209 | 0.134E-04 | 0.167E-01 | 0.376E 01 | 0.226E-01   |
| 2     | C.0 | G.093653 | 0.141E-04 | 0.175E-01 | 0.394E 01 | 0.242E-01   |
| 3     | C.0 | 0.100707 | 0.151E-04 | 0.188E-01 | 0.424E 01 | 0.264E-01   |
| 4     | C.0 | G.086680 | 0.130E-04 | 0.162E-01 | 0.365E 01 | 0.218E-01   |
| 5     | C.0 | G.074583 | 0.112E-04 | 0.139E-01 | 0.314E 01 | 0.176E-01   |
| 6     | C.0 | 0.077298 | 0.116E-04 | 0.144E-01 | 0.325E 01 | 0.185E-01   |
| 7     | C.0 | G.088359 | 0.133E-04 | 0.165E-01 | 0.372E 01 | 0.223E-01   |
| 8     | C.0 | G.070348 | 0.106E-04 | 0.131E-01 | 0.296E 01 | 0.161E-01   |
| 9     | C.0 | 0.079649 | 0.120E-04 | 0.149E-01 | 0.335E 01 | 0.193E-01   |
| 10    | C.0 | 0.091343 | 0.137E-04 | 0.170E-01 | 0.385E 01 | 0.236E-01   |
| 11    | C.0 | G.068848 | 0.103E-04 | 0.129E-01 | 0.290E 01 | 0.156E-01   |
| 12    | C.0 | G.074425 | 0.112E-04 | 0.139E-01 | 0.313E 01 | 0.175E-01   |
| 13    | C.0 | G.073272 | 0.110E-04 | 0.137E-01 | 0.309E 01 | 0.171E-01   |
| 14    | C.0 | G.049554 | 0.134E-04 | 0.167E-01 | 0.377E 01 | 0.227E-01   |
| 15    | C.0 | 0.124970 | 0.188E-04 | 0.233E-01 | 0.526E 01 | 0.350E-01   |
| 16    | C.0 | G.132736 | 0.199E-04 | 0.248E-01 | 0.559E 01 | 0.377E-01   |
| 17    | C.0 | G.135754 | 0.204E-04 | 0.253E-01 | 0.572E 01 | 0.387E-01   |
| 18    | C.0 | 0.125760 | 0.180E-04 | 0.235E-01 | 0.529E 01 | 0.353E-01   |
| 19    | C.0 | 0.045621 | 0.689E-04 | 0.451E-02 | 0.192E 01 | 0.756E-02   |
| 20    | C.0 | 0.416936 | 0.626E-04 | 0.478E-01 | 0.176E 02 | 0.136E 00   |

TIME 9.17.40  
PAGE NO. 58, VOL. I  
REP. NO. 6004  
11/08/67

TITLE  
MCDONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2306

TIME = 0.0650 PO = 6221.21 ALPHA = 15.00

| PROBE | PHI | PCN      | PCN/PO    | PCN/PO2   | PCN/PI    | (PCN-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | C.085369 | 0.137E-04 | 0.162E-01 | 0.341E 01 | 0.231E-01   |
| 2     | C.C | C.089008 | 0.143E-04 | 0.176E-01 | 0.397E 01 | 0.244E-01   |
| 3     | C.C | C.096543 | 0.152E-04 | 0.187E-01 | 0.427E 01 | 0.265E-01   |
| 4     | C.C | C.081291 | 0.131E-04 | 0.161E-01 | 0.362E 01 | 0.214E-01   |
| 5     | 0.0 | C.060825 | 0.097E-05 | 0.121E-01 | 0.271E 01 | 0.141E-01   |
| 6     | C.C | C.070680 | 0.114E-04 | 0.140E-01 | 0.315E 01 | 0.177E-01   |
| 7     | C.C | C.080926 | 0.130E-04 | 0.160E-01 | 0.361E 01 | 0.215E-01   |
| 8     | C.C | C.064183 | 0.103E-04 | 0.127E-01 | 0.286E 01 | 0.153E-01   |
| 9     | C.C | C.072226 | 0.116E-04 | 0.143E-01 | 0.327E 01 | 0.183E-01   |
| 10    | C.C | C.082850 | 0.133E-04 | 0.164E-01 | 0.369E 01 | 0.222E-01   |
| 11    | C.C | C.062663 | 0.101E-04 | 0.124E-01 | 0.279E 01 | 0.148E-01   |
| 12    | C.C | C.066834 | 0.107E-04 | 0.137E-01 | 0.299E 01 | 0.163E-01   |
| 13    | 0.0 | C.066248 | 0.106E-04 | 0.131E-01 | 0.295E 01 | 0.161E-01   |
| 14    | C.C | C.082184 | 0.132E-04 | 0.163E-01 | 0.366E 01 | 0.219E-01   |
| 15    | 0.0 | C.115642 | 0.186E-04 | 0.229E-01 | 0.516E 01 | 0.342E-01   |
| 16    | 0.0 | C.121931 | 0.196E-04 | 0.242E-01 | 0.544E 01 | 0.365E-01   |
| 17    | C.C | C.123113 | 0.198E-04 | 0.244E-01 | 0.549E 01 | 0.369E-01   |
| 18    | 0.0 | C.114644 | 0.184E-04 | 0.227E-01 | 0.511E 01 | 0.339E-01   |
| 19    | 0.0 | C.084745 | 0.663E-05 | 0.817E-02 | 0.184E 01 | 0.690E-02   |
| 20    | 0.0 | C.308332 | 0.524E-04 | 0.769E-01 | 0.173E 02 | 0.134E 00   |



RUN NO. 2306

TITLE

MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME 9.17.40  
PAGE NO. 59, VOL. I  
REF. NO. 6006  
11/08/67

TIME = 0.0700 PU = 5819.25 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-FI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.081757 | 0.140E-04 | 0.172E-01 | 0.384E 01 | 0.236E-01   |
| 2     | 0.0 | 0.085389 | 0.147E-04 | 0.179E-01 | 0.403E 01 | 0.250E-01   |
| 3     | 0.0 | 0.087031 | 0.153E-04 | 0.187E-01 | 0.420E 01 | 0.264E-01   |
| 4     | 0.0 | 0.077007 | 0.132E-04 | 0.162E-01 | 0.364E 01 | 0.217E-01   |
| 5     | 0.0 | 0.050976 | 0.876E-05 | 0.107E-01 | 0.241E 01 | 0.116E-01   |
| 6     | 0.0 | 0.065686 | 0.113E-04 | 0.138E-01 | 0.310E 01 | 0.173E-01   |
| 7     | 0.0 | 0.075100 | 0.129E-04 | 0.158E-01 | 0.355E 01 | 0.210E-01   |
| 8     | 0.0 | 0.059584 | 0.102E-04 | 0.125E-01 | 0.281E 01 | 0.149E-01   |
| 9     | 0.0 | 0.066723 | 0.115E-04 | 0.140E-01 | 0.315E 01 | 0.177E-01   |
| 10    | 0.0 | 0.076033 | 0.131E-04 | 0.160E-01 | 0.359E 01 | 0.213E-01   |
| 11    | 0.0 | 0.058005 | 0.997E-05 | 0.122E-01 | 0.274E 01 | 0.143E-01   |
| 12    | 0.0 | 0.061072 | 0.105E-04 | 0.128E-01 | 0.288E 01 | 0.155E-01   |
| 13    | 0.0 | 0.061040 | 0.105E-04 | 0.128E-01 | 0.288E 01 | 0.155E-01   |
| 14    | 0.0 | 0.076277 | 0.131E-04 | 0.160E-01 | 0.360E 01 | 0.214E-01   |
| 15    | 0.0 | 0.107256 | 0.184E-04 | 0.225E-01 | 0.507E 01 | 0.335E-01   |
| 16    | 0.0 | 0.112461 | 0.193E-04 | 0.236E-01 | 0.531E 01 | 0.355E-01   |
| 17    | 0.0 | 0.112412 | 0.193E-04 | 0.236E-01 | 0.531E 01 | 0.355E-01   |
| 18    | 0.0 | 0.105069 | 0.181E-04 | 0.221E-01 | 0.496E 01 | 0.326E-01   |
| 19    | 0.0 | 0.037975 | 0.653E-05 | 0.798E-02 | 0.179E 01 | 0.653E-02   |
| 20    | 0.0 | 0.363776 | 0.625E-04 | 0.764E-01 | 0.172E 02 | 0.133E 00   |

TIME 9.17.41  
PAGE NO. 60, VOL. I  
REP. NO. 0004  
11/08/67

**TITLE**

MC DONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.0750 PQ= 5453.33 ALPHA= 15.00

| PROBE | pH  | PON      | PON/PO    | PCN/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | C.O | C.078377 | 0.144E-04 | 0.174E-01 | 0.393E 01 | 0.241E-01   |
| 2     | C.C | C.027897 | 0.152E-04 | 0.184E-01 | 0.415E 01 | 0.259E-01   |
| 3     | C.O | C.084170 | 0.154E-04 | 0.187E-01 | 0.427E 01 | 0.264E-01   |
| 4     | C.O | C.073828 | 0.135E-04 | 0.164E-01 | 0.370E 01 | 0.227E-01   |
| 5     | C.O | C.045037 | 0.126E-05 | 0.100E-01 | 0.224E 01 | 0.103E-01   |
| 6     | C.C | C.062318 | 0.114E-04 | 0.139E-01 | 0.312E 01 | 0.174E-01   |
| 7     | O.O | C.076801 | 0.130E-04 | 0.158E-01 | 0.358E 01 | 0.210E-01   |
| 8     | O.O | C.050552 | 0.104E-04 | 0.126E-01 | 0.203E 01 | 0.151E-01   |
| 9     | O.O | C.063139 | 0.116E-04 | 0.141E-01 | 0.314E 01 | 0.178E-01   |
| 10    | O.O | C.070891 | 0.130E-04 | 0.158E-01 | 0.365E 01 | 0.219E-01   |
| 11    | O.O | C.056875 | 0.101E-04 | 0.122E-01 | 0.275E 01 | 0.144E-01   |
| 12    | O.O | C.057141 | 0.105E-04 | 0.127E-01 | 0.284E 01 | 0.153E-01   |
| 13    | C.O | C.057648 | 0.106E-04 | 0.128E-01 | 0.289E 01 | 0.155E-01   |
| 14    | C.O | C.071834 | 0.132E-04 | 0.163E-01 | 0.360E 01 | 0.214E-01   |
| 15    | C.O | C.099812 | 0.193E-04 | 0.223E-01 | 0.504E 01 | 0.329E-01   |
| 16    | O.O | C.104323 | 0.191E-04 | 0.223E-01 | 0.523E 01 | 0.347E-01   |
| 17    | O.O | C.103652 | 0.190E-04 | 0.221E-01 | 0.519E 01 | 0.345E-01   |
| 18    | C.O | C.097032 | 0.178E-04 | 0.216E-01 | 0.484E 01 | 0.317E-01   |
| 19    | C.O | C.035910 | 0.657E-05 | 0.707E-02 | 0.174E 01 | 0.653E-02   |
| 20    | O.O | C.343269 | 0.629E-05 | 0.764E-01 | 0.172E 02 | 0.133E 00   |

TIME 9.17.41  
PAGE NO. 61, VOL. I  
REP. NO. 0004  
11/08/67

MCDOONFLL

HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 3306

TIME = 0.0800 PO = 5123.44 ALPHA = 15.00

| PROBE | PHI | PIN      | PON/P1    | PCN/PC2   | MCN/P1    | IPDN-P11/01 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.075215 | 0.147E-04 | 0.177E-01 | 0.392E 01 | 0.245E-01   |
| 2     | 0.0 | 0.081231 | 0.159E-04 | 0.191E-01 | 0.431E 01 | 0.272E-01   |
| 3     | 0.0 | 0.079961 | 0.156E-04 | 0.188E-01 | 0.424E 01 | 0.266E-01   |
| 4     | 0.0 | 0.071755 | 0.140E-04 | 0.160E-01 | 0.381E 01 | 0.230E-01   |
| 5     | 0.0 | 0.063009 | 0.139E-04 | 0.151E-01 | 0.228E 01 | 0.105E-01   |
| 6     | 0.0 | 0.060575 | 0.119E-04 | 0.143E-01 | 0.321E 01 | 0.142E-01   |
| 7     | 0.0 | 0.060269 | 0.113E-04 | 0.141E-01 | 0.342E 01 | 0.215E-01   |
| 8     | 0.0 | 0.055085 | 0.108E-04 | 0.130E-01 | 0.292E 01 | 0.158E-01   |
| 9     | 0.0 | 0.061474 | 0.122E-04 | 0.145E-01 | 0.326E 01 | 0.186E-01   |
| 10    | 0.0 | 0.067424 | 0.132E-04 | 0.152E-01 | 0.348E 01 | 0.212E-01   |
| 11    | 0.0 | 0.053273 | 0.104E-04 | 0.125E-01 | 0.293E 01 | 0.150E-01   |
| 12    | 0.0 | 0.053039 | 0.107E-04 | 0.130E-01 | 0.292E 01 | 0.150E-01   |
| 13    | 0.0 | 0.056072 | 0.109E-04 | 0.132E-01 | 0.297E 01 | 0.162E-01   |
| 14    | 0.0 | 0.060855 | 0.134E-04 | 0.162E-01 | 0.365E 01 | 0.219E-01   |
| 15    | 0.0 | 0.093309 | 0.182E-04 | 0.220E-01 | 0.455E 01 | 0.324E-01   |
| 16    | 0.0 | 0.097519 | 0.190E-04 | 0.230E-01 | 0.517E 01 | 0.343E-01   |
| 17    | 0.0 | 0.066831 | 0.149E-04 | 0.228E-01 | 0.514E 01 | 0.340E-01   |
| 18    | 0.0 | 0.060534 | 0.177E-04 | 0.213E-01 | 0.480E 01 | 0.312E-01   |
| 19    | 0.0 | 0.034752 | 0.678E-05 | 0.015E-02 | 0.184E 01 | 0.692E-02   |
| 20    | 0.0 | 0.326P10 | 0.638E-04 | 0.770E-01 | 0.173E 02 | 0.134E 00   |

TIME 9.17.42  
PAGE NO. 62, VOL. I  
REP. NO. 6004  
11/08/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2306

TIME= 0.0850 PO= 4829.57 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO    | PCN/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | C.0 | 0.072285 | 0.150E-04 | 0.180E-01 | 0.404E 01 | 0.250E-01   |
| 2     | C.0 | C.080693 | 0.167E-04 | 0.201E-01 | 0.453E 01 | 0.289E-01   |
| 3     | C.0 | C.076404 | 0.158E-04 | 0.190E-01 | 0.429E 01 | 0.269E-01   |
| 4     | 0.0 | C.070788 | 0.147E-04 | 0.176E-01 | 0.397E 01 | 0.243E-01   |
| 5     | 0.0 | 0.044990 | 0.029E-05 | 0.112E-01 | 0.252E 01 | 0.124E-01   |
| 6     | 0.0 | C.060457 | 0.125E-04 | 0.150E-01 | 0.339E 01 | 0.196E-01   |
| 7     | 0.0 | 0.067264 | 0.139E-04 | 0.167E-01 | 0.377E 01 | 0.227E-01   |
| 8     | 0.0 | 0.055184 | 0.114E-04 | 0.137E-01 | 0.310E 01 | 0.172E-01   |
| 9     | 0.0 | 0.061329 | 0.128E-04 | 0.153E-01 | 0.346E 01 | 0.202E-01   |
| 10    | C.0 | 0.045633 | 0.136E-04 | 0.163E-01 | 0.368E 01 | 0.220E-01   |
| 11    | C.0 | 0.053199 | 0.110E-04 | 0.132E-01 | 0.298E 01 | 0.163E-01   |
| 12    | C.0 | C.054767 | 0.113E-04 | 0.136E-01 | 0.307E 01 | 0.170E-01   |
| 13    | C.0 | 0.056312 | 0.117E-04 | 0.140E-01 | 0.316E 01 | 0.177E-01   |
| 14    | C.0 | 0.067340 | 0.139E-04 | 0.167E-01 | 0.378E 01 | 0.229E-01   |
| 15    | 0.0 | 0.087748 | 0.182E-04 | 0.210E-01 | 0.492E 01 | 0.321E-01   |
| 16    | C.0 | 0.092049 | 0.191E-04 | 0.220E-01 | 0.516E 01 | 0.341E-01   |
| 17    | C.0 | 0.091952 | 0.190E-04 | 0.220E-01 | 0.516E 01 | 0.341E-01   |
| 18    | C.0 | 0.085576 | 0.177E-04 | 0.213E-01 | 0.480E 01 | 0.311E-01   |
| 19    | 0.0 | 0.034798 | 0.021E-05 | 0.065E-02 | 0.195E 01 | 0.789E-02   |
| 20    | C.0 | C.314399 | 0.651E-04 | 0.702E-01 | 0.176E 02 | 0.136E 00   |

TIME 9.17.42  
PAGE NO. 63, VOL. I  
REP. NO. 6004  
11/28/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 1306

TIME= 0.0900 PD= 4571.75 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.069583 | 0.152F-04 | 0.182F-01 | 0.412F 01 | 0.255F-01   |
| 2     | 0.0 | 0.041181 | 0.178E-04 | 0.213E-01 | 0.441F 01 | 0.311E-01   |
| 3     | 0.0 | 0.073499 | 0.161E-04 | 0.192F-01 | 0.435F 01 | 0.274E-01   |
| 4     | 0.0 | 0.070927 | 0.155E-04 | 0.186F-01 | 0.420E 01 | 0.261E-01   |
| 5     | 0.0 | 0.050681 | 0.111E-04 | 0.131E-01 | 0.300E 01 | 0.163E-01   |
| 6     | 0.0 | 0.061964 | 0.136E-04 | 0.162F-01 | 0.367E 01 | 0.210E-01   |
| 7     | 0.0 | 0.067866 | 0.148E-04 | 0.170E-01 | 0.402E 01 | 0.247E-01   |
| 8     | 0.0 | 0.056950 | 0.124E-04 | 0.149F-01 | 0.337E 01 | 0.193E-01   |
| 9     | 0.0 | 0.063904 | 0.140E-04 | 0.167E-01 | 0.378E 01 | 0.227E-01   |
| 10    | 0.0 | 0.065517 | 0.143E-04 | 0.172E-01 | 0.384E 01 | 0.235E-01   |
| 11    | 0.0 | 0.054454 | 0.120E-04 | 0.143E-01 | 0.324E 01 | 0.183E-01   |
| 12    | 0.0 | 0.056325 | 0.123E-04 | 0.147F-01 | 0.334E 01 | 0.191E-01   |
| 13    | 0.0 | 0.058369 | 0.128E-04 | 0.153F-01 | 0.346E 01 | 0.200E-01   |
| 14    | 0.0 | 0.067288 | 0.147E-04 | 0.176F-01 | 0.398E 01 | 0.244E-01   |
| 15    | 0.0 | 0.093129 | 0.182E-04 | 0.218E-01 | 0.492E 01 | 0.320E-01   |
| 16    | 0.0 | 0.087912 | 0.192E-04 | 0.235E-01 | 0.521E 01 | 0.344E-01   |
| 17    | 0.0 | 0.089012 | 0.195E-04 | 0.231F-01 | 0.527E 01 | 0.349E-01   |
| 18    | 0.0 | 0.082158 | 0.190E-04 | 0.215F-01 | 0.487E 01 | 0.316E-01   |
| 19    | 0.0 | 0.035951 | 0.706E-05 | 0.241E-02 | 0.213E 01 | 0.922E-02   |
| 20    | 0.0 | 0.306037 | 0.669E-04 | 0.801E-01 | 0.101E 02 | 0.140E 00   |

TIME 9.17.43  
PAGE NO. 64, VOL. I  
REP. NO. 6004  
11/08/67

TITLE  
MCDONNELL

RUN NO. 1306

HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.0950 PO= 434.55 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO    | PCN/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | C.0 | 0.067108 | 0.154E-04 | 0.184E-01 | 0.419E 01 | 0.259E-01   |
| 2     | C.0 | 0.082696 | 0.190E-04 | 0.227E-01 | 0.517E 01 | 0.339E-01   |
| 3     | C.0 | 0.071245 | 0.164E-04 | 0.196E-01 | 0.445E 01 | 0.280E-01   |
| 4     | C.0 | 0.072171 | 0.166E-04 | 0.198E-01 | 0.451E 01 | 0.285E-01   |
| 5     | C.0 | 0.060382 | 0.137E-04 | 0.166E-01 | 0.377E 01 | 0.225E-01   |
| 6     | C.0 | 0.065096 | 0.150E-04 | 0.179E-01 | 0.407E 01 | 0.249E-01   |
| 7     | C.0 | 0.070075 | 0.161E-04 | 0.193E-01 | 0.438E 01 | 0.274E-01   |
| 8     | C.0 | 0.066081 | 0.140E-04 | 0.165E-01 | 0.375E 01 | 0.224E-01   |
| 9     | C.0 | 0.067998 | 0.156E-04 | 0.187E-01 | 0.425E 01 | 0.266E-01   |
| 10    | C.0 | 0.067077 | 0.154E-04 | 0.184E-01 | 0.419E 01 | 0.259E-01   |
| 11    | C.0 | 0.057636 | 0.132E-04 | 0.158E-01 | 0.360E 01 | 0.211E-01   |
| 12    | C.0 | 0.059713 | 0.137E-04 | 0.164E-01 | 0.373E 01 | 0.222E-01   |
| 13    | C.0 | 0.062242 | 0.143E-04 | 0.171E-01 | 0.389E 01 | 0.235E-01   |
| 14    | C.0 | 0.068700 | 0.158E-04 | 0.189E-01 | 0.429E 01 | 0.267E-01   |
| 15    | C.0 | 0.079452 | 0.183E-04 | 0.218E-01 | 0.496E 01 | 0.327E-01   |
| 16    | C.0 | 0.085109 | 0.196E-04 | 0.234E-01 | 0.532E 01 | 0.351E-01   |
| 17    | C.0 | 0.088013 | 0.202E-04 | 0.242E-01 | 0.550E 01 | 0.366E-01   |
| 18    | C.0 | 0.080279 | 0.185E-04 | 0.221E-01 | 0.501E 01 | 0.326E-01   |
| 19    | C.0 | 0.038209 | 0.878E-05 | 0.105E-01 | 0.239E 01 | 0.113E-01   |
| 20    | C.0 | 0.301724 | 0.694E-04 | 0.829E-01 | 0.186E 02 | 0.145E 00   |

TIME 9.17.44  
PAGE NO. 65, VOL. I  
REP. NO. 6004  
11/08/67

MC DONNELL

TITLE

RUN NO. 1306

HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.1000 PO= 4164.19 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | C.0 | C.064860 | 0.154E-04 | 0.187E-01 | 0.427E 01 | 0.264E-01   |
| 2     | C.0 | C.045238 | 0.205E-04 | 0.245E-01 | 0.561E 01 | C.372E-01   |
| 3     | C.0 | C.069643 | 0.167E-04 | 0.200E-01 | 0.459E 01 | 0.280E-01   |
| 4     | C.0 | C.074521 | 0.179E-04 | 0.214E-01 | 0.491E 01 | 0.315E-01   |
| 5     | C.0 | C.073993 | 0.178E-04 | 0.213E-01 | 0.481E 01 | 0.312E-01   |
| 6     | C.0 | C.069853 | 0.168E-04 | 0.201E-01 | 0.460E 01 | 0.299E-01   |
| 7     | C.0 | C.073890 | 0.177E-04 | 0.212E-01 | 0.487E 01 | 0.311E-01   |
| 8     | C.0 | C.064979 | 0.156E-04 | 0.187E-01 | 0.427E 01 | 0.264E-01   |
| 9     | C.0 | C.074011 | 0.178E-04 | 0.213E-01 | 0.487E 01 | 0.312E-01   |
| 10    | C.0 | C.076313 | 0.169E-04 | 0.202E-01 | 0.463E 01 | 0.292E-01   |
| 11    | C.0 | C.062146 | 0.149E-04 | 0.179E-01 | 0.409E 01 | 0.249E-01   |
| 12    | C.0 | C.064930 | 0.156E-04 | 0.187E-01 | 0.420E 01 | 0.264E-01   |
| 13    | C.0 | C.067931 | 0.163E-04 | 0.195E-01 | 0.447E 01 | 0.280E-01   |
| 14    | C.0 | C.071575 | 0.172E-04 | 0.206E-01 | 0.471E 01 | 0.299E-01   |
| 15    | C.0 | C.076716 | 0.184E-04 | 0.221E-01 | 0.505E 01 | 0.326E-01   |
| 16    | C.0 | C.093639 | 0.201E-04 | 0.241E-01 | 0.551E 01 | 0.363E-01   |
| 17    | C.0 | C.088954 | 0.214E-04 | 0.256E-01 | 0.586E 01 | 0.391E-01   |
| 18    | C.0 | C.079939 | 0.192E-04 | 0.230E-01 | 0.526E 01 | 0.344E-01   |
| 19    | C.0 | C.041574 | 0.998E-05 | 0.120E-01 | 0.274E 01 | 0.140E-01   |
| 20    | C.0 | C.701460 | 0.724E-04 | 0.867E-01 | 0.199E 02 | 0.152E 00   |

TIME 16.42.36  
PAGE NO. 66, VOL. I  
REP. NO. 6004  
11/17/67

TITLE

RUN NO. 2307

MCDONNELL

HIT TEST NO. 67

TUNNEL PARAMETERS

| T<br>(SEC) | P0<br>(PSI) | Y0<br>(OK) | HO<br>(SFT/SEC) | Q-DOT<br>(B/SF-S) | P02<br>(PSI) | P1<br>(PSI) | T1<br>(OK) | U<br>(FT/S) | M1    | RE/FT     | O1<br>(PSI) | ALPHA<br>(DEG) |
|------------|-------------|------------|-----------------|-------------------|--------------|-------------|------------|-------------|-------|-----------|-------------|----------------|
| .0400      | 8432.       | 1926.      | 0.2456CE CR     | 107.23            | 5.822        | 0.02872     | 58.91      | 6914.       | 13.47 | 154.6606. | 3.139       | 15.00          |
| .0450      | 7937.       | 1908.      | 0.24268E CR     | 107.97            | 5.427        | 0.02357     | 58.46      | 6873.       | 13.44 | 148.9706. | 2.980       | 15.00          |
| .0500      | 7468.       | 1890.      | 0.23951E CR     | 98.72             | 5.245        | 0.02246     | 57.92      | 6827.       | 13.41 | 143.5690. | 2.828       | 15.00          |
| .0550      | 7024.       | 1865.      | 0.23607E CR     | 94.46             | 4.914        | 0.02138     | 57.29      | 6778.       | 13.39 | 138.6913. | 2.683       | 15.00          |
| .0600      | 6606.       | 1860.      | 0.23486F CR     | 90.20             | 4.716        | 0.02038     | 57.29      | 6760.       | 13.35 | 131.8201. | 2.543       | 15.00          |
| .0650      | 6214.       | 1836.      | 0.23090F CR     | 85.94             | 4.469        | 0.01937     | 56.51      | 6704.       | 13.33 | 127.7630. | 2.411       | 15.00          |
| .0700      | 5847.       | 1809.      | 0.2268CE CR     | 81.68             | 4.235        | 0.01840     | 55.60      | 6643.       | 13.32 | 124.1605. | 2.295       | 15.00          |
| .0750      | 5526.       | 1779.      | 0.22224E CR     | 77.43             | 4.012        | 0.01747     | 54.57      | 6575.       | 13.31 | 121.1241. | 2.165       | 15.00          |
| .0800      | 5191.       | 1746.      | 0.21731E CR     | 73.17             | 3.807        | 0.01656     | 53.39      | 6502.       | 13.30 | 118.6293. | 2.052       | 15.00          |
| .0850      | 4902.       | 1706.      | 0.21198E CR     | 68.91             | 3.603        | 0.01570     | 52.07      | 6422.       | 13.31 | 116.7618. | 1.945       | 15.00          |
| .0900      | 4638.       | 1664.      | 0.20622E CR     | 64.65             | 3.417        | 0.01487     | 50.59      | 6334.       | 13.32 | 115.5739. | 1.845       | 15.00          |
| .0950      | 4430.       | 1623.      | 0.19999E CR     | 60.39             | 3.242        | 0.01437     | 48.93      | 6238.       | 13.33 | 115.1721. | 1.751       | 15.00          |
| .1000      | 4187.       | 1574.      | 0.19327E CR     | 56.14             | 3.080        | 0.01332     | 47.09      | 6132.       | 13.36 | 115.6575. | 1.664       | 15.00          |



TIME 16.42.37  
PAGE NO. 67, VOL. I  
REP. NO. 0004  
11/17/67

TITLE  
MC DONNELL

RUN NO. 2307

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| TIME-C460 |                    | PO#           | R432          | PO2= 5.827 | PI= 0.0472 | ODMT-A= 107.73 |  |            |
|-----------|--------------------|---------------|---------------|------------|------------|----------------|--|------------|
| N         | COOT-N<br>(B/SF-S) | COOT-N/ODMT-A | COOT-N/COOT-A | COOT-N/RFE |            |                |  | COOT-N/RFE |
| 1         | 1.7448             | 0.01627       | 0.01627       | 1.7448     |            |                |  | 1.7448     |
| 2         | 2.6719             | 0.02305       | 0.02305       | 2.6719     |            |                |  | 2.6719     |
| 3         | 4.5327             | 0.04234       | 0.04234       | 4.5327     |            |                |  | 4.5327     |
| 4         | 3.8593             | 0.03599       | 0.03599       | 3.8593     |            |                |  | 3.8593     |
| 5         | 3.6764             | 0.03242       | 0.03242       | 3.6764     |            |                |  | 3.6764     |
| 6         | 3.5655             | 0.03125       | 0.03125       | 3.5655     |            |                |  | 3.5655     |
| 7         | 5.2668             | 0.04912       | 0.04912       | 5.2668     |            |                |  | 5.2668     |
| 8         | 3.1192             | 0.02909       | 0.02909       | 3.1192     |            |                |  | 3.1192     |
| 9         | 6.9186             | 0.04585       | 0.04585       | 6.9186     |            |                |  | 6.9186     |
| 10        | 3.3383             | 0.03113       | 0.03113       | 3.3383     |            |                |  | 3.3383     |
| 11        | 3.7366             | 0.03485       | 0.03485       | 3.7366     |            |                |  | 3.7366     |
| 12        | 4.4419             | 0.04142       | 0.04142       | 4.4419     |            |                |  | 4.4419     |
| 13        | 4.6024             | 0.04292       | 0.04292       | 4.6024     |            |                |  | 4.6024     |
| 14        | 2.4698             | 0.02658       | 0.02658       | 2.4698     |            |                |  | 2.4698     |
| 15        | 3.4389             | 0.03207       | 0.03207       | 3.4389     |            |                |  | 3.4389     |
| 16        | 4.3250             | 0.04034       | 0.04034       | 4.3250     |            |                |  | 4.3250     |
| 17        | 3.9691             | 0.03683       | 0.03683       | 3.9691     |            |                |  | 3.9691     |
| 18        | 3.8997             | 0.03637       | 0.03637       | 3.8997     |            |                |  | 3.8997     |
| 19        | 2.6091             | 0.02433       | 0.02433       | 2.6091     |            |                |  | 2.6091     |
| 20        | 17.1658            | 0.16709       | 0.16709       | 17.1658    |            |                |  | 17.1658    |

TIME 16.42.37  
PAGE NO. 68, VOL. I  
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11/17/67

TITLE  
MCDONNELL

RUN NO. 2307

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.450 P0= 7937. P02= 5.527 P1= 0.2357 QDOT-A=102.97

| N  | QDOT-N<br>(R/SF-S) | QDOT-V/QDOT-A | QDOT-N/KQDOT-A | QDOT-H/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.7159             | 0.01666       | 0.01666        | 1.7159     |
| 2  | 2.4250             | 0.02355       | 0.02355        | 2.4250     |
| 3  | 4.2947             | 0.04171       | 0.04171        | 4.2947     |
| 4  | 3.6831             | 0.03577       | 0.03577        | 3.6831     |
| 5  | 3.3593             | 0.03262       | 0.03262        | 3.3593     |
| 6  | 3.4253             | 0.03326       | 0.03326        | 3.4253     |
| 7  | 4.9426             | 0.04839       | 0.04839        | 4.9426     |
| 8  | 2.9922             | 0.02906       | 0.02906        | 2.9922     |
| 9  | 4.6454             | 0.04511       | 0.04511        | 4.6454     |
| 10 | 3.2231             | 0.03130       | 0.03130        | 3.2231     |
| 11 | 3.5694             | 0.03466       | 0.03466        | 3.5694     |
| 12 | 4.1945             | 0.04075       | 0.04075        | 4.1945     |
| 13 | 4.3529             | 0.04227       | 0.04227        | 4.3529     |
| 14 | 2.7484             | 0.02669       | 0.02669        | 2.7484     |
| 15 | 3.3370             | 0.03241       | 0.03241        | 3.3370     |
| 16 | 4.1732             | 0.04053       | 0.04053        | 4.1732     |
| 17 | 3.8146             | 0.03726       | 0.03726        | 3.8146     |
| 18 | 3.7976             | 0.03698       | 0.03698        | 3.7976     |
| 19 | 2.4923             | 0.02420       | 0.02420        | 2.4923     |
| 20 | 16.6102            | 0.16130       | 0.16130        | 16.6102    |

RUN NO. 2307

TITLE

MCDONNELL

TIME 16.42.37  
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11/17/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| TIME=0500 |                    | PO= 7468.     | PO2= 5.245     | PI=02246   | QDOT-A= 98.72 |
|-----------|--------------------|---------------|----------------|------------|---------------|
| N         | QDOT-N<br>(R/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |               |
| 1         | 1.6871             | 0.01709       | 0.01709        | 1.6871     |               |
| 2         | 2.3780             | 0.02409       | 0.02409        | 2.3780     |               |
| 3         | 4.0497             | 0.04102       | 0.04102        | 4.0497     |               |
| 4         | 3.5068             | 0.03552       | 0.03552        | 3.5068     |               |
| 5         | 3.2422             | 0.03284       | 0.03284        | 3.2422     |               |
| 6         | 3.2850             | 0.03328       | 0.03328        | 3.2850     |               |
| 7         | 4.6944             | 0.04760       | 0.04760        | 4.6944     |               |
| 8         | 2.8646             | 0.02902       | 0.02902        | 2.8646     |               |
| 9         | 4.3742             | 0.04431       | 0.04431        | 4.3742     |               |
| 10        | 3.1090             | 0.03148       | 0.03148        | 3.1090     |               |
| 11        | 3.4021             | 0.03446       | 0.03446        | 3.4021     |               |
| 12        | 3.9511             | 0.04002       | 0.04002        | 3.9511     |               |
| 13        | 4.1033             | 0.04157       | 0.04157        | 4.1033     |               |
| 14        | 2.6470             | 0.02681       | 0.02681        | 2.6470     |               |
| 15        | 3.2352             | 0.03277       | 0.03277        | 3.2352     |               |
| 16        | 4.0205             | 0.04073       | 0.04073        | 4.0205     |               |
| 17        | 3.7261             | 0.03773       | 0.03773        | 3.7261     |               |
| 18        | 3.6956             | 0.03744       | 0.03744        | 3.6956     |               |
| 19        | 2.3754             | 0.02406       | 0.02406        | 2.3754     |               |
| 20        | 16.0535            | 0.16262       | 0.16262        | 16.0535    |               |

TIME 1642.37  
PAGE NO. 70, VOL. I  
REP. NO. 604  
11/17/67

TITLE

RUN NO. 2307

MCDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME = 0550 P0 = 7024. P02 = 4.974 P1 = 02118 QDOT-A = 04.46

| N  | QDOT-N<br>(W/SF-5) | QDOT-N/QDOT-A | QDOT-N/KDOT-A | QDOT-N/REF |
|----|--------------------|---------------|---------------|------------|
| 1  | 1.6582             | 0.01756       | 0.01756       | 1.6582     |
| 2  | 2.3110             | 0.022468      | 0.02468       | 2.3110     |
| 3  | 3.8047             | 0.034029      | 0.06028       | 3.8047     |
| 4  | 3.3375             | 0.03526       | 0.03526       | 3.3375     |
| 5  | 3.1251             | 0.03308       | 0.03308       | 3.1251     |
| 6  | 3.1447             | 0.03329       | 0.03329       | 3.1447     |
| 7  | 4.4142             | 0.04673       | 0.04673       | 4.4142     |
| 8  | 2.7369             | 0.02897       | 0.02897       | 2.7369     |
| 9  | 4.1030             | 0.04344       | 0.04344       | 4.1030     |
| 10 | 2.4028             | 0.03168       | 0.03168       | 2.4028     |
| 11 | 3.2349             | 0.03425       | 0.03425       | 3.2349     |
| 12 | 3.7057             | 0.03923       | 0.03923       | 3.7057     |
| 13 | 3.8538             | 0.04080       | 0.04080       | 3.8538     |
| 14 | 2.5455             | 0.02695       | 0.02695       | 2.5455     |
| 15 | 3.1333             | 0.03317       | 0.03317       | 3.1333     |
| 16 | 3.8678             | 0.04095       | 0.04095       | 3.8678     |
| 17 | 3.6115             | 0.03823       | 0.03823       | 3.6115     |
| 18 | 3.5935             | 0.03804       | 0.03804       | 3.5935     |
| 19 | 2.2586             | 0.02391       | 0.02391       | 2.2586     |
| 20 | 15.4968            | 0.16406       | 0.16406       | 15.4968    |

TIME 16.47.37  
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11/17/67

TITLE

MC DONNELL

RUN NO. 2307

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=.0660 PO= 6606. PD2= 4.716 PJ=.02038 QDOT-A= 90.20

| N  | QDOT-N<br>(8/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.6294             | 0.01806       | 0.01806        | 1.6294     |
| 2  | 2.7841             | 0.02532       | 0.02532        | 2.7841     |
| 3  | 3.5597             | 0.03046       | 0.03046        | 3.5597     |
| 4  | 3.1543             | 0.03497       | 0.03497        | 3.1543     |
| 5  | 3.0090             | 0.03335       | 0.03335        | 3.0090     |
| 6  | 3.0664             | 0.03331       | 0.03331        | 3.0664     |
| 7  | 4.1370             | 0.04579       | 0.04579        | 4.1370     |
| 8  | 2.6093             | 0.02893       | 0.02893        | 2.6093     |
| 9  | 3.8318             | 0.04248       | 0.04248        | 3.8318     |
| 10 | 2.8776             | 0.03192       | 0.03192        | 2.8776     |
| 11 | 3.0677             | 0.03401       | 0.03401        | 3.0677     |
| 12 | 3.4602             | 0.03836       | 0.03836        | 3.4602     |
| 13 | 3.6043             | 0.03996       | 0.03996        | 3.6043     |
| 14 | 2.4441             | 0.02710       | 0.02710        | 2.4441     |
| 15 | 3.0315             | 0.03361       | 0.03361        | 3.0315     |
| 16 | 3.7151             | 0.04119       | 0.04119        | 3.7151     |
| 17 | 3.4970             | 0.03879       | 0.03879        | 3.4970     |
| 18 | 3.4915             | 0.03871       | 0.03871        | 3.4915     |
| 19 | 2.1418             | 0.02374       | 0.02374        | 2.1418     |
| 20 | 14.9401            | 0.16563       | 0.16563        | 14.9401    |

TIME 16.42.37  
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TITLE  
 MCDONNELL

HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

TIME=0.0650 PD= 6214. PD2= 4.469 PI=01937 QDOT-A= 85.94

| N  | QDOT-N<br>(W/SE-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.6006             | 0.01862       | 0.01862        | 1.6006     |
| 2  | 2.2371             | 0.02603       | 0.02603        | 2.2371     |
| 3  | 3.3167             | 0.03857       | 0.03857        | 3.3167     |
| 4  | 2.9780             | 0.03465       | 0.03465        | 2.9780     |
| 5  | 2.8928             | 0.03366       | 0.03366        | 2.8928     |
| 6  | 2.8641             | 0.03333       | 0.03333        | 2.8641     |
| 7  | 3.8454             | 0.04475       | 0.04475        | 3.8454     |
| 8  | 2.4816             | 0.02888       | 0.02888        | 2.4816     |
| 9  | 3.5606             | 0.04143       | 0.04143        | 3.5606     |
| 10 | 2.7625             | 0.03214       | 0.03214        | 2.7625     |
| 11 | 2.9035             | 0.03375       | 0.03375        | 2.9035     |
| 12 | 3.2164             | 0.03741       | 0.03741        | 3.2164     |
| 13 | 3.3547             | 0.03903       | 0.03903        | 3.3547     |
| 14 | 2.3427             | 0.02726       | 0.02726        | 2.3427     |
| 15 | 2.9286             | 0.03409       | 0.03409        | 2.9286     |
| 16 | 3.5624             | 0.04145       | 0.04145        | 3.5624     |
| 17 | 3.3864             | 0.03740       | 0.03740        | 3.3864     |
| 18 | 3.3895             | 0.03744       | 0.03744        | 3.3895     |
| 19 | 2.0250             | 0.02356       | 0.02356        | 2.0250     |
| 20 | 14.3834            | 0.16736       | 0.16736        | 14.3834    |



TIME 16.42.38  
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MC DONNELL

TITLE

RUN NO. 2307

HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

| TIME=0750 PO= 5506. PO2= 4.012 PL=01747 QDOT-A= 77.43 |                    |               |                          |
|-------------------------------------------------------|--------------------|---------------|--------------------------|
| N                                                     | QDOT-N<br>(R/SF-S) | QDOT-N/QDOT-A | QDOT-N/QDOT-A QDOT-N/REF |
| 1                                                     | 1.5429             | 0.01993       | 0.01993 1.5429           |
| 2                                                     | 2.1432             | 0.02768       | 0.02768 2.1432           |
| 3                                                     | 2.8247             | 0.03648       | 0.03648 2.8247           |
| 4                                                     | 2.6255             | 0.03391       | 0.03391 2.6255           |
| 5                                                     | 2.6566             | 0.03431       | 0.03431 2.6566           |
| 6                                                     | 2.5835             | 0.03337       | 0.03337 2.5835           |
| 7                                                     | 3.2774             | 0.04233       | 0.04233 3.2774           |
| 8                                                     | 2.2263             | 0.02875       | 0.02875 2.2263           |
| 9                                                     | 3.0182             | 0.03898       | 0.03898 3.0182           |
| 10                                                    | 2.5321             | 0.03270       | 0.03270 2.5321           |
| 11                                                    | 2.5660             | 0.03314       | 0.03314 2.5660           |
| 12                                                    | 2.7240             | 0.03518       | 0.03518 2.7240           |
| 13                                                    | 2.8556             | 0.03698       | 0.03698 2.8556           |
| 14                                                    | 2.1398             | 0.02764       | 0.02764 2.1398           |
| 15                                                    | 2.7259             | 0.03521       | 0.03521 2.7259           |
| 16                                                    | 3.2570             | 0.04207       | 0.04207 3.2570           |
| 17                                                    | 3.1614             | 0.04083       | 0.04083 3.1614           |
| 18                                                    | 3.1854             | 0.04114       | 0.04114 3.1854           |
| 19                                                    | 1.7913             | 0.02314       | 0.02314 1.7913           |
| 20                                                    | 13.2700            | 0.17139       | 0.17139 13.2700          |



RUN NO. 2307

TITLE

MC DONNELL

TIME 16.42.38  
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HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.000 PO= 5191. PO2= 3.802 PL=01656 QDOT-A= 73.17

| N  | QDOT-N<br>(B/SEC) | QDOT-W/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|-------------------|---------------|----------------|------------|
| 1  | 1.5140            | 0.02069       | 0.02069        | 1.5140     |
| 2  | 2.0962            | 0.02065       | 0.02065        | 2.0962     |
| 3  | 2.5797            | 0.03526       | 0.03526        | 2.5797     |
| 4  | 2.4493            | 0.03367       | 0.03367        | 2.4493     |
| 5  | 2.5305            | 0.03671       | 0.03671        | 2.5305     |
| 6  | 2.4632            | 0.03330       | 0.03330        | 2.4632     |
| 7  | 2.9932            | 0.04091       | 0.04091        | 2.9932     |
| 8  | 2.6987            | 0.02069       | 0.02069        | 2.6987     |
| 9  | 2.7470            | 0.03756       | 0.03756        | 2.7470     |
| 10 | 2.4170            | 0.03303       | 0.03303        | 2.4170     |
| 11 | 2.3988            | 0.03278       | 0.03278        | 2.3988     |
| 12 | 2.4786            | 0.03388       | 0.03388        | 2.4786     |
| 13 | 2.6061            | 0.03562       | 0.03562        | 2.6061     |
| 14 | 2.0393            | 0.02786       | 0.02786        | 2.0393     |
| 15 | 2.6261            | 0.03586       | 0.03586        | 2.6261     |
| 16 | 3.1043            | 0.06263       | 0.06263        | 3.1043     |
| 17 | 3.0638            | 0.04167       | 0.04167        | 3.0638     |
| 18 | 3.0833            | 0.04216       | 0.04216        | 3.0833     |
| 19 | 1.6745            | 0.02289       | 0.02289        | 1.6745     |
| 20 | 12.7133           | 0.17375       | 0.17375        | 12.7133    |

TIME 16.42.38  
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TITLE  
MCDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

RUN NO. 2307

| TIME=0.0950 P0= 4902. P02= 3.603 P1=01570 QDOT-A= 48.91 |                     |               |                           |
|---------------------------------------------------------|---------------------|---------------|---------------------------|
| N                                                       | QDOT-N<br>(B/SF-SI) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A QDOT-N/REF |
| 1                                                       | 1.4852              | 0.02155       | 0.02155 1.4852            |
| 2                                                       | 2.0493              | 0.02974       | 0.02974 2.0493            |
| 3                                                       | 2.3347              | 0.03388       | 0.03388 2.3347            |
| 4                                                       | 2.2730              | 0.03298       | 0.03298 2.2730            |
| 5                                                       | 2.4223              | 0.03515       | 0.03515 2.4223            |
| 6                                                       | 2.3029              | 0.03362       | 0.03362 2.3029            |
| 7                                                       | 2.7090              | 0.03931       | 0.03931 2.7090            |
| 8                                                       | 1.9710              | 0.02860       | 0.02860 1.9710            |
| 9                                                       | 2.4758              | 0.03593       | 0.03593 2.4758            |
| 10                                                      | 2.3018              | 0.03340       | 0.03340 2.3018            |
| 11                                                      | 2.2316              | 0.03238       | 0.03238 2.2316            |
| 12                                                      | 2.2332              | 0.03241       | 0.03241 2.2332            |
| 13                                                      | 2.3566              | 0.03620       | 0.03620 2.3566            |
| 14                                                      | 1.9369              | 0.02811       | 0.02811 1.9369            |
| 15                                                      | 2.5222              | 0.03660       | 0.03660 2.5222            |
| 16                                                      | 2.9517              | 0.04283       | 0.04283 2.9517            |
| 17                                                      | 2.9363              | 0.04261       | 0.04261 2.9363            |
| 18                                                      | 2.9813              | 0.04326       | 0.04326 2.9813            |
| 19                                                      | 1.5577              | 0.02260       | 0.02260 1.5577            |
| 20                                                      | 12.1566             | 0.17641       | 0.17641 12.1566           |

TIME 16.42.38  
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11/17/67

TITLE  
MCDONNELL

RUN NO. 2307

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0900 P1= 463H. P02= 3.417 P1=01487 Q00T-A= 64.65

| N  | Q00T-N<br>(R/SF-S) | Q00T-N/Q00T-A | Q00T-N/KQ00T-A | Q00T-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.4563             | 0.02253       | 0.02253        | 1.4563     |
| 2  | 2.0023             | 0.03097       | 0.03097        | 2.0023     |
| 3  | 2.0897             | 0.03232       | 0.03232        | 2.0897     |
| 4  | 2.0968             | 0.03243       | 0.03243        | 2.0968     |
| 5  | 2.3052             | 0.03566       | 0.03566        | 2.3052     |
| 6  | 2.1625             | 0.03345       | 0.03345        | 2.1625     |
| 7  | 2.4249             | 0.03751       | 0.03751        | 2.4249     |
| 8  | 1.8433             | 0.02851       | 0.02851        | 1.8433     |
| 9  | 2.2046             | 0.03410       | 0.03410        | 2.2046     |
| 10 | 2.1857             | 0.03382       | 0.03382        | 2.1857     |
| 11 | 2.0644             | 0.03193       | 0.03193        | 2.0644     |
| 12 | 1.9878             | 0.03075       | 0.03075        | 1.9878     |
| 13 | 2.1070             | 0.03259       | 0.03259        | 2.1070     |
| 14 | 1.8355             | 0.02819       | 0.02819        | 1.8355     |
| 15 | 2.4204             | 0.03746       | 0.03746        | 2.4204     |
| 16 | 2.7930             | 0.04329       | 0.04329        | 2.7930     |
| 17 | 2.8237             | 0.04368       | 0.04368        | 2.8237     |
| 18 | 2.8793             | 0.04453       | 0.04453        | 2.8793     |
| 19 | 1.4408             | 0.02229       | 0.02229        | 1.4408     |
| 20 | 11.5909            | 0.17942       | 0.17942        | 11.5909    |

TIME 16.42.38  
PAGE NO. 78, VOL. I  
REF. NO. 6008  
11/17/57

TITLE

RUN NO. 2307

WCDONNELL

HIT TEST NO. 67  
MODE HEAT TRANSFER RATES

| N  | QDOT-V<br>(R/SF-5) | QDOT-N/QDOT-A | QDOT-V/K/QDOT-A | QDOT-N/REF |
|----|--------------------|---------------|-----------------|------------|
| 1  | 1.4275             | 0.02366       | 0.02366         | 1.4275     |
| 2  | 1.9553             | 0.03238       | 0.03238         | 1.9553     |
| 3  | 1.8647             | 0.03056       | 0.03056         | 1.8647     |
| 4  | 1.9275             | 0.03180       | 0.03180         | 1.9275     |
| 5  | 2.1891             | 0.03623       | 0.03623         | 2.1891     |
| 6  | 2.0222             | 0.03368       | 0.03368         | 2.0222     |
| 7  | 2.1607             | 0.03566       | 0.03566         | 2.1607     |
| 8  | 1.7157             | 0.02841       | 0.02841         | 1.7157     |
| 9  | 1.9336             | 0.03231       | 0.03231         | 1.9336     |
| 10 | 2.0715             | 0.03430       | 0.03430         | 2.0715     |
| 11 | 1.8972             | 0.03161       | 0.03161         | 1.8972     |
| 12 | 1.7423             | 0.02885       | 0.02885         | 1.7423     |
| 13 | 1.8575             | 0.03076       | 0.03076         | 1.8575     |
| 14 | 1.7360             | 0.02871       | 0.02871         | 1.7360     |
| 15 | 2.3186             | 0.03839       | 0.03839         | 2.3186     |
| 16 | 2.6463             | 0.04382       | 0.04382         | 2.6463     |
| 17 | 2.7112             | 0.04689       | 0.04689         | 2.7112     |
| 18 | 2.7772             | 0.04998       | 0.04998         | 2.7772     |
| 19 | 1.3240             | 0.02192       | 0.02192         | 1.3240     |
| 20 | 11.0432            | 0.18285       | 0.18285         | 11.0432    |

TIME 16.42.38  
PAGE NO. 79, VOL. I  
REP. NO. 6004  
11/17/67

TITLE MC DONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

RUN NO. 2307

| TIME=1000 |                   | PI= 3.000     |                | PI=0.0132 |  | QMT-A= 56.14 |  |
|-----------|-------------------|---------------|----------------|-----------|--|--------------|--|
| N         | QMT-N<br>(BASE-S) | QMT-N/Q00NT-A | QMT-N/K.00NT-A | QMT-N/REF |  |              |  |
| 1         | 1.3086            | 0.02491       | 0.02491        | 1.3086    |  |              |  |
| 2         | 1.9086            | 0.03391       | 0.03391        | 1.9086    |  |              |  |
| 3         | 1.5996            | 0.02853       | 0.02853        | 1.5996    |  |              |  |
| 4         | 1.7442            | 0.03107       | 0.03107        | 1.7442    |  |              |  |
| 5         | 2.0710            | 0.03649       | 0.03649        | 2.0710    |  |              |  |
| 6         | 1.3019            | 0.03352       | 0.03352        | 1.3019    |  |              |  |
| 7         | 1.8565            | 0.03307       | 0.03307        | 1.8565    |  |              |  |
| 8         | 1.5092            | 0.02829       | 0.02829        | 1.5092    |  |              |  |
| 9         | 1.6622            | 0.02961       | 0.02961        | 1.6622    |  |              |  |
| 10        | 1.9563            | 0.03685       | 0.03685        | 1.9563    |  |              |  |
| 11        | 1.7370            | 0.03042       | 0.03042        | 1.7370    |  |              |  |
| 12        | 1.6959            | 0.02767       | 0.02767        | 1.6959    |  |              |  |
| 13        | 1.6079            | 0.02864       | 0.02864        | 1.6079    |  |              |  |
| 14        | 1.6326            | 0.02908       | 0.02908        | 1.6326    |  |              |  |
| 15        | 2.2167            | 0.03949       | 0.03949        | 2.2167    |  |              |  |
| 16        | 2.4946            | 0.04642       | 0.04642        | 2.4946    |  |              |  |
| 17        | 2.5936            | 0.04629       | 0.04629        | 2.5936    |  |              |  |
| 18        | 2.6752            | 0.04765       | 0.04765        | 2.6752    |  |              |  |
| 19        | 1.2072            | 0.02150       | 0.02150        | 1.2072    |  |              |  |
| 20        | 10.4865           | 0.10680       | 0.10680        | 10.4865   |  |              |  |

RUN NO. 3307

TIME 16.42.38  
PAGE NO. 80, VOL. I  
REP. NO. 0004  
11/17/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0400 PD = A432.16 ALPHA = 15.00

| PRUNE | PW  | POM      | POM/PO    | POM/PO2   | POM/PI    | (POM-PI)/PO1 |
|-------|-----|----------|-----------|-----------|-----------|--------------|
| 1     | 0.0 | 0.110112 | 0.131F-04 | 0.180F-01 | 0.445F 01 | 0.272F-01    |
| 2     | 0.0 | 0.121193 | 0.144F-04 | 0.208F-01 | 0.490F 01 | 0.307F-01    |
| 3     | 0.0 | 0.130572 | 0.166E-04 | 0.234F-01 | 0.561F 01 | 0.363F-01    |
| 4     | 0.0 | 0.125363 | 0.147F-04 | 0.216F-01 | 0.510F 01 | 0.323F-01    |
| 5     | 0.0 | 0.140661 | 0.167F-04 | 0.242F-01 | 0.569F 01 | 0.369F-01    |
| 6     | 0.0 | 0.125304 | 0.149F-04 | 0.215F-01 | 0.507F 01 | 0.323F-01    |
| 7     | 0.0 | 0.138711 | 0.155F-04 | 0.238F-01 | 0.561F 01 | 0.363F-01    |
| 8     | 0.0 | 0.125329 | 0.149F-04 | 0.215F-01 | 0.507F 01 | 0.323F-01    |
| 9     | 0.0 | 0.147743 | 0.175F-04 | 0.256F-01 | 0.598F 01 | 0.392F-01    |
| 10    | 0.0 | 0.156309 | 0.193F-04 | 0.265F-01 | 0.624F 01 | 0.413F-01    |
| 11    | 0.0 | 0.125103 | 0.144F-04 | 0.215F-01 | 0.507F 01 | 0.323F-01    |
| 12    | 0.0 | 0.146728 | 0.172F-04 | 0.269F-01 | 0.595F 01 | 0.392F-01    |
| 13    | 0.0 | 0.125399 | 0.153F-04 | 0.222F-01 | 0.523F 01 | 0.333F-01    |
| 14    | 0.0 | 0.154475 | 0.193F-04 | 0.265F-01 | 0.624F 01 | 0.413F-01    |
| 15    | 0.0 | 0.153477 | 0.192F-04 | 0.264F-01 | 0.621F 01 | 0.410F-01    |
| 16    | 0.0 | 0.140511 | 0.214F-04 | 0.310F-01 | 0.730F 01 | 0.496F-01    |
| 17    | 0.0 | 0.227951 | 0.370F-04 | 0.392F-01 | 0.922F 01 | 0.637F-01    |
| 18    | 0.0 | 0.170986 | 0.233F-04 | 0.296F-01 | 0.602F 01 | 0.466F-01    |
| 19    | 0.0 | 0.182123 | 0.296F-04 | 0.341F-01 | 0.733F 01 | 0.466F-01    |
| 20    | 0.0 | 0.487357 | 0.578F-04 | 0.837F-01 | 0.197E 02 | 0.147E 00    |

RUN NO. 2307

TITLE

MC DONNELL

TIME 16.42.39  
PAGE NO. 81, VOL. I  
REP. NO. 6004  
11/17/67

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0450 PD = 7937.15 ALPHA = 15.00

| PROBE | PHI | PDM      | PDM/PO    | PDM/PO2   | PDM/PI    | PDM-PI1/21 |
|-------|-----|----------|-----------|-----------|-----------|------------|
| 1     | 0.0 | 0.103190 | 0.130F-04 | 0.117F-01 | 0.430F 01 | 0.267F-01  |
| 2     | 0.0 | 0.111073 | 0.140F-04 | 0.201F-01 | 0.471F 01 | 0.294F-01  |
| 3     | 0.0 | 0.110153 | 0.164F-04 | 0.235F-01 | 0.552F 01 | 0.358F-01  |
| 4     | 0.0 | 0.116205 | 0.164F-04 | 0.210F-01 | 0.493F 01 | 0.311F-01  |
| 5     | 0.0 | 0.129922 | 0.164F-04 | 0.235F-01 | 0.551F 01 | 0.357F-01  |
| 6     | 0.0 | 0.114355 | 0.164F-04 | 0.207F-01 | 0.485F 01 | 0.305F-01  |
| 7     | 0.0 | 0.125177 | 0.158F-04 | 0.226F-01 | 0.531F 01 | 0.341F-01  |
| 8     | 0.0 | 0.115416 | 0.145F-04 | 0.209F-01 | 0.490F 01 | 0.309F-01  |
| 9     | 0.0 | 0.136021 | 0.171F-04 | 0.266F-01 | 0.577F 01 | 0.377F-01  |
| 10    | 0.0 | 0.142346 | 0.179F-04 | 0.258F-01 | 0.604F 01 | 0.399F-01  |
| 11    | 0.0 | 0.115264 | 0.145F-04 | 0.209F-01 | 0.489F 01 | 0.309F-01  |
| 12    | 0.0 | 0.133334 | 0.164F-04 | 0.241F-01 | 0.566F 01 | 0.368F-01  |
| 13    | 0.0 | 0.119197 | 0.150F-04 | 0.216F-01 | 0.506F 01 | 0.321F-01  |
| 14    | 0.0 | 0.163908 | 0.191F-04 | 0.260F-01 | 0.610F 01 | 0.404F-01  |
| 15    | 0.0 | 0.141759 | 0.179F-04 | 0.256F-01 | 0.601F 01 | 0.397F-01  |
| 16    | 0.0 | 0.149101 | 0.213F-04 | 0.306F-01 | 0.717F 01 | 0.498F-01  |
| 17    | 0.0 | 0.213986 | 0.270F-04 | 0.387F-01 | 0.908F 01 | 0.639F-01  |
| 18    | 0.0 | 0.159558 | 0.201F-04 | 0.289F-01 | 0.677F 01 | 0.456F-01  |
| 19    | 0.0 | 0.076400 | 0.963F-05 | 0.130F-01 | 0.324F 01 | 0.177F-01  |
| 20    | 0.0 | 0.461066 | 0.581F-04 | 0.834F-01 | 0.196E 02 | 0.147E 00  |

TIME 16.42.39  
PAGE NO. 82, VOL. I  
REP. NO. 6004  
11/17/67

TITLE MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2307

TIME = 0.0500 PD = 7467.82 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO     | PON/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|------------|-----------|-----------|-------------|
| 1     | 0.0 | 0.096698 | 0.129E-04  | 0.184E-01 | 0.431E 01 | 0.262E-01   |
| 2     | 0.0 | 0.101785 | 0.136E-04  | 0.184E-01 | 0.453E 01 | 0.280E-01   |
| 3     | 0.0 | 0.122080 | 0.163E-04  | 0.233E-01 | 0.546E 01 | 0.352E-01   |
| 4     | 0.0 | 0.107153 | 0.143E-04  | 0.204E-01 | 0.477E 01 | 0.299E-01   |
| 5     | 0.0 | 0.110838 | 0.160E-04  | 0.224E-01 | 0.514E 01 | 0.344E-01   |
| 6     | 0.0 | 0.104177 | 0.140E-04  | 0.199E-01 | 0.466E 01 | 0.289E-01   |
| 7     | 0.0 | 0.112641 | 0.151E-04  | 0.215E-01 | 0.522E 01 | 0.319E-01   |
| 8     | 0.0 | 0.106180 | 0.142E-04  | 0.203E-01 | 0.473E 01 | 0.294E-01   |
| 9     | 0.0 | 0.125044 | 0.167E-04  | 0.236E-01 | 0.557E 01 | 0.363E-01   |
| 10    | 0.0 | 0.131051 | 0.175E-04  | 0.250E-01 | 0.593E 01 | 0.384E-01   |
| 11    | 0.0 | 0.106125 | 0.142E-04  | 0.202E-01 | 0.472E 01 | 0.294E-01   |
| 12    | 0.0 | 0.122592 | 0.164E-04  | 0.234E-01 | 0.546E 01 | 0.354E-01   |
| 13    | 0.0 | 0.109642 | 0.147E-04  | 0.209E-01 | 0.488E 01 | 0.308E-01   |
| 14    | 0.0 | 0.133953 | 0.179E-04  | 0.255E-01 | 0.594E 01 | 0.394E-01   |
| 15    | 0.0 | 0.130957 | 0.175E-04  | 0.250E-01 | 0.583E 01 | 0.384E-01   |
| 16    | 0.0 | 0.158308 | 0.212E-04  | 0.302E-01 | 0.705E 01 | 0.480E-01   |
| 17    | 0.0 | 0.200755 | 0.269E-04  | 0.383E-01 | 0.894E 01 | 0.630E-01   |
| 18    | 0.0 | 0.148599 | 0.199E-04  | 0.283E-01 | 0.662E 01 | 0.446E-01   |
| 19    | 0.0 | 0.070640 | 0.0949E-05 | 0.135E-01 | 0.315E 01 | 0.171E-01   |
| 20    | 0.0 | 0.433375 | 0.583E-04  | 0.830E-01 | 0.194E 02 | 0.146E 00   |



TIME 16.42.40  
PAGE NO. 83, VOL. I  
REP. NO. 6004  
11/17/67

MC DONNELL

RUN NO. 2307

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0550 PO = 7024.18 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | IPON-PI1/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.090636 | 0.129F-04 | 0.1A2F-01 | 0.424E 01 | 0.259E-01   |
| 2     | 0.0 | 0.093325 | 0.133F-04 | 0.148F-01 | 0.430E 01 | 0.268E-01   |
| 3     | 0.0 | 0.114455 | 0.153F-04 | 0.230F-01 | 0.535E 01 | 0.347E-01   |
| 4     | 0.0 | 0.098804 | 0.141F-04 | 0.199F-01 | 0.462E 01 | 0.289E-01   |
| 5     | 0.0 | 0.110411 | 0.157F-04 | 0.222F-01 | 0.516E 01 | 0.332E-01   |
| 6     | 0.0 | 0.094772 | 0.135E-04 | 0.191F-01 | 0.443E 01 | 0.274E-01   |
| 7     | 0.0 | 0.101104 | 0.144F-04 | 0.203E-01 | 0.473E 01 | 0.297E-01   |
| 8     | 0.0 | 0.097622 | 0.139F-04 | 0.196E-01 | 0.457E 01 | 0.287E-01   |
| 9     | 0.0 | 0.114413 | 0.163F-04 | 0.231E-01 | 0.537E 01 | 0.348E-01   |
| 10    | 0.0 | 0.120426 | 0.171F-04 | 0.242E-01 | 0.563E 01 | 0.369E-01   |
| 11    | 0.0 | 0.097686 | 0.139E-04 | 0.196F-01 | 0.457E 01 | 0.284E-01   |
| 12    | 0.0 | 0.112504 | 0.160E-04 | 0.226E-01 | 0.526E 01 | 0.340E-01   |
| 13    | 0.0 | 0.100724 | 0.143F-04 | 0.202E-01 | 0.471E 01 | 0.296E-01   |
| 14    | 0.0 | 0.124608 | 0.177E-04 | 0.251E-01 | 0.583E 01 | 0.385E-01   |
| 15    | 0.0 | 0.121070 | 0.172E-04 | 0.243E-01 | 0.566E 01 | 0.372E-01   |
| 16    | 0.0 | 0.148132 | 0.211F-04 | 0.298F-01 | 0.693E 01 | 0.472E-01   |
| 17    | 0.0 | 0.108257 | 0.268F-04 | 0.378F-01 | 0.840E 01 | 0.623E-01   |
| 18    | 0.0 | 0.138110 | 0.197E-04 | 0.278F-01 | 0.646E 01 | 0.435E-01   |
| 19    | 0.0 | 0.065644 | 0.935E-05 | 0.132F-01 | 0.307E 01 | 0.165E-01   |
| 20    | 0.0 | 0.410283 | 0.584E-04 | 0.825E-01 | 0.192E 02 | 0.145E 00   |

RUN NO. 2307

TITLE

MCDONNELL

TIME 16.42.41  
PAGE NO. 04, VOL. I  
REP. NO. 0004  
11/17/67

HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.0600 PD= 6406.21 ALPHA= 15.00

| PROBE | PHI | PIN      | PIN/PO    | PIN/PO2   | PIN/PI    | IPIN-PI1/01 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.9 | 0.045003 | 0.129F-04 | 0.190F-01 | 0.417E 01 | 0.254F-01   |
| 2     | 0.9 | 0.085694 | 0.130F-04 | 0.182E-01 | 0.420E 01 | 0.257E-01   |
| 3     | 0.0 | 0.107276 | 0.162F-04 | 0.227F-01 | 0.526E 01 | 0.342E-01   |
| 4     | 0.0 | 0.091161 | 0.138F-04 | 0.193F-01 | 0.447E 01 | 0.278E-01   |
| 5     | 0.0 | 0.101641 | 0.154F-04 | 0.216F-01 | 0.499E 01 | 0.319F-01   |
| 6     | 0.0 | 0.086138 | 0.130F-04 | 0.183E-01 | 0.423E 01 | 0.259F-01   |
| 7     | 0.0 | 0.090564 | 0.137E-04 | 0.192E-01 | 0.444E 01 | 0.276E-01   |
| 8     | 0.0 | 0.089742 | 0.136F-04 | 0.190F-01 | 0.440E 01 | 0.273E-01   |
| 9     | 0.0 | 0.105329 | 0.159F-04 | 0.223E-01 | 0.517E 01 | 0.336E-01   |
| 10    | 0.0 | 0.110469 | 0.167F-04 | 0.234F-01 | 0.542E 01 | 0.354F-01   |
| 11    | 0.0 | 0.099945 | 0.136E-04 | 0.191F-01 | 0.441E 01 | 0.274E-01   |
| 12    | 0.0 | 0.103968 | 0.156E-04 | 0.219F-01 | 0.504E 01 | 0.325E-01   |
| 13    | 0.0 | 0.092444 | 0.140E-04 | 0.196F-01 | 0.454E 01 | 0.283E-01   |
| 14    | 0.0 | 0.115475 | 0.175E-04 | 0.246F-01 | 0.569E 01 | 0.375E-01   |
| 15    | 0.0 | 0.112099 | 0.170E-04 | 0.230E-01 | 0.550E 01 | 0.361E-01   |
| 16    | 0.0 | 0.138571 | 0.210F-04 | 0.294F-01 | 0.640E 01 | 0.445E-01   |
| 17    | 0.0 | 0.176493 | 0.267F-04 | 0.374F-01 | 0.864E 01 | 0.614E-01   |
| 18    | 0.0 | 0.128090 | 0.194F-04 | 0.272F-01 | 0.620E 01 | 0.423E-01   |
| 19    | 0.0 | 0.060411 | 0.021F-05 | 0.129F-01 | 0.294E 01 | 0.159E-01   |
| 20    | 0.0 | 0.305790 | 0.584F-04 | 0.818E-01 | 0.189E 02 | 0.144E 00   |

TIME 16.42.42  
PAGE NO. 85, VOL. 1  
REP. NO. 6004  
11/17/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2307

TIME = 0.0650 PD = 6213.94 ALPHA = 15.00

| PROBE | PHI | PON      | POH/PO    | PON/PO2   | POH/P1    | (PON-P1)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.079801 | 0.128E-04 | 0.179E-01 | 0.412E 01 | 0.251E-01   |
| 2     | 0.0 | 0.078801 | 0.127E-04 | 0.177E-01 | 0.407E 01 | 0.247E-01   |
| 3     | 0.0 | 0.100545 | 0.162E-04 | 0.225E-01 | 0.519E 01 | 0.337E-01   |
| 4     | 0.0 | 0.084221 | 0.136E-04 | 0.100E-01 | 0.435E 01 | 0.269E-01   |
| 5     | 0.0 | 0.093527 | 0.151E-04 | 0.209E-01 | 0.483E 01 | 0.300E-01   |
| 6     | 0.0 | 0.074276 | 0.126E-04 | 0.175E-01 | 0.424E 01 | 0.244E-01   |
| 7     | 0.0 | 0.081023 | 0.130E-04 | 0.181E-01 | 0.418E 01 | 0.256E-01   |
| 8     | 0.0 | 0.082539 | 0.133E-04 | 0.185E-01 | 0.426E 01 | 0.262E-01   |
| 9     | 0.0 | 0.096590 | 0.155E-04 | 0.216E-01 | 0.499E 01 | 0.320E-01   |
| 10    | 0.0 | 0.101141 | 0.163E-04 | 0.226E-01 | 0.522E 01 | 0.349E-01   |
| 11    | 0.0 | 0.082905 | 0.133E-04 | 0.186E-01 | 0.428E 01 | 0.266E-01   |
| 12    | 0.0 | 0.094286 | 0.152E-04 | 0.211E-01 | 0.487E 01 | 0.311E-01   |
| 13    | 0.0 | 0.084802 | 0.136E-04 | 0.190E-01 | 0.438E 01 | 0.271E-01   |
| 14    | 0.0 | 0.107752 | 0.173E-04 | 0.241E-01 | 0.556E 01 | 0.367E-01   |
| 15    | 0.0 | 0.104044 | 0.167E-04 | 0.233E-01 | 0.537E 01 | 0.351E-01   |
| 16    | 0.0 | 0.129631 | 0.209E-04 | 0.290E-01 | 0.669E 01 | 0.457E-01   |
| 17    | 0.0 | 0.165463 | 0.266E-04 | 0.370E-01 | 0.854E 01 | 0.606E-01   |
| 18    | 0.0 | 0.118541 | 0.191E-04 | 0.265E-01 | 0.612E 01 | 0.411E-01   |
| 19    | 0.0 | 0.056342 | 0.097E-05 | 0.126E-01 | 0.291E 01 | 0.153E-01   |
| 20    | 0.0 | 0.361897 | 0.582E-04 | 0.810E-01 | 0.187E 02 | 0.142E 00   |

**RUN NO. 2307**

TIME 16.42.42  
PAGE NO. 86, VOL. I  
REP. NO. 6004  
11/17/67

HIT TEST NO. 67  
PRESSURE SUPPLY

TIME = 0.0700 PO = 5847.35 ALPHA = 15.00

| PROBE | pH  | PON      | PON/PO    | PCN/PCO   | PON/P1    | (PIN-P1)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.075029 | 0.128E-04 | 0.177E-01 | 0.408E 01 | 0.240E-01   |
| 2     | 0.0 | 0.072916 | 0.125E-04 | 0.172E-01 | 0.398E 01 | 0.230E-01   |
| 3     | 0.0 | 0.069261 | 0.161E-04 | 0.223E-01 | 0.512E 01 | 0.332E-01   |
| 4     | 0.0 | 0.077987 | 0.133E-04 | 0.184E-01 | 0.424E 01 | 0.261E-01   |
| 5     | 0.0 | 0.086069 | 0.147E-04 | 0.203E-01 | 0.468E 01 | 0.296E-01   |
| 6     | 0.0 | 0.071105 | 0.122E-04 | 0.168E-01 | 0.387E 01 | 0.231E-01   |
| 7     | 0.0 | 0.072490 | 0.124E-04 | 0.171E-01 | 0.394E 01 | 0.237E-01   |
| 8     | 0.0 | 0.076314 | 0.130E-04 | 0.186E-01 | 0.413E 01 | 0.252E-01   |
| 9     | 0.0 | 0.084596 | 0.152E-04 | 0.209E-01 | 0.481E 01 | 0.307E-01   |
| 10    | 0.0 | 0.092562 | 0.158E-04 | 0.219E-01 | 0.503E 01 | 0.325E-01   |
| 11    | 0.0 | 0.076563 | 0.131E-04 | 0.181E-01 | 0.416E 01 | 0.255E-01   |
| 12    | 0.0 | 0.081556 | 0.147E-04 | 0.203E-01 | 0.468E 01 | 0.297E-01   |
| 13    | 0.0 | 0.077796 | 0.133E-04 | 0.184E-01 | 0.423E 01 | 0.260E-01   |
| 14    | 0.0 | 0.070241 | 0.171E-04 | 0.217E 01 | 0.543E 01 | 0.358E-01   |
| 15    | 0.0 | 0.086305 | 0.166E-04 | 0.229E 01 | 0.527E 01 | 0.344E-01   |
| 16    | 0.0 | 0.121307 | 0.297E-04 | 0.288E 01 | 0.639E 01 | 0.459E-01   |
| 17    | 0.0 | 0.151167 | 0.265E-04 | 0.366E-01 | 0.863E 01 | 0.593E-01   |
| 18    | 0.0 | 0.109462 | 0.147E-04 | 0.258E-01 | 0.595E 01 | 0.399E-01   |
| 19    | 0.0 | 0.052235 | 0.893E-05 | 0.123E-01 | 0.284E 01 | 0.148E-01   |
| 20    | 0.0 | 0.033602 | 0.579E-05 | 0.800E-01 | 0.140E 02 | 0.140E 00   |

TIME 16.47.43  
PAGE NO. 87, VOL. I  
REP. NO. 6004  
11/17/67

HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

PUN NO. 2307

MCDOONELL

TIME = 0.0750 PO = 5506.43 ALPHA = 15.20

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PL    | (PON-PL)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.07687  | 0.128E-04 | 0.176E-01 | 0.405E 01 | 0.246E-01   |
| 2     | 0.0 | 0.067769 | 0.123E-04 | 0.169E-01 | 0.388E 01 | 0.232E-01   |
| 3     | 0.0 | 0.048423 | 0.161E-04 | 0.220E-01 | 0.504E 01 | 0.328E-01   |
| 4     | 0.0 | 0.072456 | 0.132E-04 | 0.181E-01 | 0.415E 01 | 0.256E-01   |
| 5     | 0.0 | 0.079268 | 0.144E-04 | 0.198E-01 | 0.454E 01 | 0.285E-01   |
| 6     | 0.0 | 0.065966 | 0.118E-04 | 0.162E-01 | 0.371E 01 | 0.219E-01   |
| 7     | 0.0 | 0.064935 | 0.118E-04 | 0.162E-01 | 0.372E 01 | 0.219E-01   |
| 8     | 0.0 | 0.070166 | 0.127E-04 | 0.175E-01 | 0.402E 01 | 0.243E-01   |
| 9     | 0.0 | 0.081349 | 0.148E-04 | 0.203E-01 | 0.466E 01 | 0.295E-01   |
| 10    | 0.0 | 0.084611 | 0.154E-04 | 0.211E-01 | 0.484E 01 | 0.310E-01   |
| 11    | 0.0 | 0.070921 | 0.129E-04 | 0.177E-01 | 0.406E 01 | 0.247E-01   |
| 12    | 0.0 | 0.078679 | 0.143E-04 | 0.196E-01 | 0.450E 01 | 0.293E-01   |
| 13    | 0.0 | 0.071428 | 0.130E-04 | 0.178E-01 | 0.409E 01 | 0.249E-01   |
| 14    | 0.0 | 0.093340 | 0.170E-04 | 0.233E-01 | 0.534E 01 | 0.350E-01   |
| 15    | 0.0 | 0.070681 | 0.165E-04 | 0.226E-01 | 0.519E 01 | 0.334E-01   |
| 16    | 0.0 | 0.113600 | 0.206E-04 | 0.283E-01 | 0.650E 01 | 0.444E-01   |
| 17    | 0.0 | 0.145604 | 0.264E-04 | 0.363E-01 | 0.834E 01 | 0.592E-01   |
| 18    | 0.0 | 0.106453 | 0.183E-04 | 0.251E-01 | 0.577E 01 | 0.385E-01   |
| 19    | 0.0 | 0.048492 | 0.881E-05 | 0.121E-01 | 0.278E 01 | 0.143E-01   |
| 20    | 0.0 | 0.315907 | 0.574E-04 | 0.787E-01 | 0.181E 02 | 0.130E 00   |

TIME 16.42.43  
PAGE NO. 88, VOL. I  
REP. NO. 0004  
11/17/67

MC DONNELL

TITLE

RUN NO. 2307

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0800 PO = 5191.20 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PCN/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.066775 | 0.129E-04 | 0.176E-01 | 0.403E 01 | 0.245E-01   |
| 2     | 0.0 | 0.063450 | 0.122E-04 | 0.167E-01 | 0.394E 01 | 0.229E-01   |
| 3     | 0.0 | 0.093033 | 0.160E-04 | 0.218E-01 | 0.501E 01 | 0.174E-01   |
| 4     | 0.0 | 0.067631 | 0.130E-04 | 0.178E-01 | 0.408E 01 | 0.249E-01   |
| 5     | 0.0 | 0.073123 | 0.141E-04 | 0.192E-01 | 0.441E 01 | 0.276E-01   |
| 6     | 0.0 | 0.059318 | 0.114E-04 | 0.156E-01 | 0.358E 01 | 0.204E-01   |
| 7     | 0.0 | 0.058388 | 0.112E-04 | 0.154E-01 | 0.353E 01 | 0.204E-01   |
| 8     | 0.0 | 0.064996 | 0.125E-04 | 0.171E-01 | 0.392E 01 | 0.236E-01   |
| 9     | 0.0 | 0.074847 | 0.144E-04 | 0.197E-01 | 0.452E 01 | 0.284E-01   |
| 10    | 0.0 | 0.077330 | 0.149E-04 | 0.203E-01 | 0.467E 01 | 0.296E-01   |
| 11    | 0.0 | 0.065978 | 0.127E-04 | 0.174E-01 | 0.398E 01 | 0.241E-01   |
| 12    | 0.0 | 0.071855 | 0.138E-04 | 0.189E-01 | 0.434E 01 | 0.269E-01   |
| 13    | 0.0 | 0.055498 | 0.127E-04 | 0.173E-01 | 0.397E 01 | 0.239E-01   |
| 14    | 0.0 | 0.087061 | 0.168E-04 | 0.229E-01 | 0.526E 01 | 0.344E-01   |
| 15    | 0.0 | 0.084322 | 0.164E-04 | 0.225E-01 | 0.515E 01 | 0.335E-01   |
| 16    | 0.0 | 0.106116 | 0.205E-04 | 0.280E-01 | 0.643E 01 | 0.438E-01   |
| 17    | 0.0 | 0.136774 | 0.263E-04 | 0.360E-01 | 0.826E 01 | 0.585E-01   |
| 18    | 0.0 | 0.092315 | 0.179E-04 | 0.244E-01 | 0.560E 01 | 0.371E-01   |
| 19    | 0.0 | 0.045113 | 0.089E-05 | 0.119E-01 | 0.272E 01 | 0.139E-01   |
| 20    | 0.0 | 0.293811 | 0.566E-04 | 0.773E-01 | 0.177E 02 | 0.135E 00   |

TIME 16.42.64  
PAGE NO. 89, VOL. I  
RCP. NO. 0004  
11/17/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2307

TIME = 0.0850 PD = 4901.66 ALPHA = 15.00

| PROBE | PHI | PCN      | PCN/PO    | PCN/PO2   | PCN/PO1   | (PCN-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.063293 | 0.179E-04 | 0.176E-01 | 0.403E-01 | 0.245E-01   |
| 2     | 0.0 | 0.059960 | 0.122E-04 | 0.166E-01 | 0.382E-01 | 0.220E-01   |
| 3     | 0.0 | 0.070089 | 0.159E-04 | 0.211E-01 | 0.497E-01 | 0.321E-01   |
| 4     | 0.0 | 0.063509 | 0.140E-04 | 0.176E-01 | 0.405E-01 | 0.246E-01   |
| 5     | 0.0 | 0.067634 | 0.138E-04 | 0.188E-01 | 0.431E-01 | 0.267E-01   |
| 6     | 0.0 | 0.054542 | 0.111E-04 | 0.151E-01 | 0.347E-01 | 0.200E-01   |
| 7     | 0.0 | 0.052838 | 0.108E-04 | 0.147E-01 | 0.317E-01 | 0.191E-01   |
| 8     | 0.0 | 0.060503 | 0.123E-04 | 0.168E-01 | 0.385E-01 | 0.230E-01   |
| 9     | 0.0 | 0.062901 | 0.141E-04 | 0.192E-01 | 0.440E-01 | 0.275E-01   |
| 10    | 0.0 | 0.070717 | 0.144E-04 | 0.196E-01 | 0.451E-01 | 0.283E-01   |
| 11    | 0.0 | 0.061735 | 0.126E-04 | 0.171E-01 | 0.393E-01 | 0.237E-01   |
| 12    | 0.0 | 0.065684 | 0.134E-04 | 0.182E-01 | 0.418E-01 | 0.257E-01   |
| 13    | 0.0 | 0.060605 | 0.124E-04 | 0.168E-01 | 0.386E-01 | 0.231E-01   |
| 14    | 0.0 | 0.081372 | 0.166E-04 | 0.226E-01 | 0.518E-01 | 0.338E-01   |
| 15    | 0.0 | 0.080979 | 0.165E-04 | 0.225E-01 | 0.516E-01 | 0.336E-01   |
| 16    | 0.0 | 0.100037 | 0.204E-04 | 0.278E-01 | 0.637E-01 | 0.434E-01   |
| 17    | 0.0 | 0.128679 | 0.263E-04 | 0.357E-01 | 0.820E-01 | 0.581E-01   |
| 18    | 0.0 | 0.085046 | 0.174E-04 | 0.236E-01 | 0.542E-01 | 0.357E-01   |
| 19    | 0.0 | 0.042097 | 0.059E-05 | 0.117E-01 | 0.268E-01 | 0.136E-01   |
| 20    | 0.0 | 0.272314 | 0.556E-04 | 0.756E-01 | 0.173E-02 | 0.132E-00   |

RUN NO. 2307

TITLE

MCDONNELL

TIME 16.42.44  
PAGE NO. 90, VOL. I  
REP. NO. 6004  
11/17/67

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0900 PO = 4637.80 ALPHA = 15.00

| PROBE | PHI | PNN      | PNN/PD    | PNN/PD2   | PNN/P1    | (PNN-P11)/O1 |
|-------|-----|----------|-----------|-----------|-----------|--------------|
| 1     | 0.0 | 0.060241 | 0.130E-04 | 0.176E-01 | 0.405E 01 | 0.246E-01    |
| 2     | 0.0 | 0.057298 | 0.124E-04 | 0.168E-01 | 0.385E 01 | 0.230E-01    |
| 3     | 0.0 | 0.073503 | 0.159E-04 | 0.215E-01 | 0.495E 01 | 0.319E-01    |
| 4     | 0.0 | 0.060203 | 0.140E-04 | 0.176E-01 | 0.404E 01 | 0.245E-01    |
| 5     | 0.0 | 0.062802 | 0.135E-04 | 0.184E-01 | 0.422E 01 | 0.260E-01    |
| 6     | 0.0 | 0.050538 | 0.109E-04 | 0.148E-01 | 0.340E 01 | 0.193E-01    |
| 7     | 0.0 | 0.049287 | 0.104E-04 | 0.141E-01 | 0.325E 01 | 0.181E-01    |
| 8     | 0.0 | 0.056688 | 0.127E-04 | 0.166E-01 | 0.391E 01 | 0.227E-01    |
| 9     | 0.0 | 0.064081 | 0.138E-04 | 0.188E-01 | 0.431E 01 | 0.267E-01    |
| 10    | 0.0 | 0.064773 | 0.140E-04 | 0.190E-01 | 0.434E 01 | 0.270E-01    |
| 11    | 0.0 | 0.058191 | 0.125E-04 | 0.170E-01 | 0.391E 01 | 0.235E-01    |
| 12    | 0.0 | 0.060165 | 0.130E-04 | 0.176E-01 | 0.405E 01 | 0.246E-01    |
| 13    | 0.0 | 0.056149 | 0.121E-04 | 0.166E-01 | 0.378E 01 | 0.224E-01    |
| 14    | 0.0 | 0.076105 | 0.165E-04 | 0.223E-01 | 0.513E 01 | 0.333E-01    |
| 15    | 0.0 | 0.077402 | 0.167E-04 | 0.227E-01 | 0.521E 01 | 0.339E-01    |
| 16    | 0.0 | 0.094181 | 0.203E-04 | 0.276E-01 | 0.633E 01 | 0.430E-01    |
| 17    | 0.0 | 0.121317 | 0.262E-04 | 0.355E-01 | 0.816E 01 | 0.577E-01    |
| 18    | 0.0 | 0.077847 | 0.169E-04 | 0.228E-01 | 0.524E 01 | 0.341E-01    |
| 19    | 0.0 | 0.039444 | 0.850E-05 | 0.115E-01 | 0.265E 01 | 0.133E-01    |
| 20    | 0.0 | 0.251417 | 0.542E-04 | 0.736E-01 | 0.169E 02 | 0.129E 00    |



TIME 16.42.44  
PAGE NO. 91, VOL. I  
REP. NO. 6004  
11/17/67

TITLE  
MCDONNELL

HT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2307

TIME = 0.0950 PD = 4399.62 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/OI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.057619 | 0.131F-04 | 0.178F-01 | 0.409F 01 | 0.249F-01   |
| 2     | 0.0 | 0.055465 | 0.126F-04 | 0.171F-01 | 0.394F 01 | 0.236F-01   |
| 3     | 0.0 | 0.069544 | 0.150F-04 | 0.216F-01 | 0.494F 01 | 0.317F-01   |
| 4     | 0.0 | 0.057581 | 0.130F-04 | 0.177F-01 | 0.408F 01 | 0.247F-01   |
| 5     | 0.0 | 0.058626 | 0.133F-04 | 0.181F-01 | 0.417F 01 | 0.254F-01   |
| 6     | 0.0 | 0.047306 | 0.108F-04 | 0.146F-01 | 0.336F 01 | 0.190F-01   |
| 7     | 0.0 | 0.044734 | 0.102F-04 | 0.138F-01 | 0.310F 01 | 0.175F-01   |
| 8     | 0.0 | 0.053550 | 0.122F-04 | 0.165F-01 | 0.380F 01 | 0.225F-01   |
| 9     | 0.0 | 0.059117 | 0.136F-04 | 0.186F-01 | 0.424F 01 | 0.261F-01   |
| 10    | 0.0 | 0.059493 | 0.135F-04 | 0.183F-01 | 0.423F 01 | 0.259F-01   |
| 11    | 0.0 | 0.055366 | 0.126F-04 | 0.171F-01 | 0.393F 01 | 0.246F-01   |
| 12    | 0.0 | 0.055300 | 0.126F-04 | 0.171F-01 | 0.393F 01 | 0.246F-01   |
| 13    | 0.0 | 0.052331 | 0.119F-04 | 0.161F-01 | 0.372F 01 | 0.218F-01   |
| 14    | 0.0 | 0.071848 | 0.163F-04 | 0.222F-01 | 0.510F 01 | 0.339F-01   |
| 15    | 0.0 | 0.074961 | 0.170F-04 | 0.231F-01 | 0.532F 01 | 0.348F-01   |
| 16    | 0.0 | 0.088943 | 0.202F-04 | 0.274F-01 | 0.632F 01 | 0.428F-01   |
| 17    | 0.0 | 0.114689 | 0.241F-04 | 0.354F-01 | 0.815F 01 | 0.575F-01   |
| 18    | 0.0 | 0.071119 | 0.162F-04 | 0.219F-01 | 0.505F 01 | 0.326F-01   |
| 19    | 0.0 | 0.037156 | 0.064F-04 | 0.115F-01 | 0.264F 01 | 0.132F-01   |
| 20    | 0.0 | 0.231119 | 0.595F-04 | 0.713F-01 | 0.164F 02 | 0.124F 00   |

RUN NO. 2307

TITLE

MC DONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME 16 42 45  
PAGE NO. 92, VOL. 1  
REP. NO. 0004  
11/17/67

TIME = 0.1000 PD = 4187.12 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | IPIN-PI1/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.055428 | 0.137F-04 | 0.180F-01 | 0.416 01  | 0.253E-01   |
| 2     | 0.0 | 0.054459 | 0.130E-04 | 0.177F-01 | 0.409E 01 | 0.247E-01   |
| 3     | 0.0 | 0.065942 | 0.157E-04 | 0.214E-01 | 0.495E 01 | 0.316E-01   |
| 4     | 0.0 | 0.055173 | 0.132E-04 | 0.180E-01 | 0.416E 01 | 0.253E-01   |
| 5     | 0.0 | 0.055107 | 0.132E-04 | 0.179F-01 | 0.416E 01 | 0.251E-01   |
| 6     | 0.0 | 0.044845 | 0.107F-04 | 0.166F-01 | 0.337E 01 | 0.189E-01   |
| 7     | 0.0 | 0.042179 | 0.101F-04 | 0.131E-01 | 0.317E 01 | 0.173E-01   |
| 8     | 0.0 | 0.051090 | 0.122F-04 | 0.166F-01 | 0.384E 01 | 0.227E-01   |
| 9     | 0.0 | 0.056299 | 0.134F-04 | 0.183F-01 | 0.423E 01 | 0.259E-01   |
| 10    | 0.0 | 0.054892 | 0.131F-04 | 0.178F-01 | 0.412E 01 | 0.250E-01   |
| 11    | 0.0 | 0.053201 | 0.127F-04 | 0.173F-01 | 0.390E 01 | 0.240E-01   |
| 12    | 0.0 | 0.051087 | 0.122F-04 | 0.166F-01 | 0.384E 01 | 0.227E-01   |
| 13    | 0.0 | 0.049150 | 0.117F-04 | 0.160F-01 | 0.369E 01 | 0.215E-01   |
| 14    | 0.0 | 0.068002 | 0.162F-04 | 0.221E-01 | 0.511E 01 | 0.329E-01   |
| 15    | 0.0 | 0.073295 | 0.175F-04 | 0.238E-01 | 0.550E 01 | 0.360E-01   |
| 16    | 0.0 | 0.084321 | 0.201E-04 | 0.274F-01 | 0.633E 01 | 0.427E-01   |
| 17    | 0.0 | 0.108794 | 0.260E-04 | 0.353F-01 | 0.817E 01 | 0.574E-01   |
| 18    | 0.0 | 0.064860 | 0.155E-04 | 0.211F-01 | 0.487E 01 | 0.310E-01   |
| 19    | 0.0 | 0.035228 | 0.861E-05 | 0.114E-01 | 0.265E 01 | 0.132E-01   |
| 20    | 0.0 | 0.211420 | 0.505E-04 | 0.606E-01 | 0.159E 02 | 0.119E 00   |

TIME R. 42.48  
PAGE NO. 93, VOL. I  
REP. NO. 0004  
11/10/67

HIT TEST NO. 67  
TUNNEL PARAMETERS

TITLE

RUN NO. 2308

MC DONNELL

| T<br>(SEC) | PO<br>(PSI) | TO<br>(OK) | HO<br>(SF/SECC) | O-DOT<br>(B/SF-S) | P02<br>(PSI) | P1<br>(PSI) | T1<br>(OK) | U<br>(FT/S) | M1    | RE / T    | Q1<br>(PSI) | ALPHA<br>(DEG) |
|------------|-------------|------------|-----------------|-------------------|--------------|-------------|------------|-------------|-------|-----------|-------------|----------------|
| .0450      | 8337.       | 2183.      | 0.28143E 08     | 130.18            | 6.171        | 0.02177     | 71.50      | 7396.       | 13.08 | 12614.25. | 3.373       | 15.03          |
| .0500      | 7853.       | 2151.      | 0.27640E 08     | 124.31            | 5.877        | 0.02654     | 70.47      | 7329.       | 13.05 | 12304.20. | 3.166       | 15.03          |
| .0550      | 7396.       | 2113.      | 0.27099E 08     | 118.54            | 5.507        | 0.02536     | 69.30      | 7256.       | 13.03 | 12035.27. | 3.015       | 15.03          |
| .0600      | 6966.       | 2075.      | 0.26514E 08     | 112.57            | 5.330        | 0.02423     | 67.99      | 7177.       | 13.01 | 11812.14. | 2.872       | 15.03          |
| .0650      | 6558.       | 2033.      | 0.25883E 08     | 106.70            | 5.076        | 0.02313     | 66.53      | 7091.       | 13.00 | 11638.36. | 2.736       | 15.03          |
| .0700      | 6177.       | 1987.      | 0.25203E 08     | 100.83            | 4.835        | 0.02208     | 64.90      | 6997.       | 12.99 | 11519.89. | 2.606       | 15.03          |
| .0750      | 5823.       | 1937.      | 0.24465E 08     | 94.95             | 4.607        | 0.02107     | 63.09      | 6895.       | 12.98 | 11464.07. | 2.484       | 15.03          |
| .0800      | 5494.       | 1881.      | 0.23678E 08     | 89.08             | 4.393        | 0.02011     | 61.08      | 6782.       | 12.97 | 11409.97. | 2.369       | 15.03          |
| .0850      | 5191.       | 1842.      | 0.23093E 08     | 83.21             | 4.191        | 0.01923     | 59.69      | 6698.       | 12.96 | 11351.33. | 2.261       | 15.03          |
| .0900      | 4914.       | 1783.      | 0.22222E 08     | 77.34             | 4.003        | 0.01835     | 57.38      | 6571.       | 12.97 | 11500.60. | 2.160       | 15.03          |
| .0950      | 4662.       | 1718.      | 0.21298E 08     | 71.47             | 3.828        | 0.01752     | 54.87      | 6432.       | 12.98 | 11750.95. | 2.066       | 15.03          |
| .1000      | 4436.       | 1646.      | 0.20313E 08     | 65.60             | 3.665        | 0.01673     | 52.17      | 6282.       | 13.00 | 12126.10. | 1.980       | 15.03          |
| .1050      | 4236.       | 1567.      | 0.19269E 08     | 59.73             | 3.517        | 0.01598     | 49.26      | 6119.       | 13.04 | 12655.22. | 1.900       | 15.03          |



RUN NO. 2308

TITLE

MCDOONELL

TIME 8.42.48

PAGE NO. 95, VOL. I

REP. NO. 0004

11/10/67

HIT TEST NO. 67

MODE: HEAT TRANSFER RATES

TIME=0.0500 PU= 3. PR2= 5.877 P1= 0.2654 QDOT-A=124.31

| N  | QDOT-N<br>(R/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 3.1505             | 0.02534       | 0.02534        | 3.1505     |
| 2  | 3.6524             | 0.02939       | 0.02939        | 3.6524     |
| 3  | 5.0071             | 0.04028       | 0.04028        | 5.0071     |
| 4  | 4.3727             | 0.03519       | 0.03519        | 4.3727     |
| 5  | 5.0506             | 0.04063       | 0.04063        | 5.0506     |
| 6  | 4.9393             | 0.03973       | 0.03973        | 4.9393     |
| 7  | 5.4493             | 0.04384       | 0.04384        | 5.4493     |
| 8  | 3.5780             | 0.02878       | 0.02878        | 3.5780     |
| 9  | 4.5195             | 0.03636       | 0.03636        | 4.5195     |
| 10 | 4.5666             | 0.03674       | 0.03674        | 4.5666     |
| 11 | 4.1428             | 0.03333       | 0.03333        | 4.1428     |
| 12 | 3.8587             | 0.03104       | 0.03104        | 3.8587     |
| 13 | 4.4713             | 0.03597       | 0.03597        | 4.4713     |
| 14 | 3.6889             | 0.02968       | 0.02968        | 3.6889     |
| 15 | 6.7710             | 0.03838       | 0.03838        | 6.7710     |
| 16 | 5.6613             | 0.04554       | 0.04554        | 5.6613     |
| 17 | 5.2104             | 0.04191       | 0.04191        | 5.2104     |
| 18 | 5.1891             | 0.04174       | 0.04174        | 5.1891     |
| 19 | 2.9754             | 0.02394       | 0.02394        | 2.9754     |
| 20 | 20.2844            | 0.16318       | 0.16318        | 20.2844    |

TIME 8.42.49  
 PAGE NO. 96, VOL. I  
 REP. NO. 0004  
 11/10/67

TITLE  
 MCDONNELL

HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

TIME=0550 PM 7396. P02=5.597 P1=02536 QDOT-A=118.44

| N  | QDOT-N<br>(R/SF-S) | QDOT-N/KDOT-A | QDOT-N/KDOT-A | QDOT-N/REF |
|----|--------------------|---------------|---------------|------------|
| 1  | 2.9348             | 0.02478       | 0.02478       | 2.9348     |
| 2  | 3.4237             | 0.02891       | 0.02891       | 3.4237     |
| 3  | 4.9243             | 0.04158       | 0.04158       | 4.9243     |
| 4  | 4.2003             | 0.03546       | 0.03546       | 4.2003     |
| 5  | 4.8605             | 0.04047       | 0.04047       | 4.8605     |
| 6  | 4.7181             | 0.03986       | 0.03986       | 4.7181     |
| 7  | 5.3713             | 0.04535       | 0.04535       | 5.3713     |
| 8  | 3.4456             | 0.02909       | 0.02909       | 3.4456     |
| 9  | 4.4057             | 0.03720       | 0.03720       | 4.4057     |
| 10 | 4.3908             | 0.03707       | 0.03707       | 4.3908     |
| 11 | 3.9831             | 0.03363       | 0.03363       | 3.9831     |
| 12 | 3.7769             | 0.03189       | 0.03189       | 3.7769     |
| 13 | 4.3430             | 0.03667       | 0.03667       | 4.3430     |
| 14 | 3.5246             | 0.02976       | 0.02976       | 3.5246     |
| 15 | 4.5500             | 0.03842       | 0.03842       | 4.5500     |
| 16 | 5.4053             | 0.04564       | 0.04564       | 5.4053     |
| 17 | 4.9740             | 0.04200       | 0.04200       | 4.9740     |
| 18 | 4.9463             | 0.04176       | 0.04176       | 4.9463     |
| 19 | 2.8725             | 0.02425       | 0.02425       | 2.8725     |
| 20 | 19.3061            | 0.16301       | 0.16301       | 19.3061    |

TIME 8.42.49  
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11/10/67

MC DONNELL  
HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0600 PO= 6.664. PO2= 5.330 PI=02423 QDOT-A=112.57

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.7191             | 0.02416       | 0.02416        | 2.7191     |
| 2  | 3.1950             | 0.02838       | 0.02838        | 3.1950     |
| 3  | 4.8416             | 0.04101       | 0.04301        | 4.8416     |
| 4  | 4.0279             | 0.03578       | 0.03578        | 4.0279     |
| 5  | 4.6304             | 0.04113       | 0.04113        | 4.6304     |
| 6  | 4.4979             | 0.03496       | 0.03996        | 4.4979     |
| 7  | 5.2934             | 0.04702       | 0.04702        | 5.2934     |
| 8  | 3.3132             | 0.02943       | 0.02943        | 3.3132     |
| 9  | 4.2919             | 0.03813       | 0.03813        | 4.2919     |
| 10 | 4.2151             | 0.03745       | 0.03745        | 4.2151     |
| 11 | 3.8234             | 0.03397       | 0.03397        | 3.8234     |
| 12 | 3.6952             | 0.03283       | 0.03283        | 3.6952     |
| 13 | 4.2148             | 0.03744       | 0.03744        | 4.2148     |
| 14 | 3.3603             | 0.02985       | 0.02985        | 3.3603     |
| 15 | 4.3289             | 0.03946       | 0.03946        | 4.3289     |
| 16 | 5.1493             | 0.04574       | 0.04574        | 5.1493     |
| 17 | 4.7376             | 0.04209       | 0.04209        | 4.7376     |
| 18 | 4.7035             | 0.04178       | 0.04178        | 4.7035     |
| 19 | 2.7695             | 0.02460       | 0.02460        | 2.7695     |
| 20 | 18.3278            | 0.16282       | 0.16282        | 18.3278    |

TIME 8.42.49  
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 REP. NO. 0004  
 11/11/67

RUN NO. 2308

TITLE

MC DONNELL

MIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

| TIME=0650 |                    | PO=           | 6558.          | P02=       | 5.076      | P1= | 02313 | QDOT-A= | 106.70 |
|-----------|--------------------|---------------|----------------|------------|------------|-----|-------|---------|--------|
| N         | QDOT-N<br>(N/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF | QDOT-N/REF |     |       |         |        |
| 1         | 2.5035             | 0.02346       | 0.02346        | 2.5035     | 2.5035     |     |       |         |        |
| 2         | 2.9667             | 0.02780       | 0.02780        | 2.9667     | 2.9667     |     |       |         |        |
| 3         | 4.7588             | 0.04663       | 0.04663        | 4.7588     | 4.7588     |     |       |         |        |
| 4         | 3.8555             | 0.03614       | 0.03614        | 3.8555     | 3.8555     |     |       |         |        |
| 5         | 4.4203             | 0.04143       | 0.04143        | 4.4203     | 4.4203     |     |       |         |        |
| 6         | 4.2777             | 0.04009       | 0.04009        | 4.2777     | 4.2777     |     |       |         |        |
| 7         | 5.2154             | 0.04899       | 0.04899        | 5.2154     | 5.2154     |     |       |         |        |
| 8         | 3.1808             | 0.02981       | 0.02981        | 3.1808     | 3.1808     |     |       |         |        |
| 9         | 4.1791             | 0.03916       | 0.03916        | 4.1791     | 4.1791     |     |       |         |        |
| 10        | 4.0394             | 0.03786       | 0.03786        | 4.0394     | 4.0394     |     |       |         |        |
| 11        | 3.6637             | 0.03436       | 0.03436        | 3.6637     | 3.6637     |     |       |         |        |
| 12        | 3.6134             | 0.03387       | 0.03387        | 3.6134     | 3.6134     |     |       |         |        |
| 13        | 4.0865             | 0.03830       | 0.03830        | 4.0865     | 4.0865     |     |       |         |        |
| 14        | 3.1960             | 0.02995       | 0.02995        | 3.1960     | 3.1960     |     |       |         |        |
| 15        | 4.1079             | 0.03850       | 0.03850        | 4.1079     | 4.1079     |     |       |         |        |
| 16        | 4.3933             | 0.04586       | 0.04586        | 4.3933     | 4.3933     |     |       |         |        |
| 17        | 4.5013             | 0.04219       | 0.04219        | 4.5013     | 4.5013     |     |       |         |        |
| 18        | 4.4607             | 0.04181       | 0.04181        | 4.4607     | 4.4607     |     |       |         |        |
| 19        | 2.6665             | 0.02499       | 0.02499        | 2.6665     | 2.6665     |     |       |         |        |
| 20        | 17.3494            | 0.16261       | 0.16261        | 17.3494    | 17.3494    |     |       |         |        |



RUN NO. 2308

TITLE

MC DONNELL

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME 8.42.49  
PAGE NO. 99, VOL. I  
REP. NO. 0004  
11/10/67

| TIME=0700 P0= 6177. P02= 4.835 P1= 02208 QDOT-A=100.83 |                     |               |                |            |  |
|--------------------------------------------------------|---------------------|---------------|----------------|------------|--|
| N                                                      | QDOT-N<br>(10/SE-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |  |
| 1                                                      | 2.2878              | 0.02269       | 0.02269        | 2.2878     |  |
| 2                                                      | 2.7375              | 0.02715       | 0.02715        | 2.7375     |  |
| 3                                                      | 4.6760              | 0.04638       | 0.04638        | 4.6760     |  |
| 4                                                      | 3.6831              | 0.03653       | 0.03653        | 3.6831     |  |
| 5                                                      | 4.2102              | 0.04176       | 0.04176        | 4.2102     |  |
| 6                                                      | 4.0575              | 0.04024       | 0.04024        | 4.0575     |  |
| 7                                                      | 5.1375              | 0.05095       | 0.05095        | 5.1375     |  |
| 8                                                      | 3.0685              | 0.03024       | 0.03024        | 3.0685     |  |
| 9                                                      | 4.0643              | 0.04031       | 0.04031        | 4.0643     |  |
| 10                                                     | 3.8636              | 0.03832       | 0.03832        | 3.8636     |  |
| 11                                                     | 3.5060              | 0.03475       | 0.03475        | 3.5060     |  |
| 12                                                     | 3.5317              | 0.03503       | 0.03503        | 3.5317     |  |
| 13                                                     | 3.9583              | 0.03926       | 0.03926        | 3.9583     |  |
| 14                                                     | 3.0317              | 0.03007       | 0.03007        | 3.0317     |  |
| 15                                                     | 3.8868              | 0.03855       | 0.03855        | 3.8868     |  |
| 16                                                     | 4.6373              | 0.04599       | 0.04599        | 4.6373     |  |
| 17                                                     | 4.2649              | 0.04230       | 0.04230        | 4.2649     |  |
| 18                                                     | 4.2179              | 0.04183       | 0.04183        | 4.2179     |  |
| 19                                                     | 2.5635              | 0.02543       | 0.02543        | 2.5635     |  |
| 20                                                     | 16.3711             | 0.16237       | 0.16237        | 16.3711    |  |

RUN NO. 7308

TITLE

MCDONNELL

TIME 8.42.49  
PAGE NO. 100, VOL. I  
REP. NO. 0004  
11/10/67

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME=0750 P01= 5823. P02= 4.607 P1= 02107 QDOT-A= 94.95

| N  | QDOT-N<br>(B/SE-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.0721             | 0.02187       | 0.02182        | 2.0721     |
| 2  | 2.5098             | 0.02642       | 0.02642        | 2.5088     |
| 3  | 4.5932             | 0.04837       | 0.04837        | 4.5932     |
| 4  | 3.5107             | 0.03697       | 0.03697        | 3.5107     |
| 5  | 4.0001             | 0.04213       | 0.04213        | 4.0001     |
| 6  | 3.8373             | 0.04041       | 0.04041        | 3.8373     |
| 7  | 5.0595             | 0.05328       | 0.05328        | 5.0595     |
| 8  | 2.9161             | 0.03071       | 0.03071        | 2.9161     |
| 9  | 3.9505             | 0.04169       | 0.04169        | 3.9505     |
| 10 | 3.6879             | 0.03886       | 0.03886        | 3.6879     |
| 11 | 3.3443             | 0.03522       | 0.03522        | 3.3443     |
| 12 | 3.4499             | 0.03633       | 0.03633        | 3.4499     |
| 13 | 3.8300             | 0.04034       | 0.04034        | 3.8300     |
| 14 | 2.8614             | 0.03020       | 0.03020        | 2.8614     |
| 15 | 3.6658             | 0.03861       | 0.03861        | 3.6658     |
| 16 | 4.3813             | 0.04614       | 0.04614        | 4.3813     |
| 17 | 4.0285             | 0.04243       | 0.04243        | 4.0285     |
| 18 | 3.9750             | 0.04196       | 0.04196        | 3.9750     |
| 19 | 2.4606             | 0.02591       | 0.02591        | 2.4606     |
| 20 | 15.3928            | 0.16211       | 0.16211        | 15.3928    |

RUN NO. 2308

TITLE

MCDOONNELL

TIME R. 42.49

PAGE NO. 101, VOL. I

REP. NO. GOOD

11/10/67

HIT TEST NO. 67

MODEL HEAT TRANSFER RATFS

TIME=0.0800 PO=5494. PO2=4.393 PI=02011 QDOT-A=89.08

| N  | QDOT-N<br>(0/SF-S) | QDOT-N/QDOT-A | QDOT-N/KDOT-A | QDOT-N/REF |
|----|--------------------|---------------|---------------|------------|
| 1  | 1.8565             | 0.02084       | 0.02084       | 1.8565     |
| 2  | 2.2801             | 0.02560       | 0.02560       | 2.2801     |
| 3  | 4.5104             | 0.05063       | 0.05063       | 4.5104     |
| 4  | 3.3383             | 0.03747       | 0.03747       | 3.3383     |
| 5  | 3.7900             | 0.04254       | 0.04254       | 3.7900     |
| 6  | 3.6171             | 0.04060       | 0.04060       | 3.6171     |
| 7  | 4.9816             | 0.05592       | 0.05592       | 4.9816     |
| 8  | 2.7837             | 0.03125       | 0.03125       | 2.7837     |
| 9  | 3.8367             | 0.04307       | 0.04307       | 3.8367     |
| 10 | 3.5122             | 0.03943       | 0.03943       | 3.5122     |
| 11 | 3.1846             | 0.03575       | 0.03575       | 3.1846     |
| 12 | 3.3681             | 0.03781       | 0.03781       | 3.3681     |
| 13 | 3.7018             | 0.04155       | 0.04155       | 3.7018     |
| 14 | 2.7031             | 0.03034       | 0.03034       | 2.7031     |
| 15 | 3.4447             | 0.03867       | 0.03867       | 3.4447     |
| 16 | 4.1253             | 0.04631       | 0.04631       | 4.1253     |
| 17 | 3.7922             | 0.04257       | 0.04257       | 3.7922     |
| 18 | 3.7372             | 0.04190       | 0.04190       | 3.7372     |
| 19 | 2.3576             | 0.02646       | 0.02646       | 2.3576     |
| 20 | 14.4144            | 0.16181       | 0.16181       | 14.4144    |

TIME 8.42.49  
PAGE NO. 102, VOL. I  
REP. NO. 6004  
11/10/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.0850 PO= 5191. PO2= 4.191 P1=0.01923 QDOT-A= 83.21

| N  | QDOT-N<br>(h/SE-S1) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|---------------------|---------------|----------------|------------|
| 1  | 1.6608              | 0.01972       | 0.01972        | 1.6608     |
| 2  | 2.0514              | 0.02466       | 0.02466        | 2.0514     |
| 3  | 4.4276              | 0.05321       | 0.05321        | 4.4276     |
| 4  | 3.1659              | 0.03805       | 0.03805        | 3.1659     |
| 5  | 3.5799              | 0.04302       | 0.04302        | 3.5799     |
| 6  | 3.3970              | 0.04082       | 0.04082        | 3.3970     |
| 7  | 4.9036              | 0.05893       | 0.05893        | 4.9036     |
| 8  | 2.6514              | 0.03186       | 0.03186        | 2.6514     |
| 9  | 3.7229              | 0.04474       | 0.04474        | 3.7229     |
| 10 | 3.3364              | 0.04009       | 0.04009        | 3.3364     |
| 11 | 3.0248              | 0.03635       | 0.03635        | 3.0248     |
| 12 | 3.2864              | 0.03949       | 0.03949        | 3.2864     |
| 13 | 3.5716              | 0.04294       | 0.04294        | 3.5736     |
| 14 | 2.5388              | 0.03051       | 0.03051        | 2.5388     |
| 15 | 3.2237              | 0.03874       | 0.03874        | 3.2237     |
| 16 | 3.8693              | 0.04650       | 0.04650        | 3.8693     |
| 17 | 3.5558              | 0.04273       | 0.04273        | 3.5558     |
| 18 | 3.4894              | 0.04193       | 0.04193        | 3.4894     |
| 19 | 2.2546              | 0.02709       | 0.02709        | 2.2546     |
| 20 | 13.4361             | 0.16147       | 0.16147        | 13.4361    |

RUN NO. 2308

TITLE

MCDONNELL

TIME 8.42.49  
PAGE NO. 103, VOL. I  
REP. NO. 0004  
11/10/67

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME=0.0900 PD= 4.914. PD2= 4.003 PLS=0.01835 QDOT-A= 77.34

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KDOT-A | QDOT-N/PEF |
|----|--------------------|---------------|---------------|------------|
| 1  | 1.4252             | 0.01843       | 0.01843       | 1.4252     |
| 2  | 1.9227             | 0.02357       | 0.02357       | 1.9227     |
| 3  | 4.3448             | 0.05618       | 0.05618       | 4.3448     |
| 4  | 2.9935             | 0.03870       | 0.03870       | 2.9935     |
| 5  | 3.3699             | 0.04357       | 0.04357       | 3.3699     |
| 6  | 3.1768             | 0.04107       | 0.04107       | 3.1769     |
| 7  | 4.8257             | 0.06239       | 0.06239       | 4.8257     |
| 8  | 2.5190             | 0.03257       | 0.03257       | 2.5190     |
| 9  | 3.6091             | 0.04666       | 0.04666       | 3.6091     |
| 10 | 3.1607             | 0.04087       | 0.04087       | 3.1607     |
| 11 | 2.8651             | 0.03704       | 0.03704       | 2.8651     |
| 12 | 3.2046             | 0.04143       | 0.04143       | 3.2046     |
| 13 | 3.4453             | 0.04455       | 0.04455       | 3.4453     |
| 14 | 2.3745             | 0.03070       | 0.03070       | 2.3745     |
| 15 | 3.0026             | 0.03882       | 0.03882       | 3.0026     |
| 16 | 3.6133             | 0.04672       | 0.04672       | 3.6133     |
| 17 | 3.3194             | 0.04292       | 0.04292       | 3.3194     |
| 18 | 3.2466             | 0.04198       | 0.04198       | 3.2466     |
| 19 | 2.1516             | 0.02782       | 0.02782       | 2.1516     |
| 20 | 12.4578            | 0.16107       | 0.16107       | 12.4578    |

RUN NO. 2308

TITLE

MCDONNELL

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME 8.42.50  
PAGE NO. 104 VOL. I  
REP. NO. 0004  
11/1C/67

TIME=.0950 PO= 4662. P02= 3.828 PI=.01752 QDOT-A= 71.47

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.2095             | 0.01692       | 0.01692        | 1.2095     |
| 2  | 1.5940             | 0.02230       | 0.02230        | 1.5940     |
| 3  | 4.2621             | 0.05963       | 0.05963        | 4.2621     |
| 4  | 2.8211             | 0.03947       | 0.03947        | 2.8211     |
| 5  | 3.1598             | 0.04421       | 0.04421        | 3.1598     |
| 6  | 2.9566             | 0.04137       | 0.04137        | 2.9566     |
| 7  | 4.7477             | 0.06643       | 0.06643        | 4.7477     |
| 8  | 2.3866             | 0.03339       | 0.03339        | 2.3866     |
| 9  | 3.4953             | 0.04890       | 0.04890        | 3.4953     |
| 10 | 2.9849             | 0.04176       | 0.04176        | 2.9849     |
| 11 | 2.7054             | 0.03785       | 0.03785        | 2.7054     |
| 12 | 3.1229             | 0.04369       | 0.04369        | 3.1229     |
| 13 | 3.3171             | 0.04641       | 0.04641        | 3.3171     |
| 14 | 2.2102             | 0.03092       | 0.03092        | 2.2102     |
| 15 | 2.7816             | 0.03892       | 0.03892        | 2.7816     |
| 16 | 3.3573             | 0.04697       | 0.04697        | 3.3573     |
| 17 | 3.0831             | 0.04314       | 0.04314        | 3.0831     |
| 18 | 3.0038             | 0.04203       | 0.04203        | 3.0038     |
| 19 | 2.0487             | 0.02866       | 0.02866        | 2.0487     |
| 20 | 11.4794            | 0.16061       | 0.16061        | 11.4794    |

TIME 8.42.50  
PAGE NO. 105, VOL. I  
REP. NO. GOOD  
11/10/67

TITLE  
MCDONNELL  
HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

RUN NO. 2308

TIME=1000 PD= 6436. P02= 3.666 PI=0.01673 QDOT-A= 65.60

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KDOT-A | QDOT-N/REF |
|----|--------------------|---------------|---------------|------------|
| 1  | 0.9938             | 0.01515       | 0.01515       | 0.9938     |
| 2  | 1.3653             | 0.02081       | 0.02081       | 1.3653     |
| 3  | 4.1793             | 0.06371       | 0.06371       | 4.1793     |
| 4  | 2.6487             | 0.04038       | 0.04038       | 2.6487     |
| 5  | 2.9497             | 0.04496       | 0.04496       | 2.9497     |
| 6  | 2.7364             | 0.04171       | 0.04171       | 2.7364     |
| 7  | 4.6698             | 0.07118       | 0.07118       | 4.6698     |
| 8  | 2.2543             | 0.03436       | 0.03436       | 2.2543     |
| 9  | 3.3815             | 0.05155       | 0.05155       | 3.3815     |
| 10 | 2.8092             | 0.04282       | 0.04282       | 2.8092     |
| 11 | 2.5457             | 0.03881       | 0.03881       | 2.5457     |
| 12 | 3.0411             | 0.04636       | 0.04636       | 3.0411     |
| 13 | 3.1888             | 0.04861       | 0.04861       | 3.1888     |
| 14 | 2.0459             | 0.03119       | 0.03119       | 2.0459     |
| 15 | 2.5695             | 0.03903       | 0.03903       | 2.5695     |
| 16 | 3.1013             | 0.04727       | 0.04727       | 3.1013     |
| 17 | 2.8467             | 0.04339       | 0.04339       | 2.8467     |
| 18 | 2.7609             | 0.04209       | 0.04209       | 2.7609     |
| 19 | 1.9457             | 0.02966       | 0.02966       | 1.9457     |
| 20 | 10.5011            | 0.16007       | 0.16007       | 10.5011    |

RUN NO. 2308

TITLE

MCDONNELL

TIME 8.42.50  
PAGE NO. 105, VOL. I  
REP. NO. GOOD  
11/10/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| N  | QDOT-N<br>(B/SF-SI) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|---------------------|---------------|----------------|------------|
| 1  | 0.7782              | 0.01303       | 0.01303        | 0.7782     |
| 2  | 1.1366              | 0.01903       | 0.01903        | 1.1366     |
| 3  | 4.0965              | 0.06858       | 0.06858        | 4.0965     |
| 4  | 2.4763              | 0.04146       | 0.04146        | 2.4763     |
| 5  | 2.7396              | 0.04587       | 0.04587        | 2.7396     |
| 6  | 2.5162              | 0.04213       | 0.04213        | 2.5162     |
| 7  | 4.5918              | 0.07688       | 0.07688        | 4.5918     |
| 8  | 2.1219              | 0.03552       | 0.03552        | 2.1219     |
| 9  | 3.2677              | 0.05471       | 0.05471        | 3.2677     |
| 10 | 2.6335              | 0.04409       | 0.04409        | 2.6335     |
| 11 | 2.3860              | 0.03995       | 0.03995        | 2.3860     |
| 12 | 2.9594              | 0.04955       | 0.04955        | 2.9594     |
| 13 | 3.0606              | 0.05124       | 0.05124        | 3.0606     |
| 14 | 1.0816              | 0.03150       | 0.03150        | 1.0816     |
| 15 | 2.3395              | 0.03917       | 0.03917        | 2.3395     |
| 16 | 2.8453              | 0.04764       | 0.04764        | 2.8453     |
| 17 | 2.6103              | 0.04370       | 0.04370        | 2.6103     |
| 18 | 2.5181              | 0.04216       | 0.04216        | 2.5181     |
| 19 | 1.8427              | 0.03085       | 0.03085        | 1.8427     |
| 20 | 9.5228              | 0.15943       | 0.15943        | 9.5228     |



RUN NO. 7308

TITLE

MC DONNELL

TIME 8.42.50  
PAGE NO. 107, VOL. I  
REP. NO. 0004  
11/10/67

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0450 PO = 8336.60 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | C.0 | 0.129081 | 0.155E-04 | 0.209E-01 | 0.465E 01 | 0.305E-01   |
| 2     | 0.0 | *        | *         | *         | *         | *           |
| 3     | 0.0 | 0.142629 | 0.171E-04 | 0.231E-01 | 0.514E 01 | 0.346E-01   |
| 4     | C.0 | 0.122205 | 0.147E-04 | 0.198E-01 | 0.440E 01 | 0.284E-01   |
| 5     | 0.0 | 0.125259 | 0.150E-04 | 0.203E-01 | 0.451E 01 | 0.291E-01   |
| 6     | 0.0 | 0.108863 | 0.111E-04 | 0.176E-01 | 0.392E 01 | 0.244E-01   |
| 7     | 0.0 | 0.119219 | 0.143E-04 | 0.193E-01 | 0.429E 01 | 0.275E-01   |
| 8     | 0.0 | 0.094766 | 0.114E-04 | 0.154E-01 | 0.341E 01 | 0.207E-01   |
| 9     | 0.0 | 0.115702 | 0.139E-04 | 0.188E-01 | 0.417E 01 | 0.266E-01   |
| 10    | 0.0 | 0.141408 | 0.170E-04 | 0.229E-01 | 0.509E 01 | 0.342E-01   |
| 11    | C.0 | 0.096412 | 0.116E-04 | 0.156E-01 | 0.347E 01 | 0.207E-01   |
| 12    | 0.0 | 0.116113 | 0.139E-04 | 0.188E-01 | 0.419E 01 | 0.266E-01   |
| 13    | 0.0 | 0.100158 | 0.120E-04 | 0.162E-01 | 0.361E 01 | 0.218E-01   |
| 14    | 0.0 | 0.142233 | 0.171E-04 | 0.231E-01 | 0.512E 01 | 0.344E-01   |
| 15    | 0.0 | 0.174715 | 0.210E-04 | 0.283E-01 | 0.629E 01 | 0.442E-01   |
| 16    | C.0 | 0.207127 | 0.248E-04 | 0.336E-01 | 0.746E 01 | 0.540E-01   |
| 17    | C.0 | 0.205743 | 0.247E-04 | 0.333E-01 | 0.741E 01 | 0.536E-01   |
| 18    | 0.0 | 0.170844 | 0.205E-04 | 0.277E-01 | 0.615E 01 | 0.431E-01   |
| 19    | C.0 | 0.068045 | 0.816E-05 | 0.110E-01 | 0.245E 01 | 0.121E-01   |
| 20    | C.0 | 0.4770   | 0.572E-04 | 0.773E-01 | 0.172E 02 | 0.135E 00   |

TIME 8.42.50  
PAGE NO. 108, VOL. I  
REP. NO. 0004  
11/10/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2308

TIME = 0.0500 PO = 7853.26 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.121925 | 0.155E-04 | 0.207E-01 | 0.459E 01 | 0.301E-01   |
| 2     | 0.0 | *        | *         | *         | *         | *           |
| 3     | 0.0 | 0.135190 | 0.172E-04 | 0.230E-01 | 0.509E 01 | 0.343E-01   |
| 4     | 0.0 | 0.118144 | 0.150E-04 | 0.201E-01 | 0.445E 01 | 0.289E-01   |
| 5     | 0.0 | 0.121572 | 0.155E-04 | 0.207E-01 | 0.458E 01 | 0.300E-01   |
| 6     | 0.0 | 0.106670 | 0.136E-04 | 0.182E-01 | 0.402E 01 | 0.253E-01   |
| 7     | 0.0 | 0.113617 | 0.145E-04 | 0.193E-01 | 0.428E 01 | 0.275E-01   |
| 8     | 0.0 | 0.093602 | 0.119E-04 | 0.159E-01 | 0.353E 01 | 0.212E-01   |
| 9     | 0.0 | 0.112723 | 0.144E-04 | 0.192E-01 | 0.425E 01 | 0.272E-01   |
| 10    | 0.0 | 0.136678 | 0.174E-04 | 0.233E-01 | 0.515E 01 | 0.348E-01   |
| 11    | 0.0 | 0.094437 | 0.120E-04 | 0.161E-01 | 0.356E 01 | 0.214E-01   |
| 12    | 0.0 | 0.113881 | 0.145E-04 | 0.194E-01 | 0.429E 01 | 0.276E-01   |
| 13    | 0.0 | 0.098308 | 0.125E-04 | 0.167E-01 | 0.370E 01 | 0.227E-01   |
| 14    | 0.0 | 0.138000 | 0.176E-04 | 0.235E-01 | 0.520E 01 | 0.352E-01   |
| 15    | 0.0 | 0.163044 | 0.208E-04 | 0.277E-01 | 0.614E 01 | 0.431E-01   |
| 16    | 0.0 | 0.194287 | 0.247E-04 | 0.331E-01 | 0.732E 01 | 0.530E-01   |
| 17    | 0.0 | 0.193646 | 0.247E-04 | 0.329E-01 | 0.730E 01 | 0.528E-01   |
| 18    | 0.0 | 0.162872 | 0.207E-04 | 0.277E-01 | 0.614E 01 | 0.431E-01   |
| 19    | 0.0 | 0.066245 | 0.844E-05 | 0.113E-01 | 0.250E 01 | 0.125E-01   |
| 20    | 0.0 | 0.455401 | 0.580E-04 | 0.775E-01 | 0.172E 02 | 0.135E 00   |

RUN NO. 2308

TITLE

MCDONNELL

TIME 8.42.51  
PAGE NO. 109, VOL. I  
REP. NO. 0004  
11/10/67

HIT TEST NG. 67  
PRESSURE SURVEY

TIME = 0.0550 PO = 7395.67 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | C.0 | 0.115170 | 0.156E-04 | 0.206E-01 | 0.454E 01 | 0.298E-01   |
| 2     | C.0 | *        | *         | *         | *         | *           |
| 3     | C.0 | 0.128246 | 0.173E-04 | 0.229E-01 | 0.506E 01 | 0.341E-01   |
| 4     | C.0 | 0.113987 | 0.154E-04 | 0.204E-01 | 0.449E 01 | 0.294E-01   |
| 5     | C.0 | 0.117915 | 0.159E-04 | 0.211E-01 | 0.465E 01 | 0.307E-01   |
| 6     | C.0 | 0.104223 | 0.141E-04 | 0.186E-01 | 0.411E 01 | 0.262E-01   |
| 7     | C.0 | 0.108229 | 0.146E-04 | 0.193E-01 | 0.427E 01 | 0.275E-01   |
| 8     | C.0 | 0.092131 | 0.125E-04 | 0.165E-01 | 0.363E 01 | 0.221E-01   |
| 9     | C.0 | 0.109623 | 0.148E-04 | 0.196E-01 | 0.432E 01 | 0.279E-01   |
| 10    | C.0 | 0.131922 | 0.178E-04 | 0.236E-01 | 0.520E 01 | 0.353E-01   |
| 11    | C.0 | 0.092286 | 0.125E-04 | 0.165E-01 | 0.364E 01 | 0.222E-01   |
| 12    | C.0 | 0.111430 | 0.151E-04 | 0.199E-01 | 0.439E 01 | 0.285E-01   |
| 13    | C.0 | 0.096276 | 0.130E-04 | 0.172E-01 | 0.380E 01 | 0.235E-01   |
| 14    | C.0 | 0.133719 | 0.181E-04 | 0.239E-01 | 0.527E 01 | 0.359E-01   |
| 15    | C.0 | 0.152284 | 0.206E-04 | 0.272E-01 | 0.600E 01 | 0.421E-01   |
| 16    | C.0 | 0.182418 | 0.247E-04 | 0.326E-01 | 0.719E 01 | 0.521E-01   |
| 17    | C.0 | 0.182419 | 0.247E-04 | 0.326E-01 | 0.719E 01 | 0.521E-01   |
| 18    | C.0 | 0.155304 | 0.210E-04 | 0.277E-01 | 0.612E 01 | 0.431E-01   |
| 19    | C.0 | 0.064429 | 0.871E-05 | 0.115E-01 | 0.254E 01 | 0.130E-01   |
| 20    | C.0 | 0.434918 | 0.588E-04 | 0.777E-01 | 0.171E 02 | 0.136E 00   |

TIME 8.42.51  
PAGE NO. 110 VOL. I  
REP. NO. 0004 11/10/67

TITLE  
MCDONNELL

RUN NO. 2308

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0600 PO = 6963.83 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PUN/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.10816  | 0.156E-04 | 0.204E-01 | 0.449E 01 | 0.295E-01   |
| 2     | 0.0 | *        | *         | *         | *         | *           |
| 3     | 0.0 | 0.121796 | 0.175E-04 | 0.229E-01 | 0.503E 01 | 0.340E-01   |
| 4     | 0.0 | 0.109824 | 0.158E-04 | 0.206E-01 | 0.453E 01 | 0.298E-01   |
| 5     | 0.0 | 0.114288 | 0.164E-04 | 0.214E-01 | 0.472E 01 | 0.314E-01   |
| 6     | 0.0 | 0.101523 | 0.146E-04 | 0.190E-01 | 0.419E 01 | 0.269E-01   |
| 7     | 0.0 | 0.103055 | 0.148E-04 | 0.193E-01 | 0.425E 01 | 0.274E-01   |
| 8     | 0.0 | 0.090354 | 0.130E-04 | 0.170E-01 | 0.373E 01 | 0.230E-01   |
| 9     | 0.0 | 0.106402 | 0.153E-04 | 0.200E-01 | 0.439E 01 | 0.286E-01   |
| 10    | 0.0 | 0.127140 | 0.183E-04 | 0.239E-01 | 0.525E 01 | 0.358E-01   |
| 11    | 0.0 | 0.089959 | 0.129E-04 | 0.169E-01 | 0.371E 01 | 0.229E-01   |
| 12    | 0.0 | 0.108760 | 0.156E-04 | 0.204E-01 | 0.449E 01 | 0.294E-01   |
| 13    | 0.0 | 0.094061 | 0.135E-04 | 0.176E-01 | 0.398E 01 | 0.243E-01   |
| 14    | 0.0 | 0.129389 | 0.186E-04 | 0.243E-01 | 0.534E 01 | 0.366E-01   |
| 15    | 0.0 | 0.142435 | 0.205E-04 | 0.267E-01 | 0.588E 01 | 0.412E-01   |
| 16    | 0.0 | 0.171520 | 0.246E-04 | 0.327E-01 | 0.708E 01 | 0.513E-01   |
| 17    | 0.0 | 0.172062 | 0.247E-04 | 0.323E-01 | 0.710E 01 | 0.515E-01   |
| 18    | 0.0 | 0.148140 | 0.213E-04 | 0.278E-01 | 0.611E 01 | 0.431E-01   |
| 19    | 0.0 | 0.062597 | 0.999E-05 | 0.117E-01 | 0.258E 01 | 0.134E-01   |
| 20    | 0.0 | 0.415578 | 0.597E-04 | 0.780E-01 | 0.172E 02 | 0.136E 00   |

TIME 8.42.51  
PAGE NO. 112, VOL. I  
REP. NO. 0004  
11/10/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2308

TIME = 0.0650 PO = 6557.75 ALPHA = 15.00

| PROBE | PHI | PON      | PON/P0    | PON/P02   | PON/P1    | IPON-P11/01 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.102862 | 0.157E-04 | 0.203E-01 | 0.445E 01 | 0.291E-01   |
| 2     | 0.0 | 0.115839 | 0.177E-04 | 0.228E-01 | 0.501E 01 | 0.339E-01   |
| 3     | 0.0 | 0.105654 | 0.161E-04 | 0.208E-01 | 0.457E 01 | 0.302E-01   |
| 4     | 0.0 | 0.110692 | 0.169E-04 | 0.218E-01 | 0.479E 01 | 0.320E-01   |
| 5     | 0.0 | 0.098569 | 0.150E-04 | 0.194E-01 | 0.424E 01 | 0.276E-01   |
| 6     | 0.0 | 0.098095 | 0.150E-04 | 0.193E-01 | 0.424E 01 | 0.274E-01   |
| 7     | 0.0 | 0.098270 | 0.135E-04 | 0.174E-01 | 0.387E 01 | 0.238E-01   |
| 8     | 0.0 | 0.103060 | 0.157E-04 | 0.203E-01 | 0.446E 01 | 0.292E-01   |
| 9     | 0.0 | 0.122332 | 0.187E-04 | 0.241E-01 | 0.529E 01 | 0.363E-01   |
| 10    | 0.0 | 0.087456 | 0.133E-04 | 0.172E-01 | 0.378E 01 | 0.235E-01   |
| 11    | 0.0 | 0.105872 | 0.161E-04 | 0.209E-01 | 0.458E 01 | 0.302E-01   |
| 12    | 0.0 | 0.091664 | 0.140E-04 | 0.181E-01 | 0.396E 01 | 0.251E-01   |
| 13    | 0.0 | 0.125012 | 0.191E-04 | 0.246E-01 | 0.540E 01 | 0.372E-01   |
| 14    | 0.0 | 0.133497 | 0.204E-04 | 0.263E-01 | 0.577E 01 | 0.403E-01   |
| 15    | 0.0 | 0.161591 | 0.246E-04 | 0.318E-01 | 0.699E 01 | 0.506E-01   |
| 16    | 0.0 | 0.162576 | 0.246E-04 | 0.320E-01 | 0.703E 01 | 0.510E-01   |
| 17    | 0.0 | 0.141300 | 0.216E-04 | 0.279E-01 | 0.611E 01 | 0.432E-01   |
| 18    | 0.0 | 0.060748 | 0.926E-05 | 0.120E-01 | 0.263E 01 | 0.138E-01   |
| 19    | 0.0 | 0.397381 | 0.606E-04 | 0.783E-01 | 0.172E 02 | 0.137E 00   |
| 20    | 0.0 |          |           |           |           |             |

TIME 8.42.52  
PAGE NO. 112, VOL. I  
REP. NO. 6004  
11/10/67

TITLE MCDONNELL

RUN NO. 2308

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0700 PO = 6177.40 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PU    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.097309 | 0.158E-04 | 0.201E-01 | 0.441E 01 | 0.289E-01   |
| 2     | 0.0 | *        | *         | *         | *         | *           |
| 3     | 0.0 | 0.110378 | 0.179E-04 | 0.228E-01 | 0.500E 01 | 0.339E-01   |
| 4     | 0.0 | 0.101478 | 0.164E-04 | 0.210E-01 | 0.460E 01 | 0.305E-01   |
| 5     | 0.0 | 0.107126 | 0.173E-04 | 0.222E-01 | 0.495E 01 | 0.326E-01   |
| 6     | 0.0 | 0.095362 | 0.154E-04 | 0.197E-01 | 0.432E 01 | 0.281E-01   |
| 7     | 0.0 | 0.023350 | 0.151E-04 | 0.193E-01 | 0.423E 01 | 0.273E-01   |
| 8     | 0.0 | 0.004879 | 0.139E-04 | 0.178E-01 | 0.389E 01 | 0.245E-01   |
| 9     | 0.0 | 0.095997 | 0.161E-04 | 0.206E-01 | 0.451E 01 | 0.297E-01   |
| 10    | 0.0 | 0.117497 | 0.190E-04 | 0.243E-01 | 0.532E 01 | 0.364E-01   |
| 11    | 0.0 | 0.004776 | 0.137E-04 | 0.175E-01 | 0.384E 01 | 0.241E-01   |
| 12    | 0.0 | 0.102765 | 0.166E-04 | 0.213E-01 | 0.465E 01 | 0.310E-01   |
| 13    | 0.0 | 0.089083 | 0.144E-04 | 0.184E-01 | 0.403E 01 | 0.257E-01   |
| 14    | 0.0 | 0.120587 | 0.195E-04 | 0.249E-01 | 0.546E 01 | 0.379E-01   |
| 15    | 0.0 | 0.125471 | 0.203E-04 | 0.260E-01 | 0.568E 01 | 0.397E-01   |
| 16    | 0.0 | 0.152633 | 0.247E-04 | 0.316E-01 | 0.691E 01 | 0.501E-01   |
| 17    | 0.0 | 0.153960 | 0.249E-04 | 0.318E-01 | 0.697E 01 | 0.506E-01   |
| 18    | 0.0 | 0.135025 | 0.219E-04 | 0.279E-01 | 0.611E 01 | 0.433E-01   |
| 19    | 0.0 | 0.058883 | 0.093E-05 | 0.122E-01 | 0.267E 01 | 0.141E-01   |
| 20    | 0.0 | 0.380327 | 0.616E-04 | 0.787E-01 | 0.172E 02 | 0.137E 00   |

TIME 8.42.52  
PAGE NO. 113, VOL. 1  
REP. NO. 6004  
11/10/67

WIDDRIELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2308

TIME = 0.0750 PO = 5822.81 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.092156 | 0.158E-04 | 0.200E-01 | 0.437E 01 | 0.286E-01   |
| 2     | 0.0 | 0.105410 | 0.141E-04 | 0.224E-01 | 0.500E 01 | 0.339E-01   |
| 3     | 0.0 | 0.097295 | 0.167E-04 | 0.211E-01 | 0.462E 01 | 0.307E-01   |
| 4     | 0.0 | 0.103590 | 0.178E-04 | 0.225E-01 | 0.492E 01 | 0.332E-01   |
| 5     | 0.0 | 0.091902 | 0.158E-04 | 0.199E-01 | 0.436E 01 | 0.288E-01   |
| 6     | 0.0 | 0.088018 | 0.153E-04 | 0.193E-01 | 0.421E 01 | 0.273E-01   |
| 7     | 0.0 | 0.083162 | 0.143E-04 | 0.181E-01 | 0.395E 01 | 0.250E-01   |
| 8     | 0.0 | 0.096012 | 0.165E-04 | 0.208E-01 | 0.456E 01 | 0.302E-01   |
| 9     | 0.0 | 0.112637 | 0.193E-04 | 0.246E-01 | 0.514E 01 | 0.369E-01   |
| 10    | 0.0 | 0.081920 | 0.141E-04 | 0.178E-01 | 0.349E 01 | 0.245E-01   |
| 11    | 0.0 | 0.099440 | 0.171E-04 | 0.216E-01 | 0.472E 01 | 0.315E-01   |
| 12    | 0.0 | 0.086320 | 0.148E-04 | 0.187E-01 | 0.410E 01 | 0.263E-01   |
| 13    | 0.0 | 0.116114 | 0.199E-04 | 0.252E-01 | 0.551E 01 | 0.383E-01   |
| 14    | 0.0 | 0.118356 | 0.203E-04 | 0.257E-01 | 0.562E 01 | 0.392E-01   |
| 15    | 0.0 | 0.144645 | 0.248E-04 | 0.314E-01 | 0.686E 01 | 0.497E-01   |
| 16    | 0.0 | 0.146214 | 0.251E-04 | 0.317E-01 | 0.694E 01 | 0.504E-01   |
| 17    | 0.0 | 0.129074 | 0.222E-04 | 0.280E-01 | 0.612E 01 | 0.435E-01   |
| 18    | 0.0 | 0.057002 | 0.079E-05 | 0.124E-01 | 0.270E 01 | 0.145E-01   |
| 19    | 0.0 | 0.364417 | 0.626E-04 | 0.791E-01 | 0.173E 02 | 0.138E 00   |
| 20    | 0.0 |          |           |           |           |             |

TIME 8.42.52  
PAGE NO. 11<sup>h</sup>, VOL. I  
REP. NO. GOOD  
11/10/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2308

TIME = 0.0800 PD = 5493.97 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PD2   | PON/PI    | (PON-PI)/OI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.087404 | 0.159E-04 | 0.199E-01 | 0.435E 01 | 0.284E-01   |
| 2     | 0.0 | *        | *         | *         | *         | *           |
| 3     | 0.0 | 0.100936 | 0.184E-04 | 0.230E-01 | 0.502E 01 | 0.341E-01   |
| 4     | 0.0 | 0.093106 | 0.169E-04 | 0.212E-01 | 0.463E 01 | 0.308E-01   |
| 5     | 0.0 | 0.100085 | 0.182E-04 | 0.224E-01 | 0.498E 01 | 0.339E-01   |
| 6     | 0.0 | 0.088184 | 0.161E-04 | 0.201E-01 | 0.439E 01 | 0.287E-01   |
| 7     | 0.0 | 0.084500 | 0.154E-04 | 0.197E-01 | 0.420E 01 | 0.272E-01   |
| 8     | 0.0 | 0.080178 | 0.146E-04 | 0.183E-01 | 0.399E 01 | 0.254E-01   |
| 9     | 0.0 | 0.092307 | 0.160E-04 | 0.210E-01 | 0.459E 01 | 0.305E-01   |
| 10    | 0.0 | 0.107750 | 0.196E-04 | 0.245E-01 | 0.536E 01 | 0.370E-01   |
| 11    | 0.0 | 0.078888 | 0.144E-04 | 0.180E-01 | 0.392E 01 | 0.248E-01   |
| 12    | 0.0 | 0.095896 | 0.175E-04 | 0.218E-01 | 0.477E 01 | 0.320E-01   |
| 13    | 0.0 | 0.083374 | 0.152E-04 | 0.190E-01 | 0.415E 01 | 0.267E-01   |
| 14    | 0.0 | 0.111592 | 0.203E-04 | 0.254E-01 | 0.555E 01 | 0.386E-01   |
| 15    | 0.0 | 0.112152 | 0.204E-04 | 0.255E-01 | 0.558E 01 | 0.398E-01   |
| 16    | 0.0 | 0.137628 | 0.251E-04 | 0.313E-01 | 0.684E 01 | 0.495E-01   |
| 17    | 0.0 | 0.139338 | 0.254E-04 | 0.317E-01 | 0.693E 01 | 0.503E-01   |
| 18    | 0.0 | 0.123527 | 0.225E-04 | 0.281E-01 | 0.614E 01 | 0.436E-01   |
| 19    | 0.0 | 0.055104 | 0.100E-04 | 0.175E-01 | 0.274E 01 | 0.148E-01   |
| 20    | 0.0 | 0.349650 | 0.636E-04 | 0.796E-01 | 0.174E 02 | 0.139E 00   |



TIME 8.42.53  
PAGE NO. 115, VOL. I  
REP. NO. 0004  
11/10/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2308

TIME = 0.0850 PM = 5100.88 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.083052 | 0.160F-04 | 0.190F-01 | 0.432E 01 | 0.282E-01   |
| 2     | 0.0 | *        | *         | *         | *         | *           |
| 3     | 0.0 | 0.096956 | 0.187F-04 | 0.231F-01 | 0.504F 01 | 0.346F-01   |
| 4     | 0.0 | 0.088911 | 0.171E-04 | 0.212F-01 | 0.462E 01 | 0.308F-01   |
| 5     | 0.0 | 0.096611 | 0.166F-04 | 0.231F-01 | 0.502E 01 | 0.342E-01   |
| 6     | 0.0 | 0.084221 | 0.162E-04 | 0.201F-01 | 0.438E 01 | 0.297E-01   |
| 7     | 0.0 | 0.080307 | 0.155F-04 | 0.192F-01 | 0.418E 01 | 0.271F-01   |
| 8     | 0.0 | 0.076467 | 0.148E-04 | 0.183E-01 | 0.400E 01 | 0.255E-01   |
| 9     | 0.0 | 0.084841 | 0.170F-04 | 0.211F-01 | 0.460E 01 | 0.306F-01   |
| 10    | 0.0 | 0.102838 | 0.198F-04 | 0.245F-01 | 0.535E 01 | 0.370E-01   |
| 11    | 0.0 | 0.075680 | 0.166F-04 | 0.181F-01 | 0.394E 01 | 0.252E-01   |
| 12    | 0.0 | 0.092133 | 0.177F-04 | 0.220F-01 | 0.470E 01 | 0.322E-01   |
| 13    | 0.0 | 0.080245 | 0.155F-04 | 0.191F-01 | 0.417E 01 | 0.270E-01   |
| 14    | 0.0 | 0.107023 | 0.206F-04 | 0.255F-01 | 0.557E 01 | 0.398E-01   |
| 15    | 0.0 | 0.106459 | 0.206F-04 | 0.255F-01 | 0.556E 01 | 0.388E-01   |
| 16    | 0.0 | 0.111581 | 0.213F-04 | 0.316F-01 | 0.684E 01 | 0.497E-01   |
| 17    | 0.0 | 0.133333 | 0.257F-04 | 0.310F-01 | 0.693E 01 | 0.505E-01   |
| 18    | 0.0 | 0.118385 | 0.220F-04 | 0.282F-01 | 0.616E 01 | 0.439E-01   |
| 19    | 0.0 | 0.053189 | 0.102F-04 | 0.127F-01 | 0.277E 01 | 0.150E-01   |
| 20    | 0.0 | 0.336026 | 0.647F-04 | 0.802E-01 | 0.175E 02 | 0.140E 00   |

TIME 8.42.53  
PAGE NO. 116, VOL. I  
REP. NO. 0004  
11/10/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2308

TIME = 0.0900 PO = 4913.54 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PN    | PON/PD2   | PON/P1    | (PON-P1)/P1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.079101 | 0.161F-04 | 0.198E-01 | 0.431E 01 | 0.281E-01   |
| 2     | 0.0 | *        | *         | *         | *         | *           |
| 3     | 0.0 | 0.093471 | 0.190F-04 | 0.234E-01 | 0.509E 01 | 0.348E-01   |
| 4     | 0.0 | 0.084709 | 0.172E-04 | 0.212E-01 | 0.462F 01 | 0.307E-01   |
| 5     | 0.0 | 0.093166 | 0.190F-04 | 0.233E-01 | 0.508E 01 | 0.346E-01   |
| 6     | 0.0 | 0.080000 | 0.163E-04 | 0.200E-01 | 0.436E 01 | 0.285F-01   |
| 7     | 0.0 | 0.076507 | 0.156E-04 | 0.191F-01 | 0.417E 01 | 0.269E-01   |
| 8     | 0.0 | 0.073250 | 0.149E-04 | 0.183F-01 | 0.399E 01 | 0.254E-01   |
| 9     | 0.0 | 0.084534 | 0.172E-04 | 0.211F-01 | 0.461E 01 | 0.304E-01   |
| 10    | 0.0 | 0.097899 | 0.199E-04 | 0.244E-01 | 0.533E 01 | 0.368E-01   |
| 11    | 0.0 | 0.072295 | 0.147E-04 | 0.181F-01 | 0.394E 01 | 0.250E-01   |
| 12    | 0.0 | 0.088152 | 0.179E-04 | 0.220E-01 | 0.480E 01 | 0.323E-01   |
| 13    | 0.0 | 0.076933 | 0.157F-04 | 0.192F-01 | 0.419E 01 | 0.271F-01   |
| 14    | 0.0 | 0.102405 | 0.208E-04 | 0.256E-01 | 0.558E 01 | 0.389E-01   |
| 15    | 0.0 | 0.102474 | 0.209E-04 | 0.256F-01 | 0.558E 01 | 0.389E-01   |
| 16    | 0.0 | 0.126504 | 0.257E-04 | 0.316F-01 | 0.689E 01 | 0.501E-01   |
| 17    | 0.0 | 0.128198 | 0.261E-04 | 0.320F-01 | 0.699E 01 | 0.508E-01   |
| 18    | 0.0 | 0.113646 | 0.231E-04 | 0.284F-01 | 0.619E 01 | 0.441E-01   |
| 19    | 0.0 | 0.051258 | 0.104E-04 | 0.128F-01 | 0.279E 01 | 0.152E-01   |
| 20    | 0.0 | 0.323566 | 0.558E-04 | 0.808E-01 | 0.176E 02 | 0.141E 00   |

TIME 8.42.54  
PAGE NO. 117  
REP. NO. 0004  
VOL. I  
11/10/67

HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2308

MCDONNELL

TIME = 0.0950 PO = 4661.95 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | PON-PI/01 |
|-------|-----|----------|-----------|-----------|-----------|-----------|
| 1     | 0.0 | 0.075550 | 0.162E-04 | 0.197E-01 | 0.431E 01 | 0.281E-01 |
| 2     | 0.0 | *        | *         | *         | *         | *         |
| 3     | 0.0 | 0.090480 | 0.194E-04 | 0.236E-01 | 0.517E 01 | 0.353E-01 |
| 4     | 0.0 | 0.080500 | 0.173E-04 | 0.210E-01 | 0.460E 01 | 0.305E-01 |
| 5     | 0.0 | 0.089752 | 0.193E-04 | 0.234E-01 | 0.517E 01 | 0.350E-01 |
| 6     | 0.0 | 0.075526 | 0.162E-04 | 0.197E-01 | 0.431E 01 | 0.281E-01 |
| 7     | 0.0 | 0.072832 | 0.156E-04 | 0.190E-01 | 0.416E 01 | 0.268E-01 |
| 8     | 0.0 | 0.069327 | 0.149E-04 | 0.181E-01 | 0.396E 01 | 0.251E-01 |
| 9     | 0.0 | 0.080466 | 0.173E-04 | 0.210E-01 | 0.459E 01 | 0.305E-01 |
| 10    | 0.0 | 0.092934 | 0.199E-04 | 0.243E-01 | 0.531E 01 | 0.365E-01 |
| 11    | 0.0 | 0.068734 | 0.147E-04 | 0.180E-01 | 0.392E 01 | 0.248E-01 |
| 12    | 0.0 | 0.083952 | 0.180E-04 | 0.219E-01 | 0.479E 01 | 0.321E-01 |
| 13    | 0.0 | 0.073638 | 0.158E-04 | 0.192E-01 | 0.419E 01 | 0.271E-01 |
| 14    | 0.0 | 0.097740 | 0.210E-04 | 0.255E-01 | 0.553E 01 | 0.388E-01 |
| 15    | 0.0 | 0.099308 | 0.212E-04 | 0.259E-01 | 0.565E 01 | 0.394E-01 |
| 16    | 0.0 | 0.122397 | 0.263E-04 | 0.320E-01 | 0.699E 01 | 0.509E-01 |
| 17    | 0.0 | 0.123934 | 0.266E-04 | 0.324E-01 | 0.708E 01 | 0.515E-01 |
| 18    | 0.0 | 0.109312 | 0.234E-04 | 0.286E-01 | 0.624E 01 | 0.444E-01 |
| 19    | 0.0 | 0.049311 | 0.106E-04 | 0.129E-01 | 0.287E 01 | 0.154E-01 |
| 20    | 0.0 | 0.312209 | 0.670E-04 | 0.816E-01 | 0.178E 02 | 0.143E 00 |

TIME 8.42.54  
PAGE NO. 118, VOL. I  
REP. NO. 6004  
11/10/67

MC DONNELL

TITLE

RUN NO. 2308

HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.1000 PO= 4436.10 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/OI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.072400 | 0.163E-04 | 0.197E-01 | 0.433E 01 | 0.281E-01   |
| 2     | 0.0 | *        | *         | *         | *         | *           |
| 3     | 0.0 | 0.087983 | 0.198E-04 | 0.240E-01 | 0.526E 01 | 0.360E-01   |
| 4     | 0.0 | 0.076285 | 0.172E-04 | 0.238E-01 | 0.456E 01 | 0.301E-01   |
| 5     | 0.0 | 0.086369 | 0.195E-04 | 0.236E-01 | 0.516E 01 | 0.352E-01   |
| 6     | 0.0 | 0.070799 | 0.160E-04 | 0.193E-01 | 0.423E 01 | 0.273E-01   |
| 7     | 0.0 | 0.069371 | 0.156E-04 | 0.189E-01 | 0.415E 01 | 0.266E-01   |
| 8     | 0.0 | 0.065096 | 0.147E-04 | 0.170E-01 | 0.389E 01 | 0.244E-01   |
| 9     | 0.0 | 0.076276 | 0.172E-04 | 0.208E-01 | 0.456E 01 | 0.301E-01   |
| 10    | 0.0 | 0.087944 | 0.198E-04 | 0.240E-01 | 0.526E 01 | 0.360E-01   |
| 11    | 0.0 | 0.064947 | 0.147E-04 | 0.177E-01 | 0.389E 01 | 0.244E-01   |
| 12    | 0.0 | 0.079533 | 0.179E-04 | 0.217E-01 | 0.475E 01 | 0.317E-01   |
| 13    | 0.0 | 0.069761 | 0.157E-04 | 0.190E-01 | 0.417E 01 | 0.266E-01   |
| 14    | 0.0 | 0.093026 | 0.210E-04 | 0.254E-01 | 0.596E 01 | 0.385E-01   |
| 15    | 0.0 | 0.076649 | 0.217E-04 | 0.263E-01 | 0.577E 01 | 0.403E-01   |
| 16    | 0.0 | 0.119261 | 0.269E-04 | 0.325E-01 | 0.713E 01 | 0.518E-01   |
| 17    | 0.0 | 0.120540 | 0.272E-04 | 0.329E-01 | 0.721E 01 | 0.526E-01   |
| 18    | 0.0 | 0.105383 | 0.238E-04 | 0.287E-01 | 0.630E 01 | 0.448E-01   |
| 19    | 0.0 | 0.047347 | 0.107E-04 | 0.129E-01 | 0.283E 01 | 0.155E-01   |
| 20    | 0.0 | 0.302015 | 0.681E-04 | 0.824E-01 | 0.101E 02 | 0.144E 00   |

TIME 8.42.55  
PAGE NO. 119, VOL. I  
REP. NO. GOC4  
11/10/67

RUN NO. 2308

TITLE MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.1050 PO = 4236.00 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.069650 | 0.164E-04 | 0.198F-01 | 0.436E 01 | 0.282F-01   |
| 2     | 0.0 | *        | *         | *         | *         | *           |
| 3     | 0.0 | 0.085980 | 0.203E-04 | 0.244F-01 | 0.538E 01 | 0.368E-01   |
| 4     | 0.0 | 0.072064 | 0.170E-04 | 0.205F-01 | 0.451E 01 | 0.295E-01   |
| 5     | 0.0 | 0.083016 | 0.196E-04 | 0.236F-01 | 0.519E 01 | 0.353E-01   |
| 6     | 0.0 | 0.065918 | 0.155E-04 | 0.187E-01 | 0.412E 01 | 0.262E-01   |
| 7     | 0.0 | 0.066123 | 0.156E-04 | 0.188E-01 | 0.414E 01 | 0.264F-01   |
| 8     | 0.0 | 0.060559 | 0.143E-04 | 0.172F-01 | 0.379E 01 | 0.235E-01   |
| 9     | 0.0 | 0.071966 | 0.170F-04 | 0.205F-01 | 0.450E 01 | 0.295F-01   |
| 10    | 0.0 | 0.082927 | 0.196E-04 | 0.236E-01 | 0.519E 01 | 0.352E-01   |
| 11    | 0.0 | 0.061084 | 0.144E-04 | 0.174E-01 | 0.382E 01 | 0.237E-01   |
| 12    | 0.0 | 0.074896 | 0.177E-04 | 0.213F-01 | 0.469E 01 | 0.310E-01   |
| 13    | 0.0 | 0.065900 | 0.156E-04 | 0.187E-01 | 0.412E 01 | 0.263E-01   |
| 14    | 0.0 | 0.088265 | 0.208E-04 | 0.251F-01 | 0.552E 01 | 0.380E-01   |
| 15    | 0.0 | 0.094801 | 0.224E-04 | 0.270F-01 | 0.593E 01 | 0.415E-01   |
| 16    | 0.0 | 0.117096 | 0.276E-04 | 0.333F-01 | 0.733E 01 | 0.532E-01   |
| 17    | 0.0 | 0.118016 | 0.279E-04 | 0.336F-01 | 0.739E 01 | 0.537E-01   |
| 18    | 0.0 | 0.101857 | 0.240F-04 | 0.290F-01 | 0.637E 01 | 0.452E-01   |
| 19    | 0.0 | 0.045367 | 0.107E-04 | 0.129F-01 | 0.284E 01 | 0.155E-01   |
| 20    | 0.0 | 0.292965 | 0.692E-04 | 0.833F-01 | 0.183E 02 | 0.146E 00   |

RUN NO. 2309

TITLE

MCDONNELL

TIME 12.12.59  
PAGE NO. 120, VOL. 1  
REP. NO. 0004  
11/21/67

HIT TEST NO. 67  
TUNNEL PARAMETERS

| Y     | PO    | TO    | HO          | Q-DOT    | PJ2   | P1      | U      | M1    | RE/FT     | QI    | ALPHA |
|-------|-------|-------|-------------|----------|-------|---------|--------|-------|-----------|-------|-------|
| (SFC) | (PSI) | (IN)  | (SFT/SSFC)  | (3/ST-S) | (PSI) | (PSI)   | (FT/S) |       |           | (PSI) | (DEG) |
| .0400 | 9010. | 1940. | C.24A2CE 08 | 121.34   | 7.268 | 0.03288 | 63.32  | 13.05 | 178.8589. | 3.919 | 15.03 |
| .0450 | 8409. | 1907. | 0.24284F 08 | 113.94   | 6.758 | 0.01051 | 68.70  | 13.04 | 172.2686. | 3.664 | 15.03 |
| .0500 | 7844. | 1467. | 0.23682E 08 | 106.55   | 6.281 | 0.02828 | 61.81  | 12.08 | 166.7645. | 3.398 | 15.03 |
| .0550 | 7315. | 1441. | 0.23266E 08 | 99.15    | 5.838 | 0.02625 | 67.84  | 13.09 | 159.3772. | 3.149 | 15.03 |
| .0600 | 6822. | 1790. | 0.22545F 08 | 91.76    | 5.428 | 0.02432 | 58.98  | 13.12 | 155.9964. | 2.929 | 15.03 |
| .0650 | 6365. | 1735. | 0.21735E 08 | 84.36    | 5.052 | 0.02354 | 66.20  | 13.15 | 154.0673. | 2.727 | 15.03 |
| .0700 | 5944. | 1674. | 0.20836E 08 | 76.96    | 4.709 | 0.02091 | 65.00  | 13.18 | 153.8111. | 2.643 | 15.03 |
| .0750 | 5559. | 1601. | 0.19838E 08 | 69.57    | 4.400 | 0.01963 | 63.65  | 13.22 | 155.6025. | 2.377 | 15.03 |
| .0800 | 5211. | 1506. | 0.18522E 08 | 62.17    | 4.124 | 0.01808 | 62.11  | 13.27 | 163.0345. | 2.229 | 15.03 |
| .0850 | 4898. | 1409. | 0.17243E 08 | 56.78    | 3.881 | 0.01690 | 60.02  | 13.32 | 172.1694. | 2.009 | 15.03 |
| .0900 | 4622. | 1314. | 0.16006E 08 | 47.38    | 3.672 | 0.01589 | 57.92  | 13.37 | 183.6416. | 1.907 | 15.03 |
| .0950 | 4381. | 1188. | 0.14402E 08 | 39.98    | 3.496 | 0.01501 | 55.81  | 13.43 | 206.6908. | 1.894 | 15.03 |
| .1000 | 4177. | 1050. | 0.12917E 08 | 32.59    | 3.356 | 0.01430 | 52.93  | 13.48 | 235.3768. | 1.819 | 15.03 |

TIME 12.12.59  
 PAGE NO. 121, VOL. I  
 REP. NO. 6004  
 11/21/67

MC DONNELL

HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

TIME=0.000 PN= 9010. P02= 7.26R PL=0.028R QDOT-A=121.34

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 3.0051             | 0.02477       | 0.02477        | 3.0051     |
| 2  | 4.1087             | 0.03386       | 0.03386        | 4.1087     |
| 3  | 3.7374             | 0.03080       | 0.03080        | 3.7374     |
| 4  | 3.9446             | 0.03251       | 0.03251        | 3.9446     |
| 5  | 4.2405             | 0.03495       | 0.03495        | 4.2405     |
| 6  | 4.0504             | 0.03334       | 0.03334        | 4.0504     |
| 7  | 4.1811             | 0.03447       | 0.03447        | 4.1811     |
| 8  | 3.0504             | 0.02514       | 0.02514        | 3.0504     |
| 9  | 3.7110             | 0.03058       | 0.03058        | 3.7110     |
| 10 | 3.8901             | 0.03206       | 0.03206        | 3.8901     |
| 11 | 3.4142             | 0.02814       | 0.02814        | 3.4142     |
| 12 | 3.2772             | 0.02701       | 0.02701        | 3.2772     |
| 13 | 3.7322             | 0.03076       | 0.03076        | 3.7322     |
| 14 | 3.2547             | 0.02682       | 0.02682        | 3.2547     |
| 15 | 4.6964             | 0.03870       | 0.03870        | 4.6964     |
| 16 | 5.3556             | 0.04414       | 0.04414        | 5.3556     |
| 17 | 4.8592             | 0.04005       | 0.04005        | 4.8592     |
| 18 | 5.0440             | 0.04157       | 0.04157        | 5.0440     |
| 19 | 2.4009             | 0.01979       | 0.01979        | 2.4009     |
| 20 | 19.7532            | 0.16279       | 0.16279        | 19.7532    |

RUN NO. 2309

TITLE

MCDONNELL

TIME 12.12.59  
PAGE NO. 122, VOL. I  
REP. NO. 0004  
11/21/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.450 PD= 8409. PD2= 6.758 PI=03051 QDOT-A=113.94

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KDOT-A | QDOT-N/REF |
|----|--------------------|---------------|---------------|------------|
| 1  | 2.8392             | 0.02492       | 0.02492       | 2.8392     |
| 2  | 3.8636             | 0.03391       | 0.03391       | 3.8636     |
| 3  | 3.5273             | 0.03096       | 0.03096       | 3.5273     |
| 4  | 3.7090             | 0.03255       | 0.03255       | 3.7090     |
| 5  | 4.0032             | 0.03513       | 0.03513       | 4.0032     |
| 6  | 3.7921             | 0.03334       | 0.03334       | 3.7921     |
| 7  | 3.9352             | 0.03454       | 0.03454       | 3.9352     |
| 8  | 2.8219             | 0.02421       | 0.02421       | 2.8219     |
| 9  | 3.4810             | 0.03060       | 0.03060       | 3.4810     |
| 10 | 3.6134             | 0.03224       | 0.03224       | 3.6134     |
| 11 | 3.2126             | 0.02819       | 0.02819       | 3.2126     |
| 12 | 3.0883             | 0.02710       | 0.02710       | 3.0883     |
| 13 | 3.5088             | 0.03079       | 0.03079       | 3.5088     |
| 14 | 3.0768             | 0.02703       | 0.02703       | 3.0768     |
| 15 | 4.4689             | 0.03922       | 0.03922       | 4.4689     |
| 16 | 5.0823             | 0.04460       | 0.04460       | 5.0823     |
| 17 | 4.6183             | 0.04053       | 0.04053       | 4.6183     |
| 18 | 4.7703             | 0.04187       | 0.04187       | 4.7703     |
| 19 | 2.2852             | 0.02006       | 0.02006       | 2.2852     |
| 20 | 18.5363            | 0.16268       | 0.16268       | 18.5363    |



RUN NO. 2309

TITLE

MCDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME 12.12.59  
PAGE NO. 123, VOL. I  
REP. NO. 000  
11/21/67

| TIME=0500 |                    | PO=           | 7844.           | PO2=            | 6.281      | PI= | 0.2428 | QDOT-A= | 106.55 |
|-----------|--------------------|---------------|-----------------|-----------------|------------|-----|--------|---------|--------|
| N         | QDOT-N<br>(B/SE-S) | QDOT-N/QDOT-A | QDOT-N/K QDOT-A | QDOT-N/K QDOT-A | QDOT-N/REF |     |        |         |        |
| 1         | 2.6732             | 0.02509       | 0.02509         | 0.02509         | 2.6732     |     |        |         |        |
| 2         | 3.6104             | 0.03396       | 0.03396         | 0.03396         | 3.6104     |     |        |         |        |
| 3         | 3.3172             | 0.03113       | 0.03113         | 0.03113         | 3.3172     |     |        |         |        |
| 4         | 3.4734             | 0.03260       | 0.03260         | 0.03260         | 3.4734     |     |        |         |        |
| 5         | 3.7658             | 0.03534       | 0.03534         | 0.03534         | 3.7658     |     |        |         |        |
| 6         | 3.5478             | 0.03330       | 0.03330         | 0.03330         | 3.5478     |     |        |         |        |
| 7         | 3.6873             | 0.03461       | 0.03461         | 0.03461         | 3.6873     |     |        |         |        |
| 8         | 2.6935             | 0.02528       | 0.02528         | 0.02528         | 2.6935     |     |        |         |        |
| 9         | 3.2631             | 0.03063       | 0.03063         | 0.03063         | 3.2631     |     |        |         |        |
| 10        | 3.4506             | 0.03244       | 0.03244         | 0.03244         | 3.4506     |     |        |         |        |
| 11        | 3.0110             | 0.02826       | 0.02826         | 0.02826         | 3.0110     |     |        |         |        |
| 12        | 2.8994             | 0.02721       | 0.02721         | 0.02721         | 2.8994     |     |        |         |        |
| 13        | 3.2854             | 0.03084       | 0.03084         | 0.03084         | 3.2854     |     |        |         |        |
| 14        | 2.8988             | 0.02721       | 0.02721         | 0.02721         | 2.8988     |     |        |         |        |
| 15        | 4.2413             | 0.03981       | 0.03981         | 0.03981         | 4.2413     |     |        |         |        |
| 16        | 4.8089             | 0.04513       | 0.04513         | 0.04513         | 4.8089     |     |        |         |        |
| 17        | 4.3773             | 0.04108       | 0.04108         | 0.04108         | 4.3773     |     |        |         |        |
| 18        | 4.4966             | 0.04220       | 0.04220         | 0.04220         | 4.4966     |     |        |         |        |
| 19        | 2.1694             | 0.02036       | 0.02036         | 0.02036         | 2.1694     |     |        |         |        |
| 20        | 17.3193            | 0.16255       | 0.16255         | 0.16255         | 17.3193    |     |        |         |        |

RUN NO. 2309

TITLE

MCDONNELL

TIME 12.12.59  
PAGE NO. 124, VOL. I  
REP. NO. G004  
11/21/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.0550 P1= 7315. P02= 5.038 P1=0.02625 QDOT-A= 99.15

| N  | QDOT-V<br>(0/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.5073             | 0.02529       | 0.02529        | 2.5073     |
| 2  | 3.1712             | 0.03402       | 0.01402        | 3.3732     |
| 3  | 3.1071             | 0.03134       | 0.01134        | 3.1071     |
| 4  | 3.2171             | 0.03266       | 0.01266        | 3.2378     |
| 5  | 3.5284             | 0.03559       | 0.01559        | 3.5284     |
| 6  | 3.2965             | 0.03325       | 0.01325        | 3.2965     |
| 7  | 3.4394             | 0.03469       | 0.01469        | 3.4394     |
| 8  | 2.5150             | 0.02537       | 0.01537        | 2.5150     |
| 9  | 3.0391             | 0.03065       | 0.01065        | 3.0391     |
| 10 | 3.2399             | 0.03268       | 0.01268        | 3.2399     |
| 11 | 2.8044             | 0.02833       | 0.01833        | 2.8094     |
| 12 | 2.7104             | 0.02734       | 0.01734        | 2.7104     |
| 13 | 3.0620             | 0.03088       | 0.01088        | 3.0620     |
| 14 | 2.7209             | 0.02764       | 0.01764        | 2.7209     |
| 15 | 4.0138             | 0.04048       | 0.04048        | 4.0138     |
| 16 | 4.5355             | 0.04574       | 0.04574        | 4.5355     |
| 17 | 4.1363             | 0.04172       | 0.04172        | 4.1363     |
| 18 | 4.2228             | 0.04259       | 0.04259        | 4.2228     |
| 19 | 2.0536             | 0.02071       | 0.02071        | 2.0536     |
| 20 | 16.1024            | 0.16240       | 0.16240        | 16.1024    |

TIME 12.13. 0  
PAGE NO. 125, VOL. I  
REP. NO. 0004  
11/21/67

TITLE MCDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0600 P0= 6A22, P02= 5.428, P1=02432, QDOT-A= 91.76

| N  | QDOT-N<br>(0/SE-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.3413             | 0.02557       | 0.02552        | 2.3413     |
| 2  | 3.1240             | 0.03409       | 0.03409        | 3.1280     |
| 3  | 2.8970             | 0.03157       | 0.03157        | 2.8970     |
| 4  | 3.0022             | 0.03272       | 0.03272        | 3.0022     |
| 5  | 3.2911             | 0.03587       | 0.03587        | 3.2911     |
| 6  | 3.0452             | 0.03310       | 0.03310        | 3.0452     |
| 7  | 3.1915             | 0.03478       | 0.03478        | 3.1915     |
| 8  | 2.3365             | 0.02544       | 0.02544        | 2.3365     |
| 9  | 2.8151             | 0.03068       | 0.03068        | 2.8151     |
| 10 | 3.0232             | 0.03295       | 0.03295        | 3.0232     |
| 11 | 2.6078             | 0.02742       | 0.02742        | 2.6078     |
| 12 | 2.5215             | 0.02748       | 0.02748        | 2.5215     |
| 13 | 2.9386             | 0.03096       | 0.03096        | 2.9386     |
| 14 | 2.5479             | 0.02771       | 0.02771        | 2.5479     |
| 15 | 3.7863             | 0.04127       | 0.04127        | 3.7863     |
| 16 | 4.2621             | 0.04645       | 0.04645        | 4.2621     |
| 17 | 3.0736             | 0.04245       | 0.04245        | 3.0736     |
| 18 | 3.9491             | 0.04304       | 0.04304        | 3.9491     |
| 19 | 1.9378             | 0.02112       | 0.02112        | 1.9378     |
| 20 | 14.8854            | 0.16223       | 0.16223        | 14.8854    |

RUN NO. 1309

TITLE

MC DONNELL

TIME 12.13.0  
PAGE NO. 126, VOL. I  
REP. NO. 0004  
11/21/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.0650 PQ= 6365. P02= 5.052 P1=0.2254 QDOT-A= 84.36

| N  | QDOT-N<br>(A/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.1754             | 0.02579       | 0.02579        | 2.1754     |
| 2  | 2.4429             | 0.03417       | 0.03417        | 2.4429     |
| 3  | 2.6870             | 0.03185       | 0.03185        | 2.6870     |
| 4  | 2.7666             | 0.03280       | 0.03280        | 2.7666     |
| 5  | 3.0517             | 0.03620       | 0.03620        | 3.0517     |
| 6  | 2.7910             | 0.03312       | 0.03312        | 2.7910     |
| 7  | 2.9437             | 0.03489       | 0.03489        | 2.9437     |
| 8  | 2.1581             | 0.02558       | 0.02558        | 2.1581     |
| 9  | 2.5912             | 0.03072       | 0.03072        | 2.5912     |
| 10 | 2.8064             | 0.03327       | 0.03327        | 2.8064     |
| 11 | 2.4062             | 0.02852       | 0.02852        | 2.4062     |
| 12 | 2.3326             | 0.02765       | 0.02765        | 2.3326     |
| 13 | 2.6152             | 0.03100       | 0.03100        | 2.6152     |
| 14 | 2.3649             | 0.02803       | 0.02803        | 2.3649     |
| 15 | 3.5848             | 0.04219       | 0.04219        | 3.5848     |
| 16 | 3.9848             | 0.04728       | 0.04728        | 3.9848     |
| 17 | 3.6544             | 0.04332       | 0.04332        | 3.6544     |
| 18 | 3.6754             | 0.04357       | 0.04357        | 3.6754     |
| 19 | 1.8220             | 0.02160       | 0.02160        | 1.8220     |
| 20 | 13.6685            | 0.16203       | 0.16203        | 13.6685    |

RUN NO. 2309

YIELD

MC DONNELL

TIME 12.13.0  
PAGE NO. 127 VOL. I  
REP. NO. 0004  
11/21/67

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

| TIME = 0700 |                    | PD = 5944     | PO2 = 4.709     | PI = 02091 | ODDT-A = 76.96 |
|-------------|--------------------|---------------|-----------------|------------|----------------|
| N           | QDOT-N<br>(B/SF-S) | QDOT-M/QDOT-A | QDOT-N/K QDOT-A | QDOT-N/REF | QDOT-N/REF     |
| 1           | 2.0094             | 0.02611       | 0.02511         | 2.0094     |                |
| 2           | 2.6377             | 0.03627       | 0.03627         | 2.6377     |                |
| 3           | 2.6769             | 0.03218       | 0.04218         | 2.4769     |                |
| 4           | 2.5311             | 0.03289       | 0.03289         | 2.5311     |                |
| 5           | 2.8164             | 0.03659       | 0.03659         | 2.8164     |                |
| 6           | 2.5425             | 0.03304       | 0.03304         | 2.5425     |                |
| 7           | 2.6958             | 0.03503       | 0.03503         | 2.6958     |                |
| 8           | 1.9726             | 0.02572       | 0.02572         | 1.9726     |                |
| 9           | 2.3672             | 0.03076       | 0.03076         | 2.3672     |                |
| 10          | 2.5897             | 0.03365       | 0.03365         | 2.5897     |                |
| 11          | 2.2046             | 0.02864       | 0.02864         | 2.2046     |                |
| 12          | 2.1436             | 0.02785       | 0.02785         | 2.1436     |                |
| 13          | 2.3919             | 0.03108       | 0.03108         | 2.3919     |                |
| 14          | 2.1870             | 0.02842       | 0.02842         | 2.1870     |                |
| 15          | 3.3313             | 0.04328       | 0.04328         | 3.3313     |                |
| 16          | 3.7154             | 0.04827       | 0.04827         | 3.7154     |                |
| 17          | 3.4134             | 0.04435       | 0.04435         | 3.4134     |                |
| 18          | 3.4016             | 0.04420       | 0.04420         | 3.4016     |                |
| 19          | 1.7663             | 0.02217       | 0.02217         | 1.7663     |                |
| 20          | 12.4516            | 0.16179       | 0.16179         | 12.4516    |                |

RUN NO. 2309

TITLE

MCDONNELL

TIME 12.13.0  
PAGE NO. 128, VOL. I  
REP. NO. COOL  
11/21/67

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME=0.750 PO= 5559. PO2= 4.400 PI=0.01943 QDOT-A= 69.57

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/K QDOT-A | QDOT-N/REF |
|----|--------------------|---------------|-----------------|------------|
| 1  | 1.0435             | 0.02650       | 0.02650         | 1.8435     |
| 2  | 2.3925             | 0.03439       | 0.03439         | 2.3925     |
| 3  | 2.2668             | 0.03258       | 0.03258         | 2.2668     |
| 4  | 2.2955             | 0.03300       | 0.03300         | 2.2955     |
| 5  | 2.5790             | 0.03707       | 0.03707         | 2.5790     |
| 6  | 2.2912             | 0.03293       | 0.03293         | 2.2912     |
| 7  | 2.4679             | 0.03519       | 0.03519         | 2.4679     |
| 8  | 1.8011             | 0.02589       | 0.02589         | 1.8011     |
| 9  | 2.1432             | 0.03081       | 0.03081         | 2.1432     |
| 10 | 2.3729             | 0.03611       | 0.03611         | 2.3729     |
| 11 | 2.0030             | 0.02879       | 0.02879         | 2.0030     |
| 12 | 1.9567             | 0.02810       | 0.02810         | 1.9567     |
| 13 | 2.1685             | 0.03117       | 0.03117         | 2.1685     |
| 14 | 2.0090             | 0.02888       | 0.02888         | 2.0090     |
| 15 | 3.1038             | 0.04461       | 0.04461         | 3.1038     |
| 16 | 3.4420             | 0.04968       | 0.04968         | 3.4420     |
| 17 | 3.1725             | 0.04560       | 0.04560         | 3.1725     |
| 18 | 3.1279             | 0.04496       | 0.04496         | 3.1279     |
| 19 | 1.5905             | 0.02286       | 0.02286         | 1.5905     |
| 20 | 11.2366            | 0.16149       | 0.16149         | 11.2366    |

TIME 12.13. 0  
PAGE NO. 129, VOL. I  
REP. NO. 6004  
11/21/67

| TITLE                                                   |                    | MCDONNELL     |                | HIT TEST NO. 67 |  | MODEL HEAT TRANSFER RATES |  |
|---------------------------------------------------------|--------------------|---------------|----------------|-----------------|--|---------------------------|--|
| TIME=.0000 PO= 5211. PO2= 4.12% PI=.01408 QDOT-A= 62.17 |                    |               |                |                 |  |                           |  |
| N                                                       | QDOT-N<br>(B/SE-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/PIEF     |  |                           |  |
| 1                                                       | 1.6776             | 0.02698       | 0.02698        | 1.6776          |  |                           |  |
| 2                                                       | 2.1474             | 0.03654       | 0.03654        | 2.1474          |  |                           |  |
| 3                                                       | 2.0567             | 0.03308       | 0.03308        | 2.0567          |  |                           |  |
| 4                                                       | 2.0599             | 0.03313       | 0.03313        | 2.0599          |  |                           |  |
| 5                                                       | 2.3617             | 0.03766       | 0.03766        | 2.3617          |  |                           |  |
| 6                                                       | 2.0399             | 0.03281       | 0.03281        | 2.0399          |  |                           |  |
| 7                                                       | 2.2000             | 0.03539       | 0.03539        | 2.2000          |  |                           |  |
| 8                                                       | 1.6227             | 0.02610       | 0.02610        | 1.6227          |  |                           |  |
| 9                                                       | 1.9193             | 0.03087       | 0.03087        | 1.9193          |  |                           |  |
| 10                                                      | 2.1562             | 0.03466       | 0.03466        | 2.1562          |  |                           |  |
| 11                                                      | 1.8014             | 0.02897       | 0.02897        | 1.8014          |  |                           |  |
| 12                                                      | 1.7657             | 0.02840       | 0.02840        | 1.7657          |  |                           |  |
| 13                                                      | 1.9451             | 0.03129       | 0.03129        | 1.9451          |  |                           |  |
| 14                                                      | 1.8311             | 0.02945       | 0.02945        | 1.8311          |  |                           |  |
| 15                                                      | 2.8762             | 0.06626       | 0.06626        | 2.8762          |  |                           |  |
| 16                                                      | 3.1636             | 0.05097       | 0.05097        | 3.1636          |  |                           |  |
| 17                                                      | 2.9315             | 0.04715       | 0.04715        | 2.9315          |  |                           |  |
| 18                                                      | 2.0542             | 0.04591       | 0.04591        | 2.0542          |  |                           |  |
| 19                                                      | 1.6747             | 0.02372       | 0.02372        | 1.6747          |  |                           |  |
| 20                                                      | 10.0177            | 0.16113       | 0.16113        | 10.0177         |  |                           |  |

TIME 12.13. C  
PAGE NO. 130, VOL. I  
REP. NO. 0004  
11/21/67

TITLE MCDONNELL

RUN NO. 2309

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| TIME = .0850 |                    | PO = 489H.    | PO2 = 3.881     | PI = 0.1690 | QDOT-A = 54.78 |
|--------------|--------------------|---------------|-----------------|-------------|----------------|
| N            | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/K QDOT-A | QDOT-N/REF  |                |
| 1            | 1.5116             | 0.02760       | 0.02760         | 1.5116      |                |
| 2            | 1.9022             | 0.03473       | 0.03473         | 1.9022      |                |
| 3            | 1.8466             | 0.03371       | 0.03371         | 1.8466      |                |
| 4            | 1.8243             | 0.03330       | 0.03330         | 1.8243      |                |
| 5            | 2.1043             | 0.03842       | 0.03842         | 2.1043      |                |
| 6            | 1.7886             | 0.03265       | 0.03265         | 1.7886      |                |
| 7            | 1.9521             | 0.03564       | 0.03564         | 1.9521      |                |
| 8            | 1.4442             | 0.02637       | 0.02637         | 1.4442      |                |
| 9            | 1.6553             | 0.03095       | 0.03095         | 1.6553      |                |
| 10           | 1.9395             | 0.03541       | 0.03541         | 1.9395      |                |
| 11           | 1.5997             | 0.02921       | 0.02921         | 1.5997      |                |
| 12           | 1.5768             | 0.02579       | 0.02579         | 1.5768      |                |
| 13           | 1.7217             | 0.03143       | 0.03143         | 1.7217      |                |
| 14           | 1.6531             | 0.03018       | 0.03018         | 1.6531      |                |
| 15           | 2.6487             | 0.04836       | 0.04836         | 2.6487      |                |
| 16           | 2.8952             | 0.05286       | 0.05286         | 2.8952      |                |
| 17           | 2.6906             | 0.04912       | 0.04912         | 2.6906      |                |
| 18           | 2.5804             | 0.04711       | 0.04711         | 2.5804      |                |
| 19           | 1.3589             | 0.02481       | 0.02481         | 1.3589      |                |
| 20           | 8.8008             | 0.16067       | 0.16067         | 8.8008      |                |



RUN NO. 2309

TITLE

MCDONNELL

TIME 12.13.0  
PAGE NO. 131, VOL. I  
REP. NO. 0001  
11/21/67

MIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=.0900 PO= 4622. PO2= 3.672 P1=.01589 QDOT-A= 47.38

| N  | QDOT-N<br>(H/SE-S) | QDOT-N/QDOT-A | QDOT-N/K QDOT-A | QDOT-N/REF |
|----|--------------------|---------------|-----------------|------------|
| 1  | 1.7457             | 0.02840       | 0.02840         | 1.3457     |
| 2  | 1.6570             | 0.03697       | 0.03697         | 1.6570     |
| 3  | 1.6365             | 0.03656       | 0.03656         | 1.6365     |
| 4  | 1.5817             | 0.03353       | 0.03353         | 1.5817     |
| 5  | 1.5670             | 0.03040       | 0.03040         | 1.5670     |
| 6  | 1.5372             | 0.03244       | 0.03244         | 1.5372     |
| 7  | 1.7063             | 0.03597       | 0.03597         | 1.7063     |
| 8  | 1.2658             | 0.02671       | 0.02671         | 1.2658     |
| 9  | 1.4714             | 0.03105       | 0.03105         | 1.4714     |
| 10 | 1.7227             | 0.03636       | 0.03636         | 1.7227     |
| 11 | 1.5981             | 0.02951       | 0.02951         | 1.5981     |
| 12 | 1.3879             | 0.02929       | 0.02929         | 1.3879     |
| 13 | 1.4943             | 0.03162       | 0.03162         | 1.4943     |
| 14 | 1.4751             | 0.03113       | 0.03113         | 1.4751     |
| 15 | 2.4212             | 0.05110       | 0.05110         | 2.4212     |
| 16 | 2.6219             | 0.05534       | 0.05534         | 2.6219     |
| 17 | 2.4496             | 0.05170       | 0.05170         | 2.4496     |
| 18 | 2.3067             | 0.04868       | 0.04868         | 2.3067     |
| 19 | 1.27632            | 0.02624       | 0.02624         | 1.27632    |
| 20 | 7.5838             | 0.16006       | 0.16006         | 7.5838     |

RUN NO. 2309

TITLE

MCDONNELL

TIME 12.13.1  
PAGE NO. 132 VOL. I  
R-P. NO. GOOD  
11/21/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| TIME=0.0950 |                    |               |                |            |  | PI= 4.381. | PO2= 3.496 | PI=0.1501 | QDOT-A= 39.98 |
|-------------|--------------------|---------------|----------------|------------|--|------------|------------|-----------|---------------|
| N           | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |  |            |            |           |               |
| 1           | 1.1797             | 0.02950       | 0.02950        | 1.1797     |  |            |            |           |               |
| 2           | 1.4118             | 0.03531       | 0.03531        | 1.4118     |  |            |            |           |               |
| 3           | 1.6266             | 0.03567       | 0.03567        | 1.6266     |  |            |            |           |               |
| 4           | 1.3531             | 0.03386       | 0.03386        | 1.3531     |  |            |            |           |               |
| 5           | 1.6296             | 0.04076       | 0.04076        | 1.6296     |  |            |            |           |               |
| 6           | 1.2859             | 0.03216       | 0.03216        | 1.2859     |  |            |            |           |               |
| 7           | 1.4564             | 0.03642       | 0.03642        | 1.4564     |  |            |            |           |               |
| 8           | 1.0873             | 0.02719       | 0.02719        | 1.0873     |  |            |            |           |               |
| 9           | 1.2474             | 0.03120       | 0.03120        | 1.2474     |  |            |            |           |               |
| 10          | 1.5060             | 0.03766       | 0.03766        | 1.5060     |  |            |            |           |               |
| 11          | 1.1965             | 0.02992       | 0.02992        | 1.1965     |  |            |            |           |               |
| 12          | 1.1989             | 0.02998       | 0.02998        | 1.1989     |  |            |            |           |               |
| 13          | 1.2749             | 0.03188       | 0.03188        | 1.2749     |  |            |            |           |               |
| 14          | 1.2972             | 0.03246       | 0.03246        | 1.2972     |  |            |            |           |               |
| 15          | 2.1937             | 0.05486       | 0.05486        | 2.1937     |  |            |            |           |               |
| 16          | 2.3485             | 0.05873       | 0.05873        | 2.3485     |  |            |            |           |               |
| 17          | 2.2006             | 0.05524       | 0.05524        | 2.2006     |  |            |            |           |               |
| 18          | 2.0330             | 0.05084       | 0.05084        | 2.0330     |  |            |            |           |               |
| 19          | 1.1276             | 0.02520       | 0.02520        | 1.1276     |  |            |            |           |               |
| 20          | 6.3669             | 0.15923       | 0.15923        | 6.3669     |  |            |            |           |               |

TIME 12.13.1  
PAGE NO. 133 VOL. I  
EP. NO. 0004  
11/21/67

RUN NO. 2309

TITLE  
MCDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=1.000 P0= 4.177. P02= 3.354 P1= 0.1430 QDOT-A= 32.59

| N  | QDOT-N<br>(R/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.0138             | 0.03111       | 0.03111        | 1.0138     |
| 2  | 1.1667             | 0.03580       | 0.03580        | 1.1667     |
| 3  | 1.2163             | 0.03732       | 0.03732        | 1.2163     |
| 4  | 1.1175             | 0.03429       | 0.03429        | 1.1175     |
| 5  | 1.3923             | 0.04272       | 0.04272        | 1.3923     |
| 6  | 1.0346             | 0.03175       | 0.03175        | 1.0346     |
| 7  | 1.2085             | 0.03708       | 0.03708        | 1.2085     |
| 8  | 0.9088             | 0.02789       | 0.02789        | 0.9088     |
| 9  | 1.0234             | 0.03140       | 0.03140        | 1.0234     |
| 10 | 1.2802             | 0.03956       | 0.03956        | 1.2802     |
| 11 | 0.9949             | 0.03053       | 0.03053        | 0.9949     |
| 12 | 1.0100             | 0.03099       | 0.03099        | 1.0100     |
| 13 | 1.0515             | 0.03227       | 0.03227        | 1.0515     |
| 14 | 1.1192             | 0.03434       | 0.03434        | 1.1192     |
| 15 | 1.9662             | 0.06033       | 0.06033        | 1.9662     |
| 16 | 2.0751             | 0.06367       | 0.06367        | 2.0751     |
| 17 | 1.9677             | 0.06238       | 0.06238        | 1.9677     |
| 18 | 1.7592             | 0.05398       | 0.05398        | 1.7592     |
| 19 | 1.0116             | 0.03104       | 0.03104        | 1.0116     |
| 20 | 5.1500             | 0.15803       | 0.15803        | 5.1500     |

TIME 12.13.1  
PAGE NO. 134, VOL. I  
REP. NO. 0004  
11/21/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2309

TIME = 0.0400 PO = 9010.42 ALPHA = 15.00.

| PROBE | PHI | PON      | PON/P1    | PON/P02   | PON/P1    | (PON-P1)/01 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | C.C | 0.145079 | 0.161E-04 | 0.200E-01 | 0.461E 01 | 0.284E-01   |
| 2     | C.C | 0.150293 | 0.167E-04 | 0.207E-01 | 0.457E 01 | 0.300E-01   |
| 3     | C.C | 0.151575 | 0.168E-04 | 0.209E-01 | 0.461E 01 | 0.303E-01   |
| 4     | C.C | 0.153421 | 0.170E-04 | 0.211E-01 | 0.467E 01 | 0.308E-01   |
| 5     | C.C | 0.162229 | 0.160E-04 | 0.198E-01 | 0.439E 01 | 0.286E-01   |
| 6     | C.C | 0.136585 | 0.169E-04 | 0.185E-01 | 0.409E 01 | 0.260E-01   |
| 7     | C.C | 0.145309 | 0.161E-04 | 0.200E-01 | 0.442E 01 | 0.287E-01   |
| 8     | C.C | 0.127636 | 0.162E-04 | 0.176E-01 | 0.388E 01 | 0.262E-01   |
| 9     | C.C | 0.145319 | 0.162E-04 | 0.201E-01 | 0.446E 01 | 0.289E-01   |
| 10    | C.C | 0.162075 | 0.160E-04 | 0.223E-01 | 0.493E 01 | 0.330E-01   |
| 11    | C.C | 0.122558 | 0.176E-04 | 0.169E-01 | 0.373E 01 | 0.229E-01   |
| 12    | C.C | 0.139546 | 0.155E-04 | 0.192E-01 | 0.424E 01 | 0.272E-01   |
| 13    | C.C | 0.128073 | 0.162E-04 | 0.176E-01 | 0.390E 01 | 0.243E-01   |
| 14    | C.C | 0.160141 | 0.170E-04 | 0.221E-01 | 0.489E 01 | 0.326E-01   |
| 15    | C.C | 0.182222 | 0.202E-04 | 0.251E-01 | 0.556E 01 | 0.381E-01   |
| 16    | C.C | 0.212789 | 0.236E-04 | 0.293E-01 | 0.667E 01 | 0.459E-01   |
| 17    | C.C | 0.216653 | 0.240E-04 | 0.298E-01 | 0.659E 01 | 0.469E-01   |
| 18    | C.C | 0.196305 | 0.210E-04 | 0.270E-01 | 0.597E 01 | 0.417E-01   |
| 19    | C.C | 0.076408 | 0.952E-05 | 0.106E-01 | 0.234E 01 | 0.112E-01   |
| 20    | C.C | 0.587866 | 0.652E-04 | 0.809E-01 | 0.179E 02 | 0.162E 00   |

RUN NO. 2309

TITLE

MC DONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME 12.13.1  
PAGE NO. 135, VOL. I  
REP. NO. 0004  
11/21/67

TIME= 0.0450 PO= 8409.17 ALPHA= 15.00

| PROBE | PHI | PCN      | PCN/PO    | PCN/PO2   | PCN/PI    | (PCN-0.1)701 |
|-------|-----|----------|-----------|-----------|-----------|--------------|
| 1     | 0.0 | 0.129917 | 0.154E-04 | 0.192E-01 | 0.426E 01 | 0.273E-01    |
| 2     | 0.0 | 0.132614 | 0.154E-04 | 0.196E-01 | 0.435E 01 | 0.280E-01    |
| 3     | 0.0 | 0.134416 | 0.160E-04 | 0.199E-01 | 0.441E 01 | 0.285E-01    |
| 4     | 0.0 | 0.135159 | 0.161E-04 | 0.200E-01 | 0.443E 01 | 0.287E-01    |
| 5     | 0.0 | 0.126873 | 0.151E-04 | 0.188E-01 | 0.416E 01 | 0.265E-01    |
| 6     | 0.0 | 0.116370 | 0.130E-04 | 0.172E-01 | 0.381E 01 | 0.235E-01    |
| 7     | 0.0 | 0.126236 | 0.150E-04 | 0.187E-01 | 0.414E 01 | 0.263E-01    |
| 8     | 0.0 | 0.112398 | 0.134E-04 | 0.166E-01 | 0.368E 01 | 0.225E-01    |
| 9     | 0.0 | 0.127967 | 0.152E-04 | 0.189E-01 | 0.419E 01 | 0.267E-01    |
| 10    | 0.0 | 0.144141 | 0.171E-04 | 0.213E-01 | 0.473E 01 | 0.312E-01    |
| 11    | 0.0 | 0.108134 | 0.129E-04 | 0.160E-01 | 0.354E 01 | 0.213E-01    |
| 12    | 0.0 | 0.122196 | 0.145E-04 | 0.181E-01 | 0.401E 01 | 0.252E-01    |
| 13    | 0.0 | 0.113512 | 0.135E-04 | 0.169E-01 | 0.372E 01 | 0.229E-01    |
| 14    | 0.0 | 0.144273 | 0.172E-04 | 0.213E-01 | 0.473E 01 | 0.312E-01    |
| 15    | 0.0 | 0.167091 | 0.199E-04 | 0.247E-01 | 0.548E 01 | 0.375E-01    |
| 16    | 0.0 | 0.193566 | 0.230E-04 | 0.286E-01 | 0.635E 01 | 0.447E-01    |
| 17    | 0.0 | 0.192666 | 0.229E-04 | 0.285E-01 | 0.632E 01 | 0.445E-01    |
| 18    | 0.0 | 0.175693 | 0.209E-04 | 0.260E-01 | 0.576E 01 | 0.398E-01    |
| 19    | 0.0 | 0.069409 | 0.930E-05 | 0.103E-01 | 0.229E 01 | 0.104E-01    |
| 20    | 0.0 | 0.527335 | 0.627E-04 | 0.780E-01 | 0.173E 02 | 0.136E 00    |

TIME 12.13.2  
PAGE NO. 136 VOL. 1  
REP. NO. 6004  
11/21/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 5309

TIME=0.0500 PO=7843.99 ALPHA=15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/OI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.116352 | 0.148F-04 | 0.185F-01 | 0.411E 01 | 0.260E-01   |
| 2     | 0.0 | 0.116844 | 0.149F-04 | 0.186F-01 | 0.413E 01 | 0.261E-01   |
| 3     | 0.0 | 0.119175 | 0.152E-04 | 0.190E-01 | 0.421E 01 | 0.268E-01   |
| 4     | 0.0 | 0.116800 | 0.151E-04 | 0.189E-01 | 0.420E 01 | 0.267E-01   |
| 5     | 0.0 | 0.111427 | 0.142E-04 | 0.177E-01 | 0.394E 01 | 0.245E-01   |
| 6     | 0.0 | 0.100148 | 0.128E-04 | 0.159E-01 | 0.354E 01 | 0.212E-01   |
| 7     | 0.0 | 0.109190 | 0.139E-04 | 0.174E-01 | 0.386E 01 | 0.239E-01   |
| 8     | 0.0 | 0.098755 | 0.126E-04 | 0.157E-01 | 0.349E 01 | 0.208E-01   |
| 9     | 0.0 | 0.111865 | 0.143F-04 | 0.178F-01 | 0.396F 01 | 0.247F-01   |
| 10    | 0.0 | 0.128024 | 0.163E-04 | 0.204E-01 | 0.453E 01 | 0.294E-01   |
| 11    | 0.0 | 0.095173 | 0.121F-04 | 0.152E-01 | 0.337E 01 | 0.197E-01   |
| 12    | 0.0 | 0.106692 | 0.136F-04 | 0.170F-01 | 0.377E 01 | 0.231E-01   |
| 13    | 0.0 | 0.100410 | 0.128F-04 | 0.160E-01 | 0.355E 01 | 0.213E-01   |
| 14    | 0.0 | 0.129430 | 0.165F-04 | 0.204E-01 | 0.454E 01 | 0.299E-01   |
| 15    | 0.0 | 0.153435 | 0.196E-04 | 0.244E-01 | 0.543E 01 | 0.369E-01   |
| 16    | 0.0 | 0.176357 | 0.225E-04 | 0.281E-01 | 0.624E 01 | 0.437E-01   |
| 17    | 0.0 | 0.171472 | 0.219E-04 | 0.273E-01 | 0.606E 01 | 0.423E-01   |
| 18    | 0.0 | 0.157058 | 0.200E-04 | 0.250E-01 | 0.555E 01 | 0.389E-01   |
| 19    | 0.0 | 0.063388 | 0.808E-05 | 0.101E-01 | 0.224E 01 | 0.104E-01   |
| 20    | 0.0 | 0.477296 | 0.602E-04 | 0.752E-01 | 0.167E 02 | 0.131E 00   |

TIME 12.13.2  
PAGE NO. 237 VOL. I  
REP. NO. 6004  
11/21/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2309

TITLE

TIME 0.0550 PD= 7314.89 ALPHA= 15.00

| PROBE | PHE | PIN      | PON/PO    | POH/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.104382 | 0.143E-04 | 0.179E-01 | 0.398E 01 | 0.260E-01   |
| 2     | 0.0 | 0.102902 | 0.141E-04 | 0.176E-01 | 0.492E 01 | 0.244E-01   |
| 3     | 0.0 | 0.105051 | 0.145E-04 | 0.181E-01 | 0.403E 01 | 0.258E-01   |
| 4     | 0.0 | 0.104362 | 0.143E-04 | 0.179E-01 | 0.397E 01 | 0.240E-01   |
| 5     | 0.0 | 0.097800 | 0.136E-04 | 0.168E-01 | 0.373E 01 | 0.237E-01   |
| 6     | 0.0 | 0.095319 | 0.117E-04 | 0.147E-01 | 0.327E 01 | 0.180E-01   |
| 7     | 0.0 | 0.094170 | 0.129E-04 | 0.161E-01 | 0.359E 01 | 0.216E-01   |
| 8     | 0.0 | 0.086707 | 0.119E-04 | 0.149E-01 | 0.310E 01 | 0.192E-01   |
| 9     | 0.0 | 0.097631 | 0.133E-04 | 0.167E-01 | 0.372E 01 | 0.227E-01   |
| 10    | 0.0 | 0.113724 | 0.155E-04 | 0.195E-01 | 0.433E 01 | 0.278E-01   |
| 11    | 0.0 | 0.083674 | 0.114E-04 | 0.143E-01 | 0.319E 01 | 0.182E-01   |
| 12    | 0.0 | 0.093332 | 0.127E-04 | 0.159E-01 | 0.356E 01 | 0.212E-01   |
| 13    | 0.0 | 0.086767 | 0.121E-04 | 0.152E-01 | 0.338E 01 | 0.198E-01   |
| 14    | 0.0 | 0.116212 | 0.159E-04 | 0.199E-01 | 0.443E 01 | 0.280E-01   |
| 15    | 0.0 | 0.161254 | 0.193E-04 | 0.242E-01 | 0.538E 01 | 0.365E-01   |
| 16    | 0.0 | 0.161163 | 0.220E-04 | 0.276E-01 | 0.616E 01 | 0.428E-01   |
| 17    | 0.0 | 0.154070 | 0.209E-04 | 0.262E-01 | 0.583E 01 | 0.403E-01   |
| 18    | 0.0 | 0.160679 | 0.192E-04 | 0.241E-01 | 0.535E 01 | 0.363E-01   |
| 19    | 0.0 | 0.057564 | 0.707E-05 | 0.906E-02 | 0.219E 01 | 0.998E-02   |
| 20    | 0.0 | 0.422748 | 0.578E-04 | 0.724E-01 | 0.161E 02 | 0.126E 00   |

RUN NO. 2309

TITLE

MC DONNELL

TIME 12.13.2  
PAGE NO. 138, VOL. I  
REP. NO. G004  
11/21/67

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0600 PO = 6821.89 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | C.0 | 0.094007 | 0.134E-04 | 0.173E-01 | 0.387E 01 | 0.249E-01   |
| 2     | C.0 | 0.091027 | 0.133E-04 | 0.168E-01 | 0.374E 01 | 0.239E-01   |
| 3     | C.0 | 0.094449 | 0.130E-04 | 0.174E-01 | 0.388E 01 | 0.239E-01   |
| 4     | C.0 | 0.091786 | 0.135E-04 | 0.169E-01 | 0.377E 01 | 0.240E-01   |
| 5     | C.0 | 0.086262 | 0.126E-04 | 0.159E-01 | 0.355E 01 | 0.211E-01   |
| 6     | C.0 | 0.073683 | 0.108E-04 | 0.136E-01 | 0.303E 01 | 0.169E-01   |
| 7     | C.0 | 0.081175 | 0.119E-04 | 0.150E-01 | 0.334E 01 | 0.194E-01   |
| 8     | C.0 | 0.076253 | 0.112E-04 | 0.140E-01 | 0.314E 01 | 0.177E-01   |
| 9     | C.0 | 0.085267 | 0.125E-04 | 0.157E-01 | 0.351E 01 | 0.229E-01   |
| 10    | C.0 | 0.101242 | 0.168E-04 | 0.187E-01 | 0.416E 01 | 0.265E-01   |
| 11    | C.0 | 0.073639 | 0.108E-04 | 0.136E-01 | 0.303E 01 | 0.169E-01   |
| 12    | C.0 | 0.081216 | 0.119E-04 | 0.150E-01 | 0.334E 01 | 0.194E-01   |
| 13    | C.0 | 0.078502 | 0.115E-04 | 0.145E-01 | 0.323E 01 | 0.185E-01   |
| 14    | C.0 | 0.104619 | 0.153E-04 | 0.194E-01 | 0.430E 01 | 0.274E-01   |
| 15    | C.0 | 0.130548 | 0.191E-04 | 0.240E-01 | 0.537E 01 | 0.363E-01   |
| 16    | C.0 | 0.147983 | 0.217E-04 | 0.273E-01 | 0.609E 01 | 0.422E-01   |
| 17    | C.0 | 0.137461 | 0.201E-04 | 0.254E-01 | 0.565E 01 | 0.386E-01   |
| 18    | C.0 | 0.125956 | 0.185E-04 | 0.232E-01 | 0.518E 01 | 0.347E-01   |
| 19    | C.0 | 0.052276 | 0.766E-05 | 0.963E-02 | 0.214E 01 | 0.954E-02   |
| 20    | C.0 | 0.370692 | 0.555E-04 | 0.690E-01 | 0.156E 02 | 0.121E 00   |



RUN NO. 2309

TITLE

MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME 12.13.3  
PAGE NO. 139, VOL. I  
REP. NO. G004  
11/21/67

TIME = 0.0650 PO = 6364.97 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PD    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.085229 | 0.134E-04 | 0.169E-01 | 0.378E 01 | 0.230E-01   |
| 2     | 0.0 | 0.040981 | 0.127E-04 | 0.160E-01 | 0.359E 01 | 0.214E-01   |
| 3     | 0.0 | 0.084964 | 0.133E-04 | 0.168E-01 | 0.377E 01 | 0.229E-01   |
| 4     | 0.0 | 0.081132 | 0.127E-04 | 0.161E-01 | 0.360E 01 | 0.215E-01   |
| 5     | 0.0 | 0.076543 | 0.120E-04 | 0.152E-01 | 0.340E 01 | 0.198E-01   |
| 6     | 0.0 | 0.063440 | 0.997E-05 | 0.126E-01 | 0.281E 01 | 0.150E-01   |
| 7     | 0.0 | 0.070207 | 0.110E-04 | 0.139E-01 | 0.311E 01 | 0.175E-01   |
| 8     | 0.0 | 0.067395 | 0.106E-04 | 0.133E-01 | 0.299E 01 | 0.164E-01   |
| 9     | 0.0 | 0.074771 | 0.117E-04 | 0.148E-01 | 0.332E 01 | 0.192E-01   |
| 10    | 0.0 | 0.090578 | 0.142E-04 | 0.179E-01 | 0.402E 01 | 0.250E-01   |
| 11    | 0.0 | 0.065065 | 0.102E-04 | 0.129E-01 | 0.289E 01 | 0.156E-01   |
| 12    | 0.0 | 0.071243 | 0.112E-04 | 0.141E-01 | 0.316E 01 | 0.179E-01   |
| 13    | 0.0 | 0.069856 | 0.110E-04 | 0.138E-01 | 0.310E 01 | 0.174E-01   |
| 14    | 0.0 | 0.094650 | 0.149E-04 | 0.187E-01 | 0.420E 01 | 0.264E-01   |
| 15    | 0.0 | 0.121318 | 0.191E-04 | 0.240E-01 | 0.538E 01 | 0.362E-01   |
| 16    | 0.0 | 0.136818 | 0.215E-04 | 0.271E-01 | 0.607E 01 | 0.419E-01   |
| 17    | 0.0 | 0.124644 | 0.196E-04 | 0.247E-01 | 0.553E 01 | 0.374E-01   |
| 18    | 0.0 | 0.113490 | 0.178E-04 | 0.225E-01 | 0.503E 01 | 0.334E-01   |
| 19    | 0.0 | 0.047587 | 0.748E-05 | 0.942E-02 | 0.211E 01 | 0.919E-02   |
| 20    | 0.0 | 0.340129 | 0.534E-04 | 0.673E-01 | 0.151E 02 | 0.116E 00   |

RUN NO. 2309

TITLE

MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME 12.13. 3  
PAGE NO. 140, VOL. I  
REP. NO. 0004  
11/21/67

TIME = 0.0700 PO = 5944.13 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.070045 | 0.131E-04 | 0.166E-01 | 0.373E 01 | 0.225E-01   |
| 2     | 0.0 | 0.072843 | 0.123E-04 | 0.155E-01 | 0.348E 01 | 0.204E-01   |
| 3     | 0.0 | 0.077397 | 0.130E-04 | 0.164E-01 | 0.370E 01 | 0.222E-01   |
| 4     | 0.0 | 0.072380 | 0.122E-04 | 0.154E-01 | 0.346E 01 | 0.207E-01   |
| 5     | 0.0 | 0.068733 | 0.116E-04 | 0.146E-01 | 0.329E 01 | 0.188E-01   |
| 6     | 0.0 | 0.055189 | 0.928E-05 | 0.117E-01 | 0.264E 01 | 0.135E-01   |
| 7     | 0.0 | 0.061264 | 0.103E-04 | 0.130E-01 | 0.293E 01 | 0.159E-01   |
| 8     | 0.0 | 0.060131 | 0.101E-04 | 0.128E-01 | 0.288E 01 | 0.154E-01   |
| 9     | 0.0 | 0.066144 | 0.111E-04 | 0.140E-01 | 0.316E 01 | 0.178E-01   |
| 10    | 0.0 | 0.081731 | 0.137E-04 | 0.174E-01 | 0.391E 01 | 0.239E-01   |
| 11    | 0.0 | 0.057955 | 0.975E-05 | 0.123E-01 | 0.277E 01 | 0.146E-01   |
| 12    | 0.0 | 0.063114 | 0.106E-04 | 0.134E-01 | 0.302E 01 | 0.166E-01   |
| 13    | 0.0 | 0.062589 | 0.105E-04 | 0.133E-01 | 0.299E 01 | 0.164E-01   |
| 14    | 0.0 | 0.086306 | 0.145E-04 | 0.183E-01 | 0.413E 01 | 0.257E-01   |
| 15    | 0.0 | 0.113563 | 0.191E-04 | 0.241E-01 | 0.543E 01 | 0.364E-01   |
| 16    | 0.0 | 0.127667 | 0.215E-04 | 0.271E-01 | 0.611E 01 | 0.420E-01   |
| 17    | 0.0 | 0.114619 | 0.193E-04 | 0.243E-01 | 0.548E 01 | 0.369E-01   |
| 18    | 0.0 | 0.103080 | 0.173E-04 | 0.219E-01 | 0.493E 01 | 0.323E-01   |
| 19    | 0.0 | 0.043474 | 0.731E-05 | 0.923E-02 | 0.208E 01 | 0.887E-02   |
| 20    | 0.0 | 0.307057 | 0.517E-04 | 0.652E-01 | 0.147E 02 | 0.113E 00   |

TIME 12.13.4  
PAGE NO. 141, VOL. I  
REP. NO. 6004  
11/21/67

TITLE  
MCDONNELL

RUN NO. 2309

HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.0750 PN= 5559.37 ALPHA= 15.00

| PROBE | PHI | PCN      | PCN/PO    | PCN/PO2   | PCN/PI    | (PCN-0.11/0.1 |
|-------|-----|----------|-----------|-----------|-----------|---------------|
| 1     | C.0 | 0.072458 | 0.130E-04 | 0.165F-01 | 0.373E 01 | 0.223E-01     |
| 2     | 0.0 | 0.066613 | 0.120E-04 | 0.151F-01 | 0.343E 01 | 0.199E-01     |
| 3     | 0.0 | 0.071749 | 0.129E-04 | 0.163F-01 | 0.369E 01 | 0.220E-01     |
| 4     | C.0 | 0.065529 | 0.118E-04 | 0.149E-01 | 0.337E 01 | 0.194E-01     |
| 5     | 0.0 | 0.062831 | 0.113E-04 | 0.143E-01 | 0.323E 01 | 0.183E-01     |
| 6     | 0.0 | 0.064832 | 0.110E-04 | 0.141E-01 | 0.322E 01 | 0.184E-01     |
| 7     | 0.0 | 0.054347 | 0.098E-04 | 0.124E-01 | 0.280E 01 | 0.147E-01     |
| 8     | C.0 | 0.054462 | 0.090E-04 | 0.124E-01 | 0.280E 01 | 0.147E-01     |
| 9     | C.0 | 0.059385 | 0.107E-04 | 0.135E-01 | 0.306E 01 | 0.168E-01     |
| 10    | 0.0 | 0.074702 | 0.134E-04 | 0.170E-01 | 0.384E 01 | 0.233E-01     |
| 11    | 0.0 | 0.052307 | 0.094E-04 | 0.119E-01 | 0.269E 01 | 0.138E-01     |
| 12    | C.0 | 0.056828 | 0.102E-04 | 0.129E-01 | 0.292E 01 | 0.157E-01     |
| 13    | 0.0 | 0.056781 | 0.102E-04 | 0.129E-01 | 0.292E 01 | 0.157E-01     |
| 14    | C.0 | 0.079587 | 0.143E-04 | 0.181E-01 | 0.410E 01 | 0.253E-01     |
| 15    | C.0 | 0.107283 | 0.193E-04 | 0.244E-01 | 0.552E 01 | 0.370E-01     |
| 16    | C.0 | 0.120531 | 0.217E-04 | 0.274E-01 | 0.620E 01 | 0.425E-01     |
| 17    | C.0 | 0.107387 | 0.193E-04 | 0.244E-01 | 0.553E 01 | 0.370E-01     |
| 18    | C.0 | 0.094726 | 0.170E-04 | 0.215E-01 | 0.487E 01 | 0.317E-01     |
| 19    | 0.0 | 0.039939 | 0.071E-04 | 0.090E-02 | 0.206E 01 | 0.863E-02     |
| 20    | 0.0 | 0.279477 | 0.503E-04 | 0.635E-01 | 0.144E 02 | 0.109E 00     |

TIME 12.13.4  
PAGE NO. 142, VOL. I  
REP. NO. 6004  
11/21/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2309

TIME = 0.0800 PO = 5210.70 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PCN/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.068466 | 0.131E-04 | 0.166E-01 | 0.379E 01 | 0.226E-01   |
| 2     | 0.0 | 0.062291 | 0.120E-04 | 0.151E-01 | 0.345E 01 | 0.198E-01   |
| 3     | 0.0 | 0.068019 | 0.131E-04 | 0.165E-01 | 0.376E 01 | 0.224E-01   |
| 4     | 0.0 | 0.060581 | 0.116E-04 | 0.147E-01 | 0.335E 01 | 0.191E-01   |
| 5     | 0.0 | 0.058939 | 0.113E-04 | 0.143E-01 | 0.325E 01 | 0.183E-01   |
| 6     | 0.0 | 0.044667 | 0.857E-05 | 0.108E-01 | 0.247E 01 | 0.119E-01   |
| 7     | 0.0 | 0.049456 | 0.949E-05 | 0.120E-01 | 0.274E 01 | 0.141E-01   |
| 8     | 0.0 | 0.050388 | 0.967E-05 | 0.122E-01 | 0.279E 01 | 0.145E-01   |
| 9     | 0.0 | 0.054494 | 0.105E-04 | 0.132E-01 | 0.301E 01 | 0.163E-01   |
| 10    | 0.0 | 0.069490 | 0.133E-04 | 0.169E-01 | 0.384E 01 | 0.231E-01   |
| 11    | 0.0 | 0.048121 | 0.924E-05 | 0.117E-01 | 0.266E 01 | 0.135E-01   |
| 12    | 0.0 | 0.052387 | 0.101E-04 | 0.127E-01 | 0.290E 01 | 0.154E-01   |
| 13    | 0.0 | 0.052431 | 0.101E-04 | 0.127E-01 | 0.290E 01 | 0.154E-01   |
| 14    | 0.0 | 0.074493 | 0.143E-04 | 0.181E-01 | 0.412E 01 | 0.253E-01   |
| 15    | 0.0 | 0.102478 | 0.197E-04 | 0.249E-01 | 0.567E 01 | 0.379E-01   |
| 16    | 0.0 | 0.115409 | 0.221E-04 | 0.280E-01 | 0.638E 01 | 0.437E-01   |
| 17    | 0.0 | 0.102947 | 0.198E-04 | 0.250E-01 | 0.569E 01 | 0.381E-01   |
| 18    | 0.0 | 0.088428 | 0.170E-04 | 0.214E-01 | 0.489E 01 | 0.316E-01   |
| 19    | 0.0 | 0.036981 | 0.710E-05 | 0.897E-02 | 0.205E 01 | 0.848E-02   |
| 20    | 0.0 | 0.257388 | 0.494E-04 | 0.624E-01 | 0.142E 02 | 0.107E 00   |

TIME 12.13.5  
PAGE NO. 143, VOL. I  
REP. NO. 6004  
11/21/67

TITLE  
MCDONNELL

RUN NO. 2309

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0850 PO = 4898.11 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PCN/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.066070 | 0.135E-04 | 0.170E-01 | 0.391E 01 | 0.234E-01   |
| 2     | 0.0 | 0.059877 | 0.122E-04 | 0.154E-01 | 0.354E 01 | 0.205E-01   |
| 3     | 0.0 | 0.066207 | 0.135E-04 | 0.174E-01 | 0.392E 01 | 0.235E-01   |
| 4     | 0.0 | 0.057534 | 0.117E-04 | 0.148E-01 | 0.340E 01 | 0.194E-01   |
| 5     | 0.0 | 0.056755 | 0.116E-04 | 0.146E-01 | 0.336E 01 | 0.190E-01   |
| 6     | 0.0 | 0.062394 | 0.066E-04 | 0.109E-01 | 0.251E 01 | 0.121E-01   |
| 7     | 0.0 | 0.066590 | 0.051E-04 | 0.120E-01 | 0.276E 01 | 0.141E-01   |
| 8     | 0.0 | 0.047909 | 0.078E-05 | 0.123E-01 | 0.284E 01 | 0.148E-01   |
| 9     | 0.0 | 0.051476 | 0.105E-04 | 0.133E-01 | 0.305E 01 | 0.165E-01   |
| 10    | 0.0 | 0.066096 | 0.135E-04 | 0.170E-01 | 0.391E 01 | 0.234E-01   |
| 11    | 0.0 | 0.065398 | 0.027E-05 | 0.117E-01 | 0.269E 01 | 0.136E-01   |
| 12    | 0.0 | 0.049789 | 0.102E-04 | 0.128E-01 | 0.295E 01 | 0.157E-01   |
| 13    | 0.0 | 0.049540 | 0.101E-04 | 0.128E-01 | 0.293E 01 | 0.156E-01   |
| 14    | 0.0 | 0.071023 | 0.145E-04 | 0.183E-01 | 0.420E 01 | 0.258E-01   |
| 15    | 0.0 | 0.099149 | 0.202E-04 | 0.255E-01 | 0.587E 01 | 0.392E-01   |
| 16    | 0.0 | 0.112302 | 0.229E-04 | 0.289E-01 | 0.665E 01 | 0.454E-01   |
| 17    | 0.0 | 0.101300 | 0.207E-04 | 0.261E-01 | 0.599E 01 | 0.402E-01   |
| 18    | 0.0 | 0.084187 | 0.172E-04 | 0.217E-01 | 0.498E 01 | 0.321E-01   |
| 19    | 0.0 | 0.034600 | 0.706E-05 | 0.891E-02 | 0.205E 01 | 0.843E-02   |
| 20    | 0.0 | 0.240792 | 0.492E-04 | 0.620E-01 | 0.142E 02 | 0.107E 00   |

RUN NO. 2309

TITLE

MC DONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME 12.13.5  
PAGE NO. 144, VOL. I  
REP. NO. 6004  
11/21/67

TIME = 0.0900 PO = 4621.60 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.065269 | 0.141E-04 | 0.178E-01 | 0.411E 01 | 0.248E-01   |
| 2     | 0.0 | 0.059372 | 0.128E-04 | 0.162E-01 | 0.374E 01 | 0.219E-01   |
| 3     | 0.0 | 0.066314 | 0.143E-04 | 0.181E-01 | 0.417E 01 | 0.254E-01   |
| 4     | 0.0 | 0.056389 | 0.122E-04 | 0.154E-01 | 0.355E 01 | 0.204E-01   |
| 5     | 0.0 | 0.056580 | 0.122E-04 | 0.154E-01 | 0.356E 01 | 0.205E-01   |
| 6     | 0.0 | 0.042115 | 0.911E-05 | 0.115E-01 | 0.265E 01 | 0.132E-01   |
| 7     | 0.0 | 0.045751 | 0.990E-05 | 0.125E-01 | 0.288E 01 | 0.150E-01   |
| 8     | 0.0 | 0.047025 | 0.102E-04 | 0.128E-01 | 0.296E 01 | 0.157E-01   |
| 9     | 0.0 | 0.050324 | 0.109E-04 | 0.137E-01 | 0.317E 01 | 0.173E-01   |
| 10    | 0.0 | 0.064519 | 0.140E-04 | 0.176E-01 | 0.406E 01 | 0.245E-01   |
| 11    | 0.0 | 0.044138 | 0.955E-05 | 0.120E-01 | 0.278E 01 | 0.142E-01   |
| 12    | 0.0 | 0.049035 | 0.106E-04 | 0.136E-01 | 0.309E 01 | 0.167E-01   |
| 13    | 0.0 | 0.048107 | 0.104E-04 | 0.131E-01 | 0.303E 01 | 0.162E-01   |
| 14    | 0.0 | 0.069178 | 0.150E-04 | 0.188E-01 | 0.435E 01 | 0.248E-01   |
| 15    | 0.0 | 0.097295 | 0.211E-04 | 0.265E-01 | 0.612E 01 | 0.410E-01   |
| 16    | 0.0 | 0.111209 | 0.241E-04 | 0.303E-01 | 0.700E 01 | 0.480E-01   |
| 17    | 0.0 | 0.102445 | 0.222E-04 | 0.279E-01 | 0.645E 01 | 0.436E-01   |
| 18    | 0.0 | 0.082002 | 0.177E-04 | 0.223E-01 | 0.516E 01 | 0.333E-01   |
| 19    | 0.0 | 0.032797 | 0.710E-05 | 0.893E-02 | 0.206E 01 | 0.851E-02   |
| 20    | 0.0 | 0.229687 | 0.497E-04 | 0.626E-01 | 0.145E 02 | 0.108E 00   |

TIME 12.13. 6  
PAGE NO. 145, VOL. I  
REP. NO. 0004  
11/21/67

TITLE  
MCDONNELL

RUN NO. 2309

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0950 PO = 4381.18 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PCN/PO2   | PON/PI    | (PON-PI)/QI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.066064 | 0.151E-04 | 0.189E-01 | 0.440E 01 | 0.270E-01   |
| 2     | 0.0 | 0.060774 | 0.139E-04 | 0.174E-01 | 0.405E 01 | 0.242E-01   |
| 3     | 0.0 | 0.068340 | 0.156E-04 | 0.195E-01 | 0.455E 01 | 0.282E-01   |
| 4     | 0.0 | 0.057146 | 0.130E-04 | 0.163E-01 | 0.381E 01 | 0.222E-01   |
| 5     | 0.0 | 0.058314 | 0.133E-04 | 0.167E-01 | 0.389E 01 | 0.229E-01   |
| 6     | 0.0 | 0.043829 | 0.100E-04 | 0.125E-01 | 0.292E 01 | 0.157E-01   |
| 7     | 0.0 | 0.046937 | 0.107E-04 | 0.134E-01 | 0.313E 01 | 0.169E-01   |
| 8     | 0.0 | 0.047735 | 0.109E-04 | 0.137E-01 | 0.318E 01 | 0.173E-01   |
| 9     | 0.0 | 0.051041 | 0.117E-04 | 0.146E-01 | 0.340E 01 | 0.190E-01   |
| 10    | 0.0 | 0.064760 | 0.148E-04 | 0.185E-01 | 0.432E 01 | 0.263E-01   |
| 11    | 0.0 | 0.044340 | 0.101E-04 | 0.127E-01 | 0.295E 01 | 0.155E-01   |
| 12    | 0.0 | 0.050125 | 0.114E-04 | 0.143E-01 | 0.334E 01 | 0.185E-01   |
| 13    | 0.0 | 0.048134 | 0.110E-04 | 0.138E-01 | 0.321E 01 | 0.175E-01   |
| 14    | 0.0 | 0.068957 | 0.157E-04 | 0.197E-01 | 0.459E 01 | 0.285E-01   |
| 15    | 0.0 | 0.096916 | 0.221E-04 | 0.277E-01 | 0.646E 01 | 0.432E-01   |
| 16    | 0.0 | 0.112131 | 0.256E-04 | 0.321E-01 | 0.747E 01 | 0.513E-01   |
| 17    | 0.0 | 0.106383 | 0.243E-04 | 0.304E-01 | 0.709E 01 | 0.482E-01   |
| 18    | 0.0 | 0.081874 | 0.187E-04 | 0.234E-01 | 0.546E 01 | 0.353E-01   |
| 19    | 0.0 | 0.031571 | 0.721E-05 | 0.903E-02 | 0.210E 01 | 0.874E-02   |
| 20    | 0.0 | 0.224074 | 0.511E-04 | 0.641E-01 | 0.149E 02 | 0.110E 00   |

TIME 12.13. 7  
PAGE NO. 146, VOL. I  
REP. NO. 6004  
11/21/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.1000 PC = 4176.84 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PCN/PO2   | PON/PI    | (PCN-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.068454 | 0.164E-04 | 0.204E-01 | 0.479E 01 | 0.298E-01   |
| 2     | 0.0 | 0.064084 | 0.153E-04 | 0.191E-01 | 0.448E 01 | 0.274E-01   |
| 3     | 0.0 | 0.072284 | 0.173E-04 | 0.216E-01 | 0.505E 01 | 0.319E-01   |
| 4     | 0.0 | 0.059804 | 0.143E-04 | 0.178E-01 | 0.418E 01 | 0.250E-01   |
| 5     | 0.0 | 0.061957 | 0.148E-04 | 0.185E-01 | 0.433E 01 | 0.262E-01   |
| 6     | 0.0 | 0.047535 | 0.114E-04 | 0.142E-01 | 0.332E 01 | 0.183E-01   |
| 7     | 0.0 | 0.050150 | 0.120E-04 | 0.150E-01 | 0.351E 01 | 0.197E-01   |
| 8     | 0.0 | 0.050040 | 0.120E-04 | 0.145E-01 | 0.350E 01 | 0.196E-01   |
| 9     | 0.0 | 0.053627 | 0.128E-04 | 0.160E-01 | 0.375E 01 | 0.216E-01   |
| 10    | 0.0 | 0.046819 | 0.160E-04 | 0.199E-01 | 0.467E 01 | 0.289E-01   |
| 11    | 0.0 | 0.046005 | 0.110E-04 | 0.137E-01 | 0.322E 01 | 0.174E-01   |
| 12    | 0.0 | 0.053059 | 0.127E-04 | 0.158E-01 | 0.371E 01 | 0.213E-01   |
| 13    | 0.0 | 0.049619 | 0.119E-04 | 0.148E-01 | 0.347E 01 | 0.194E-01   |
| 14    | 0.0 | 0.070362 | 0.168E-04 | 0.210E-01 | 0.492E 01 | 0.308E-01   |
| 15    | 0.0 | 0.098012 | 0.235E-04 | 0.292E-01 | 0.685E 01 | 0.460E-01   |
| 16    | 0.0 | 0.115067 | 0.275E-04 | 0.343E-01 | 0.804E 01 | 0.554E-01   |
| 17    | 0.0 | 0.113112 | 0.271E-04 | 0.337E-01 | 0.791E 01 | 0.543E-01   |
| 18    | 0.0 | 0.083802 | 0.201E-04 | 0.250E-01 | 0.586E 01 | 0.382E-01   |
| 19    | 0.0 | 0.030922 | 0.740E-05 | 0.922E-02 | 0.216E 01 | 0.913E-02   |
| 20    | 0.0 | 0.223954 | 0.536E-04 | 0.668E-01 | 0.157E 02 | 0.115E 00   |



TIME 9.26.42  
PAGE NO. 147, VOL. I  
REP. NO. GOOD  
11/09/67

TITLE  
MCDONNELL

HIT TEST NO. 67.  
TUNNEL PARAMETERS

RUN NO. 2311

| T<br>(SEC) | P0<br>(PSI) | T0<br>(OK) | H0<br>(SFT/SSEC) | Q-DOT<br>(R/SF-S) | P02<br>(PSI) | P1<br>(PSI) | T1<br>(OK) | U<br>(FT/S) | M1    | RE/F.T    | O1<br>(PSI) | ALPHA<br>(DEG) |
|------------|-------------|------------|------------------|-------------------|--------------|-------------|------------|-------------|-------|-----------|-------------|----------------|
| .0400      | 8521.       | 1833.      | 0.23261E 08      | 96.20             | 5.498        | 0.02245     | 53.68      | 6732.       | 13.74 | 16472.07. | 2.956       | 15.00          |
| .0450      | 8065.       | 1814.      | 0.22963E 08      | 92.26             | 5.229        | 0.02140     | 53.11      | 6689.       | 13.72 | 15936.42. | 2.821       | 15.00          |
| .0500      | 7630.       | 1792.      | 0.22641E 08      | 88.31             | 4.972        | 0.02040     | 52.48      | 6642.       | 13.71 | 15444.25. | 2.692       | 15.00          |
| .0550      | 7216.       | 1772.      | 0.22292E 08      | 84.37             | 4.726        | 0.01943     | 51.78      | 6590.       | 13.69 | 14998.91. | 2.550       | 15.00          |
| .0600      | 6823.       | 1747.      | 0.21917E 08      | 80.43             | 4.491        | 0.01850     | 50.99      | 6534.       | 13.68 | 14598.12. | 2.423       | 15.00          |
| .0650      | 6451.       | 1720.      | 0.21512E 08      | 76.49             | 4.268        | 0.01761     | 50.12      | 6474.       | 13.67 | 14248.19. | 2.303       | 15.00          |
| .0700      | 6100.       | 1688.      | 0.21076E 08      | 72.55             | 4.056        | 0.01675     | 49.16      | 6408.       | 13.66 | 13950.60. | 2.189       | 15.00          |
| .0750      | 5771.       | 1658.      | 0.20605E 08      | 68.60             | 3.855        | 0.01594     | 48.10      | 6336.       | 13.66 | 13711.74. | 2.082       | 15.00          |
| .0800      | 5462.       | 1620.      | 0.20097E 08      | 64.66             | 3.667        | 0.01517     | 46.92      | 6257.       | 13.66 | 13536.85. | 1.980       | 15.00          |
| .0850      | 5175.       | 1582.      | 0.19551E 08      | 60.72             | 3.489        | 0.01443     | 45.64      | 6171.       | 13.66 | 13431.50. | 1.895       | 15.00          |
| .0900      | 4908.       | 1526.      | 0.18759E 08      | 56.78             | 3.323        | 0.01372     | 43.68      | 6045.       | 13.68 | 13648.00. | 1.706       | 15.00          |
| .0950      | 4663.       | 1477.      | 0.18096E 08      | 52.83             | 3.169        | 0.01306     | 42.07      | 5938.       | 13.69 | 13763.36. | 1.713       | 15.00          |
| .1000      | 4439.       | 1426.      | 0.17381E 08      | 48.89             | 3.026        | 0.01245     | 40.31      | 5819.       | 13.70 | 14003.62. | 1.636       | 15.00          |
| .1050      | 4236.       | 1366.      | 0.16609E 08      | 44.95             | 2.894        | 0.01187     | 38.39      | 5689.       | 13.73 | 14388.38. | 1.566       | 15.00          |
| .1100      | 4054.       | 1316.      | 0.15960E 08      | 41.01             | 2.774        | 0.01135     | 36.79      | 5577.       | 13.75 | 14685.97. | 1.501       | 15.00          |

RUN NO. 2311

TITLE MCDONNELL

TIME 9.26.42  
PAGE NO. 140, VOL. I  
REP. NO. 0004  
11/09/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.0400 PO= 8521. P02= 5.498 P1=0.2245 QDOT-A= 96.20

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.0976             | 0.02181       | 0.03007        | 2.0976     |
| 2  | 2.8929             | 0.03007       | 0.03007        | 2.8929     |
| 3  | 2.6179             | 0.02721       | 0.02721        | 2.6179     |
| 4  | 3.2580             | 0.03387       | 0.03387        | 3.2580     |
| 5  | 3.1507             | 0.03775       | 0.03775        | 3.1507     |
| 6  | 3.3421             | 0.03474       | 0.03474        | 3.3421     |
| 7  | 3.2112             | 0.03338       | 0.03338        | 3.2112     |
| 8  | 2.7210             | 0.02828       | 0.02828        | 2.7210     |
| 9  | 3.4088             | 0.03544       | 0.03544        | 3.4088     |
| 10 | 2.9517             | 0.03068       | 0.03068        | 2.9517     |
| 11 | 3.0392             | 0.03159       | 0.03159        | 3.0392     |
| 12 | 2.9346             | 0.03051       | 0.03051        | 2.9346     |
| 13 | 3.3155             | 0.03446       | 0.03446        | 3.3155     |
| 14 | 2.6391             | 0.02743       | 0.02743        | 2.6391     |
| 15 | 3.3797             | 0.03513       | 0.03513        | 3.3797     |
| 16 | 4.1945             | 0.04360       | 0.04360        | 4.1945     |
| 17 | 3.9868             | 0.04144       | 0.04144        | 3.9868     |
| 18 | 3.9108             | 0.04065       | 0.04065        | 3.9108     |
| 19 | 2.1337             | 0.02218       | 0.02218        | 2.1337     |
| 20 | 16.5493            | 0.17203       | 0.17203        | 16.5493    |

RUN NO. 2311

TITLE

MCDONNELL

TIME 9.25.42  
PAGE NO. 149, VOL. I  
REP. NO. 0001  
11/09/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.450 P0= 8065. P07= 5.229 P1=0.02140 QDOT-A= 92.26

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.0533             | 0.02226       | 0.02226        | 2.0533     |
| 2  | 2.0141             | 0.03050       | 0.03050        | 2.0141     |
| 3  | 2.5380             | 0.02751       | 0.02751        | 2.5380     |
| 4  | 3.1258             | 0.03398       | 0.03398        | 3.1258     |
| 5  | 3.0456             | 0.03301       | 0.03301        | 3.0456     |
| 6  | 3.2095             | 0.03479       | 0.03479        | 3.2095     |
| 7  | 3.0892             | 0.03349       | 0.03349        | 3.0892     |
| 8  | 2.6154             | 0.02835       | 0.02835        | 2.6154     |
| 9  | 3.2550             | 0.03528       | 0.03528        | 3.2550     |
| 10 | 2.8403             | 0.03079       | 0.03079        | 2.8403     |
| 11 | 2.9129             | 0.03157       | 0.03157        | 2.9129     |
| 12 | 2.8075             | 0.03043       | 0.03043        | 2.8075     |
| 13 | 3.1697             | 0.03436       | 0.03436        | 3.1697     |
| 14 | 2.5347             | 0.02747       | 0.02747        | 2.5347     |
| 15 | 3.2859             | 0.03662       | 0.03662        | 3.2859     |
| 16 | 4.0398             | 0.04379       | 0.04379        | 4.0398     |
| 17 | 3.8247             | 0.04150       | 0.04150        | 3.8247     |
| 18 | 3.7657             | 0.04082       | 0.04082        | 3.7657     |
| 19 | 2.0543             | 0.02227       | 0.02227        | 2.0543     |
| 20 | 15.8371            | 0.17166       | 0.17166        | 15.8371    |

---  
RUN NO. 2311

FILE

MC DOWNFELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=.0500 P0= 7630. P02= 4.972 P1=.02040 Q007-A= 88.31

| N  | QDOT-N<br>(8/SF-S) | QDOT-N/QDOT-A | QDOT-N/KDOT-A | QDOT-N/REF |
|----|--------------------|---------------|---------------|------------|
| 1  | 2.0089             | 0.02775       | 0.02775       | 2.0089     |
| 2  | 2.7353             | 0.03097       | 0.03097       | 2.7353     |
| 3  | 2.4580             | 0.02783       | 0.02783       | 2.4580     |
| 4  | 2.9935             | 0.03390       | 0.03390       | 2.9935     |
| 5  | 2.9405             | 0.03330       | 0.03330       | 2.9405     |
| 6  | 3.0769             | 0.03636       | 0.03636       | 3.0769     |
| 7  | 2.9673             | 0.03360       | 0.03360       | 2.9673     |
| 8  | 2.5097             | 0.02862       | 0.02862       | 2.5097     |
| 9  | 3.1011             | 0.03511       | 0.03511       | 3.1011     |
| 10 | 2.7289             | 0.03090       | 0.03090       | 2.7289     |
| 11 | 2.7865             | 0.03155       | 0.03155       | 2.7865     |
| 12 | 2.6804             | 0.03035       | 0.03035       | 2.6804     |
| 13 | 3.0239             | 0.03626       | 0.03626       | 3.0239     |
| 14 | 2.6304             | 0.02752       | 0.02752       | 2.6304     |
| 15 | 3.1922             | 0.03615       | 0.03615       | 3.1922     |
| 16 | 3.8851             | 0.04393       | 0.04393       | 3.8851     |
| 17 | 3.6706             | 0.04156       | 0.04156       | 3.6706     |
| 18 | 3.6206             | 0.04100       | 0.04100       | 3.6206     |
| 19 | 1.9748             | 0.02236       | 0.02236       | 1.9748     |
| 20 | 15.1240            | 0.17126       | 0.17126       | 15.1240    |

RUN NO. 2311

TITLE

MC DONNELL

TIME 9.26.43  
PAGE NO. 151, VOL. I  
REP. NO. GOOD  
11/09/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| TIME=0.0550 |         | PO=           | 7216.          | PO2=       | 4.726 | PI= | 01943 | QDOT-A= | 84.37 |
|-------------|---------|---------------|----------------|------------|-------|-----|-------|---------|-------|
| N           | QDOT-N  | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |       |     |       |         |       |
| 1           | 1.9645  | 0.02328       | 0.02328        | 1.9645     |       |     |       |         |       |
| 2           | 2.6565  | 0.03149       | 0.03149        | 2.6565     |       |     |       |         |       |
| 3           | 2.1780  | 0.02818       | 0.02818        | 2.3780     |       |     |       |         |       |
| 4           | 2.8613  | 0.03391       | 0.03391        | 2.8613     |       |     |       |         |       |
| 5           | 2.8355  | 0.03361       | 0.03361        | 2.8355     |       |     |       |         |       |
| 6           | 2.9443  | 0.03490       | 0.03490        | 2.9443     |       |     |       |         |       |
| 7           | 2.8454  | 0.03372       | 0.03372        | 2.8454     |       |     |       |         |       |
| 8           | 2.4041  | 0.02869       | 0.02869        | 2.4041     |       |     |       |         |       |
| 9           | 2.9472  | 0.03493       | 0.03493        | 2.9472     |       |     |       |         |       |
| 10          | 2.6174  | 0.03102       | 0.03102        | 2.6174     |       |     |       |         |       |
| 11          | 2.6602  | 0.03153       | 0.03153        | 2.6602     |       |     |       |         |       |
| 12          | 2.5534  | 0.03026       | 0.03026        | 2.5534     |       |     |       |         |       |
| 13          | 2.8781  | 0.03411       | 0.03411        | 2.8781     |       |     |       |         |       |
| 14          | 2.3260  | 0.02757       | 0.02757        | 2.3260     |       |     |       |         |       |
| 15          | 3.0785  | 0.03672       | 0.03672        | 3.0785     |       |     |       |         |       |
| 16          | 3.7304  | 0.04421       | 0.04421        | 3.7304     |       |     |       |         |       |
| 17          | 3.5125  | 0.04163       | 0.04163        | 3.5125     |       |     |       |         |       |
| 18          | 3.4755  | 0.04119       | 0.04119        | 3.4755     |       |     |       |         |       |
| 19          | 1.8954  | 0.02246       | 0.02246        | 1.8954     |       |     |       |         |       |
| 20          | 14.4126 | 0.17082       | 0.17082        | 14.4126    |       |     |       |         |       |

RUN NO. 5311

TITLE

MC DONNELL

TIME 9.26.43  
PAGE NO. 152, VOL. I  
REP. NO. 6004  
11/09/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| TIME=0600 |                     | PO= 6823.     | P02= 4.491     | PI= 0.01650 | QDOT-A= 80.43 |
|-----------|---------------------|---------------|----------------|-------------|---------------|
| N         | QDOT-N<br>(B/SF-SI) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF  | QDOT-N/REF    |
| 1         | 1.9201              | 0.02387       | 0.02397        | 1.9261      |               |
| 2         | 2.5778              | 0.03205       | 0.03205        | 2.5778      |               |
| 3         | 2.2980              | 0.02857       | 0.02857        | 2.2980      |               |
| 4         | 2.7290              | 0.03393       | 0.03393        | 2.7290      |               |
| 5         | 2.7304              | 0.03395       | 0.03395        | 2.7304      |               |
| 6         | 2.8116              | 0.03496       | 0.03496        | 2.8116      |               |
| 7         | 2.7234              | 0.03386       | 0.03386        | 2.7234      |               |
| 8         | 2.2985              | 0.02858       | 0.02858        | 2.2985      |               |
| 9         | 2.7933              | 0.03473       | 0.03473        | 2.7933      |               |
| 10        | 2.5060              | 0.03116       | 0.03116        | 2.5060      |               |
| 11        | 2.5338              | 0.03150       | 0.03150        | 2.5338      |               |
| 12        | 2.4263              | 0.03017       | 0.03017        | 2.4263      |               |
| 13        | 2.7323              | 0.03397       | 0.03397        | 2.7323      |               |
| 14        | 2.2217              | 0.02762       | 0.02762        | 2.2217      |               |
| 15        | 3.0047              | 0.03736       | 0.03736        | 3.0047      |               |
| 16        | 3.5756              | 0.04446       | 0.04446        | 3.5756      |               |
| 17        | 3.3544              | 0.04171       | 0.04171        | 3.3544      |               |
| 18        | 3.3304              | 0.04141       | 0.04141        | 3.3304      |               |
| 19        | 1.8160              | 0.02258       | 0.02258        | 1.8160      |               |
| 20        | 13.7004             | 0.17034       | 0.17034        | 13.7004     |               |

TIME 9.25.43  
PAGE NO. 153, VOL. I  
REF. NO. G004  
11/09/67

MC DONNELL

TITLE

RUN NO. 2311

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.0650 PN= 6451. PHZ= 4.268 PL=01761 QDOT-A= 76.49

| N  | QDOT-N<br>(W/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.8757             | 0.02452       | 0.02452        | 1.8757     |
| 2  | 2.4900             | 0.03267       | 0.03267        | 2.4900     |
| 3  | 2.2181             | 0.02900       | 0.02900        | 2.2181     |
| 4  | 2.5968             | 0.03395       | 0.03395        | 2.5968     |
| 5  | 2.6253             | 0.03432       | 0.03432        | 2.6253     |
| 6  | 2.6790             | 0.03503       | 0.03503        | 2.6790     |
| 7  | 2.6015             | 0.03401       | 0.03401        | 2.6015     |
| 8  | 2.1929             | 0.02867       | 0.02867        | 2.1929     |
| 9  | 2.6396             | 0.03451       | 0.03451        | 2.6396     |
| 10 | 2.3966             | 0.03131       | 0.03131        | 2.3966     |
| 11 | 2.4075             | 0.03148       | 0.03148        | 2.4075     |
| 12 | 2.2993             | 0.03006       | 0.03006        | 2.2993     |
| 13 | 2.5865             | 0.03382       | 0.03382        | 2.5865     |
| 14 | 2.1173             | 0.02768       | 0.02768        | 2.1173     |
| 15 | 2.9110             | 0.03806       | 0.03806        | 2.9110     |
| 16 | 3.4209             | 0.04473       | 0.04473        | 3.4209     |
| 17 | 3.1963             | 0.04179       | 0.04179        | 3.1963     |
| 18 | 3.1853             | 0.04165       | 0.04165        | 3.1853     |
| 19 | 1.7366             | 0.02270       | 0.02270        | 1.7366     |
| 20 | 12.9802            | 0.16981       | 0.16981        | 12.9802    |

RUN NO. 2311

TITLE

MCDONNELL

TIME 9.26.43  
PAGE NO. 154 VOL. I  
REP. NO. GOOD  
11/09/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0700 PD= 6100. PD2= 4.056 PI=01675 QDOT-A= 72.55

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/PFF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.8314             | 0.02524       | 0.02524        | 1.8314     |
| 2  | 2.4203             | 0.03336       | 0.03336        | 2.4203     |
| 3  | 2.1381             | 0.02947       | 0.02947        | 2.1381     |
| 4  | 2.4645             | 0.03397       | 0.03397        | 2.4645     |
| 5  | 2.5203             | 0.03474       | 0.03474        | 2.5203     |
| 6  | 2.5464             | 0.03510       | 0.03510        | 2.5464     |
| 7  | 2.4796             | 0.03418       | 0.03418        | 2.4796     |
| 8  | 2.0872             | 0.02877       | 0.02877        | 2.0872     |
| 9  | 2.4856             | 0.03426       | 0.03426        | 2.4856     |
| 10 | 2.2831             | 0.03147       | 0.03147        | 2.2831     |
| 11 | 2.2811             | 0.03144       | 0.03144        | 2.2811     |
| 12 | 2.1722             | 0.02994       | 0.02994        | 2.1722     |
| 13 | 2.4408             | 0.03364       | 0.03364        | 2.4408     |
| 14 | 2.0130             | 0.02775       | 0.02775        | 2.0130     |
| 15 | 2.8172             | 0.03883       | 0.03883        | 2.8172     |
| 16 | 3.2662             | 0.04502       | 0.04502        | 3.2662     |
| 17 | 3.0382             | 0.04188       | 0.04188        | 3.0382     |
| 18 | 3.0403             | 0.04191       | 0.04191        | 3.0403     |
| 19 | 1.6572             | 0.02284       | 0.02284        | 1.6572     |
| 20 | 12.2760            | 0.16922       | 0.16922        | 12.2760    |



TIME 9.26.43  
PAGE NO. 155, VOL. I  
REP. NO. 6004  
11/09/67

TITLE

RUN NO. 2311

MC DONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0750 PO= 5771. P02= 3.855 PI=01594 QDOT-A= 68.60

| N  | QDOT-N<br>(R/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.7870             | 0.02605       | 0.02605        | 1.7870     |
| 2  | 2.3415             | 0.03413       | 0.03413        | 2.3415     |
| 3  | 2.0581             | 0.03000       | 0.03000        | 2.0581     |
| 4  | 2.3323             | 0.03400       | 0.03400        | 2.3323     |
| 5  | 2.4152             | 0.03521       | 0.03521        | 2.4152     |
| 6  | 2.4138             | 0.03519       | 0.03519        | 2.4138     |
| 7  | 2.3577             | 0.03437       | 0.03437        | 2.3577     |
| 8  | 1.9816             | 0.02889       | 0.02889        | 1.9816     |
| 9  | 2.3317             | 0.03399       | 0.03399        | 2.3317     |
| 10 | 2.1717             | 0.03166       | 0.03166        | 2.1717     |
| 11 | 2.1548             | 0.03141       | 0.03141        | 2.1548     |
| 12 | 2.0452             | 0.02981       | 0.02981        | 2.0452     |
| 13 | 2.2950             | 0.03345       | 0.03345        | 2.2950     |
| 14 | 1.9086             | 0.02782       | 0.02782        | 1.9086     |
| 15 | 2.7235             | 0.03970       | 0.03970        | 2.7235     |
| 16 | 3.1115             | 0.04535       | 0.04535        | 3.1115     |
| 17 | 2.8801             | 0.04198       | 0.04198        | 2.8801     |
| 18 | 2.8952             | 0.04220       | 0.04220        | 2.8952     |
| 19 | 1.5777             | 0.02300       | 0.02300        | 1.5777     |
| 20 | 11.5638            | 0.16856       | 0.16856        | 11.5638    |

1  
RUN NO. 2311.

**MC DONNELL**

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=.0800 P0= 5462. P02= 3.667 P1=.01517 P00Y-A= 64.66

| N  | QDOT-N<br>(8/5F-51) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|---------------------|---------------|----------------|------------|
| 1  | 1.7426              | 0.02695       | 0.02695        | 1.7426     |
| 2  | 2.2628              | 0.03499       | 0.03499        | 2.2628     |
| 3  | 1.9781              | 0.03059       | 0.03059        | 1.9781     |
| 4  | 2.2000              | 0.03402       | 0.03402        | 2.2000     |
| 5  | 2.3101              | 0.03573       | 0.03573        | 2.3101     |
| 6  | 2.2812              | 0.03528       | 0.03528        | 2.2812     |
| 7  | 2.2357              | 0.03454       | 0.03458        | 2.2357     |
| 8  | 1.8760              | 0.02901       | 0.02901        | 1.8760     |
| 9  | 2.1778              | 0.03368       | 0.03368        | 2.1778     |
| 10 | 2.0603              | 0.03186       | 0.03186        | 2.0603     |
| 11 | 2.0284              | 0.03137       | 0.03137        | 2.0284     |
| 12 | 1.9181              | 0.02966       | 0.02966        | 1.9181     |
| 13 | 2.1492              | 0.03324       | 0.03324        | 2.1492     |
| 14 | 1.8043              | 0.02790       | 0.02790        | 1.8043     |
| 15 | 2.6298              | 0.04067       | 0.04067        | 2.6298     |
| 16 | 2.9567              | 0.04573       | 0.04573        | 2.9567     |
| 17 | 2.7220              | 0.04210       | 0.04210        | 2.7220     |
| 18 | 2.7501              | 0.04253       | 0.04253        | 2.7501     |
| 19 | 1.4983              | 0.02317       | 0.02317        | 1.4983     |
| 20 | 10.8516             | 0.16782       | 0.16782        | 10.8516    |

TIME 9.26.43  
PAGE NO. 157, VOL. I  
REP. NO. 0004  
11/09/67

TITLE  
MCDONNELL

RUN NO. 2311

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.0850 PD= 5175. PD2= 3.489 PI=01443 QDOT-A= 60.72

| N  | QDOT-N<br>(R/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.6982             | 0.02797       | 0.02797        | 1.6982     |
| 2  | 2.1840             | 0.03597       | 0.03597        | 2.1840     |
| 3  | 1.4982             | 0.03176       | 0.03176        | 1.4982     |
| 4  | 2.0678             | 0.03406       | 0.03406        | 2.0678     |
| 5  | 2.2051             | 0.03632       | 0.03632        | 2.2051     |
| 6  | 2.1486             | 0.03539       | 0.03539        | 2.1486     |
| 7  | 2.1138             | 0.03481       | 0.03481        | 2.1138     |
| 8  | 1.7704             | 0.02916       | 0.02916        | 1.7704     |
| 9  | 2.0239             | 0.03333       | 0.03333        | 2.0239     |
| 10 | 1.9488             | 0.03210       | 0.03210        | 1.9488     |
| 11 | 1.9020             | 0.03133       | 0.03133        | 1.9020     |
| 12 | 1.7911             | 0.02950       | 0.02950        | 1.7911     |
| 13 | 2.0034             | 0.03299       | 0.03299        | 2.0034     |
| 14 | 1.6999             | 0.02800       | 0.02800        | 1.6999     |
| 15 | 2.5360             | 0.04177       | 0.04177        | 2.5360     |
| 16 | 2.8020             | 0.04615       | 0.04615        | 2.8020     |
| 17 | 2.5639             | 0.04223       | 0.04223        | 2.5639     |
| 18 | 2.6050             | 0.04290       | 0.04290        | 2.6050     |
| 19 | 1.4189             | 0.02337       | 0.02337        | 1.4189     |
| 20 | 10.1394            | 0.16699       | 0.16699        | 10.1394    |

TIME 9.26.44  
PAGE NO. 158, VOL. I  
REP. NO. 6004  
11/09/67

TITLE

MC DONNELL

RUN NO. 2311

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| TIME=0900 PD= 4908. P02= 3.323 P1=01372 QDOT-A= 56.78 |                    |               |                           |
|-------------------------------------------------------|--------------------|---------------|---------------------------|
| N                                                     | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A QDOT-N/REF |
| 1                                                     | 1.6538             | 0.02913       | 0.02913 1.6538            |
| 2                                                     | 2.1052             | 0.03708       | 0.03708 2.1052            |
| 3                                                     | 1.8182             | 0.03202       | 0.03202 1.8182            |
| 4                                                     | 1.9355             | 0.03409       | 0.03409 1.9355            |
| 5                                                     | 2.1000             | 0.03699       | 0.03699 2.1000            |
| 6                                                     | 2.0160             | 0.03551       | 0.03551 2.0160            |
| 7                                                     | 1.9919             | 0.03508       | 0.03508 1.9919            |
| 8                                                     | 1.6647             | 0.02932       | 0.02932 1.6647            |
| 9                                                     | 1.8700             | 0.03294       | 0.03294 1.8700            |
| 10                                                    | 1.8374             | 0.03236       | 0.03236 1.8374            |
| 11                                                    | 1.7757             | 0.03128       | 0.03128 1.7757            |
| 12                                                    | 1.6640             | 0.02931       | 0.02931 1.6640            |
| 13                                                    | 1.8576             | 0.03272       | 0.03272 1.8576            |
| 14                                                    | 1.5955             | 0.02810       | 0.02810 1.5955            |
| 15                                                    | 2.4423             | 0.04302       | 0.04302 2.4423            |
| 16                                                    | 2.6473             | 0.04663       | 0.04663 2.6473            |
| 17                                                    | 2.4058             | 0.04237       | 0.04237 2.4058            |
| 18                                                    | 2.4137             | 0.04333       | 0.04333 2.4137            |
| 19                                                    | 1.3305             | 0.02359       | 0.02359 1.3305            |
| 20                                                    | 9.4272             | 0.16604       | 0.16604 9.4272            |

RUN NO. 2311

TITLE

MCDONNELL

TIME 9.26.44  
PAGE NO. 159 VOL. I  
REP. NO. 0004  
11/09/67

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME=.0950 PO= 4663. PD2= 3.169 PI=.01306 QDOT-A= 52.83

| N  | QDOT-N<br>(R/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.6095             | 0.03046       | 0.03046        | 1.6095     |
| 2  | 2.0265             | 0.03836       | 0.03836        | 2.0265     |
| 3  | 1.7382             | 0.03290       | 0.03290        | 1.7382     |
| 4  | 1.8033             | 0.03413       | 0.03413        | 1.8033     |
| 5  | 1.9949             | 0.03776       | 0.03776        | 1.9949     |
| 6  | 1.8833             | 0.03565       | 0.03565        | 1.8833     |
| 7  | 1.8699             | 0.03539       | 0.03539        | 1.8699     |
| 8  | 1.5591             | 0.02951       | 0.02951        | 1.5591     |
| 9  | 1.7161             | 0.03248       | 0.03248        | 1.7161     |
| 10 | 1.7260             | 0.03267       | 0.03267        | 1.7260     |
| 11 | 1.6493             | 0.03122       | 0.03122        | 1.6493     |
| 12 | 1.5370             | 0.02909       | 0.02909        | 1.5370     |
| 13 | 1.7118             | 0.03240       | 0.03240        | 1.7118     |
| 14 | 1.4912             | 0.02822       | 0.02822        | 1.4912     |
| 15 | 2.3485             | 0.04445       | 0.04445        | 2.3485     |
| 16 | 2.4926             | 0.04718       | 0.04718        | 2.4926     |
| 17 | 2.2477             | 0.04254       | 0.04254        | 2.2477     |
| 18 | 2.3148             | 0.04381       | 0.04381        | 2.3148     |
| 19 | 1.2601             | 0.02385       | 0.02385        | 1.2601     |
| 20 | 8.7150             | 0.16495       | 0.16495        | 8.7150     |

RUN NO. 2311

TITLE

MC DONNELL

TIME 9.26.44  
PAGE NO. 160, VOL. I  
REP. NO. 6004  
11/09/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=1.000 PO= 4439. P02= 3.026 PI=01245 QDOT-A= 43.89

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.5651             | 0.03201       | 0.03201        | 1.5651     |
| 2  | 1.9477             | 0.03984       | 0.03984        | 1.9477     |
| 3  | 1.6582             | 0.03392       | 0.03392        | 1.6582     |
| 4  | 1.6710             | 0.03418       | 0.03418        | 1.6710     |
| 5  | 1.8899             | 0.03865       | 0.03865        | 1.8899     |
| 6  | 1.7507             | 0.03581       | 0.03581        | 1.7507     |
| 7  | 1.7480             | 0.03575       | 0.03575        | 1.7480     |
| 8  | 1.4535             | 0.02973       | 0.02973        | 1.4535     |
| 9  | 1.5623             | 0.03195       | 0.03195        | 1.5623     |
| 10 | 1.6145             | 0.03302       | 0.03302        | 1.6145     |
| 11 | 1.5230             | 0.03115       | 0.03115        | 1.5230     |
| 12 | 1.4099             | 0.02804       | 0.02804        | 1.4099     |
| 13 | 1.5660             | 0.03203       | 0.03203        | 1.5660     |
| 14 | 1.3868             | 0.02837       | 0.02837        | 1.3868     |
| 15 | 2.2543             | 0.04612       | 0.04612        | 2.2548     |
| 16 | 2.3379             | 0.04782       | 0.04782        | 2.3379     |
| 17 | 2.0897             | 0.04274       | 0.04274        | 2.0897     |
| 18 | 2.1697             | 0.04438       | 0.04438        | 2.1697     |
| 19 | 1.1807             | 0.02415       | 0.02415        | 1.1807     |
| 20 | 8.0028             | 0.16368       | 0.16368        | 8.0028     |

RUN NO. 2311

TITLE

MCDONNELL

TIME 9.26.44  
PAGE NO. 161, VOL. I  
REP. NO. 0004  
11/09/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=1050 P0= 4236. P02= 2.894 P1=0.1187 QDOT-A= 44.95

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.5207             | 0.03383       | 0.03383        | 1.5207     |
| 2  | 1.8690             | 0.04158       | 0.04158        | 1.8690     |
| 3  | 1.5783             | 0.03111       | 0.03111        | 1.5783     |
| 4  | 1.5388             | 0.03423       | 0.03423        | 1.5388     |
| 5  | 1.7848             | 0.03971       | 0.03971        | 1.7848     |
| 6  | 1.6181             | 0.03600       | 0.03600        | 1.6181     |
| 7  | 1.6261             | 0.03618       | 0.03618        | 1.6261     |
| 8  | 1.3479             | 0.02999       | 0.02999        | 1.3479     |
| 9  | 1.4084             | 0.03133       | 0.03133        | 1.4084     |
| 10 | 1.5031             | 0.03344       | 0.03344        | 1.5031     |
| 11 | 1.3966             | 0.03107       | 0.03107        | 1.3966     |
| 12 | 1.2829             | 0.02854       | 0.02854        | 1.2829     |
| 13 | 1.4203             | 0.03160       | 0.03160        | 1.4203     |
| 14 | 1.2825             | 0.02853       | 0.02853        | 1.2825     |
| 15 | 2.1611             | 0.04808       | 0.04808        | 2.1611     |
| 16 | 2.1831             | 0.04857       | 0.04857        | 2.1831     |
| 17 | 1.9316             | 0.04297       | 0.04297        | 1.9316     |
| 18 | 2.0246             | 0.04504       | 0.04504        | 2.0246     |
| 19 | 1.1012             | 0.02450       | 0.02450        | 1.1012     |
| 20 | 7.2905             | 0.16219       | 0.16219        | 7.2905     |

RUN NO. 2311

TITLE

MCDONNELL

TIME 9.26.44  
PAGE NO. 162 VOL. I  
REP. NO. 0004  
11/09/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| TIME=11.00 |                    | P0=           | 4.054         | P02=       | 2.774 | PI= | 0.1135 | QDOT-A= | 41.01 |
|------------|--------------------|---------------|---------------|------------|-------|-----|--------|---------|-------|
| N          | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KDOT-A | QDOT-N/REF |       |     |        |         |       |
| 1          | 1.4763             | 0.03600       | 0.03600       | 1.4763     |       |     |        |         |       |
| 2          | 1.7902             | 0.04366       | 0.04366       | 1.7902     |       |     |        |         |       |
| 3          | 1.4983             | 0.03654       | 0.03654       | 1.4983     |       |     |        |         |       |
| 4          | 1.4065             | 0.03430       | 0.03430       | 1.4065     |       |     |        |         |       |
| 5          | 1.6797             | 0.04096       | 0.04096       | 1.6797     |       |     |        |         |       |
| 6          | 1.4855             | 0.03622       | 0.03622       | 1.4855     |       |     |        |         |       |
| 7          | 1.5041             | 0.03668       | 0.03668       | 1.5041     |       |     |        |         |       |
| 8          | 1.2423             | 0.03029       | 0.03029       | 1.2423     |       |     |        |         |       |
| 9          | 1.2545             | 0.03059       | 0.03059       | 1.2545     |       |     |        |         |       |
| 10         | 1.3917             | 0.03394       | 0.03394       | 1.3917     |       |     |        |         |       |
| 11         | 1.2703             | 0.03098       | 0.03098       | 1.2703     |       |     |        |         |       |
| 12         | 1.1558             | 0.02819       | 0.02819       | 1.1558     |       |     |        |         |       |
| 13         | 1.2745             | 0.03108       | 0.03108       | 1.2745     |       |     |        |         |       |
| 14         | 1.1781             | 0.02873       | 0.02873       | 1.1781     |       |     |        |         |       |
| 15         | 2.0873             | 0.05041       | 0.05041       | 2.0873     |       |     |        |         |       |
| 16         | 2.0284             | 0.04946       | 0.04946       | 2.0284     |       |     |        |         |       |
| 17         | 1.7735             | 0.04325       | 0.04325       | 1.7735     |       |     |        |         |       |
| 18         | 1.8795             | 0.04583       | 0.04583       | 1.8795     |       |     |        |         |       |
| 19         | 1.0218             | 0.02492       | 0.02492       | 1.0218     |       |     |        |         |       |
| 20         | 6.5783             | 0.16042       | 0.16042       | 6.5783     |       |     |        |         |       |



TIME 9.26.44  
PAGE NO. 163, VOL. I  
REP. NO. 0004  
11/09/67

TITLE  
MCDONNELL

RUN NO. 2311

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0400 PD = 8521.12 ALPHA = 15.00

| PROBE | PHI | PON      | PON/P0    | PON/PD2   | PON/P1    | (PON-P1)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.090677 | 0.106F-04 | 0.165F-01 | 0.404E 01 | 0.230F-01   |
| 2     | 0.0 | 0.096021 | 0.113F-04 | 0.175F-01 | 0.428E 01 | 0.248F-01   |
| 3     | 0.0 | 0.104183 | 0.122E-04 | 0.190F-01 | 0.465F 01 | 0.276F-01   |
| 4     | 0.0 | 0.107673 | 0.126E-04 | 0.196F-01 | 0.480F 01 | 0.287F-01   |
| 5     | 0.0 | 0.103178 | 0.121F-04 | 0.188F-01 | 0.460E 01 | 0.272F-01   |
| 6     | 0.0 | 0.102497 | 0.120E-04 | 0.186E-01 | 0.457E 01 | 0.270E-01   |
| 7     | 0.0 | 0.113408 | 0.133E-04 | 0.206F-01 | 0.505F 01 | 0.307E-01   |
| 8     | 0.0 | 0.099790 | 0.117E-04 | 0.181F-01 | 0.445F 01 | 0.261E-01   |
| 9     | 0.0 | 0.12767  | 0.132E-04 | 0.204E-01 | 0.502E 01 | 0.305E-01   |
| 10    | 0.0 | 0.131067 | 0.154E-04 | 0.238E-01 | 0.584E 01 | 0.366E-01   |
| 11    | 0.0 | 0.102327 | 0.120F-04 | 0.186F-01 | 0.456E 01 | 0.269E-01   |
| 12    | 0.0 | 0.112633 | 0.132E-04 | 0.205E-01 | 0.502E 01 | 0.304E-01   |
| 13    | 0.0 | 0.107577 | 0.120E-04 | 0.187E-01 | 0.451E 01 | 0.270E-01   |
| 14    | 0.0 | 0.127653 | 0.150E-04 | 0.232E-01 | 0.569E 01 | 0.355E-01   |
| 15    | 0.0 | 0.142786 | 0.168E-04 | 0.260F-01 | 0.636E 01 | 0.406E-01   |
| 16    | 0.0 | 0.173454 | 0.204E-04 | 0.315E-01 | 0.773F 01 | 0.509E-01   |
| 17    | 0.0 | 0.184384 | 0.216E-04 | 0.335F-01 | 0.821E 01 | 0.546E-01   |
| 18    | 0.0 | 0.161391 | 0.189E-04 | 0.294F-01 | 0.719E 01 | 0.469E-01   |
| 19    | 0.0 | 0.065323 | 0.0767-05 | 0.119E-01 | 0.291E 01 | 0.145E-01   |
| 20    | 0.0 | 0.450426 | 0.529F-04 | 0.819E-01 | 0.201E 02 | 0.144E 00   |

TIME 9.26.45  
PAGE NO. 164, VOL. I  
REP. NO. 0004  
11/09/67

TITLE  
MCDONNELL

RUN NO. 2311

MIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.0450 PO= 8064.91 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O2 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.087013 | 0.108E-04 | 0.166E-01 | 0.407E 01 | 0.233E-01   |
| 2     | 0.0 | 0.091341 | 0.113E-04 | 0.175E-01 | 0.427E 01 | 0.240E-01   |
| 3     | 0.0 | 0.098499 | 0.122E-04 | 0.188E-01 | 0.460E 01 | 0.273E-01   |
| 4     | 0.0 | 0.101143 | 0.125E-04 | 0.193E-01 | 0.473E 01 | 0.283E-01   |
| 5     | 0.0 | 0.096473 | 0.120E-04 | 0.184E-01 | 0.451E 01 | 0.266E-01   |
| 6     | 0.0 | 0.095111 | 0.118E-04 | 0.182E-01 | 0.444E 01 | 0.261E-01   |
| 7     | 0.0 | 0.105355 | 0.131E-04 | 0.201E-01 | 0.492E 01 | 0.290E-01   |
| 8     | 0.0 | 0.093462 | 0.116E-04 | 0.179E-01 | 0.437E 01 | 0.255E-01   |
| 9     | 0.0 | 0.105147 | 0.130E-04 | 0.201E-01 | 0.491E 01 | 0.277E-01   |
| 10    | 0.0 | 0.121409 | 0.151E-04 | 0.232E-01 | 0.567E 01 | 0.355E-01   |
| 11    | 0.0 | 0.096145 | 0.119E-04 | 0.184E-01 | 0.449E 01 | 0.265E-01   |
| 12    | 0.0 | 0.104343 | 0.129E-04 | 0.200E-01 | 0.488E 01 | 0.294E-01   |
| 13    | 0.0 | 0.096231 | 0.119E-04 | 0.184E-01 | 0.450E 01 | 0.265E-01   |
| 14    | 0.0 | 0.119026 | 0.148E-04 | 0.228E-01 | 0.556E 01 | 0.346E-01   |
| 15    | 0.0 | 0.134097 | 0.166E-04 | 0.256E-01 | 0.627E 01 | 0.399E-01   |
| 16    | 0.0 | 0.160318 | 0.199E-04 | 0.307E-01 | 0.749E 01 | 0.492E-01   |
| 17    | 0.0 | 0.168737 | 0.209E-04 | 0.323E-01 | 0.788E 01 | 0.522E-01   |
| 18    | 0.0 | 0.148404 | 0.184E-04 | 0.284E-01 | 0.693E 01 | 0.450E-01   |
| 19    | 0.0 | 0.061945 | 0.768E-05 | 0.118E-01 | 0.289E 01 | 0.144E-01   |
| 20    | 0.0 | 0.418536 | 0.519E-04 | 0.800E-01 | 0.196E 02 | 0.141E 00   |

TIME 9.26.45  
PAGE NO. 165, VOL. I  
REP. NO. 0004  
11/09/67

TITLE  
MCDONNELL  
MIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2311

TIME = 0.0500 PO = 7629.79 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.083438 | 0.109E-04 | 0.168E-01 | 0.409E 01 | 0.235E-01   |
| 2     | 0.0 | 0.086922 | 0.114E-04 | 0.175E-01 | 0.426E 01 | 0.248E-01   |
| 3     | 0.0 | 0.092963 | 0.122E-04 | 0.187E-01 | 0.456E 01 | 0.271E-01   |
| 4     | 0.0 | 0.094962 | 0.124E-04 | 0.191E-01 | 0.466E 01 | 0.278E-01   |
| 5     | 0.0 | 0.090198 | 0.118E-04 | 0.181E-01 | 0.442E 01 | 0.260E-01   |
| 6     | 0.0 | 0.088177 | 0.116E-04 | 0.177E-01 | 0.432E 01 | 0.253E-01   |
| 7     | 0.0 | 0.097802 | 0.128E-04 | 0.197E-01 | 0.480E 01 | 0.289E-01   |
| 8     | 0.0 | 0.087449 | 0.115E-04 | 0.176E-01 | 0.429E 01 | 0.250E-01   |
| 9     | 0.0 | 0.097930 | 0.128E-04 | 0.197E-01 | 0.480E 01 | 0.289E-01   |
| 10    | 0.0 | 0.112410 | 0.147E-04 | 0.226E-01 | 0.511E 01 | 0.343E-01   |
| 11    | 0.0 | 0.090256 | 0.118E-04 | 0.182E-01 | 0.443E 01 | 0.260E-01   |
| 12    | 0.0 | 0.094573 | 0.127E-04 | 0.194E-01 | 0.473E 01 | 0.284E-01   |
| 13    | 0.0 | 0.090145 | 0.118E-04 | 0.181E-01 | 0.442E 01 | 0.260E-01   |
| 14    | 0.0 | 0.110936 | 0.145E-04 | 0.223E-01 | 0.544E 01 | 0.338E-01   |
| 15    | 0.0 | 0.125986 | 0.165E-04 | 0.253E-01 | 0.618E 01 | 0.394E-01   |
| 16    | 0.0 | 0.148224 | 0.194E-04 | 0.298E-01 | 0.727E 01 | 0.477E-01   |
| 17    | 0.0 | 0.154402 | 0.202E-04 | 0.311E-01 | 0.757E 01 | 0.500E-01   |
| 18    | 0.0 | 0.136379 | 0.179E-04 | 0.274E-01 | 0.669E 01 | 0.432E-01   |
| 19    | 0.0 | 0.058654 | 0.769E-05 | 0.118E-01 | 0.288E 01 | 0.143E-01   |
| 20    | 0.0 | 0.308573 | 0.509E-04 | 0.782E-01 | 0.191E 02 | 0.137E 00   |



TIME 9.26.76  
PAGE NO. 167, VOL. I  
REP. NO. 600  
11/09/67

TITLE  
MCDONNELL

RUN NO. 2311

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = C.06C0 PD = 6822.82 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.074555 | 0.112E-04 | 0.170E-01 | 0.414E 01 | 0.240E-01   |
| 2     | 0.0 | 0.078269 | 0.115E-04 | 0.174E-01 | 0.423E 01 | 0.247E-01   |
| 3     | 0.0 | 0.082935 | 0.122E-04 | 0.185E-01 | 0.448E 01 | 0.266E-01   |
| 4     | 0.0 | 0.083650 | 0.123E-04 | 0.186E-01 | 0.452E 01 | 0.269E-01   |
| 5     | 0.0 | 0.078939 | 0.116E-04 | 0.176E-01 | 0.427E 01 | 0.249E-01   |
| 6     | 0.0 | 0.075663 | 0.111E-04 | 0.168E-01 | 0.409E 01 | 0.236E-01   |
| 7     | 0.0 | 0.084193 | 0.123E-04 | 0.187E-01 | 0.455E 01 | 0.271E-01   |
| 8     | 0.0 | 0.076365 | 0.112E-04 | 0.170E-01 | 0.413E 01 | 0.239E-01   |
| 9     | 0.0 | 0.084708 | 0.124E-04 | 0.189E-01 | 0.458E 01 | 0.273E-01   |
| 10    | 0.0 | 0.083990 | 0.141E-04 | 0.215E-01 | 0.521E 01 | 0.321E-01   |
| 11    | 0.0 | 0.079360 | 0.116E-04 | 0.177E-01 | 0.429E 01 | 0.251E-01   |
| 12    | 0.0 | 0.082592 | 0.121E-04 | 0.184E-01 | 0.447E 01 | 0.264E-01   |
| 13    | 0.0 | 0.078757 | 0.115E-04 | 0.175E-01 | 0.426E 01 | 0.249E-01   |
| 14    | 0.0 | 0.080367 | 0.141E-04 | 0.215E-01 | 0.521E 01 | 0.321E-01   |
| 15    | 0.0 | 0.111502 | 0.163E-04 | 0.248E-01 | 0.603E 01 | 0.386E-01   |
| 16    | 0.0 | 0.127160 | 0.186E-04 | 0.281E-01 | 0.687E 01 | 0.448E-01   |
| 17    | 0.0 | 0.129673 | 0.190E-04 | 0.289E-01 | 0.701E 01 | 0.459E-01   |
| 18    | 0.0 | 0.115221 | 0.169E-04 | 0.257E-01 | 0.623E 01 | 0.399E-01   |
| 19    | 0.0 | 0.052338 | 0.767E-05 | 0.117E-01 | 0.283E 01 | 0.140E-01   |
| 20    | 0.0 | 0.334431 | 0.490E-04 | 0.745E-01 | 0.181E 02 | 0.130E 00   |

TIME 9.26.46  
PAGE NO. 168 VOL. I  
REP. NO. 0004  
11/09/67

TITLE  
MC DONNELL  
MIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2311

TIME = 0.0650 PO = 6450.98 ALPHA = 15.00

| PROBE | PHI | PON      | PON/P0    | PON/PD2   | PON/P1    | (PON-P1)/01 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.073248 | 0.114E-04 | 0.172E-01 | 0.416E 01 | 0.242E-01   |
| 2     | 0.0 | 0.074235 | 0.115E-04 | 0.174E-01 | 0.422E 01 | 0.244E-01   |
| 3     | 0.0 | 0.078443 | 0.122E-04 | 0.184E-01 | 0.446E 01 | 0.264E-01   |
| 4     | 0.0 | 0.078519 | 0.122E-04 | 0.184E-01 | 0.446E 01 | 0.264E-01   |
| 5     | 0.0 | 0.073954 | 0.115E-04 | 0.173E-01 | 0.420E 01 | 0.245E-01   |
| 6     | 0.0 | 0.070084 | 0.109E-04 | 0.164E-01 | 0.398E 01 | 0.228E-01   |
| 7     | 0.0 | 0.078137 | 0.121E-04 | 0.183E-01 | 0.444E 01 | 0.263E-01   |
| 8     | 0.0 | 0.071294 | 0.111E-04 | 0.167E-01 | 0.405E 01 | 0.233E-01   |
| 9     | 0.0 | 0.078703 | 0.122E-04 | 0.184E-01 | 0.447E 01 | 0.265E-01   |
| 10    | 0.0 | 0.089368 | 0.139E-04 | 0.209E-01 | 0.508E 01 | 0.312E-01   |
| 11    | 0.0 | 0.074353 | 0.115E-04 | 0.174E-01 | 0.422E 01 | 0.246E-01   |
| 12    | 0.0 | 0.076387 | 0.118E-04 | 0.179E-01 | 0.434E 01 | 0.255E-01   |
| 13    | 0.0 | 0.073455 | 0.114E-04 | 0.172E-01 | 0.417E 01 | 0.242E-01   |
| 14    | 0.0 | 0.089887 | 0.139E-04 | 0.211E-01 | 0.511E 01 | 0.314E-01   |
| 15    | 0.0 | 0.105127 | 0.163E-04 | 0.246E-01 | 0.597E 01 | 0.380E-01   |
| 16    | 0.0 | 0.118191 | 0.183E-04 | 0.277E-01 | 0.671E 01 | 0.437E-01   |
| 17    | 0.0 | 0.119278 | 0.185E-04 | 0.279E-01 | 0.678E 01 | 0.441E-01   |
| 18    | 0.0 | 0.106084 | 0.164E-04 | 0.249E-01 | 0.603E 01 | 0.384E-01   |
| 19    | 0.0 | 0.049312 | 0.764E-05 | 0.116E-01 | 0.280E 01 | 0.138E-01   |
| 20    | 0.0 | 0.310253 | 0.481E-04 | 0.727E-01 | 0.176E 02 | 0.127E 00   |

TIME 9.26.47  
PAGE NO. 169, VOL. I  
REP. NO. GOOD  
11/09/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0700 PD = 6100.24 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PD2   | PON/P1    | (PON-P1)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.070029 | 0.115E-04 | 0.173E-01 | 0.418E 01 | 0.243E-01   |
| 2     | 0.0 | 0.070362 | 0.115E-04 | 0.173E-01 | 0.420E 01 | 0.245E-01   |
| 3     | 0.0 | 0.074300 | 0.122E-04 | 0.183E-01 | 0.443E 01 | 0.263E-01   |
| 4     | 0.0 | 0.073737 | 0.121E-04 | 0.182E-01 | 0.440E 01 | 0.260E-01   |
| 5     | 0.0 | 0.069400 | 0.114E-04 | 0.171E-01 | 0.414E 01 | 0.240E-01   |
| 6     | 0.0 | 0.064956 | 0.106E-04 | 0.160E-01 | 0.388E 01 | 0.220E-01   |
| 7     | 0.0 | 0.072379 | 0.119E-04 | 0.179E-01 | 0.433E 01 | 0.255E-01   |
| 8     | 0.0 | 0.066537 | 0.109E-04 | 0.164E-01 | 0.397E 01 | 0.227E-01   |
| 9     | 0.0 | 0.073102 | 0.120E-04 | 0.180E-01 | 0.436E 01 | 0.257E-01   |
| 10    | 0.0 | 0.083005 | 0.136E-04 | 0.205E-01 | 0.495E 01 | 0.303E-01   |
| 11    | 0.0 | 0.069640 | 0.114E-04 | 0.172E-01 | 0.416E 01 | 0.247E-01   |
| 12    | 0.0 | 0.070691 | 0.116E-04 | 0.174E-01 | 0.427E 01 | 0.246E-01   |
| 13    | 0.0 | 0.068613 | 0.112E-04 | 0.169E-01 | 0.408E 01 | 0.236E-01   |
| 14    | 0.0 | 0.083944 | 0.138E-04 | 0.207E-01 | 0.501E 01 | 0.307E-01   |
| 15    | 0.0 | 0.093331 | 0.163E-04 | 0.245E-01 | 0.557E 01 | 0.377E-01   |
| 16    | 0.0 | 0.110263 | 0.181E-04 | 0.272E-01 | 0.658E 01 | 0.427E-01   |
| 17    | 0.0 | 0.110196 | 0.181E-04 | 0.272E-01 | 0.658E 01 | 0.427E-01   |
| 18    | 0.0 | 0.097915 | 0.161E-04 | 0.241E-01 | 0.584E 01 | 0.371E-01   |
| 19    | 0.0 | 0.046374 | 0.760E-05 | 0.114E-01 | 0.277E 01 | 0.135E-01   |
| 20    | 0.0 | 0.288001 | 0.472E-04 | 0.710E-01 | 0.172E 02 | 0.125E 00   |

TIME 9.26.47  
PAGE NO. 170 VOL. I  
REP. NO. 0004  
11/09/67

TITLE  
MCDONNELL

RUN NO. 2311

HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.0750 PO= 5770.58 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.066899 | 0.116E-04 | 0.174E-01 | 0.420E 01 | 0.245E-01   |
| 2     | 0.0 | 0.066651 | 0.116E-04 | 0.173E-01 | 0.410E 01 | 0.244E-01   |
| 3     | 0.0 | 0.070505 | 0.122E-04 | 0.183E-01 | 0.442E 01 | 0.262E-01   |
| 4     | 0.0 | 0.069305 | 0.120E-04 | 0.180E-01 | 0.435E 01 | 0.256E-01   |
| 5     | 0.0 | 0.065275 | 0.113E-04 | 0.169E-01 | 0.409E 01 | 0.237E-01   |
| 6     | 0.0 | 0.060280 | 0.104E-04 | 0.156E-01 | 0.370E 01 | 0.213E-01   |
| 7     | 0.0 | 0.067521 | 0.117E-04 | 0.175E-01 | 0.474E 01 | 0.248E-01   |
| 8     | 0.0 | 0.062094 | 0.108E-04 | 0.161E-01 | 0.390E 01 | 0.222E-01   |
| 9     | 0.0 | 0.067904 | 0.118E-04 | 0.176E-01 | 0.426E 01 | 0.250E-01   |
| 10    | 0.0 | 0.077301 | 0.134E-04 | 0.200E-01 | 0.485E 01 | 0.295E-01   |
| 11    | 0.0 | 0.065220 | 0.113E-04 | 0.169E-01 | 0.409E 01 | 0.237E-01   |
| 12    | 0.0 | 0.065520 | 0.114E-04 | 0.170E-01 | 0.411E 01 | 0.238E-01   |
| 13    | 0.0 | 0.063632 | 0.110E-04 | 0.165E-01 | 0.390E 01 | 0.229E-01   |
| 14    | 0.0 | 0.070538 | 0.136E-04 | 0.204E-01 | 0.493E 01 | 0.301E-01   |
| 15    | 0.0 | 0.094114 | 0.163E-04 | 0.244E-01 | 0.590E 01 | 0.376E-01   |
| 16    | 0.0 | 0.103377 | 0.179E-04 | 0.268E-01 | 0.643E 01 | 0.420E-01   |
| 17    | 0.0 | 0.102428 | 0.177E-04 | 0.266E-01 | 0.643E 01 | 0.415E-01   |
| 18    | 0.0 | 0.090708 | 0.157E-04 | 0.235E-01 | 0.569E 01 | 0.359E-01   |
| 19    | 0.0 | 0.043525 | 0.754E-05 | 0.113E-01 | 0.273E 01 | 0.131E-01   |
| 20    | 0.0 | 0.267678 | 0.464E-04 | 0.694E-01 | 0.168E 02 | 0.121E 00   |



TIME 9.26.48  
PAGE NO. 171 VOL. I  
REP. NO. 0004  
11/09/67

TITLE  
MCDONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2311

| TIME = 0.0800 PO = 5462.01 ALPHA = 15.00 |     |          |           |           |           |             |
|------------------------------------------|-----|----------|-----------|-----------|-----------|-------------|
| PROBE                                    | PHI | PON      | PON/PI    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
| 1                                        | 0.0 | 0.063858 | 0.117E-04 | 0.174E-01 | 0.421E 01 | 0.246E-01   |
| 2                                        | 0.0 | 0.063101 | 0.116E-04 | 0.172E-01 | 0.416E 01 | 0.242E-01   |
| 3                                        | 0.0 | 0.067059 | 0.123E-04 | 0.183E-01 | 0.442E 01 | 0.262E-01   |
| 4                                        | 0.0 | 0.065222 | 0.119E-04 | 0.178E-01 | 0.430E 01 | 0.253E-01   |
| 5                                        | 0.0 | 0.061581 | 0.113E-04 | 0.168E-01 | 0.406E 01 | 0.234E-01   |
| 6                                        | 0.0 | 0.056056 | 0.103E-04 | 0.153E-01 | 0.370E 01 | 0.206E-01   |
| 7                                        | 0.0 | 0.062961 | 0.115E-04 | 0.172E-01 | 0.415E 01 | 0.241E-01   |
| 8                                        | 0.0 | 0.057966 | 0.106E-04 | 0.158E-01 | 0.382E 01 | 0.216E-01   |
| 9                                        | 0.0 | 0.063111 | 0.116E-04 | 0.172E-01 | 0.416E 01 | 0.242E-01   |
| 10                                       | 0.0 | 0.072256 | 0.132E-04 | 0.197E-01 | 0.476E 01 | 0.288E-01   |
| 11                                       | 0.0 | 0.061095 | 0.112E-04 | 0.167E-01 | 0.403E 01 | 0.232E-01   |
| 12                                       | 0.0 | 0.060869 | 0.111E-04 | 0.166E-01 | 0.401E 01 | 0.231E-01   |
| 13                                       | C.0 | 0.059112 | 0.108E-04 | 0.161E-01 | 0.390E 01 | 0.222E-01   |
| 14                                       | 0.0 | 0.073669 | 0.135E-04 | 0.201E-01 | 0.486E 01 | 0.275E-01   |
| 15                                       | 0.0 | 0.089475 | 0.164E-04 | 0.244E-01 | 0.590E 01 | 0.375E-01   |
| 16                                       | 0.0 | 0.097532 | 0.179E-04 | 0.266E-01 | 0.643E 01 | 0.416E-01   |
| 17                                       | 0.0 | 0.095972 | 0.176E-04 | 0.262E-01 | 0.633E 01 | 0.408E-01   |
| 18                                       | 0.0 | 0.084664 | 0.155E-04 | 0.230E-01 | 0.557E 01 | 0.350E-01   |
| 19                                       | 0.0 | 0.060763 | 0.146E-05 | 0.111E-01 | 0.269E 01 | 0.129E-01   |
| 20                                       | 0.0 | 0.249282 | 0.456E-04 | 0.680E-01 | 0.164E 02 | 0.118E 00   |

TIME 9.26.48  
PAGE NO. 172, VOL. I  
REP. NO. 0004  
11/09/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0850 PD = 5174.53 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.060906 | 0.118E-04 | 0.175E-01 | 0.422E 01 | 0.247E-01   |
| 2     | 0.0 | 0.059712 | 0.115E-04 | 0.171E-01 | 0.414E 01 | 0.240E-01   |
| 3     | 0.0 | 0.063961 | 0.124E-04 | 0.183E-01 | 0.443E 01 | 0.263E-01   |
| 4     | 0.0 | 0.061409 | 0.119E-04 | 0.174E-01 | 0.424E 01 | 0.250E-01   |
| 5     | 0.0 | 0.058317 | 0.113E-04 | 0.167E-01 | 0.404E 01 | 0.233E-01   |
| 6     | 0.0 | 0.052283 | 0.101E-04 | 0.150E-01 | 0.367E 01 | 0.201E-01   |
| 7     | 0.0 | 0.058901 | 0.114E-04 | 0.169E-01 | 0.408E 01 | 0.234E-01   |
| 8     | 0.0 | 0.054152 | 0.105E-04 | 0.155E-01 | 0.375E 01 | 0.211E-01   |
| 9     | 0.0 | 0.058721 | 0.113E-04 | 0.168E-01 | 0.407E 01 | 0.239E-01   |
| 10    | 0.0 | 0.067870 | 0.131E-04 | 0.195E-01 | 0.470E 01 | 0.284E-01   |
| 11    | 0.0 | 0.057263 | 0.111E-04 | 0.164E-01 | 0.397E 01 | 0.227E-01   |
| 12    | 0.0 | 0.056738 | 0.110E-04 | 0.163E-01 | 0.393E 01 | 0.224E-01   |
| 13    | 0.0 | 0.054854 | 0.106E-04 | 0.157E-01 | 0.340E 01 | 0.214E-01   |
| 14    | 0.0 | 0.069337 | 0.134E-04 | 0.199E-01 | 0.480E 01 | 0.291E-01   |
| 15    | 0.0 | 0.085415 | 0.165E-04 | 0.245E-01 | 0.592E 01 | 0.377E-01   |
| 16    | 0.0 | 0.092729 | 0.179E-04 | 0.266E-01 | 0.642E 01 | 0.415E-01   |
| 17    | 0.0 | 0.090029 | 0.176E-04 | 0.260E-01 | 0.629E 01 | 0.405E-01   |
| 18    | 0.0 | 0.079183 | 0.153E-04 | 0.227E-01 | 0.549E 01 | 0.344E-01   |
| 19    | 0.0 | 0.038090 | 0.736E-05 | 0.109E-01 | 0.264E 01 | 0.124E-01   |
| 20    | 0.0 | 0.232813 | 0.450E-04 | 0.667E-01 | 0.161E 02 | 0.116E 00   |

TIME 9.26.49  
PAGE NO. 173 VOL. I  
REP. NO. 0004  
11/09/67

TITLE  
MCDONNELL

RUN NO. 2 311

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0900 PO = 4908.15 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PP    | PON/PN2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.058044 | 0.118E-04 | 0.175E-01 | 0.423E 01 | 0.247E-01   |
| 2     | 0.0 | 0.056485 | 0.115E-04 | 0.170E-01 | 0.412E 01 | 0.238E-01   |
| 3     | 0.0 | 0.061211 | 0.125E-04 | 0.184E-01 | 0.444E 01 | 0.264E-01   |
| 4     | 0.0 | 0.058106 | 0.118E-04 | 0.175E-01 | 0.424E 01 | 0.247E-01   |
| 5     | 0.0 | 0.055483 | 0.113E-04 | 0.167E-01 | 0.404E 01 | 0.233E-01   |
| 6     | 0.0 | 0.048962 | 0.998E-05 | 0.147E-01 | 0.357E 01 | 0.194E-01   |
| 7     | 0.0 | 0.055340 | 0.113E-04 | 0.167E-01 | 0.403E 01 | 0.232E-01   |
| 8     | 0.0 | 0.050651 | 0.103E-04 | 0.152E-01 | 0.369E 01 | 0.206E-01   |
| 9     | 0.0 | 0.054736 | 0.112E-04 | 0.165E-01 | 0.399E 01 | 0.228E-01   |
| 10    | 0.0 | 0.064143 | 0.131E-04 | 0.193E-01 | 0.468E 01 | 0.281E-01   |
| 11    | 0.0 | 0.053725 | 0.109E-04 | 0.162E-01 | 0.392E 01 | 0.223E-01   |
| 12    | 0.0 | 0.053127 | 0.108E-04 | 0.160E-01 | 0.387E 01 | 0.219E-01   |
| 13    | 0.0 | 0.050856 | 0.104E-04 | 0.153E-01 | 0.371E 01 | 0.207E-01   |
| 14    | 0.0 | 0.065561 | 0.134E-04 | 0.197E-01 | 0.478E 01 | 0.289E-01   |
| 15    | 0.0 | 0.081934 | 0.167E-04 | 0.247E-01 | 0.597E 01 | 0.380E-01   |
| 16    | 0.0 | 0.088968 | 0.181E-04 | 0.268E-01 | 0.649E 01 | 0.419E-01   |
| 17    | 0.0 | 0.084999 | 0.177E-04 | 0.262E-01 | 0.634E 01 | 0.408E-01   |
| 18    | 0.0 | 0.074865 | 0.153E-04 | 0.235E-01 | 0.546E 01 | 0.341E-01   |
| 19    | 0.0 | 0.035504 | 0.723E-05 | 0.107E-01 | 0.259E 01 | 0.121E-01   |
| 20    | 0.0 | 0.218273 | 0.445E-04 | 0.657E-01 | 0.159E 02 | 0.114E 00   |

TIME 9.26.49  
PAGE NO. 174, VOL. I  
REP. NO. 0004  
11/09/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 9311

TIME = 0.0950 PO = 4662.86 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.055270 | 0.119E-04 | 0.174E-01 | 0.423E 01 | 0.244E-01   |
| 2     | 0.0 | 0.053419 | 0.115E-04 | 0.169E-01 | 0.409E 01 | 0.236E-01   |
| 3     | 0.0 | 0.058809 | 0.126E-04 | 0.186E-01 | 0.450E 01 | 0.267E-01   |
| 4     | 0.0 | 0.055073 | 0.118E-04 | 0.174E-01 | 0.422E 01 | 0.245E-01   |
| 5     | 0.0 | 0.053079 | 0.114E-04 | 0.168E-01 | 0.406E 01 | 0.234E-01   |
| 6     | 0.0 | 0.046092 | 0.986E-05 | 0.145E-01 | 0.353E 01 | 0.193E-01   |
| 7     | 0.0 | 0.052277 | 0.112E-04 | 0.165E-01 | 0.400E 01 | 0.229E-01   |
| 8     | 0.0 | 0.047465 | 0.107E-04 | 0.150E-01 | 0.363E 01 | 0.201E-01   |
| 9     | 0.0 | 0.051154 | 0.110E-04 | 0.161E-01 | 0.392E 01 | 0.222E-01   |
| 10    | 0.0 | 0.061074 | 0.131E-04 | 0.193E-01 | 0.468E 01 | 0.280E-01   |
| 11    | 0.0 | 0.050480 | 0.108E-04 | 0.159E-01 | 0.384E 01 | 0.210E-01   |
| 12    | 0.0 | 0.050936 | 0.107E-04 | 0.158E-01 | 0.383E 01 | 0.216E-01   |
| 13    | 0.0 | 0.047119 | 0.101E-04 | 0.149E-01 | 0.361E 01 | 0.199E-01   |
| 14    | 0.0 | 0.062283 | 0.134E-04 | 0.197E-01 | 0.477E 01 | 0.287E-01   |
| 15    | 0.0 | 0.079031 | 0.169E-04 | 0.249E-01 | 0.605E 01 | 0.385E-01   |
| 16    | 0.0 | 0.086248 | 0.185E-04 | 0.272E-01 | 0.660E 01 | 0.427E-01   |
| 17    | 0.0 | 0.084483 | 0.181E-04 | 0.267E-01 | 0.647E 01 | 0.417E-01   |
| 18    | 0.0 | 0.071511 | 0.153E-04 | 0.226E-01 | 0.547E 01 | 0.341E-01   |
| 19    | 0.0 | 0.033007 | 0.708E-05 | 0.104E-01 | 0.253E 01 | 0.116E-01   |
| 20    | 0.0 | 0.203660 | 0.441E-04 | 0.649E-01 | 0.157E 02 | 0.112E 00   |

TIME 9.26.50  
PAGE NO. 175, VOL. I  
REP. NO. 6004  
11/09/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2311

TIME = 6.1000 PD = 4438.66 ALPHA = 15.00

| PROBE | PHI | PCN      | PCN/PC    | PCN/P02   | PCN/P1    | (PCN-P1)/01 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.052585 | 0.118E-04 | 0.174E-01 | 0.427E 01 | 0.245E-01   |
| 2     | 0.0 | 0.050515 | 0.114E-04 | 0.167E-01 | 0.406E 01 | 0.233E-01   |
| 3     | 0.0 | 0.056756 | 0.128E-04 | 0.188E-01 | 0.456E 01 | 0.271E-01   |
| 4     | 0.0 | 0.052389 | 0.119E-04 | 0.173E-01 | 0.421E 01 | 0.244E-01   |
| 5     | 0.0 | 0.051105 | 0.115E-04 | 0.169E-01 | 0.411E 01 | 0.236E-01   |
| 6     | 0.0 | 0.043674 | 0.984E-05 | 0.144E-01 | 0.351E 01 | 0.191E-01   |
| 7     | 0.0 | 0.049714 | 0.112E-04 | 0.164E-01 | 0.399E 01 | 0.228E-01   |
| 8     | 0.0 | 0.044593 | 0.100E-04 | 0.147E-01 | 0.358E 01 | 0.196E-01   |
| 9     | 0.0 | 0.047976 | 0.108E-04 | 0.159E-01 | 0.385E 01 | 0.217E-01   |
| 10    | 0.0 | 0.058665 | 0.132E-04 | 0.194E-01 | 0.471E 01 | 0.282E-01   |
| 11    | 0.0 | 0.047530 | 0.107E-04 | 0.157E-01 | 0.302E 01 | 0.214E-01   |
| 12    | 0.0 | 0.047464 | 0.107E-04 | 0.157E-01 | 0.381E 01 | 0.214E-01   |
| 13    | 0.0 | 0.043643 | 0.993E-05 | 0.144E-01 | 0.351E 01 | 0.191E-01   |
| 14    | 0.0 | 0.059561 | 0.134E-04 | 0.197E-01 | 0.479E 01 | 0.288E-01   |
| 15    | 0.0 | 0.076707 | 0.173E-04 | 0.254E-01 | 0.616E 01 | 0.391E-01   |
| 16    | 0.0 | 0.084570 | 0.191E-04 | 0.280E-01 | 0.679E 01 | 0.441E-01   |
| 17    | 0.0 | 0.083279 | 0.188E-04 | 0.275E-01 | 0.669E 01 | 0.433E-01   |
| 18    | 0.0 | 0.049120 | 0.156E-04 | 0.228E-01 | 0.555E 01 | 0.346E-01   |
| 19    | 0.0 | 0.030598 | 0.609E-05 | 0.101E-01 | 0.246E 01 | 0.111E-01   |
| 20    | 0.0 | 0.194975 | 0.439E-04 | 0.644E-01 | 0.157E 02 | 0.112E 00   |

TIME 9.25.50  
PAGE NO. 176, VOL. I  
REP. NO. 0004  
11/09/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2311

TIME 0.1050 P0= 4235.55 ALPHA= 15.00

| PROBE | PHI | PIN      | PON/PO    | PIN/POP   | PON/PI    | (PON-PI)/OI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.04989  | 0.118E-04 | 0.173E-01 | 0.421E 01 | 0.243E-01   |
| 2     | 0.0 | 0.047772 | 0.113E-04 | 0.165E-01 | 0.402E 01 | 0.229E-01   |
| 3     | 0.0 | 0.05051  | 0.130E-04 | 0.190E-01 | 0.464E 01 | 0.276E-01   |
| 4     | 0.0 | 0.05055  | 0.118E-04 | 0.173E-01 | 0.422E 01 | 0.244E-01   |
| 5     | 0.0 | 0.049562 | 0.117E-04 | 0.171E-01 | 0.418E 01 | 0.241E-01   |
| 6     | 0.0 | 0.041708 | 0.985E-05 | 0.144E-01 | 0.351E 01 | 0.191E-01   |
| 7     | 0.0 | 0.047649 | 0.112E-04 | 0.165E-01 | 0.401E 01 | 0.229E-01   |
| 8     | 0.0 | 0.042035 | 0.992E-05 | 0.145E-01 | 0.354E 01 | 0.193E-01   |
| 9     | 0.0 | 0.045201 | 0.107E-04 | 0.156E-01 | 0.381E 01 | 0.213E-01   |
| 10    | 0.0 | 0.056915 | 0.134E-04 | 0.197E-01 | 0.479E 01 | 0.280E-01   |
| 11    | 0.0 | 0.044873 | 0.106E-04 | 0.155E-01 | 0.378E 01 | 0.211E-01   |
| 12    | 0.0 | 0.045412 | 0.107E-04 | 0.157E-01 | 0.383E 01 | 0.214E-01   |
| 13    | 0.0 | 0.040428 | 0.944E-05 | 0.140E-01 | 0.341E 01 | 0.182E-01   |
| 14    | 0.0 | 0.057376 | 0.135E-04 | 0.198E-01 | 0.483E 01 | 0.291E-01   |
| 15    | 0.0 | 0.074961 | 0.177E-04 | 0.259E-01 | 0.631E 01 | 0.403E-01   |
| 16    | 0.0 | 0.083933 | 0.190E-04 | 0.290E-01 | 0.707E 01 | 0.460E-01   |
| 17    | 0.0 | 0.083389 | 0.197E-04 | 0.288E-01 | 0.702E 01 | 0.457E-01   |
| 18    | 0.0 | 0.067693 | 0.160E-04 | 0.234E-01 | 0.570E 01 | 0.357E-01   |
| 19    | 0.0 | 0.028277 | 0.668E-05 | 0.977E-02 | 0.230E 01 | 0.105E-01   |
| 20    | 0.0 | 0.186218 | 0.440E-04 | 0.643E-01 | 0.157E 02 | 0.111E 00   |

TIME 9.25.51  
PAGE NO. 177, VOL. I  
REP. NO. 0004  
11/09/67

TITLE  
MCDONNELL

RUN NO. 2311

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 6.1100 PD = 4053.54 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.047482 | 0.117E-04 | 0.171E-01 | 0.418E 01 | 0.241E-01   |
| 2     | 0.0 | 0.045190 | 0.111E-04 | 0.163E-01 | 0.398E 01 | 0.225E-01   |
| 3     | 0.0 | 0.043594 | 0.132E-04 | 0.194E-01 | 0.473E 01 | 0.242E-01   |
| 4     | 0.0 | 0.048071 | 0.119E-04 | 0.173E-01 | 0.424E 01 | 0.245E-01   |
| 5     | 0.0 | 0.048448 | 0.120E-04 | 0.175E-01 | 0.427E 01 | 0.247E-01   |
| 6     | 0.0 | 0.040194 | 0.992E-05 | 0.145E-01 | 0.354E 01 | 0.192E-01   |
| 7     | 0.0 | 0.046084 | 0.114E-04 | 0.166E-01 | 0.404E 01 | 0.231E-01   |
| 8     | 0.0 | 0.039791 | 0.962E-05 | 0.143E-01 | 0.351E 01 | 0.189E-01   |
| 9     | 0.0 | 0.042031 | 0.106E-04 | 0.154E-01 | 0.377E 01 | 0.210E-01   |
| 10    | 0.0 | 0.045823 | 0.110E-04 | 0.201E-01 | 0.492E 01 | 0.296E-01   |
| 11    | 0.0 | 0.042510 | 0.105E-04 | 0.151E-01 | 0.375E 01 | 0.208E-01   |
| 12    | 0.0 | 0.043851 | 0.108E-04 | 0.158E-01 | 0.387E 01 | 0.217E-01   |
| 13    | 0.0 | 0.037473 | 0.924E-05 | 0.135E-01 | 0.330E 01 | 0.174E-01   |
| 14    | 0.0 | 0.035728 | 0.137E-04 | 0.201E-01 | 0.491E 01 | 0.296E-01   |
| 15    | 0.0 | 0.073794 | 0.182E-04 | 0.266E-01 | 0.630E 01 | 0.416E-01   |
| 16    | 0.0 | 0.084338 | 0.208E-04 | 0.304E-01 | 0.743E 01 | 0.486E-01   |
| 17    | 0.0 | 0.084811 | 0.209E-04 | 0.306E-01 | 0.747E 01 | 0.489E-01   |
| 18    | 0.0 | 0.067229 | 0.166E-04 | 0.242E-01 | 0.592E 01 | 0.372E-01   |
| 19    | 0.0 | 0.026044 | 0.642E-05 | 0.939E-02 | 0.229E 01 | 0.979E-02   |
| 20    | 0.0 | 0.179380 | 0.443E-04 | 0.647E-01 | 0.158E 02 | 0.112E 00   |

TIME 11.27.36  
PAGE NO. 178, VOL. I  
REP. NO. 6004  
11/10/67

MCDONNELL

TITLE

RUN NO. 2312

HIT TEST NO. 67

TUNNEL PARAMETERS

| T<br>(SEC) | P0<br>(PSI) | Y0<br>(OK) | H0<br>(SFT/SEC) | Q-DOT<br>(B/SF-S) | P02<br>(PSI) | P1<br>(PSI) | T1<br>(OK) | U<br>(FT/S) | M1    | RE/FT    | Q1<br>(PSI) | ALPHA<br>(DEG) |
|------------|-------------|------------|-----------------|-------------------|--------------|-------------|------------|-------------|-------|----------|-------------|----------------|
| .0300      | 10237.      | 1905.      | 0.24449E 08     | 126.73            | 8.223        | 0.03676     | 61.65      | 6894.       | 13.13 | 2094173. | 4.434       | 15.03          |
| .0350      | 9548.       | 1883.      | 0.24048E 08     | 120.01            | 7.677        | 0.03435     | 60.69      | 6837.       | 13.12 | 2002700. | 4.140       | 15.03          |
| .0400      | 8897.       | 1853.      | 0.23595E 08     | 113.29            | 7.163        | 0.03208     | 59.59      | 6773.       | 13.12 | 1921446. | 3.854       | 15.03          |
| .0450      | 8284.       | 1839.      | 0.23353E 08     | 106.57            | 6.681        | 0.03000     | 59.11      | 6717.       | 13.10 | 1816546. | 3.604       | 15.03          |
| .0500      | 7710.       | 1804.      | 0.22814E 08     | 99.84             | 6.212        | 0.02700     | 57.76      | 6650.       | 13.10 | 1754940. | 3.363       | 15.03          |
| .0550      | 7173.       | 1766.      | 0.22210E 08     | 93.14             | 5.816        | 0.02412     | 56.22      | 6570.       | 13.10 | 1704693. | 3.119       | 15.03          |
| .0600      | 6675.       | 1720.      | 0.21517E 08     | 86.42             | 5.432        | 0.02139     | 54.48      | 6470.       | 13.11 | 1669662. | 2.932       | 15.03          |
| .0650      | 6215.       | 1668.      | 0.20789E 08     | 79.70             | 5.091        | 0.02280     | 52.54      | 6357.       | 13.11 | 1648814. | 2.744       | 15.03          |
| .0700      | 5793.       | 1607.      | 0.19957E 08     | 72.98             | 4.763        | 0.02135     | 50.34      | 6228.       | 13.12 | 1645760. | 2.573       | 15.03          |
| .0750      | 5409.       | 1527.      | 0.18839E 08     | 66.26             | 4.477        | 0.02031     | 47.39      | 6052.       | 13.14 | 1693298. | 2.420       | 15.03          |
| .0800      | 5063.       | 1449.      | 0.17777E 08     | 59.55             | 4.224        | 0.01884     | 44.60      | 5879.       | 13.16 | 1748231. | 2.284       | 15.03          |
| .0850      | 4756.       | 1364.      | 0.16602E 08     | 52.83             | 4.003        | 0.01781     | 41.52      | 5682.       | 13.18 | 1842914. | 2.166       | 15.03          |
| .0900      | 4486.       | 1275.      | 0.15519E 08     | 46.11             | 3.815        | 0.01694     | 38.73      | 5493.       | 13.20 | 1948774. | 2.066       | 15.03          |
| .0950      | 4255.       | 1155.      | 0.14036E 08     | 39.39             | 3.660        | 0.01618     | 34.85      | 5225.       | 13.23 | 2186610. | 1.983       | 15.03          |
| .1000      | 4061.       | 1028.      | 0.12595E 08     | 32.67             | 3.537        | 0.01559     | 31.13      | 4949.       | 13.26 | 2499637. | 1.919       | 15.03          |
| .1050      | 3906.       | 868.       | 0.11199E 08     | 25.96             | 3.447        | 0.01513     | 27.02      | 4623.       | 13.30 | 3009079. | 1.873       | 15.03 ON       |



TIME 11.27.36  
PAGE NO. 179, VOL. I  
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11/10/67

RUN NO. 2312

TITLE

MCDONNELL

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME=.0300 PD= 10237. PD2= 8.223 PI=.03676 QDOT-A=126.73

| N  | QDOT-N<br>(R/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 4.2306             | 0.0338        | 0.0338         | 4.2306     |
| 2  | 4.4920             | 0.03545       | 0.03545        | 4.4920     |
| 3  | 5.0093             | 0.03953       | 0.03953        | 5.0093     |
| 4  | 5.1102             | 0.04032       | 0.04032        | 5.1102     |
| 5  | 5.0236             | 0.04674       | 0.04674        | 5.9236     |
| 6  | 5.1714             | 0.04081       | 0.04081        | 5.1714     |
| 7  | 5.5202             | 0.04356       | 0.04356        | 5.5202     |
| 8  | 4.2459             | 0.03350       | 0.03350        | 4.2459     |
| 9  | 5.1952             | 0.04100       | 0.04100        | 5.1952     |
| 10 | 5.5230             | 0.04358       | 0.04358        | 5.5230     |
| 11 | 4.9180             | 0.03881       | 0.03881        | 4.9180     |
| 12 | 4.7973             | 0.03786       | 0.03786        | 4.7973     |
| 13 | *                  | *             | *              | *          |
| 14 | *                  | *             | *              | *          |
| 15 | 5.1556             | 0.04068       | 0.04068        | 5.1556     |
| 16 | 6.3508             | 0.05011       | 0.05011        | 6.3508     |
| 17 | 6.1738             | 0.04872       | 0.04872        | 6.1738     |
| 18 | *                  | *             | *              | *          |
| 19 | 4.8081             | 0.03794       | 0.03794        | 4.8081     |
| 20 | 20.3031            | 0.16021       | 0.16021        | 20.3031    |

RUN NO. 2312

TITLE

MCDDNFLL

TIME 11.27.17  
PAGE NO. 180 VOL. I  
REP. NO. 0004  
11/10/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| TIME=0.350 |                    | PO=           | 9548.          | PO2=       | 7.677 | PI= | 0.3435 | QDOT-A= | 120.01 |
|------------|--------------------|---------------|----------------|------------|-------|-----|--------|---------|--------|
| N          | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |       |     |        |         |        |
| 1          | 4.0058             | 0.03338       | 0.03338        | 4.0058     |       |     |        |         |        |
| 2          | 4.2667             | 0.03555       | 0.03555        | 4.2667     |       |     |        |         |        |
| 3          | 4.7283             | 0.03940       | 0.03940        | 4.7283     |       |     |        |         |        |
| 4          | 4.8576             | 0.04048       | 0.04048        | 4.8576     |       |     |        |         |        |
| 5          | 5.5813             | 0.04651       | 0.04651        | 5.5813     |       |     |        |         |        |
| 6          | 4.9188             | 0.04099       | 0.04099        | 4.9188     |       |     |        |         |        |
| 7          | 5.2246             | 0.04354       | 0.04354        | 5.2246     |       |     |        |         |        |
| 8          | 4.0326             | 0.03360       | 0.03360        | 4.0326     |       |     |        |         |        |
| 9          | 4.9230             | 0.04102       | 0.04102        | 4.9230     |       |     |        |         |        |
| 10         | 5.2714             | 0.04351       | 0.04351        | 5.2714     |       |     |        |         |        |
| 11         | 4.6641             | 0.03886       | 0.03886        | 4.6641     |       |     |        |         |        |
| 12         | 4.5462             | 0.03708       | 0.03708        | 4.5462     |       |     |        |         |        |
| 13         | *                  | *             | *              | *          |       |     |        |         |        |
| 14         | *                  | *             | *              | *          |       |     |        |         |        |
| 15         | 4.0002             | 0.04083       | 0.04083        | 4.0002     |       |     |        |         |        |
| 16         | 6.0181             | 0.05015       | 0.05015        | 6.0181     |       |     |        |         |        |
| 17         | 5.8645             | 0.04870       | 0.04870        | 5.8645     |       |     |        |         |        |
| 18         | *                  | *             | *              | *          |       |     |        |         |        |
| 19         | 4.5340             | 0.03778       | 0.03778        | 4.5340     |       |     |        |         |        |
| 20         | 19.3793            | 0.16148       | 0.16148        | 19.3793    |       |     |        |         |        |

RUN NO. 2312

TITLE

MC DONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME 11.27.37  
PAGE NO. 181, VOL. I  
REP. NO. 6004  
11/10/67

TIME=04.00 PO= 8897. PO2= 7.163 PI=03208 QDOT-A=113.29

| N  | QDOT-N<br>(R/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 3.7811             | 0.03338       | 0.03338        | 3.7811     |
| 2  | 4.0414             | 0.03567       | 0.03567        | 4.0414     |
| 3  | 4.4473             | 0.03926       | 0.03926        | 4.4473     |
| 4  | 4.6050             | 0.04065       | 0.04065        | 4.6050     |
| 5  | 5.2390             | 0.04624       | 0.04624        | 5.2390     |
| 6  | 4.6662             | 0.04119       | 0.04119        | 4.6662     |
| 7  | 4.9291             | 0.04351       | 0.04351        | 4.9291     |
| 8  | 3.4104             | 0.03371       | 0.03371        | 3.4104     |
| 9  | 4.6509             | 0.04105       | 0.04105        | 4.6509     |
| 10 | 4.9198             | 0.04343       | 0.04343        | 4.9198     |
| 11 | 4.4102             | 0.03893       | 0.03893        | 4.4102     |
| 12 | 4.2951             | 0.03791       | 0.03791        | 4.2951     |
| 13 | *                  | *             | *              | *          |
| 14 | *                  | *             | *              | *          |
| 15 | 4.6447             | 0.04100       | 0.04100        | 4.6447     |
| 16 | 5.6853             | 0.05018       | 0.05018        | 5.6853     |
| 17 | 5.5152             | 0.04868       | 0.04868        | 5.5152     |
| 18 | *                  | *             | *              | *          |
| 19 | 4.2600             | 0.03760       | 0.03760        | 4.2600     |
| 20 | 18.4555            | 0.16299       | 0.16299        | 18.4555    |

TIME 11.27.37  
 PAGE NO. 182, VOL. I  
 REP. NO. GOOD  
 11/10/67

RUN NO. 1312

TITLE

MC DONNELL

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME=0.0450 PQ= 8285. P02= 6.681 P1=0.0300 QDOT-A=106.57

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 3.5564             | 0.03337       | 0.03337        | 3.5564     |
| 2  | 3.8162             | 0.03581       | 0.03581        | 3.8162     |
| 3  | 4.1664             | 0.03909       | 0.03909        | 4.1664     |
| 4  | 4.3523             | 0.04084       | 0.04084        | 4.3523     |
| 5  | 4.4866             | 0.04595       | 0.04595        | 4.4866     |
| 6  | 4.4136             | 0.04141       | 0.04141        | 4.4136     |
| 7  | 4.6336             | 0.04368       | 0.04368        | 4.6336     |
| 8  | 3.6061             | 0.03384       | 0.03384        | 3.6061     |
| 9  | 4.3787             | 0.04109       | 0.04109        | 4.3787     |
| 10 | 4.6182             | 0.04333       | 0.04333        | 4.6182     |
| 11 | 4.1563             | 0.03900       | 0.03900        | 4.1563     |
| 12 | 4.0440             | 0.03795       | 0.03795        | 4.0440     |
| 13 | *                  | *             | *              | *          |
| 14 | *                  | *             | *              | *          |
| 15 | 4.3892             | 0.04119       | 0.04119        | 4.3892     |
| 16 | 5.3526             | 0.05022       | 0.05022        | 5.3526     |
| 17 | 5.1859             | 0.04866       | 0.04866        | 5.1859     |
| 18 | *                  | *             | *              | *          |
| 19 | 3.9859             | 0.03740       | 0.03740        | 3.9859     |
| 20 | 17.5317            | 0.16451       | 0.16451        | 17.5317    |

RUN NO. 2312

TITLE

MCDONNELL

TIME 11.27.37  
PAGE NO. 183, VOL. I  
REP. NO. 0004  
11/10/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.000 P0= 7710. P02= 6.232 P1=0.2799 QDOT-A= 99.85

| N  | QDOT-N<br>(18/SF-S) | QDOT-N/ODOT-A | QDOT-H/KDOT-A | QDOT-N/REF |
|----|---------------------|---------------|---------------|------------|
| 1  | 3.3317              | 0.03337       | 0.03337       | 3.3317     |
| 2  | 3.5904              | 0.03596       | 0.03596       | 3.5904     |
| 3  | 3.8054              | 0.03801       | 0.03801       | 3.8054     |
| 4  | 4.0997              | 0.04106       | 0.04106       | 4.0997     |
| 5  | 4.5563              | 0.04561       | 0.04561       | 4.5563     |
| 6  | 4.1610              | 0.04167       | 0.04167       | 4.1610     |
| 7  | 4.3381              | 0.04367       | 0.04367       | 4.3381     |
| 8  | 3.3924              | 0.03398       | 0.03398       | 3.3924     |
| 9  | 4.1066              | 0.04113       | 0.04113       | 4.1066     |
| 10 | 4.3166              | 0.04323       | 0.04323       | 4.3166     |
| 11 | 3.9025              | 0.03908       | 0.03908       | 3.9025     |
| 12 | 3.7928              | 0.03798       | 0.03798       | 3.7928     |
| 13 | *                   | *             | *             | *          |
| 14 | *                   | *             | *             | *          |
| 15 | 4.1338              | 0.04140       | 0.04140       | 4.1338     |
| 16 | 5.0198              | 0.05027       | 0.05027       | 5.0198     |
| 17 | 4.8567              | 0.04866       | 0.04866       | 4.8567     |
| 18 | *                   | *             | *             | *          |
| 19 | 3.7119              | 0.03717       | 0.03717       | 3.7119     |
| 20 | 16.6080             | 0.16632       | 0.16632       | 16.6080    |

RUN NO. 2312

TITLE

MC DONNELL

TIME 11.27.37  
PAGE NO. 184, VOL. I  
REP. NO. GOOD  
11/10/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.0550 PO= 7173. PO7= 5.816 PI=02612 QDOT-A= 93.14

| N  | QDOT-N<br>(8/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 3.1070             | 0.0336        | 0.0336         | 3.1070     |
| 2  | 3.3656             | 0.03614       | 0.03614        | 3.3656     |
| 3  | 3.6044             | 0.03870       | 0.03870        | 3.6044     |
| 4  | 3.8471             | 0.04131       | 0.04131        | 3.8471     |
| 5  | 4.2119             | 0.04522       | 0.04522        | 4.2119     |
| 6  | 3.9084             | 0.04196       | 0.04196        | 3.9084     |
| 7  | 4.0425             | 0.04340       | 0.04340        | 4.0425     |
| 8  | 3.1796             | 0.03414       | 0.03414        | 3.1796     |
| 9  | 3.8345             | 0.04117       | 0.04117        | 3.8345     |
| 10 | 4.0150             | 0.04311       | 0.04311        | 4.0150     |
| 11 | 3.6486             | 0.03917       | 0.03917        | 3.6486     |
| 12 | 3.5417             | 0.03803       | 0.03803        | 3.5417     |
| 13 | *                  | *             | *              | *          |
| 14 | *                  | *             | *              | *          |
| 15 | 3.8783             | 0.04164       | 0.04164        | 3.8783     |
| 16 | 4.6870             | 0.05032       | 0.05032        | 4.6870     |
| 17 | 4.5274             | 0.04861       | 0.04861        | 4.5274     |
| 18 | *                  | *             | *              | *          |
| 19 | 3.4378             | 0.03691       | 0.03691        | 3.4378     |
| 20 | 15.6842            | 0.16840       | 0.16840        | 15.6842    |

TIME 11.27.37  
PAGE NO. 185, VOL. I  
REP. NO. 0004  
11/10/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0600 P0= 6675. P02= 5.432 P1=02439 QDOT-A= 86.42

| N  | QDOT-N<br>(B/SF-SI) | QDOT-N/QDOT-A | QDOT-N/K QDOT-A | QDOT-N/REF |
|----|---------------------|---------------|-----------------|------------|
| 1  | 2.8823              | 0.0335        | 0.0335          | 2.8823     |
| 2  | 3.1404              | 0.0363        | 0.0363          | 3.1404     |
| 3  | 3.3235              | 0.0386        | 0.0386          | 3.3235     |
| 4  | 3.5945              | 0.0415        | 0.0415          | 3.5945     |
| 5  | 3.8696              | 0.0447        | 0.0447          | 3.8696     |
| 6  | 3.6558              | 0.0423        | 0.0423          | 3.6558     |
| 7  | 3.7470              | 0.0436        | 0.0436          | 3.7470     |
| 8  | 2.9663              | 0.0342        | 0.0342          | 2.9663     |
| 9  | 3.5623              | 0.0412        | 0.0412          | 3.5623     |
| 10 | 3.7134              | 0.0427        | 0.0427          | 3.7134     |
| 11 | 3.3947              | 0.0392        | 0.0392          | 3.3947     |
| 12 | 3.2926              | 0.0380        | 0.0380          | 3.2926     |
| 13 | *                   | *             | *               | *          |
| 14 | *                   | *             | *               | *          |
| 15 | 3.6228              | 0.0419        | 0.0419          | 3.6228     |
| 16 | 4.3543              | 0.0503        | 0.0503          | 4.3543     |
| 17 | 4.1981              | 0.0485        | 0.0485          | 4.1981     |
| 18 | *                   | *             | *               | *          |
| 19 | 3.1638              | 0.0366        | 0.0366          | 3.1638     |
| 20 | 14.7604             | 0.1700        | 0.1700          | 14.7604    |

TIME 11.27.37  
 PAGE NO. 186, VOL. I  
 REP. NO. GOOD  
 11/10/67

TITLE  
 MCDONNELL  
 HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

RUN NO. 3312

TIME = 0650 PO = 6215. PO2 = 5.081 PL = 02280 QDOT-A = 79.70

| N  | QDOT-N<br>(R/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.6575             | 0.0334        | 0.0334         | 2.6576     |
| 2  | 2.9151             | 0.0365        | 0.0365         | 2.9151     |
| 3  | 3.0425             | 0.0381        | 0.0381         | 3.0425     |
| 4  | 3.3419             | 0.0419        | 0.0419         | 3.3419     |
| 5  | 3.5273             | 0.0442        | 0.0442         | 3.5273     |
| 6  | 3.4032             | 0.0427        | 0.0427         | 3.4032     |
| 7  | 3.4515             | 0.0431        | 0.0431         | 3.4515     |
| 8  | 2.7530             | 0.0345        | 0.0345         | 2.7530     |
| 9  | 3.2902             | 0.0412        | 0.0412         | 3.2902     |
| 10 | 3.4118             | 0.0428        | 0.0428         | 3.4118     |
| 11 | 3.1409             | 0.0394        | 0.0394         | 3.1409     |
| 12 | 3.0395             | 0.0381        | 0.0381         | 3.0395     |
| 13 | *                  | *             | *              | *          |
| 14 | *                  | *             | *              | *          |
| 15 | 3.3674             | 0.0425        | 0.0425         | 3.3674     |
| 16 | 4.0215             | 0.0504        | 0.0504         | 4.0215     |
| 17 | 3.8688             | 0.0485        | 0.0485         | 3.8688     |
| 18 | *                  | *             | *              | *          |
| 19 | 2.8897             | 0.0362        | 0.0362         | 2.8897     |
| 20 | 13.8366            | 0.1736        | 0.1736         | 13.8366    |



RUN NO. 2312

TITLE

MCOWMELL

TIME 11.27.38  
PAGE NO. 187, VOL. I  
REP. NO. 0004  
11/10/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.700 P0= 5793. P02= 4.763 P1=0.2135 QDOT-A= 72.98

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.4329             | 0.03333       | 0.03333        | 2.4329     |
| 2  | 2.4898             | 0.03646       | 0.03646        | 2.6898     |
| 3  | 2.7615             | 0.03784       | 0.03784        | 2.7615     |
| 4  | 3.0892             | 0.04233       | 0.04233        | 3.0892     |
| 5  | 3.1849             | 0.04364       | 0.04364        | 3.1849     |
| 6  | 3.1506             | 0.04317       | 0.04317        | 3.1506     |
| 7  | 3.1560             | 0.04324       | 0.04324        | 3.1560     |
| 8  | 2.5398             | 0.03490       | 0.03490        | 2.5398     |
| 9  | 3.0180             | 0.04135       | 0.04135        | 3.0180     |
| 10 | 3.1103             | 0.04262       | 0.04262        | 3.1103     |
| 11 | 2.8870             | 0.03956       | 0.03956        | 2.8870     |
| 12 | 2.7883             | 0.03821       | 0.03821        | 2.7883     |
| 13 | *                  | *             | *              | *          |
| 14 | *                  | *             | *              | *          |
| 15 | 3.1119             | 0.04264       | 0.04264        | 3.1119     |
| 16 | 3.6887             | 0.05054       | 0.05054        | 3.6887     |
| 17 | 3.5395             | 0.04850       | 0.04850        | 3.5395     |
| 18 | *                  | *             | *              | *          |
| 19 | 2.6156             | 0.03584       | 0.03584        | 2.6156     |
| 20 | 12.9128            | 0.17693       | 0.17693        | 12.9128    |

RUN NO. 2312

TITLE

MC DONNELL

TIME 11.27.38  
PAGE NO. 188, VOL. I  
REP. NO. 0004  
11/10/67

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME = .0750 PD = 5409. PD2 = 4.477 PI = .02001 QDOT-A = 66.26

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.2041             | 0.03332       | 0.03332        | 2.2041     |
| 2  | 2.4646             | 0.03719       | 0.03719        | 2.4646     |
| 3  | 2.4806             | 0.03743       | 0.03743        | 2.4806     |
| 4  | 2.8366             | 0.04281       | 0.04281        | 2.8366     |
| 5  | 2.8426             | 0.04290       | 0.04290        | 2.8426     |
| 6  | 2.8980             | 0.04373       | 0.04373        | 2.8980     |
| 7  | 2.8604             | 0.04317       | 0.04317        | 2.8604     |
| 8  | 2.3265             | 0.03511       | 0.03511        | 2.3265     |
| 9  | 2.7459             | 0.04146       | 0.04146        | 2.7459     |
| 10 | 2.8087             | 0.04239       | 0.04239        | 2.8087     |
| 11 | 2.6331             | 0.03974       | 0.03974        | 2.6331     |
| 12 | 2.5372             | 0.03829       | 0.03829        | 2.5372     |
| 13 | *                  | *             | *              | *          |
| 14 | *                  | *             | *              | *          |
| 15 | 2.8564             | 0.04311       | 0.04311        | 2.8564     |
| 16 | 3.3560             | 0.05065       | 0.05065        | 3.3560     |
| 17 | 3.2102             | 0.04845       | 0.04845        | 3.2102     |
| 18 | *                  | *             | *              | *          |
| 19 | 2.3416             | 0.03534       | 0.03534        | 2.3416     |
| 20 | 11.0890            | 0.18093       | 0.18093        | 11.0890    |

RUN NO. 2.312

TITLE

MC DONNELL

TIME 11.27.39  
PAGE NO. 189, VOL. I  
REP. VO. 6004  
11/10/67

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME=0.0800 PU= 5063. P02= 4.224 P1= 0.1884 QDOT-A= 59.55

| N  | QDOT-N<br>(8/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.9834             | 0.0331        | 0.0331         | 1.9834     |
| 2  | 2.2393             | 0.03761       | 0.03761        | 2.2393     |
| 3  | 2.1995             | 0.03694       | 0.03694        | 2.1996     |
| 4  | 2.5860             | 0.04339       | 0.04339        | 2.5840     |
| 5  | 2.5002             | 0.04199       | 0.04199        | 2.5002     |
| 6  | 2.6454             | 0.04443       | 0.04443        | 2.6454     |
| 7  | 2.5649             | 0.04307       | 0.04307        | 2.5649     |
| 8  | 2.1132             | 0.03549       | 0.03549        | 2.1132     |
| 9  | 2.4737             | 0.04154       | 0.04154        | 2.4737     |
| 10 | 2.5071             | 0.04210       | 0.04210        | 2.5071     |
| 11 | 2.3793             | 0.03996       | 0.03996        | 2.3793     |
| 12 | 2.2861             | 0.03839       | 0.03839        | 2.2861     |
| 13 | *                  | *             | *              | *          |
| 14 | *                  | *             | *              | *          |
| 15 | 2.6010             | 0.04368       | 0.04368        | 2.6010     |
| 16 | 3.0232             | 0.05077       | 0.05077        | 3.0232     |
| 17 | 2.4110             | 0.04838       | 0.04838        | 2.4110     |
| 18 | *                  | *             | *              | *          |
| 19 | 2.0675             | 0.03472       | 0.03472        | 2.0675     |
| 20 | 11.0653            | 0.18583       | 0.18583        | 11.0653    |

TIME 11.27.38  
PAGE NO. 190, VOL. I  
REP. NO. 6004  
11/10/67

MC DONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.0850 MD= 4756. PD7= 4.003 PI=0.1781 QDOT-A= 57.83

| N  | QDOT-N<br>(0/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.7587             | 0.03329       | 0.03329        | 1.7587     |
| 2  | 2.0141             | 0.03412       | 0.03412        | 2.0141     |
| 3  | 1.9187             | 0.03632       | 0.03632        | 1.9187     |
| 4  | 2.3314             | 0.04413       | 0.04413        | 2.3314     |
| 5  | 2.1579             | 0.04085       | 0.04085        | 2.1579     |
| 6  | 2.3927             | 0.04529       | 0.04529        | 2.3927     |
| 7  | 2.2694             | 0.04296       | 0.04296        | 2.2694     |
| 8  | 1.9000             | 0.03596       | 0.03596        | 1.9000     |
| 9  | 2.2016             | 0.04167       | 0.04167        | 2.2016     |
| 10 | 2.2055             | 0.04175       | 0.04175        | 2.2055     |
| 11 | 2.1254             | 0.04023       | 0.04023        | 2.1254     |
| 12 | 2.0349             | 0.03852       | 0.03852        | 2.0349     |
| 13 | *                  | *             | *              | *          |
| 14 | *                  | *             | *              | *          |
| 15 | 2.3455             | 0.04440       | 0.04440        | 2.3455     |
| 16 | 2.6904             | 0.05093       | 0.05093        | 2.6904     |
| 17 | 2.5517             | 0.04810       | 0.04810        | 2.5517     |
| 18 | *                  | *             | *              | *          |
| 19 | 1.7935             | 0.03395       | 0.03395        | 1.7935     |
| 20 | 10.1415            | 0.19197       | 0.19197        | 10.1415    |

RUN NO. 1312

TITLE

MC DONNELL

TIME 11.27.38  
PAGE NO. 191, VOL. I  
REP. NO. 600  
11/10/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.9000 P0= 4.86. PD2= 3.815 PL=0.1694 QDOT-A= 46.11

| N  | QDOT-N<br>(H/SE-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.5340             | 0.03127       | 0.03327        | 1.5340     |
| 2  | 1.7888             | 0.03179       | 0.03879        | 1.7888     |
| 3  | 1.6377             | 0.03552       | 0.03552        | 1.6377     |
| 4  | 2.0787             | 0.04509       | 0.04509        | 2.0787     |
| 5  | 1.8156             | 0.03637       | 0.03937        | 1.8156     |
| 6  | 2.1401             | 0.04641       | 0.04641        | 2.1401     |
| 7  | 1.9739             | 0.04281       | 0.04281        | 1.9739     |
| 8  | 1.6067             | 0.03658       | 0.03658        | 1.6067     |
| 9  | 1.9295             | 0.04184       | 0.04184        | 1.9295     |
| 10 | 1.9039             | 0.04129       | 0.04129        | 1.9039     |
| 11 | 1.0715             | 0.04059       | 0.04059        | 1.0715     |
| 12 | 1.7838             | 0.03869       | 0.03869        | 1.7838     |
| 13 | *                  | *             | *              | *          |
| 14 | *                  | *             | *              | *          |
| 15 | 2.0900             | 0.04533       | 0.04533        | 2.0900     |
| 16 | 2.1577             | 0.05113       | 0.05113        | 2.1577     |
| 17 | 2.2224             | 0.04820       | 0.04820        | 2.2224     |
| 18 | *                  | *             | *              | *          |
| 19 | 1.5194             | 0.03295       | 0.03295        | 1.5194     |
| 20 | 9.2177             | 0.19990       | 0.19990        | 9.2177     |

RUN NO. 8312

TITLE

MCDONNELL

TIME 11.27.38  
PAGE NO. 192, VOL. I  
REP. NO. 0004  
11/10/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.950 PD= 4255. PD2= 3.660 PL=0.1618 QDOT-A= 39.39

| N  | QDOT-N<br>(H/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.3093             | 0.03324       | 0.03324        | 1.3093     |
| 2  | 1.5635             | 0.03969       | 0.03969        | 1.5635     |
| 3  | 1.3567             | 0.03646       | 0.03646        | 1.3567     |
| 4  | 1.8261             | 0.04636       | 0.04636        | 1.8261     |
| 5  | 1.4732             | 0.03740       | 0.03740        | 1.4732     |
| 6  | 1.8875             | 0.04792       | 0.04792        | 1.8875     |
| 7  | 1.6783             | 0.04261       | 0.04261        | 1.6783     |
| 8  | 1.4714             | 0.03740       | 0.03740        | 1.4734     |
| 9  | 1.6573             | 0.04207       | 0.04207        | 1.6573     |
| 10 | 1.6023             | 0.04068       | 0.04068        | 1.6023     |
| 11 | 1.6177             | 0.04106       | 0.04106        | 1.6177     |
| 12 | 1.5327             | 0.03891       | 0.03891        | 1.5327     |
| 13 | *                  | *             | *              | *          |
| 14 | *                  | *             | *              | *          |
| 15 | 1.8346             | 0.04657       | 0.04657        | 1.8346     |
| 16 | 2.0249             | 0.05140       | 0.05140        | 2.0249     |
| 17 | 1.8931             | 0.04806       | 0.04806        | 1.8931     |
| 18 | *                  | *             | *              | *          |
| 19 | 1.2454             | 0.03161       | 0.03161        | 1.2454     |
| 20 | 8.2939             | 0.21055       | 0.21055        | 8.2939     |

TIME 11.27.18  
PAGE NO. 193 VOL. I  
REP. NO. 6004  
11/10/67

MC000NIFLL

TITLE

RUN NO. 2312

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME=1000 PD= 4061. PD2= 3.537 P1= 01559 QDOT-A= 32.67

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.0846             | 0.03319       | 0.03319        | 1.0846     |
| 2  | 1.3383             | 0.04096       | 0.04096        | 1.3383     |
| 3  | 1.0758             | 0.03292       | 0.03292        | 1.0758     |
| 4  | 1.5735             | 0.04816       | 0.04816        | 1.5735     |
| 5  | 1.1309             | 0.03461       | 0.03461        | 1.1309     |
| 6  | 1.6369             | 0.05004       | 0.05004        | 1.6369     |
| 7  | 1.3828             | 0.04232       | 0.04232        | 1.3828     |
| 8  | 1.2602             | 0.03857       | 0.03857        | 1.2602     |
| 9  | 1.3852             | 0.04239       | 0.04239        | 1.3852     |
| 10 | 1.3007             | 0.03981       | 0.03981        | 1.3007     |
| 11 | 1.3638             | 0.04174       | 0.04174        | 1.3638     |
| 12 | 1.2816             | 0.03922       | 0.03922        | 1.2816     |
| 13 | *                  | *             | *              | *          |
| 14 | *                  | *             | *              | *          |
| 15 | 1.5791             | 0.04833       | 0.04833        | 1.5791     |
| 16 | 1.6921             | 0.05179       | 0.05179        | 1.6921     |
| 17 | 1.5638             | 0.04786       | 0.04786        | 1.5638     |
| 18 | *                  | *             | *              | +          |
| 19 | 0.9713             | 0.02973       | 0.02973        | 0.9713     |
| 20 | 7.3701             | 0.22556       | 0.22556        | 7.3701     |

RUN NO. 2312

TITLE

MCDONNELL

TIME 11.27.39

PAGE NO. 194, VOL. I

REP. NO. 0004

11/10/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=1050 P0= 3906. P02= 3.447 PL=01513 QDOT-A= 25.96

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 0.8599             | 0.03313       | 0.03313        | 0.8599     |
| 2  | 1.1130             | 0.04288       | 0.04288        | 1.1130     |
| 3  | 0.7948             | 0.03062       | 0.03062        | 0.7948     |
| 4  | 1.2209             | 0.05089       | 0.05089        | 1.3209     |
| 5  | 0.7085             | 0.03038       | 0.03038        | 0.7085     |
| 6  | 1.3023             | 0.05376       | 0.05376        | 1.3023     |
| 7  | 1.0873             | 0.04189       | 0.04189        | 1.0873     |
| 8  | 1.0469             | 0.04033       | 0.04033        | 1.0469     |
| 9  | 1.1130             | 0.04288       | 0.04288        | 1.1130     |
| 10 | 0.9991             | 0.03849       | 0.03849        | 0.9991     |
| 11 | 1.1099             | 0.04276       | 0.04276        | 1.1099     |
| 12 | 1.0304             | 0.03970       | 0.03970        | 1.0304     |
| 13 |                    |               |                |            |
| 14 |                    |               |                |            |
| 15 | 1.3237             | 0.05099       | 0.05099        | 1.3237     |
| 16 | 1.3594             | 0.05237       | 0.05237        | 1.3594     |
| 17 | 1.2345             | 0.04756       | 0.04756        | 1.2345     |
| 18 |                    |               |                |            |
| 19 | 0.6973             | 0.02686       | 0.02686        | 0.6973     |
| 20 | 6.4464             | 0.24835       | 0.24835        | 6.4464     |



RUN NO. 2312

TITLE

MC DONNELL

TIME 11.27.39  
PAGE NO. 195, VOL. I  
REP. NO. 6004  
11/10/67

HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.0300 PO=10236.65 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.149160 | 0.146F-04 | 0.181F-01 | 0.406E 01 | 0.253E-01   |
| 2     | 0.0 | 0.115290 | 0.113E-04 | 0.140F-01 | 0.314E 01 | 0.177E-01   |
| 3     | 0.0 | 0.152984 | 0.149E-04 | 0.186F-01 | 0.414E 01 | 0.262E-01   |
| 4     | 0.0 | 0.155357 | 0.152E-04 | 0.189F-01 | 0.423E 01 | 0.267E-01   |
| 5     | 0.0 | 0.143745 | 0.140E-04 | 0.174E-01 | 0.390E 01 | 0.240E-01   |
| 6     | 0.0 | 0.147672 | 0.144E-04 | 0.180F-01 | 0.402E 01 | 0.250E-01   |
| 7     | 0.0 | 0.168761 | 0.165E-04 | 0.205F-01 | 0.459E 01 | 0.298E-01   |
| 8     | 0.0 | 0.139507 | 0.136E-04 | 0.170F-01 | 0.379E 01 | 0.232E-01   |
| 9     | 0.0 | 0.153932 | 0.150E-04 | 0.187F-01 | 0.419E 01 | 0.264E-01   |
| 10    | 0.0 | 0.177397 | 0.173E-04 | 0.216F-01 | 0.483E 01 | 0.317E-01   |
| 11    | 0.0 | 0.153399 | 0.150E-04 | 0.187E-01 | 0.417E 01 | 0.263E-01   |
| 12    | 0.0 | 0.152009 | 0.148E-04 | 0.185E-01 | 0.413E 01 | 0.260E-01   |
| 13    | 0.0 | 0.131238 | 0.128E-04 | 0.160E-01 | 0.357E 01 | 0.213E-01   |
| 14    | 0.0 | 0.142857 | 0.138E-04 | 0.235E-01 | 0.525E 01 | 0.352E-01   |
| 15    | 0.0 | 0.237407 | 0.232E-04 | 0.289E-01 | 0.664E 01 | 0.452E-01   |
| 16    | 0.0 | 0.265124 | 0.259E-04 | 0.322F-01 | 0.721E 01 | 0.515E-01   |
| 17    | 0.0 | 0.260576 | 0.255E-04 | 0.317E-01 | 0.709E 01 | 0.505E-01   |
| 18    | 0.0 | 0.222239 | 0.217E-04 | 0.270F-01 | 0.605E 01 | 0.419E-01   |
| 19    | 0.0 | 0.100542 | 0.982E-05 | 0.122E-01 | 0.273E 01 | 0.144E-01   |
| 20    | 0.0 | 0.579850 | 0.566E-04 | 0.705F-01 | 0.158E 02 | 0.122E 00   |

TIME 11.27.39  
 PAGE NO. 196, VOL. I  
 REP. VO. GOOD  
 11/10/67

MC DONNELL  
 HIT TEST NO. 67  
 PRESSURE SURVEY

TITLE

RUN NO. 2312

TIME = 0.0350 PD = 9547.77 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/OI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.141924 | 0.149E-04 | 0.185E-01 | 0.413E 01 | 0.260E-01   |
| 2     | 0.0 | 0.110372 | 0.116E-04 | 0.144E-01 | 0.321E 01 | 0.184E-01   |
| 3     | 0.0 | 0.144158 | 0.151E-04 | 0.188E-01 | 0.420E 01 | 0.265E-01   |
| 4     | 0.0 | 0.145952 | 0.153E-04 | 0.192E-01 | 0.425E 01 | 0.270E-01   |
| 5     | 0.0 | 0.133985 | 0.140E-04 | 0.175E-01 | 0.399E 01 | 0.241E-01   |
| 6     | 0.0 | 0.136968 | 0.143E-04 | 0.178E-01 | 0.399E 01 | 0.248E-01   |
| 7     | 0.0 | 0.156310 | 0.164E-04 | 0.204E-01 | 0.455E 01 | 0.295E-01   |
| 8     | 0.0 | 0.129528 | 0.136E-04 | 0.169E-01 | 0.377E 01 | 0.230E-01   |
| 9     | 0.0 | 0.143592 | 0.150E-04 | 0.187E-01 | 0.418E 01 | 0.264E-01   |
| 10    | 0.0 | 0.165523 | 0.173E-04 | 0.216E-01 | 0.482E 01 | 0.317E-01   |
| 11    | 0.0 | 0.142599 | 0.149E-04 | 0.186E-01 | 0.415E 01 | 0.261E-01   |
| 12    | 0.0 | 0.141858 | 0.149E-04 | 0.185E-01 | 0.413E 01 | 0.260E-01   |
| 13    | 0.0 | 0.121889 | 0.128E-04 | 0.159E-01 | 0.355E 01 | 0.211E-01   |
| 14    | 0.0 | 0.180795 | 0.189E-04 | 0.235E-01 | 0.525E 01 | 0.315E-01   |
| 15    | 0.0 | 0.219149 | 0.230E-04 | 0.285E-01 | 0.638E 01 | 0.445E-01   |
| 16    | 0.0 | 0.244846 | 0.256E-04 | 0.319E-01 | 0.713E 01 | 0.508E-01   |
| 17    | 0.0 | 0.239523 | 0.251E-04 | 0.317E-01 | 0.697E 01 | 0.496E-01   |
| 18    | 0.0 | 0.207176 | 0.217E-04 | 0.270E-01 | 0.603E 01 | 0.417E-01   |
| 19    | 0.0 | 0.093458 | 0.099E-05 | 0.122E-01 | 0.272E 01 | 0.143E-01   |
| 20    | 0.0 | 0.536905 | 0.562E-04 | 0.699E-01 | 0.156E 02 | 0.121E 00   |

RUN NO. 2312

TITLE

MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME 11.27.39  
PAGE NO. 197, VOL. I  
REP. NO. 6004  
11/10/67

TIME = 0.0400 PO = 8897.02 ALPHA = 15.00

| PROBE | PHT | PON      | PON/PO     | PON/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|------------|-----------|-----------|-------------|
| 1     | 0.0 | 0.134905 | 0.152E-04  | 0.188E-01 | 0.421E 01 | 0.266E-01   |
| 2     | 0.0 | 0.105565 | 0.119E-04  | 0.147E-01 | 0.329E 01 | 0.190E-01   |
| 3     | 0.0 | 0.135731 | 0.153E-04  | 0.193E-01 | 0.423E 01 | 0.268E-01   |
| 4     | 0.0 | 0.117092 | 0.154E-04  | 0.191E-01 | 0.427E 01 | 0.272E-01   |
| 5     | 0.0 | 0.125264 | 0.161E-04  | 0.175E-01 | 0.391E 01 | 0.241E-01   |
| 6     | 0.0 | 0.126999 | 0.143E-04  | 0.177E-01 | 0.396E 01 | 0.246E-01   |
| 7     | 0.0 | 0.144625 | 0.163E-04  | 0.202E-01 | 0.451E 01 | 0.291E-01   |
| 8     | 0.0 | 0.120256 | 0.135E-04  | 0.169E-01 | 0.375E 01 | 0.224E-01   |
| 9     | 0.0 | 0.133932 | 0.151E-04  | 0.187E-01 | 0.418E 01 | 0.264E-01   |
| 10    | 0.0 | 0.154310 | 0.173E-04  | 0.215E-01 | 0.481E 01 | 0.316E-01   |
| 11    | 0.0 | 0.132562 | 0.149E-04  | 0.185E-01 | 0.413E 01 | 0.268E-01   |
| 12    | 0.0 | 0.132358 | 0.149E-04  | 0.185E-01 | 0.413E 01 | 0.268E-01   |
| 13    | 0.0 | 0.113193 | 0.127E-04  | 0.158E-01 | 0.353E 01 | 0.210E-01   |
| 14    | 0.0 | 0.168509 | 0.189E-04  | 0.235E-01 | 0.525E 01 | 0.353E-01   |
| 15    | 0.0 | 0.201967 | 0.227E-04  | 0.282E-01 | 0.630E 01 | 0.440E-01   |
| 16    | 0.0 | 0.225840 | 0.254E-04  | 0.315E-01 | 0.704E 01 | 0.502E-01   |
| 17    | 0.0 | 0.219924 | 0.247E-04  | 0.307E-01 | 0.686E 01 | 0.486E-01   |
| 18    | 0.0 | 0.193044 | 0.217E-04  | 0.273E-01 | 0.602E 01 | 0.417E-01   |
| 19    | 0.0 | 0.086850 | 0.0976E-04 | 0.121E-01 | 0.271E 01 | 0.142E-01   |
| 20    | 0.0 | 0.496491 | 0.559E-04  | 0.694E-01 | 0.155E 02 | 0.120E 00   |

TIME 11.27.40  
 PAGE NO. 190, VOL. I  
 REP. NO. 0004  
 11/10/67

MC DONNELL  
 HIT TEST NO. 47  
 PRESSURE SURVEY

TITLE

RUN NO. 2312

TIME = 0.0450 PO = 0284.39 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PPN   | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.128103 | 0.155F-04 | 0.192F-01 | 0.427F 01 | 0.272F-01   |
| 2     | 0.0 | 0.100068 | 0.122F-04 | 0.151F-01 | 0.336E 01 | 0.197F-01   |
| 3     | 0.0 | 0.127702 | 0.154E-04 | 0.191F-01 | 0.426E 01 | 0.271E-01   |
| 4     | 0.0 | 0.128777 | 0.155F-04 | 0.193F-01 | 0.429F 01 | 0.274F-01   |
| 5     | 0.0 | 0.117082 | 0.141F-04 | 0.175E-01 | 0.390E 01 | 0.242F-01   |
| 6     | 0.0 | 0.117763 | 0.142E-04 | 0.176E-01 | 0.393F 01 | 0.244E-01   |
| 7     | 0.0 | 0.133705 | 0.161F-04 | 0.200F-01 | 0.466E 01 | 0.298F-01   |
| 8     | 0.0 | 0.111691 | 0.135E-04 | 0.167F-01 | 0.372F 01 | 0.227F-01   |
| 9     | 0.0 | 0.124951 | 0.151E-04 | 0.187F-01 | 0.417F 01 | 0.263F-01   |
| 10    | 0.0 | 0.143759 | 0.174F-04 | 0.215E-01 | 0.479F 01 | 0.316F-01   |
| 11    | 0.0 | 0.123286 | 0.149F-04 | 0.185E-01 | 0.411F 01 | 0.259E-01   |
| 12    | 0.0 | 0.123508 | 0.149E-04 | 0.185E-01 | 0.412E 01 | 0.259E-01   |
| 13    | 0.0 | 0.105151 | 0.127F-04 | 0.157E-01 | 0.351E 01 | 0.209E-01   |
| 14    | 0.0 | 0.157500 | 0.190F-04 | 0.236E-01 | 0.525E 01 | 0.355E-01   |
| 15    | 0.0 | 0.185855 | 0.224F-04 | 0.278E-01 | 0.620E 01 | 0.432E-01   |
| 16    | 0.0 | 0.208106 | 0.251F-04 | 0.311E-01 | 0.694E 01 | 0.494E-01   |
| 17    | 0.0 | 0.201781 | 0.244F-04 | 0.302E-01 | 0.673E 01 | 0.477E-01   |
| 18    | 0.0 | 0.179843 | 0.217F-04 | 0.269E-01 | 0.600E 01 | 0.416E-01   |
| 19    | 0.0 | 0.080720 | 0.974F-05 | 0.121F-01 | 0.269E 01 | 0.141E-01   |
| 20    | 0.0 | 0.460109 | 0.555F-04 | 0.689E-01 | 0.153E 02 | 0.119E 00   |

TIME 11.27.40  
PAGE NO. 199 VOL. I  
REP. NO. 6004  
11/10/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2.312

TIME = 0.0500 PO = 7709.87 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.121519 | 0.158E-04 | 0.195E-01 | 0.434E 01 | 0.278E-01   |
| 2     | 0.0 | 0.096283 | 0.125E-04 | 0.154E-01 | 0.344E 01 | 0.203E-01   |
| 3     | 0.0 | 0.120071 | 0.156E-04 | 0.193E-01 | 0.429E 01 | 0.274E-01   |
| 4     | 0.0 | 0.121007 | 0.157E-04 | 0.194E-01 | 0.432E 01 | 0.277E-01   |
| 5     | 0.0 | 0.109440 | 0.142E-04 | 0.176E-01 | 0.391E 01 | 0.242E-01   |
| 6     | 0.0 | 0.105262 | 0.142E-04 | 0.175E-01 | 0.390E 01 | 0.242E-01   |
| 7     | 0.0 | 0.123549 | 0.160E-04 | 0.198E-01 | 0.441E 01 | 0.286E-01   |
| 8     | 0.0 | 0.103036 | 0.135E-04 | 0.167E-01 | 0.371E 01 | 0.226E-01   |
| 9     | 0.0 | 0.116650 | 0.151E-04 | 0.187E-01 | 0.417E 01 | 0.264E-01   |
| 10    | 0.0 | 0.133070 | 0.174E-04 | 0.215E-01 | 0.478E 01 | 0.315E-01   |
| 11    | 0.0 | 0.114772 | 0.149E-04 | 0.186E-01 | 0.410E 01 | 0.258E-01   |
| 12    | 0.0 | 0.115308 | 0.150E-04 | 0.186E-01 | 0.412E 01 | 0.260E-01   |
| 13    | 0.0 | 0.097762 | 0.127E-04 | 0.157E-01 | 0.360E 01 | 0.207E-01   |
| 14    | 0.0 | 0.147267 | 0.191E-04 | 0.236E-01 | 0.526E 01 | 0.355E-01   |
| 15    | 0.0 | 0.170813 | 0.222E-04 | 0.276E-01 | 0.610E 01 | 0.425E-01   |
| 16    | 0.0 | 0.191646 | 0.269E-04 | 0.308E-01 | 0.685E 01 | 0.488E-01   |
| 17    | 0.0 | 0.185093 | 0.260E-04 | 0.297E-01 | 0.661E 01 | 0.467E-01   |
| 18    | 0.0 | 0.167572 | 0.217E-04 | 0.269E-01 | 0.590E 01 | 0.415E-01   |
| 19    | 0.0 | 0.075066 | 0.094E-05 | 0.123E-01 | 0.260E 01 | 0.140E-01   |
| 20    | 0.0 | 0.426257 | 0.553E-04 | 0.684E-01 | 0.152E 02 | 0.118E 00   |

TIME 11.27.41  
PAGE NO. 200 VOL. I  
REP. NO. 6004  
11/10/67

TITLE  
MCDONNELL

RUN NO. 2312

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0550 PO = 7173.49 ALPHA = 14.00

| PROBE | PHE | PON      | PON/PO    | PON/PO2   | PON/P1    | (PON-P1)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.115150 | 0.161E-04 | 0.198E-01 | 0.441E 01 | 0.284E-01   |
| 2     | 0.0 | 0.091808 | 0.128E-04 | 0.158E-01 | 0.351E 01 | 0.209E-01   |
| 3     | 0.0 | 0.112838 | 0.157E-04 | 0.194E-01 | 0.432E 01 | 0.276E-01   |
| 4     | 0.0 | 0.113783 | 0.159E-04 | 0.196E-01 | 0.436E 01 | 0.279E-01   |
| 5     | 0.0 | 0.102337 | 0.143E-04 | 0.176E-01 | 0.392E 01 | 0.243E-01   |
| 6     | 0.0 | 0.101494 | 0.141E-04 | 0.175E-01 | 0.388E 01 | 0.240E-01   |
| 7     | 0.0 | 0.114158 | 0.159E-04 | 0.196E-01 | 0.437E 01 | 0.280E-01   |
| 8     | 0.0 | 0.096685 | 0.135E-04 | 0.166E-01 | 0.370E 01 | 0.225E-01   |
| 9     | 0.0 | 0.109329 | 0.152E-04 | 0.187E-01 | 0.417E 01 | 0.264E-01   |
| 10    | 0.0 | 0.124643 | 0.174E-04 | 0.214E-01 | 0.477E 01 | 0.314E-01   |
| 11    | 0.0 | 0.107020 | 0.149E-04 | 0.184E-01 | 0.410E 01 | 0.258E-01   |
| 12    | 0.0 | 0.107758 | 0.150E-04 | 0.185E-01 | 0.412E 01 | 0.260E-01   |
| 13    | 0.0 | 0.091026 | 0.127E-04 | 0.157E-01 | 0.348E 01 | 0.207E-01   |
| 14    | 0.0 | 0.137811 | 0.192E-04 | 0.237E-01 | 0.528E 01 | 0.356E-01   |
| 15    | 0.0 | 0.156842 | 0.219E-04 | 0.270E-01 | 0.600E 01 | 0.416E-01   |
| 16    | 0.0 | 0.176458 | 0.246E-04 | 0.303E-01 | 0.675E 01 | 0.479E-01   |
| 17    | 0.0 | 0.169860 | 0.237E-04 | 0.292E-01 | 0.650E 01 | 0.458E-01   |
| 18    | 0.0 | 0.156232 | 0.218E-04 | 0.269E-01 | 0.598E 01 | 0.415E-01   |
| 19    | 0.0 | 0.069888 | 0.974E-05 | 0.120E-01 | 0.268E 01 | 0.139E-01   |
| 20    | 0.0 | 0.395438 | 0.551E-04 | 0.680E-01 | 0.151E 02 | 0.118E 00   |

RUN NO. 2312

TITLE

MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME 11.27.41

PAGE NO. 201, VOL. I

REP. NO. 6004

11/10/67

TIME = 0.0600 PO = 6675.21 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PN    | PON/PD2   | PON/P1    | (PON-P1)/P1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.109003 | 0.163E-04 | 0.201E-01 | 0.447E 01 | 0.289E-01   |
| 2     | 0.0 | 0.087445 | 0.131E-04 | 0.141E-01 | 0.358E 01 | 0.215E-01   |
| 3     | 0.0 | 0.106003 | 0.159E-04 | 0.194E-01 | 0.435E 01 | 0.278E-01   |
| 4     | 0.0 | 0.107105 | 0.160E-04 | 0.197E-01 | 0.439E 01 | 0.282E-01   |
| 5     | 0.0 | 0.095773 | 0.143E-04 | 0.176E-01 | 0.393E 01 | 0.243E-01   |
| 6     | 0.0 | 0.094663 | 0.142E-04 | 0.174E-01 | 0.387E 01 | 0.239E-01   |
| 7     | 0.0 | 0.105532 | 0.158E-04 | 0.194E-01 | 0.433E 01 | 0.277E-01   |
| 8     | 0.0 | 0.090244 | 0.135E-04 | 0.164E-01 | 0.370E 01 | 0.225E-01   |
| 9     | 0.0 | 0.102087 | 0.154E-04 | 0.188E-01 | 0.419E 01 | 0.265E-01   |
| 10    | 0.0 | 0.116077 | 0.174E-04 | 0.214E-01 | 0.476E 01 | 0.313E-01   |
| 11    | 0.0 | 0.100279 | 0.150E-04 | 0.184E-01 | 0.410E 01 | 0.258E-01   |
| 12    | 0.0 | 0.100859 | 0.151E-04 | 0.186E-01 | 0.413E 01 | 0.261E-01   |
| 13    | 0.0 | 0.084933 | 0.127E-04 | 0.154E-01 | 0.348E 01 | 0.206E-01   |
| 14    | 0.0 | 0.129131 | 0.193E-04 | 0.238E-01 | 0.529E 01 | 0.357E-01   |
| 15    | 0.0 | 0.143941 | 0.216E-04 | 0.265E-01 | 0.590E 01 | 0.408E-01   |
| 16    | 0.0 | 0.162543 | 0.244E-04 | 0.299E-01 | 0.666E 01 | 0.471E-01   |
| 17    | 0.0 | 0.156082 | 0.234E-04 | 0.287E-01 | 0.640E 01 | 0.449E-01   |
| 18    | 0.0 | 0.145823 | 0.218E-04 | 0.268E-01 | 0.598E 01 | 0.414E-01   |
| 19    | 0.0 | 0.065188 | 0.977E-05 | 0.120E-01 | 0.267E 01 | 0.139E-01   |
| 20    | 0.0 | 0.367649 | 0.551E-04 | 0.677E-01 | 0.151E 02 | 0.117E 00   |

TIME 11.27.42  
 PACE NO. 202, VOL. I  
 REP. NO. 6004  
 11/10/67

TITLE

RUN NO. 2312

MCDONNELL  
 HIT TEST NO. 67  
 PRESSURE SURVEY

TIME = 0.0650 PO = 6215.07 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.103066 | 0.166F-04 | 0.203E-01 | 0.452E 01 | 0.293E-01   |
| 2     | 0.0 | 0.083192 | 0.134E-04 | 0.164E-01 | 0.365E 01 | 0.220E-01   |
| 3     | 0.0 | 0.099566 | 0.160E-04 | 0.196E-01 | 0.437E 01 | 0.280E-01   |
| 4     | 0.0 | 0.100972 | 0.162E-04 | 0.199E-01 | 0.443E 01 | 0.285E-01   |
| 5     | 0.0 | 0.089749 | 0.164E-04 | 0.177E-01 | 0.394E 01 | 0.244E-01   |
| 6     | 0.0 | 0.088160 | 0.162E-04 | 0.173E-01 | 0.387E 01 | 0.230E-01   |
| 7     | 0.0 | 0.097671 | 0.157E-04 | 0.192E-01 | 0.420E 01 | 0.273E-01   |
| 8     | 0.0 | 0.084510 | 0.136E-04 | 0.166E-01 | 0.371E 01 | 0.225E-01   |
| 9     | 0.0 | 0.095925 | 0.154E-04 | 0.189E-01 | 0.420E 01 | 0.266E-01   |
| 10    | 0.0 | 0.108174 | 0.174E-04 | 0.213E-01 | 0.474E 01 | 0.311E-01   |
| 11    | 0.0 | 0.093909 | 0.151E-04 | 0.185E-01 | 0.411E 01 | 0.259E-01   |
| 12    | 0.0 | 0.094609 | 0.152E-04 | 0.186E-01 | 0.415E 01 | 0.262E-01   |
| 13    | 0.0 | 0.079514 | 0.129E-04 | 0.156E-01 | 0.349E 01 | 0.207E-01   |
| 14    | 0.0 | 0.121224 | 0.195E-04 | 0.239E-01 | 0.512E 01 | 0.359E-01   |
| 15    | 0.0 | 0.132110 | 0.213E-04 | 0.260E-01 | 0.579E 01 | 0.398E-01   |
| 16    | 0.0 | 0.149900 | 0.241E-04 | 0.295E-01 | 0.647E 01 | 0.463E-01   |
| 17    | 0.0 | 0.143759 | 0.231E-04 | 0.283E-01 | 0.610E 01 | 0.441E-01   |
| 18    | 0.0 | 0.136345 | 0.219E-04 | 0.268E-01 | 0.598E 01 | 0.414E-01   |
| 19    | 0.0 | 0.060963 | 0.091E-05 | 0.120E-01 | 0.267E 01 | 0.134E-01   |
| 20    | 0.0 | 0.342892 | 0.552E-04 | 0.675E-01 | 0.150E 02 | 0.117E 00   |



RUN NO. 2312

TITLE

MCDONNELL

TIME 11.27.42  
PAGE NO. 203, VOL. 1  
REP. NO. 0004  
11/10/67

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0700 PD = 5703.04 ALPHA = 15.00

| PROBE | PHE | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.097350 | 0.148E-04 | 0.204E-01 | 0.456E 01 | 0.295E-01   |
| 2     | 0.0 | 0.079050 | 0.136E-04 | 0.164E-01 | 0.370E 01 | 0.224E-01   |
| 3     | 0.0 | 0.093528 | 0.161E-04 | 0.196E-01 | 0.438E 01 | 0.281E-01   |
| 4     | 0.0 | 0.095304 | 0.165E-04 | 0.200E-01 | 0.447E 01 | 0.286E-01   |
| 5     | 0.0 | 0.084265 | 0.145E-04 | 0.177E-01 | 0.395E 01 | 0.245E-01   |
| 6     | 0.0 | 0.042593 | 0.143E-04 | 0.173E-01 | 0.387E 01 | 0.238E-01   |
| 7     | 0.0 | 0.090575 | 0.156E-04 | 0.190E-01 | 0.424E 01 | 0.269E-01   |
| 8     | 0.0 | 0.079484 | 0.137E-04 | 0.167E-01 | 0.372E 01 | 0.226E-01   |
| 9     | 0.0 | 0.090242 | 0.156E-04 | 0.189E-01 | 0.473E 01 | 0.268E-01   |
| 10    | 0.0 | 0.100432 | 0.174E-04 | 0.212E-01 | 0.473E 01 | 0.309E-01   |
| 11    | 0.0 | 0.088333 | 0.152E-04 | 0.185E-01 | 0.414E 01 | 0.260E-01   |
| 12    | 0.0 | 0.089010 | 0.154E-04 | 0.167E-01 | 0.417E 01 | 0.263E-01   |
| 13    | 0.0 | 0.074738 | 0.129E-04 | 0.157E-01 | 0.350E 01 | 0.207E-01   |
| 14    | 0.0 | 0.114101 | 0.197E-04 | 0.240E-01 | 0.534E 01 | 0.360E-01   |
| 15    | 0.0 | 0.121349 | 0.209E-04 | 0.255E-01 | 0.568E 01 | 0.389E-01   |
| 16    | 0.0 | 0.138530 | 0.235E-04 | 0.291E-01 | 0.649E 01 | 0.455E-01   |
| 17    | 0.0 | 0.132891 | 0.229E-04 | 0.279E-01 | 0.622E 01 | 0.434E-01   |
| 18    | 0.0 | 0.127797 | 0.221E-04 | 0.268E-01 | 0.598E 01 | 0.414E-01   |
| 19    | 0.0 | 0.057216 | 0.088E-05 | 0.120E-01 | 0.268E 01 | 0.139E-01   |
| 20    | 0.0 | 0.321166 | 0.554E-04 | 0.674E-01 | 0.150E 02 | 0.117E 00   |

RUN NO. 2312

TITLE

MC DONNELL

TIME 11-27-43

PAGE NO. 204 VOL. I

REP. NO. 0004

11/10/67

HIT TEST NO. 67

PRESSURE SURVEY

TIME= 0.0750 PD= 5409.13 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PD2   | PON/P1    | (PON-P1)/P1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.091850 | 0.170E-04 | 0.205E-01 | 0.459E 01 | 0.297E-01   |
| 2     | 0.0 | 0.075019 | 0.139E-04 | 0.168E-01 | 0.375E 01 | 0.227E-01   |
| 3     | 0.0 | 0.087808 | 0.162E-04 | 0.196E-01 | 0.439E 01 | 0.281E-01   |
| 4     | 0.0 | 0.090342 | 0.167E-04 | 0.202E-01 | 0.451E 01 | 0.291E-01   |
| 5     | 0.0 | 0.079319 | 0.147E-04 | 0.177E-01 | 0.396E 01 | 0.245E-01   |
| 6     | 0.0 | 0.077761 | 0.144E-04 | 0.174E-01 | 0.389E 01 | 0.239E-01   |
| 7     | 0.0 | 0.084243 | 0.156E-04 | 0.188E-01 | 0.421E 01 | 0.265E-01   |
| 8     | 0.0 | 0.075166 | 0.139E-04 | 0.168E-01 | 0.376E 01 | 0.228E-01   |
| 9     | 0.0 | 0.085339 | 0.158E-04 | 0.191E-01 | 0.426E 01 | 0.270E-01   |
| 10    | 0.0 | 0.094351 | 0.174E-04 | 0.211E-01 | 0.471E 01 | 0.307E-01   |
| 11    | 0.0 | 0.083627 | 0.155E-04 | 0.187E-01 | 0.418E 01 | 0.263E-01   |
| 12    | 0.0 | 0.084062 | 0.155E-04 | 0.188E-01 | 0.420E 01 | 0.265E-01   |
| 13    | 0.0 | 0.070615 | 0.131E-04 | 0.158E-01 | 0.353E 01 | 0.209E-01   |
| 14    | 0.0 | 0.107750 | 0.199E-04 | 0.241E-01 | 0.538E 01 | 0.363E-01   |
| 15    | 0.0 | 0.111659 | 0.206E-04 | 0.249E-01 | 0.558E 01 | 0.379E-01   |
| 16    | 0.0 | 0.128433 | 0.237E-04 | 0.287E-01 | 0.642E 01 | 0.448E-01   |
| 17    | 0.0 | 0.123479 | 0.228E-04 | 0.276E-01 | 0.617E 01 | 0.428E-01   |
| 18    | 0.0 | 0.120180 | 0.222E-04 | 0.268E-01 | 0.601E 01 | 0.414E-01   |
| 19    | 0.0 | 0.053945 | 0.997E-05 | 0.120E-01 | 0.270E 01 | 0.140E-01   |
| 20    | 0.0 | 0.302471 | 0.559E-04 | 0.676E-01 | 0.151E 02 | 0.117E 00   |

TIME 11.27.43  
 PAGE NO. 205, VOL. I  
 REP. NO. 0004  
 11/10/67

MC DONNELL  
 HIT TEST NO. 67  
 PRESSURE SURVEY

TITLE

RUN NO. 2312

TIME = 6.0800 PO = 5063.35 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PN    | PNN/PN2   | PNN/P1    | (PNN-P1)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.086568 | 0.171E-04 | 0.205E-01 | 0.459E 01 | 0.297E-01   |
| 2     | 0.0 | 0.071099 | 0.140E-04 | 0.160E-01 | 0.377E 01 | 0.229E-01   |
| 3     | 0.0 | 0.082666 | 0.163E-04 | 0.196E-01 | 0.430E 01 | 0.279E-01   |
| 4     | 0.0 | 0.085845 | 0.170E-04 | 0.203E-01 | 0.456E 01 | 0.293E-01   |
| 5     | 0.0 | 0.074913 | 0.144E-04 | 0.177E-01 | 0.398E 01 | 0.246E-01   |
| 6     | 0.0 | 0.073662 | 0.145E-04 | 0.176E-01 | 0.391E 01 | 0.240E-01   |
| 7     | 0.0 | 0.078677 | 0.155E-04 | 0.186E-01 | 0.418E 01 | 0.262E-01   |
| 8     | 0.0 | 0.071555 | 0.141E-04 | 0.169E-01 | 0.380E 01 | 0.231E-01   |
| 9     | 0.0 | 0.081115 | 0.160E-04 | 0.192E-01 | 0.431E 01 | 0.273E-01   |
| 10    | 0.0 | 0.088433 | 0.175E-04 | 0.209E-01 | 0.469E 01 | 0.305E-01   |
| 11    | 0.0 | 0.079683 | 0.157E-04 | 0.189E-01 | 0.423E 01 | 0.266E-01   |
| 12    | 0.0 | 0.079763 | 0.158E-04 | 0.189E-01 | 0.423E 01 | 0.267E-01   |
| 13    | 0.0 | 0.067165 | 0.133E-04 | 0.159E-01 | 0.356E 01 | 0.211E-01   |
| 14    | 0.0 | 0.102176 | 0.202E-04 | 0.242E-01 | 0.542E 01 | 0.365E-01   |
| 15    | 0.0 | 0.103939 | 0.203E-04 | 0.244E-01 | 0.547E 01 | 0.369E-01   |
| 16    | 0.0 | 0.119608 | 0.236E-04 | 0.283E-01 | 0.635E 01 | 0.441E-01   |
| 17    | 0.0 | 0.115521 | 0.228E-04 | 0.273E-01 | 0.613E 01 | 0.423E-01   |
| 18    | 0.0 | 0.113494 | 0.224E-04 | 0.269E-01 | 0.602E 01 | 0.414E-01   |
| 19    | 0.0 | 0.051151 | 0.101E-04 | 0.121E-01 | 0.272E 01 | 0.141E-01   |
| 20    | 0.0 | 0.286807 | 0.566E-04 | 0.679E-01 | 0.152E 02 | 0.117E 00   |

TIME 11.27.44  
PAGE NO. 205, VOL. 1  
REP. NO. 0004  
11/1 C/67

TITLE  
MCDONNELL

RUN NO. 2312

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0850 PO = 4755.6R ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/P02   | PON/P1    | (PON-P1)/P1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.081503 | 0.171E-04 | 0.204E-01 | 0.458E 01 | 0.294E-01   |
| 2     | 0.0 | 0.067290 | 0.141E-04 | 0.168E-01 | 0.378E 01 | 0.228E-01   |
| 3     | 0.0 | 0.077802 | 0.164E-04 | 0.194E-01 | 0.437E 01 | 0.277E-01   |
| 4     | 0.0 | 0.081894 | 0.172E-04 | 0.205E-01 | 0.460E 01 | 0.296E-01   |
| 5     | 0.0 | 0.071047 | 0.149E-04 | 0.177E-01 | 0.399E 01 | 0.246E-01   |
| 6     | 0.0 | 0.070297 | 0.148E-04 | 0.176E-01 | 0.395E 01 | 0.242E-01   |
| 7     | 0.0 | 0.073875 | 0.155E-04 | 0.185E-01 | 0.415E 01 | 0.259E-01   |
| 8     | 0.0 | 0.068651 | 0.144E-04 | 0.171E-01 | 0.384E 01 | 0.235E-01   |
| 9     | 0.0 | 0.077571 | 0.163E-04 | 0.194E-01 | 0.436E 01 | 0.276E-01   |
| 10    | 0.0 | 0.083176 | 0.175E-04 | 0.208E-01 | 0.467E 01 | 0.302E-01   |
| 11    | 0.0 | 0.076501 | 0.161E-04 | 0.191E-01 | 0.430E 01 | 0.271E-01   |
| 12    | 0.0 | 0.076114 | 0.160E-04 | 0.190E-01 | 0.427E 01 | 0.269E-01   |
| 13    | 0.0 | 0.064329 | 0.135E-04 | 0.161E-01 | 0.361E 01 | 0.215E-01   |
| 14    | 0.0 | 0.077378 | 0.205E-04 | 0.243E-01 | 0.547E 01 | 0.367E-01   |
| 15    | 0.0 | 0.095490 | 0.201E-04 | 0.239E-01 | 0.536E 01 | 0.359E-01   |
| 16    | 0.0 | 0.112056 | 0.236E-04 | 0.280E-01 | 0.629E 01 | 0.435E-01   |
| 17    | 0.0 | 0.109019 | 0.229E-04 | 0.272E-01 | 0.612E 01 | 0.421E-01   |
| 18    | 0.0 | 0.107738 | 0.227E-04 | 0.269E-01 | 0.605E 01 | 0.415E-01   |
| 19    | 0.0 | 0.048834 | 0.103E-04 | 0.122E-01 | 0.274E 01 | 0.143E-01   |
| 20    | 0.0 | 0.274175 | 0.577E-04 | 0.685E-01 | 0.154E 02 | 0.118E 00   |

TIME 11.27.44  
PAGE NO. 207, VOL. I  
REP. NO. 0004  
11/10/67

MC DONNELL  
MIT TEST NO. 67  
PRESSURE SURVEY

TITLE

PUN NO. 2312

TIME = 0.0900 PO = 4486.13 ALPHA = 15.00

| PROF | PHI | PON      | PON/PI    | PON/PO2   | PON/PI1/21 |
|------|-----|----------|-----------|-----------|------------|
| 1    | 0.0 | 0.076556 | 0.171F-04 | 0.201F-01 | 0.280F-01  |
| 2    | 0.0 | 0.063591 | 0.162F-04 | 0.167F-01 | 0.226F-01  |
| 3    | 0.0 | 0.073356 | 0.164F-04 | 0.192F-01 | 0.273F-01  |
| 4    | 0.0 | 0.078488 | 0.175F-04 | 0.206F-01 | 0.294F-01  |
| 5    | 0.0 | 0.067720 | 0.151F-04 | 0.178F-01 | 0.246F-01  |
| 6    | 0.0 | 0.067664 | 0.151F-04 | 0.177F-01 | 0.246F-01  |
| 7    | 0.0 | 0.069838 | 0.156F-04 | 0.183F-01 | 0.256F-01  |
| 8    | 0.0 | 0.066456 | 0.148F-04 | 0.174F-01 | 0.240F-01  |
| 9    | 0.0 | 0.074707 | 0.167F-04 | 0.196F-01 | 0.280F-01  |
| 10   | 0.0 | 0.079581 | 0.175F-04 | 0.206F-01 | 0.294F-01  |
| 11   | 0.0 | 0.074081 | 0.165F-04 | 0.194F-01 | 0.277F-01  |
| 12   | 0.0 | 0.073116 | 0.163F-04 | 0.192F-01 | 0.272F-01  |
| 13   | 0.0 | 0.062166 | 0.139F-04 | 0.163F-01 | 0.219F-01  |
| 14   | 0.0 | 0.093357 | 0.208F-04 | 0.245F-01 | 0.370F-01  |
| 15   | 0.0 | 0.089010 | 0.198F-04 | 0.233F-01 | 0.349F-01  |
| 16   | 0.0 | 0.103776 | 0.236F-04 | 0.277F-01 | 0.430F-01  |
| 17   | 0.0 | 0.103971 | 0.232F-04 | 0.273F-01 | 0.421F-01  |
| 18   | 0.0 | 0.102914 | 0.229F-04 | 0.270F-01 | 0.416F-01  |
| 19   | 0.0 | 0.066993 | 0.105F-04 | 0.123F-01 | 0.145F-01  |
| 20   | 0.0 | 0.264574 | 0.590F-04 | 0.693F-01 | 0.120E 00  |

TIME 11.27.45  
PAGE NO. 208, VOL. I  
REP. NO. 0004  
11/10/67

TITLE  
MCDONNELL

RUN NO. 9312

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0' 50 PO = 4254.71 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.072025 | 0.169F-04 | 0.197E-01 | 0.445F 01 | 0.282E-01   |
| 2     | 0.0 | 0.060004 | 0.141F-04 | 0.164F-01 | 0.371F 01 | 0.221F-01   |
| 3     | 0.0 | 0.069309 | 0.143E-04 | 0.189F-01 | 0.428E 01 | 0.268E-01   |
| 4     | 0.0 | 0.075627 | 0.178F-04 | 0.207E-01 | 0.467E 01 | 0.300E-01   |
| 5     | 0.0 | 0.064932 | 0.153F-04 | 0.177F-01 | 0.401E 01 | 0.246F-01   |
| 6     | 0.0 | 0.065769 | 0.155F-04 | 0.180F-01 | 0.406E 01 | 0.250F-01   |
| 7     | 0.0 | 0.066566 | 0.156F-04 | 0.182E-01 | 0.411E 01 | 0.254E-01   |
| 8     | 0.0 | 0.064768 | 0.153F-04 | 0.178F-01 | 0.401E 01 | 0.246E-01   |
| 9     | 0.0 | 0.072522 | 0.170F-04 | 0.198F-01 | 0.448E 01 | 0.284E-01   |
| 10    | 0.0 | 0.074648 | 0.175F-04 | 0.204F-01 | 0.461E 01 | 0.295F-01   |
| 11    | 0.0 | 0.072422 | 0.170F-04 | 0.198F-01 | 0.447E 01 | 0.284E-01   |
| 12    | 0.0 | 0.070768 | 0.166E-04 | 0.193F-01 | 0.437E 01 | 0.275E-01   |
| 13    | 0.0 | 0.060456 | 0.143F-04 | 0.166F-01 | 0.375F 01 | 0.224E-01   |
| 14    | 0.0 | 0.090112 | 0.212E-04 | 0.246F-01 | 0.557E 01 | 0.373F-01   |
| 15    | 0.0 | 0.083601 | 0.196E-04 | 0.228F-01 | 0.517E 01 | 0.340F-01   |
| 16    | 0.0 | 0.100769 | 0.247F-04 | 0.275F-01 | 0.624E 01 | 0.426F-01   |
| 17    | 0.0 | 0.100379 | 0.236F-04 | 0.274E-01 | 0.620F 01 | 0.424E-01   |
| 18    | 0.0 | 0.099020 | 0.233E-04 | 0.271F-01 | 0.612E 01 | 0.418E-01   |
| 19    | 0.0 | 0.045629 | 0.107F-04 | 0.125F-01 | 0.282E 01 | 0.148E-01   |
| 20    | 0.0 | 0.258005 | 0.406E-04 | 0.705E-01 | 0.159E 02 | 0.122E 00   |

TIME 11.27.46  
PAGE NO. 209, VOL. I  
REP. NO. 6004  
11/10/57

TITLE  
MCDONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 1312

TIME = 0.1000 PO = 4061.41 ALPHA = 15.00

| PRUNE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PO1 |
|-------|-----|----------|-----------|-----------|-----------|--------------|
| 1     | 0.0 | 0.067611 | 0.166F-04 | 0.191F-01 | 0.434F 01 | 0.271E-01    |
| 2     | 0.0 | 0.056527 | 0.139F-04 | 0.160E-01 | 0.363E 01 | 0.213E-01    |
| 3     | 0.0 | 0.065659 | 0.162F-04 | 0.186F-01 | 0.421F 01 | 0.261E-01    |
| 4     | 0.0 | 0.073312 | 0.191E-04 | 0.207F-01 | 0.470E 01 | 0.301E-01    |
| 5     | 0.0 | 0.062604 | 0.154F-04 | 0.177E-01 | 0.402E 01 | 0.245E-01    |
| 6     | 0.0 | 0.064606 | 0.159E-04 | 0.183F-01 | 0.414F 01 | 0.255E-01    |
| 7     | 0.0 | 0.064059 | 0.158E-04 | 0.181E-01 | 0.411E 01 | 0.253E-01    |
| 8     | 0.0 | 0.064188 | 0.158E-04 | 0.181E-01 | 0.412E 01 | 0.253E-01    |
| 9     | 0.0 | 0.071017 | 0.175E-04 | 0.201F-01 | 0.456E 01 | 0.289E-01    |
| 10    | 0.0 | 0.071376 | 0.176E-04 | 0.202E-01 | 0.458E 01 | 0.291E-01    |
| 11    | 0.0 | 0.071525 | 0.176E-04 | 0.202E-01 | 0.459E 01 | 0.292E-01    |
| 12    | 0.0 | 0.069070 | 0.170E-04 | 0.195E-01 | 0.443E 01 | 0.279E-01    |
| 13    | 0.0 | 0.059800 | 0.147E-04 | 0.169E-01 | 0.394E 01 | 0.230E-01    |
| 14    | 0.0 | 0.087643 | 0.216E-04 | 0.248E-01 | 0.562E 01 | 0.376E-01    |
| 15    | 0.0 | 0.079262 | 0.195E-04 | 0.224E-01 | 0.509E 01 | 0.332E-01    |
| 16    | 0.0 | 0.077035 | 0.239F-04 | 0.274E-01 | 0.623E 01 | 0.474E-01    |
| 17    | 0.0 | 0.090241 | 0.262F-04 | 0.278E-01 | 0.630E 01 | 0.481E-01    |
| 18    | 0.0 | 0.096057 | 0.237E-04 | 0.272E-01 | 0.616E 01 | 0.419E-01    |
| 19    | 0.0 | 0.046741 | 0.110E-04 | 0.126E-01 | 0.287E 01 | 0.152E-01    |
| 20    | 0.0 | 0.254466 | 0.627E-04 | 0.719E-01 | 0.163E 02 | 0.174E 00    |

TIME 11.27.47  
PAGE NO. 210, VOL. I  
REP. NO. 6004  
11/10/67

MCDONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2312

TIME = 0.1050 PO = 3906.23 ALPHA = 15.00

| PROF | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|------|-----|----------|-----------|-----------|-----------|-------------|
| 1    | C.0 | 0.063415 | 0.152F-04 | 0.184F-01 | 0.419F 01 | 0.259E-01   |
| 2    | 0.0 | 0.053162 | 0.136F-04 | 0.154F-01 | 0.351F 01 | 0.203E-01   |
| 3    | 0.0 | 0.062408 | 0.160F-04 | 0.181E-01 | 0.413F 01 | 0.252E-01   |
| 4    | 0.0 | 0.071543 | 0.193F-04 | 0.202E-01 | 0.473E 01 | 0.301E-01   |
| 5    | 0.0 | 0.060975 | 0.156F-04 | 0.177F-01 | 0.403E 01 | 0.245E-01   |
| 6    | 0.0 | 0.064177 | 0.164F-04 | 0.186F-01 | 0.424F 01 | 0.262E-01   |
| 7    | 0.0 | 0.062316 | 0.160F-04 | 0.181E-01 | 0.412F 01 | 0.252E-01   |
| 8    | 0.0 | 0.064115 | 0.164F-04 | 0.186F-01 | 0.424E 01 | 0.262E-01   |
| 9    | 0.0 | 0.070191 | 0.180F-04 | 0.204F-01 | 0.444E 01 | 0.294E-01   |
| 10   | 0.0 | 0.064767 | 0.176F-04 | 0.200F-01 | 0.455E 01 | 0.286E-01   |
| 11   | 0.0 | 0.071389 | 0.193F-04 | 0.207E-01 | 0.472E 01 | 0.307E-01   |
| 12   | 0.0 | 0.068023 | 0.174E-04 | 0.197F-01 | 0.450F 01 | 0.282E-01   |
| 13   | 0.0 | 0.059596 | 0.153E-04 | 0.173F-01 | 0.394E 01 | 0.237E-01   |
| 14   | 0.0 | 0.085451 | 0.220F-04 | 0.240E-01 | 0.568E 01 | 0.378E-01   |
| 15   | 0.0 | 0.075944 | 0.193F-04 | 0.220E-01 | 0.502E 01 | 0.325E-01   |
| 16   | C.0 | 0.094573 | 0.242F-04 | 0.274E-01 | 0.625E 01 | 0.424E-01   |
| 17   | C.0 | 0.097559 | 0.250F-04 | 0.283F-01 | 0.645E 01 | 0.440E-01   |
| 18   | 0.0 | 0.094024 | 0.241F-04 | 0.273E-01 | 0.621E 01 | 0.421E-01   |
| 19   | 0.0 | 0.044330 | 0.113E-04 | 0.129F-01 | 0.293E 01 | 0.154E-01   |
| 20   | 0.0 | 0.253960 | 0.650E-04 | 0.737E-01 | 0.168E 02 | 0.128E 00   |



TIME 22.57.0  
PAGE NO. 211, VOL. I  
REP. NO. 6004  
11/10/67

HIT TEST NO. 67  
TUNNEL PARAMETERS

TITLE

RUN NO. 2314

MCDONNELL

| T     | PO     | TO    | MO          | Q-DOT     | PO2   | PI      | TI    | U      | MI    | RE/FI    | OI    | ALPHA |
|-------|--------|-------|-------------|-----------|-------|---------|-------|--------|-------|----------|-------|-------|
| (SEC) | (PSI)  | (OK)  | (SFT/SSCC)  | (10/SF-S) | (PSI) | (PSI)   | (OK)  | (FT/S) |       |          | (PSI) | (DFG) |
| .0300 | 10530. | 1930. | C.24841E 08 | 125.70    | 7.907 | 0.03463 | 61.06 | 6952.  | 13.30 | 2016012. | 4.263 | 15.00 |
| .0350 | 9022.  | 1900. | C.24308E 08 | 119.72    | 7.442 | 0.03251 | 59.93 | 6876.  | 13.28 | 1954756. | 4.013 | 15.00 |
| .0400 | 9155.  | 1861. | C.23730E 08 | 112.74    | 6.998 | 0.03065 | 58.65 | 6794.  | 13.26 | 1901425. | 3.774 | 15.00 |
| .0450 | 8529.  | 1839. | C.23355E 08 | 105.76    | 6.574 | 0.02992 | 57.97 | 6740.  | 13.24 | 1821457. | 3.546 | 15.00 |
| .0500 | 7944.  | 1795. | C.22710E 08 | 98.78     | 6.172 | 0.02720 | 56.44 | 6646.  | 13.23 | 1781950. | 3.310 | 15.00 |
| .0550 | 7399.  | 1748. | C.22005E 08 | 91.80     | 5.790 | 0.02554 | 54.72 | 6542.  | 13.22 | 1741976. | 3.125 | 15.00 |
| .0600 | 6895.  | 1697. | C.21243E 08 | 84.82     | 5.478 | 0.02394 | 53.01 | 6427.  | 13.22 | 1732972. | 2.931 | 15.00 |
| .0650 | 6431.  | 1638. | C.20419E 08 | 77.84     | 5.088 | 0.02242 | 50.48 | 6302.  | 13.23 | 1726807. | 2.748 | 15.00 |
| .0700 | 6008.  | 1574. | C.19527E 08 | 70.85     | 4.769 | 0.02095 | 48.33 | 6163.  | 13.25 | 1716164. | 2.576 | 15.00 |
| .0750 | 5626.  | 1492. | C.18335E 08 | 63.87     | 4.470 | 0.01952 | 46.12 | 5973.  | 13.30 | 1690656. | 2.416 | 15.00 |
| .0800 | 5284.  | 1408. | C.17231E 08 | 56.89     | 4.192 | 0.01819 | 42.71 | 5791.  | 13.35 | 1666833. | 2.267 | 15.00 |
| .0850 | 4983.  | 1328. | C.16197E 08 | 49.91     | 3.935 | 0.01695 | 39.25 | 5614.  | 13.40 | 1639574. | 2.129 | 15.00 |
| .0900 | 4723.  | 1231. | C.15562E 08 | 43.93     | 3.698 | 0.01576 | 35.85 | 5397.  | 13.48 | 1607662. | 2.003 | 15.00 |
| .0950 | 4503.  | 1110. | C.13550E 08 | 37.95     | 3.483 | 0.01464 | 32.00 | 5137.  | 13.54 | 1575029. | 1.888 | 15.00 |
| .1000 | 4324.  | 977.  | C.12078E 08 | 28.97     | 3.288 | 0.01360 | 28.05 | 4851.  | 13.69 | 1532188. | 1.784 | 15.00 |

RUN NO. 2314

TITLE

MC DONNELL

TIME 22.57. 1

PAGE NO. 212 VOL. I

REP. NO. 6004

11/10/67

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME=0300 PU= 10530. PU2= 7.907 PI=03443 QDOT-A=126.70

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.9822             | 0.02354       | 0.02354        | 2.9822     |
| 2  | 3.7155             | 0.02932       | 0.02932        | 3.7153     |
| 3  | 3.6134             | 0.02852       | 0.02852        | 3.6134     |
| 4  | 4.6500             | 0.03670       | 0.03670        | 4.6500     |
| 5  | 3.9599             | 0.03125       | 0.03125        | 3.9599     |
| 6  | 5.2293             | 0.04127       | 0.04127        | 5.2293     |
| 7  | 4.7594             | 0.03756       | 0.03756        | 4.7594     |
| 8  | 3.8546             | 0.03042       | 0.03042        | 3.8546     |
| 9  | 4.8900             | 0.03859       | 0.03859        | 4.8900     |
| 10 | 3.9101             | 0.03086       | 0.03086        | 3.9101     |
| 11 | 4.4805             | 0.03543       | 0.03543        | 4.4805     |
| 12 | 4.2637             | 0.03365       | 0.03365        | 4.2637     |
| 13 | 4.6676             | 0.03684       | 0.03684        | 4.6676     |
| 14 | 3.6218             | 0.02859       | 0.02859        | 3.6218     |
| 15 | 4.6533             | 0.03673       | 0.03673        | 4.6533     |
| 16 | 5.8963             | 0.04654       | 0.04654        | 5.8963     |
| 17 | 5.3428             | 0.04217       | 0.04217        | 5.3428     |
| 18 | 5.2129             | 0.04114       | 0.04114        | 5.2129     |
| 19 | 2.7600             | 0.02178       | 0.02178        | 2.7600     |
| 20 | 24.1136            | 0.19032       | 0.19032        | 24.1136    |

RUN NO. 2314

TITLE

MCDONNELL

TIME 22.57.1  
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HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.350 PO= 9822. PO2= 7.442 PI=0.3251 QDOT-A=119.72

| N  | QDOT-N<br>(R/SF-S) | CONT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.8320             | 0.02365       | 0.02365        | 2.8320     |
| 2  | 3.5121             | 0.02934       | 0.02934        | 3.5121     |
| 3  | 3.4290             | 0.02864       | 0.02864        | 3.4290     |
| 4  | 4.3651             | 0.03646       | 0.03646        | 4.3651     |
| 5  | 3.7650             | 0.03145       | 0.03145        | 3.7650     |
| 6  | 4.8978             | 0.04091       | 0.04091        | 4.8978     |
| 7  | 4.6791             | 0.03741       | 0.03741        | 4.6791     |
| 8  | 3.6177             | 0.03022       | 0.03022        | 3.6177     |
| 9  | 4.5855             | 0.03830       | 0.03830        | 4.5855     |
| 10 | 3.7050             | 0.03095       | 0.03095        | 3.7050     |
| 11 | 4.2052             | 0.03513       | 0.03513        | 4.2052     |
| 12 | 4.0099             | 0.03349       | 0.03349        | 4.0099     |
| 13 | 4.3773             | 0.03656       | 0.03656        | 4.3773     |
| 14 | 3.4215             | 0.02858       | 0.02858        | 3.4215     |
| 15 | 4.4209             | 0.03693       | 0.03693        | 4.4209     |
| 16 | 5.5799             | 0.04661       | 0.04661        | 5.5799     |
| 17 | 5.0650             | 0.04231       | 0.04231        | 5.0650     |
| 18 | 4.9419             | 0.04128       | 0.04128        | 4.9419     |
| 19 | 2.5903             | 0.02164       | 0.02164        | 2.5903     |
| 20 | 22.6784            | 0.18943       | 0.18943        | 22.6784    |

RUN NO. 2314

TITLE

MC DONNELL

TIME 22.57.1  
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11/10/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0400 PD= 9155. P02= 6.998 P1=0.0065 QDOT-A=112.74

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/K/QDOT-A | QDOT-N/REF |
|----|--------------------|---------------|-----------------|------------|
| 1  | 2.6817             | 0.02379       | 0.02379         | 2.6817     |
| 2  | 3.3088             | 0.02935       | 0.02935         | 3.3088     |
| 3  | 3.2446             | 0.02878       | 0.02878         | 3.2446     |
| 4  | 4.0601             | 0.03619       | 0.03619         | 4.0601     |
| 5  | 3.5701             | 0.03167       | 0.03167         | 3.5701     |
| 6  | 4.5662             | 0.04050       | 0.04050         | 4.5662     |
| 7  | 4.1988             | 0.03724       | 0.03724         | 4.1988     |
| 8  | 3.3808             | 0.02999       | 0.02999         | 3.3808     |
| 9  | 4.2810             | 0.03797       | 0.03797         | 4.2810     |
| 10 | 3.5000             | 0.03106       | 0.03106         | 3.5000     |
| 11 | 3.9220             | 0.03479       | 0.03479         | 3.9220     |
| 12 | 3.7560             | 0.03332       | 0.03332         | 3.7560     |
| 13 | 4.0870             | 0.03625       | 0.03625         | 4.0870     |
| 14 | 3.2211             | 0.02857       | 0.02857         | 3.2211     |
| 15 | 4.1885             | 0.03715       | 0.03715         | 4.1885     |
| 16 | 5.2635             | 0.04669       | 0.04669         | 5.2635     |
| 17 | 4.7872             | 0.04246       | 0.04246         | 4.7872     |
| 18 | 4.6710             | 0.04143       | 0.04143         | 4.6710     |
| 19 | 2.4206             | 0.02147       | 0.02147         | 2.4206     |
| 20 | 21.2433            | 0.18843       | 0.18843         | 21.2433    |

TIME 22.57.1  
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11/10/67

MC DONNELL  
HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.450 P0= 8529. P02= 6.574 P1=0.02892 QDOT-A=105.76

| N  | QDOT-N<br>(H/SF-SI) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N, REF |
|----|---------------------|---------------|----------------|-------------|
| 1  | 2.5315              | 0.02394       | 0.02394        | 2.5315      |
| 2  | 3.1056              | 0.02936       | 0.02936        | 3.1056      |
| 3  | 3.0601              | 0.02803       | 0.02803        | 3.0601      |
| 4  | 3.7952              | 0.03508       | 0.03508        | 3.7952      |
| 5  | 3.3752              | 0.03191       | 0.03191        | 3.3752      |
| 6  | 4.2347              | 0.04004       | 0.04004        | 4.2347      |
| 7  | 3.9105              | 0.03705       | 0.03705        | 3.9105      |
| 8  | 3.1439              | 0.02973       | 0.02973        | 3.1439      |
| 9  | 3.9765              | 0.03760       | 0.03760        | 3.9765      |
| 10 | 3.2969              | 0.03115       | 0.03115        | 3.2969      |
| 11 | 3.6387              | 0.03441       | 0.03441        | 3.6387      |
| 12 | 3.5022              | 0.03311       | 0.03311        | 3.5022      |
| 13 | 3.7968              | 0.03590       | 0.03590        | 3.7968      |
| 14 | 3.0208              | 0.02856       | 0.02856        | 3.0208      |
| 15 | 3.9561              | 0.03741       | 0.03741        | 3.9561      |
| 16 | 4.9471              | 0.04678       | 0.04678        | 4.9471      |
| 17 | 4.5093              | 0.04264       | 0.04264        | 4.5093      |
| 18 | 4.4000              | 0.04160       | 0.04160        | 4.4000      |
| 19 | 2.2509              | 0.02128       | 0.02128        | 2.2509      |
| 20 | 19.8081             | 0.18729       | 0.18729        | 19.8081     |

TIME 22.57.1  
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MC DONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

RUN NO. 2314

TIME=0.0500 P0= 7944. P02= 6.172 P1=0.2720 QDOT-A= 98.78

| N  | QDOT-N<br>(R/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.3413             | 0.02411       | 0.02411        | 2.3913     |
| 2  | 2.9024             | 0.02934       | 0.02934        | 2.9024     |
| 3  | 2.8757             | 0.02911       | 0.02911        | 2.8757     |
| 4  | 3.5102             | 0.03556       | 0.03554        | 3.5102     |
| 5  | 3.1403             | 0.03220       | 0.03220        | 3.1403     |
| 6  | 3.9032             | 0.03952       | 0.03952        | 3.9032     |
| 7  | 3.6382             | 0.03683       | 0.03683        | 3.6382     |
| 8  | 2.9070             | 0.02943       | 0.02943        | 2.9070     |
| 9  | 3.6720             | 0.03717       | 0.03717        | 3.6720     |
| 10 | 3.0078             | 0.03128       | 0.03128        | 3.0078     |
| 11 | 3.3555             | 0.03397       | 0.03397        | 3.3555     |
| 12 | 3.2483             | 0.03288       | 0.03288        | 3.2483     |
| 13 | 3.5055             | 0.03550       | 0.03550        | 3.5055     |
| 14 | 2.8205             | 0.02855       | 0.02855        | 2.8205     |
| 15 | 3.7238             | 0.03770       | 0.03770        | 3.7238     |
| 16 | 4.6307             | 0.04688       | 0.04688        | 4.6307     |
| 17 | 4.2315             | 0.04284       | 0.04284        | 4.2315     |
| 18 | 4.1290             | 0.04180       | 0.04180        | 4.1290     |
| 19 | 2.0812             | 0.02107       | 0.02107        | 2.0812     |
| 20 | 18.3729            | 0.18600       | 0.18600        | 18.3729    |

TIME 22.57. 1  
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TITLE  
 MCDONNELL  
 HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

RUN NO. 2314

TIME=.0550 PO= 7399. P02= 5.790 PI=.02554 QDOT-A= 91.80

| N  | QDOT-N<br>(B/SE-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.2311             | 0.02430       | 0.02430        | 2.2311     |
| 2  | 2.6991             | 0.02940       | 0.02940        | 2.6991     |
| 3  | 2.6913             | 0.02932       | 0.02932        | 2.6913     |
| 4  | 3.2253             | 0.03513       | 0.03513        | 3.2253     |
| 5  | 2.9854             | 0.03252       | 0.03252        | 2.9854     |
| 6  | 3.5717             | 0.03891       | 0.03891        | 3.5717     |
| 7  | 3.3579             | 0.03658       | 0.03658        | 3.3579     |
| 8  | 2.6702             | 0.02909       | 0.02909        | 2.6702     |
| 9  | 3.3675             | 0.03668       | 0.03668        | 3.3675     |
| 10 | 2.8847             | 0.03142       | 0.03142        | 2.8847     |
| 11 | 3.0722             | 0.03347       | 0.03347        | 3.0722     |
| 12 | 2.9945             | 0.03262       | 0.03262        | 2.9945     |
| 13 | 3.2162             | 0.03504       | 0.03504        | 3.2162     |
| 14 | 2.6202             | 0.02854       | 0.02854        | 2.6202     |
| 15 | 3.4914             | 0.03803       | 0.03803        | 3.4914     |
| 16 | 4.3143             | 0.04700       | 0.04700        | 4.3143     |
| 17 | 3.9537             | 0.04307       | 0.04307        | 3.9537     |
| 18 | 3.8580             | 0.04203       | 0.04203        | 3.8580     |
| 19 | 1.9115             | 0.02082       | 0.02082        | 1.9115     |
| 20 | 16.9378            | 0.18451       | 0.18451        | 16.9378    |

TIME 22.57.1  
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TITLE  
 MCDONNELL

HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

RUN NO. 2314

TIME=0600 P0= 6895. P02= 5.428 P1= 02394 QDOT-A= 84.82

| N  | QDOT-N<br>(H/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.0809             | 0.02453       | 0.02453        | 2.0809     |
| 2  | 2.4959             | 0.02943       | 0.02943        | 2.4959     |
| 3  | 2.5068             | 0.02956       | 0.02956        | 2.5068     |
| 4  | 2.9403             | 0.03467       | 0.03467        | 2.9403     |
| 5  | 2.7905             | 0.03290       | 0.03290        | 2.7905     |
| 6  | 3.2402             | 0.03820       | 0.03820        | 3.2402     |
| 7  | 3.0776             | 0.03629       | 0.03629        | 3.0776     |
| 8  | 2.6333             | 0.02869       | 0.02869        | 2.6333     |
| 9  | 3.0630             | 0.03611       | 0.03611        | 3.0630     |
| 10 | 2.6796             | 0.03159       | 0.03159        | 2.6796     |
| 11 | 2.7890             | 0.03288       | 0.03288        | 2.7890     |
| 12 | 2.7406             | 0.03231       | 0.03231        | 2.7406     |
| 13 | 2.9260             | 0.03450       | 0.03450        | 2.9260     |
| 14 | 2.4198             | 0.02653       | 0.02653        | 2.4198     |
| 15 | 3.2590             | 0.03842       | 0.03842        | 3.2590     |
| 16 | 3.9978             | 0.04714       | 0.04714        | 3.9978     |
| 17 | 3.6759             | 0.04336       | 0.04336        | 3.6759     |
| 18 | 3.5871             | 0.04229       | 0.04229        | 3.5871     |
| 19 | 1.7418             | 0.02054       | 0.02054        | 1.7418     |
| 20 | 15.5026            | 0.18274       | 0.18274        | 15.5026    |



TIME 22.57.2  
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TITLE

MC DONNELL

RUN NO. 2314

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME=0.650 PO= 6431. PO2= 5.008 PI=0.2242 QDOT-A= 77.84

| N  | QDOT-N<br>(0/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.9307             | 0.02480       | 0.02410        | 1.9307     |
| 2  | 2.2926             | 0.02945       | 0.02945        | 2.2926     |
| 3  | 2.3224             | 0.02984       | 0.02984        | 2.3224     |
| 4  | 2.6554             | 0.03411       | 0.03411        | 2.6554     |
| 5  | 2.5956             | 0.03335       | 0.03335        | 2.5956     |
| 6  | 2.9087             | 0.03737       | 0.03737        | 2.9087     |
| 7  | 2.7973             | 0.03594       | 0.03594        | 2.7973     |
| 8  | 2.1964             | 0.02822       | 0.02822        | 2.1964     |
| 9  | 2.7585             | 0.03544       | 0.03544        | 2.7585     |
| 10 | 2.4746             | 0.03179       | 0.03179        | 2.4746     |
| 11 | 2.5057             | 0.03219       | 0.03219        | 2.5057     |
| 12 | 2.4368             | 0.03195       | 0.03195        | 2.4368     |
| 13 | 2.6357             | 0.03386       | 0.03386        | 2.6357     |
| 14 | 2.2195             | 0.02852       | 0.02852        | 2.2195     |
| 15 | 3.0266             | 0.03888       | 0.03888        | 3.0266     |
| 16 | 3.6814             | 0.04730       | 0.04730        | 3.6814     |
| 17 | 3.3981             | 0.04366       | 0.04366        | 3.3981     |
| 18 | 3.3161             | 0.04260       | 0.04260        | 3.3161     |
| 19 | 1.5721             | 0.02070       | 0.02070        | 1.5721     |
| 20 | 14.0674            | 0.18073       | 0.18073        | 14.0674    |

TIME 22.57.2  
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TITLE  
MCDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0700 PD= 6008. P02= 4.769 PL=02095 QDOT A= 70.85

| N  | QDOT-N<br>(B/SE-S) | CONF-N/QDOT-A | CONF-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.7805             | 0.02513       | 0.02513        | 1.7805     |
| 2  | 2.0894             | 0.02939       | 0.02949        | 2.0894     |
| 3  | 2.1380             | 0.03017       | 0.03017        | 2.1380     |
| 4  | 2.3704             | 0.03345       | 0.03345        | 2.3704     |
| 5  | 2.4007             | 0.03388       | 0.03388        | 2.4007     |
| 6  | 2.5772             | 0.03637       | 0.03637        | 2.5772     |
| 7  | 2.5170             | 0.03552       | 0.03552        | 2.5170     |
| 8  | 1.9595             | 0.02766       | 0.02766        | 1.9595     |
| 9  | 2.4540             | 0.03453       | 0.03453        | 2.4540     |
| 10 | 2.2695             | 0.03203       | 0.03203        | 2.2695     |
| 11 | 2.2225             | 0.03137       | 0.03137        | 2.2225     |
| 12 | 2.2329             | 0.03151       | 0.03151        | 2.2329     |
| 13 | 2.3454             | 0.03310       | 0.03310        | 2.3454     |
| 14 | 2.0192             | 0.02850       | 0.02850        | 2.0192     |
| 15 | 2.7942             | 0.03944       | 0.03944        | 2.7942     |
| 16 | 3.3650             | 0.04749       | 0.04749        | 3.3650     |
| 17 | 3.1203             | 0.04404       | 0.04404        | 3.1203     |
| 18 | 3.0451             | 0.04298       | 0.04298        | 3.0451     |
| 19 | 1.4024             | 0.01979       | 0.01979        | 1.4024     |
| 20 | 12.6323            | 0.17828       | 0.17828        | 12.6323    |

TIME 22.57.2  
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MC DONNELL  
 HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

TIME=0.0750 PO= 5626. PO2= 4.470 P1=0.01952 QDOT-A= 63.87

| N  | QDOT-N<br>(B/SP-S) | COOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.6303             | 0.02552       | 0.02552        | 1.6303     |
| 2  | 1.8861             | 0.02953       | 0.02953        | 1.8861     |
| 3  | 1.9536             | 0.03058       | 0.03058        | 1.9536     |
| 4  | 2.0055             | 0.03265       | 0.03265        | 2.0055     |
| 5  | 2.2058             | 0.03453       | 0.03453        | 2.2058     |
| 6  | 2.2456             | 0.03516       | 0.03516        | 2.2456     |
| 7  | 2.2367             | 0.03502       | 0.03502        | 2.2367     |
| 8  | 1.7226             | 0.02697       | 0.02697        | 1.7226     |
| 9  | 2.1495             | 0.03365       | 0.03365        | 2.1495     |
| 10 | 2.0644             | 0.03232       | 0.03232        | 2.0644     |
| 11 | 1.9392             | 0.03036       | 0.03036        | 1.9392     |
| 12 | 1.9791             | 0.03098       | 0.03098        | 1.9791     |
| 13 | 2.0551             | 0.03217       | 0.03217        | 2.0551     |
| 14 | 1.8189             | 0.02848       | 0.02848        | 1.8189     |
| 15 | 2.5618             | 0.04011       | 0.04011        | 2.5618     |
| 16 | 3.0486             | 0.04773       | 0.04773        | 3.0486     |
| 17 | 2.8425             | 0.04450       | 0.04450        | 2.8425     |
| 18 | 2.7741             | 0.04343       | 0.04343        | 2.7741     |
| 19 | 1.2327             | 0.01930       | 0.01930        | 1.2327     |
| 20 | 11.1971            | 0.17530       | 0.17530        | 11.1971    |

RUN NO. 2314

TITLE

MCDONNELL

TIME 22.57.2  
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11/10/67

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME=0800 PO= 5284. PO2= 4.192 PI=0.1819 QDOT-A= 56.89

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.4801             | 0.02601       | 0.02601        | 1.4801     |
| 2  | 1.6829             | 0.02958       | 0.02958        | 1.6829     |
| 3  | 1.7691             | 0.03110       | 0.03110        | 1.7691     |
| 4  | 1.8005             | 0.03165       | 0.03165        | 1.8005     |
| 5  | 2.0109             | 0.03534       | 0.03534        | 2.0109     |
| 6  | 1.9141             | 0.03364       | 0.03364        | 1.9141     |
| 7  | 1.9564             | 0.03439       | 0.03439        | 1.9564     |
| 8  | 1.4058             | 0.02612       | 0.02612        | 1.4058     |
| 9  | 1.8450             | 0.03243       | 0.03243        | 1.8450     |
| 10 | 1.8593             | 0.03268       | 0.03268        | 1.8593     |
| 11 | 1.6560             | 0.02911       | 0.02911        | 1.6560     |
| 12 | 1.7252             | 0.03032       | 0.03032        | 1.7252     |
| 13 | 1.7649             | 0.03102       | 0.03102        | 1.7649     |
| 14 | 1.6186             | 0.02845       | 0.02845        | 1.6186     |
| 15 | 2.3294             | 0.04094       | 0.04094        | 2.3294     |
| 16 | 2.7322             | 0.04802       | 0.04802        | 2.7322     |
| 17 | 2.5647             | 0.04508       | 0.04508        | 2.5647     |
| 18 | 2.5032             | 0.04400       | 0.04400        | 2.5032     |
| 19 | 1.0630             | 0.01868       | 0.01868        | 1.0630     |
| 20 | 9.7619             | 0.17158       | 0.17158        | 9.7619     |

RUN NO. 2314

TITLE

MCDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME 22.57.2  
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11/10/67

| TIME=0.0050 PO= 4.935 PI=0.1695 QDOT-A= 49.91 |                    |               |            |
|-----------------------------------------------|--------------------|---------------|------------|
| N                                             | QDOT-N<br>(N/SP-S) | QDOT-N/QDOT-A | QDOT-N/REF |
| 1                                             | 1.3299             | 0.02664       | 1.3209     |
| 2                                             | 1.4796             | 0.02965       | 1.4706     |
| 3                                             | 1.5047             | 0.03175       | 1.5047     |
| 4                                             | 1.5156             | 0.03036       | 1.5156     |
| 5                                             | 1.8160             | 0.03630       | 1.8160     |
| 6                                             | 1.5826             | 0.03171       | 1.5826     |
| 7                                             | 1.6761             | 0.03358       | 1.6761     |
| 8                                             | 1.7489             | 0.02502       | 1.7489     |
| 9                                             | 1.5405             | 0.03086       | 1.5405     |
| 10                                            | 1.6543             | 0.03314       | 1.6543     |
| 11                                            | 1.3727             | 0.02750       | 1.3727     |
| 12                                            | 1.4714             | 0.02948       | 1.4714     |
| 13                                            | 1.4746             | 0.02954       | 1.4746     |
| 14                                            | 1.4182             | 0.02861       | 1.4182     |
| 15                                            | 2.0970             | 0.04201       | 2.0970     |
| 16                                            | 2.4158             | 0.04840       | 2.4158     |
| 17                                            | 2.2869             | 0.04582       | 2.2869     |
| 18                                            | 2.2322             | 0.04472       | 2.2322     |
| 19                                            | 0.8933             | 0.01790       | 0.8933     |
| 20                                            | 8.3264             | 0.16683       | 8.3268     |

RUN NO. 2314

TITLE

MCDONNELL

TIME 22.57.2

PAGE NO. 224, VOL. I

REP. NO. 0004

11/10/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.0400 PD= 4723. P02= 3.698 PI=0.1576 QDOT-A= 42.93

| N  | QDOT-N<br>(0/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.1796             | 0.02748       | 0.02748        | 1.1796     |
| 2  | 1.2764             | 0.02973       | 0.02973        | 1.2764     |
| 3  | 1.4003             | 0.03262       | 0.03262        | 1.4003     |
| 4  | 1.2306             | 0.02866       | 0.02866        | 1.2306     |
| 5  | 1.6211             | 0.03776       | 0.03776        | 1.6211     |
| 6  | 1.2511             | 0.02916       | 0.02916        | 1.2511     |
| 7  | 1.3958             | 0.03251       | 0.03251        | 1.3958     |
| 8  | 1.0120             | 0.02357       | 0.02357        | 1.0120     |
| 9  | 1.2360             | 0.02879       | 0.02879        | 1.2360     |
| 10 | 1.4492             | 0.03376       | 0.03376        | 1.4492     |
| 11 | 1.0895             | 0.02538       | 0.02538        | 1.0895     |
| 12 | 1.2175             | 0.02836       | 0.02836        | 1.2175     |
| 13 | 1.1843             | 0.02759       | 0.02759        | 1.1843     |
| 14 | 1.2179             | 0.02837       | 0.02837        | 1.2179     |
| 15 | 1.8646             | 0.04343       | 0.04343        | 1.8646     |
| 16 | 2.0993             | 0.04890       | 0.04890        | 2.0993     |
| 17 | 2.0091             | 0.04680       | 0.04680        | 2.0091     |
| 18 | 1.9612             | 0.04568       | 0.04568        | 1.9612     |
| 19 | 0.7236             | 0.01386       | 0.01386        | 0.7236     |
| 20 | 6.8916             | 0.16053       | 0.16053        | 6.8916     |

TIME 22.57.2  
PAGE NO. 225, VOL. I  
REP. NO. 6004  
11/10/67

TITLE

RUN NO. 2314

MCDONNELL

MT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME = 0.0950 P1 = 4503. P12 = 3.483 P13 = 0.1466 QDOT-A = 15.95

| N  | QDOT-N<br>(0.1 SF-5) | QDOT-N/ODOT-A | QDOT-N/KDOT-A | QDOT-N/KFF |
|----|----------------------|---------------|---------------|------------|
| 1  | 1.0294               | 0.02863       | 0.02863       | 1.0294     |
| 2  | 1.0732               | 0.02905       | 0.02905       | 1.0732     |
| 3  | 1.2158               | 0.03382       | 0.03382       | 1.2158     |
| 4  | 0.9457               | 0.02630       | 0.02630       | 0.9457     |
| 5  | 1.4262               | 0.03967       | 0.03967       | 1.4262     |
| 6  | 0.9196               | 0.02558       | 0.02558       | 0.9196     |
| 7  | 1.1155               | 0.03103       | 0.03103       | 1.1155     |
| 8  | 0.7751               | 0.02156       | 0.02156       | 0.7751     |
| 9  | 0.9315               | 0.02591       | 0.02591       | 0.9315     |
| 10 | 1.2441               | 0.03461       | 0.03461       | 1.2441     |
| 11 | 0.8062               | 0.02243       | 0.02243       | 0.8062     |
| 12 | 0.9636               | 0.02681       | 0.02681       | 0.9636     |
| 13 | 0.8940               | 0.02487       | 0.02487       | 0.8940     |
| 14 | 1.0176               | 0.02831       | 0.02831       | 1.0176     |
| 15 | 1.6323               | 0.04540       | 0.04540       | 1.6323     |
| 16 | 1.7829               | 0.04959       | 0.04959       | 1.7829     |
| 17 | 1.7313               | 0.04816       | 0.04816       | 1.7313     |
| 18 | 1.6902               | 0.04702       | 0.04702       | 1.6902     |
| 19 | 0.5539               | 0.01541       | 0.01541       | 0.5539     |
| 20 | 5.4564               | 0.15170       | 0.15170       | 5.4564     |

TIME 22.57.3  
PAGE NO. 226, VOL. I  
REP. NO. 0004  
11/10/67

TITLE  
MCDONNELL

RUN NO. 2314

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=1.000 PO= 4324. PO2= 3.288 PI= 0.1360 QDOT-A= 20.97

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 0.8792             | 0.03035       | 0.03035        | 0.8792     |
| 2  | 0.8699             | 0.03003       | 0.03003        | 0.8699     |
| 3  | 1.0314             | 0.03560       | 0.03560        | 1.0314     |
| 4  | 0.6607             | 0.02281       | 0.02281        | 0.6607     |
| 5  | 1.2313             | 0.04250       | 0.04250        | 1.2313     |
| 6  | 0.5801             | 0.02030       | 0.02030        | 0.5801     |
| 7  | 0.8352             | 0.02883       | 0.02883        | 0.8352     |
| 8  | 0.5382             | 0.01858       | 0.01858        | 0.5382     |
| 9  | 0.6270             | 0.02164       | 0.02164        | 0.6270     |
| 10 | 1.0390             | 0.03587       | 0.03587        | 1.0390     |
| 11 | 0.5230             | 0.01805       | 0.01805        | 0.5230     |
| 12 | 0.7608             | 0.02450       | 0.02450        | 0.7608     |
| 13 | 0.6038             | 0.02006       | 0.02006        | 0.6038     |
| 14 | 0.8173             | 0.02821       | 0.02821        | 0.8173     |
| 15 | 1.3909             | 0.04832       | 0.04832        | 1.3909     |
| 16 | 1.4665             | 0.05062       | 0.05062        | 1.4665     |
| 17 | 1.4535             | 0.05017       | 0.05017        | 1.4535     |
| 18 | 1.4193             | 0.04899       | 0.04899        | 1.4193     |
| 19 | 0.3862             | 0.01326       | 0.01326        | 0.3862     |
| 20 | 4.0213             | 0.13081       | 0.13081        | 4.0213     |



TIME 22.57. 3  
PACE NO. 227, VOL. I  
REP. NO. 0004  
11/10/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2314

TIME = 0.0300 PD=10529.70 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.151518 | 0.144F-04 | 0.192E-01 | 0.440E 01 | 0.275E-01   |
| 2     | 0.0 | 0.161408 | 0.154F-04 | 0.205E-01 | 0.470E 01 | 0.299E-01   |
| 3     | 0.0 | 0.157648 | 0.150E-04 | 0.199F-01 | 0.458E 01 | 0.289E-01   |
| 4     | 0.0 | 0.162653 | 0.154F-04 | 0.206E-01 | 0.472E 01 | 0.301E-01   |
| 5     | 0.0 | 0.164735 | 0.156F-04 | 0.208E-01 | 0.478E 01 | 0.303E-01   |
| 6     | 0.0 | 0.171291 | 0.163E-04 | 0.217E-01 | 0.498E 01 | 0.321E-01   |
| 7     | 0.0 | 0.183126 | 0.174F-04 | 0.237E-01 | 0.532E 01 | 0.349E-01   |
| 8     | 0.0 | 0.153638 | 0.146E-04 | 0.194F-01 | 0.446E 01 | 0.280E-01   |
| 9     | 0.0 | 0.176790 | 0.168F-04 | 0.224F-01 | 0.513E 01 | 0.334E-01   |
| 10    | 0.0 | 0.176229 | 0.170E-04 | 0.227F-01 | 0.521E 01 | 0.340E-01   |
| 11    | 0.0 | 0.153428 | 0.146E-04 | 0.194F-01 | 0.446E 01 | 0.279E-01   |
| 12    | 0.0 | 0.172401 | 0.164E-04 | 0.219E-01 | 0.502E 01 | 0.325E-01   |
| 13    | 0.0 | 0.156429 | 0.149E-04 | 0.198F-01 | 0.454E 01 | 0.286E-01   |
| 14    | 0.0 | 0.176906 | 0.168E-04 | 0.224E-01 | 0.514E 01 | 0.334E-01   |
| 15    | 0.0 | 0.191143 | 0.182E-04 | 0.242F-01 | 0.555E 01 | 0.368E-01   |
| 16    | 0.0 | 0.228937 | 0.217E-04 | 0.270F-01 | 0.665E 01 | 0.456E-01   |
| 17    | 0.0 | 0.259027 | 0.246F-04 | 0.328F-01 | 0.742E 01 | 0.527E-01   |
| 18    | 0.0 | 0.246112 | 0.234F-04 | 0.311F-01 | 0.715E 01 | 0.497E-01   |
| 19    | 0.0 | 0.105026 | 0.997E-05 | 0.133E-01 | 0.305E 01 | 0.166E-01   |
| 20    | 0.0 | 0.695115 | 0.660E-04 | 0.879E-01 | 0.202E 02 | 0.155E 00   |

MCDONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2314

TIME= 0.0350 PO= 9822.20 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | C.0 | 0.141321 | 0.144E-04 | 0.190E-01 | 0.435E 01 | 0.271E-01   |
| 2     | C.0 | 0.148690 | 0.151E-04 | 0.200E-01 | 0.457E 01 | 0.289E-01   |
| 3     | C.0 | 0.146793 | 0.149E-04 | 0.197E-01 | 0.452E 01 | 0.285E-01   |
| 4     | C.0 | 0.150270 | 0.153E-04 | 0.202E-01 | 0.462E 01 | 0.293E-01   |
| 5     | C.0 | 0.151526 | 0.154E-04 | 0.204E-01 | 0.466E 01 | 0.297E-01   |
| 6     | C.0 | 0.156570 | 0.159E-04 | 0.210E-01 | 0.482E 01 | 0.309E-01   |
| 7     | C.0 | 0.167878 | 0.171E-04 | 0.226E-01 | 0.516E 01 | 0.337E-01   |
| 8     | C.0 | 0.140026 | 0.143E-04 | 0.188E-01 | 0.431E 01 | 0.269E-01   |
| 9     | C.0 | 0.161149 | 0.164E-04 | 0.217E-01 | 0.496E 01 | 0.321E-01   |
| 10    | C.0 | 0.166133 | 0.169E-04 | 0.223E-01 | 0.512E 01 | 0.333E-01   |
| 11    | C.0 | 0.139424 | 0.142E-04 | 0.187E-01 | 0.429E 01 | 0.266E-01   |
| 12    | C.0 | 0.157892 | 0.161E-04 | 0.212E-01 | 0.486E 01 | 0.312E-01   |
| 13    | C.0 | 0.142310 | 0.145E-04 | 0.191E-01 | 0.438E 01 | 0.274E-01   |
| 14    | C.0 | 0.163672 | 0.167E-04 | 0.220E-01 | 0.503E 01 | 0.327E-01   |
| 15    | C.0 | 0.183999 | 0.187E-04 | 0.247E-01 | 0.566E 01 | 0.377E-01   |
| 16    | C.0 | 0.216524 | 0.220E-04 | 0.291E-01 | 0.666E 01 | 0.459E-01   |
| 17    | C.0 | 0.240436 | 0.245E-04 | 0.323E-01 | 0.740E 01 | 0.518E-01   |
| 18    | C.0 | 0.224987 | 0.229E-04 | 0.302E-01 | 0.692E 01 | 0.480E-01   |
| 19    | C.0 | 0.094938 | 0.967E-05 | 0.128E-01 | 0.292E 01 | 0.156E-01   |
| 20    | C.0 | 0.631215 | 0.643E-04 | 0.848E-01 | 0.194E 02 | 0.149E 00   |

TIME 22.57.4  
PAGE NO. 229, VOL. I  
REP. NO. 0004  
11/10/67

HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2314

MCDONNELL

TIME = 0.0400 PO = 9155.36 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/OI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.131718 | 0.144E-04 | 0.144E-01 | 0.430E 01 | 0.264E-01   |
| 2     | 0.0 | 0.136516 | 0.149E-04 | 0.149E-01 | 0.445E 01 | 0.280E-01   |
| 3     | 0.0 | 0.136601 | 0.147E-04 | 0.147E-01 | 0.446E 01 | 0.281E-01   |
| 4     | 0.0 | 0.136666 | 0.151E-04 | 0.151E-01 | 0.452E 01 | 0.286E-01   |
| 5     | 0.0 | 0.139200 | 0.152E-04 | 0.152E-01 | 0.454E 01 | 0.288E-01   |
| 6     | 0.0 | 0.142900 | 0.156E-04 | 0.156E-01 | 0.466E 01 | 0.297E-01   |
| 7     | 0.0 | 0.153485 | 0.168E-04 | 0.168E-01 | 0.501E 01 | 0.325E-01   |
| 8     | 0.0 | 0.127471 | 0.139E-04 | 0.139E-01 | 0.416E 01 | 0.257E-01   |
| 9     | 0.0 | 0.146650 | 0.160E-04 | 0.160E-01 | 0.478E 01 | 0.307E-01   |
| 10    | 0.0 | 0.154147 | 0.168E-04 | 0.168E-01 | 0.503E 01 | 0.327E-01   |
| 11    | 0.0 | 0.126551 | 0.138E-04 | 0.138E-01 | 0.413E 01 | 0.254E-01   |
| 12    | 0.0 | 0.144053 | 0.157E-04 | 0.157E-01 | 0.470E 01 | 0.300E-01   |
| 13    | 0.0 | 0.129315 | 0.141E-04 | 0.141E-01 | 0.422E 01 | 0.261E-01   |
| 14    | 0.0 | 0.151257 | 0.165E-04 | 0.165E-01 | 0.493E 01 | 0.320E-01   |
| 15    | 0.0 | 0.176599 | 0.193E-04 | 0.193E-01 | 0.578E 01 | 0.387E-01   |
| 16    | 0.0 | 0.204347 | 0.223E-04 | 0.223E-01 | 0.667E 01 | 0.460E-01   |
| 17    | 0.0 | 0.222734 | 0.243E-04 | 0.243E-01 | 0.727E 01 | 0.509E-01   |
| 18    | 0.0 | 0.205082 | 0.224E-04 | 0.224E-01 | 0.669E 01 | 0.462E-01   |
| 19    | 0.0 | 0.085653 | 0.096E-05 | 0.096E-01 | 0.279E 01 | 0.146E-01   |
| 20    | 0.0 | 0.572337 | 0.625E-04 | 0.625E-01 | 0.107E 02 | 0.144E 00   |

TIME 22.57.4  
PAGE NO. 230, VOL. I  
REP. NO. 6004  
11/1 C/67

MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2314

TIME= 0.0450 PO= 8529.17 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PN    | PON/P02   | PON/P1    | (PON-P1)/01 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.122711 | 0.144E-04 | 0.187E-01 | 0.424E 01 | 0.264E-01   |
| 2     | 0.0 | 0.125288 | 0.147E-04 | 0.191E-01 | 0.433E 01 | 0.272E-01   |
| 3     | 0.0 | 0.127070 | 0.149E-04 | 0.193E-01 | 0.439E 01 | 0.277E-01   |
| 4     | 0.0 | 0.127842 | 0.150E-04 | 0.194E-01 | 0.442E 01 | 0.279E-01   |
| 5     | 0.0 | 0.127756 | 0.150E-04 | 0.194E-01 | 0.442E 01 | 0.279E-01   |
| 6     | 0.0 | 0.130280 | 0.153E-04 | 0.198E-01 | 0.450E 01 | 0.286E-01   |
| 7     | 0.0 | 0.140149 | 0.164E-04 | 0.213E-01 | 0.485E 01 | 0.314E-01   |
| 8     | 0.0 | 0.115972 | 0.136E-04 | 0.176E-01 | 0.401E 01 | 0.245E-01   |
| 9     | 0.0 | 0.133291 | 0.156E-04 | 0.203E-01 | 0.461E 01 | 0.294E-01   |
| 10    | 0.0 | 0.142670 | 0.167E-04 | 0.217E-01 | 0.493E 01 | 0.321E-01   |
| 11    | 0.0 | 0.114810 | 0.135E-04 | 0.175E-01 | 0.397E 01 | 0.242E-01   |
| 12    | 0.0 | 0.131283 | 0.154E-04 | 0.200E-01 | 0.454E 01 | 0.289E-01   |
| 13    | 0.0 | 0.117446 | 0.138E-04 | 0.179E-01 | 0.406E 01 | 0.250E-01   |
| 14    | 0.0 | 0.139659 | 0.164E-04 | 0.212E-01 | 0.483E 01 | 0.312E-01   |
| 15    | 0.0 | 0.168541 | 0.198E-04 | 0.257E-01 | 0.584E 01 | 0.395E-01   |
| 16    | 0.0 | 0.192405 | 0.226E-04 | 0.293E-01 | 0.665E 01 | 0.461E-01   |
| 17    | 0.0 | 0.205021 | 0.241E-04 | 0.313E-01 | 0.712E 01 | 0.499E-01   |
| 18    | 0.0 | 0.186595 | 0.219E-04 | 0.284E-01 | 0.645E 01 | 0.445E-01   |
| 19    | 0.0 | 0.077169 | 0.905E-05 | 0.117E-01 | 0.267E 01 | 0.136E-01   |
| 20    | 0.0 | 0.510481 | 0.608E-04 | 0.789E-01 | 0.179E 02 | 0.138E 00   |

TIME 22.57.4  
PAGE NO. 231, VOL. 1  
REP. NO. 0001  
11/10/67

MC DONNELL

TITLE

RUN NO. 2314

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0500 P0 = 7943.63 ALPHA = 15.00

| PROBE | PHI | PCN      | PON/PI    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.114299 | 0.144E-04 | 0.185E-01 | 0.420E 01 | 0.262E-01   |
| 2     | 0.0 | 0.115005 | 0.145E-04 | 0.186E-01 | 0.423E 01 | 0.264E-01   |
| 3     | 0.0 | 0.118201 | 0.149E-04 | 0.192E-01 | 0.435E 01 | 0.271E-01   |
| 4     | 0.0 | 0.117798 | 0.148E-04 | 0.191E-01 | 0.433E 01 | 0.272E-01   |
| 5     | 0.0 | 0.117193 | 0.148E-04 | 0.190E-01 | 0.431E 01 | 0.270E-01   |
| 6     | 0.0 | 0.118711 | 0.149E-04 | 0.192E-01 | 0.436E 01 | 0.275E-01   |
| 7     | 0.0 | 0.127869 | 0.161E-04 | 0.207E-01 | 0.470E 01 | 0.302E-01   |
| 8     | 0.0 | 0.105520 | 0.133E-04 | 0.171E-01 | 0.388E 01 | 0.245E-01   |
| 9     | 0.0 | 0.121073 | 0.152E-04 | 0.196E-01 | 0.445E 01 | 0.282E-01   |
| 10    | 0.0 | 0.131704 | 0.166E-04 | 0.214E-01 | 0.485E 01 | 0.314E-01   |
| 11    | 0.0 | 0.104202 | 0.131E-04 | 0.169E-01 | 0.383E 01 | 0.231E-01   |
| 12    | 0.0 | 0.119584 | 0.151E-04 | 0.194E-01 | 0.440E 01 | 0.277E-01   |
| 13    | 0.0 | 0.106701 | 0.134E-04 | 0.173E-01 | 0.397E 01 | 0.239E-01   |
| 14    | 0.0 | 0.128879 | 0.162E-04 | 0.209E-01 | 0.474E 01 | 0.305E-01   |
| 15    | 0.0 | 0.161026 | 0.203E-04 | 0.261E-01 | 0.592E 01 | 0.402E-01   |
| 16    | 0.0 | 0.180698 | 0.227E-04 | 0.293E-01 | 0.664E 01 | 0.461E-01   |
| 17    | 0.0 | 0.189796 | 0.239E-04 | 0.308E-01 | 0.699E 01 | 0.489E-01   |
| 18    | 0.0 | 0.165528 | 0.213E-04 | 0.275E-01 | 0.623E 01 | 0.427E-01   |
| 19    | 0.0 | 0.069488 | 0.875E-05 | 0.113E-01 | 0.255E 01 | 0.127E-01   |
| 20    | 0.0 | 0.469647 | 0.591E-04 | 0.761E-01 | 0.173E 02 | 0.133E 00   |

RUN NO. 2314

TITLE

MCDONNELL

TIME 22.57.5  
PAGE NO. 232, VOL. I  
REP. NO. 6004  
11/10/67

MIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0550 PO = 7398.75 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.106483 | 0.144E-04 | 0.184E-01 | 0.417E 01 | 0.259E-01   |
| 2     | 0.0 | 0.105667 | 0.143E-04 | 0.183E-01 | 0.414E 01 | 0.256E-01   |
| 3     | 0.0 | 0.109994 | 0.149E-04 | 0.190E-01 | 0.431E 01 | 0.270E-01   |
| 4     | 0.0 | 0.108534 | 0.147E-04 | 0.187E-01 | 0.425E 01 | 0.266E-01   |
| 5     | 0.0 | 0.107513 | 0.145E-04 | 0.186E-01 | 0.421E 01 | 0.262E-01   |
| 6     | 0.0 | 0.108193 | 0.146E-04 | 0.187E-01 | 0.424E 01 | 0.264E-01   |
| 7     | 0.0 | 0.116644 | 0.150E-04 | 0.201E-01 | 0.557E 01 | 0.292E-01   |
| 8     | 0.0 | 0.096143 | 0.130E-04 | 0.166E-01 | 0.376E 01 | 0.226E-01   |
| 9     | 0.0 | 0.109995 | 0.149E-04 | 0.190E-01 | 0.431E 01 | 0.270E-01   |
| 10    | 0.0 | 0.121849 | 0.165E-04 | 0.210E-01 | 0.477E 01 | 0.308E-01   |
| 11    | 0.0 | 0.094725 | 0.128E-04 | 0.164E-01 | 0.371E 01 | 0.221E-01   |
| 12    | 0.0 | 0.108954 | 0.147E-04 | 0.188E-01 | 0.427E 01 | 0.267E-01   |
| 13    | 0.0 | 0.097082 | 0.131E-04 | 0.168E-01 | 0.390E 01 | 0.229E-01   |
| 14    | 0.0 | 0.118917 | 0.161E-04 | 0.205E-01 | 0.466E 01 | 0.299E-01   |
| 15    | 0.0 | 0.152854 | 0.207E-04 | 0.264E-01 | 0.599E 01 | 0.407E-01   |
| 16    | 0.0 | 0.169226 | 0.229E-04 | 0.292E-01 | 0.663E 01 | 0.440E-01   |
| 17    | 0.0 | 0.174960 | 0.236E-04 | 0.302E-01 | 0.685E 01 | 0.478E-01   |
| 18    | 0.0 | 0.153881 | 0.208E-04 | 0.266E-01 | 0.603E 01 | 0.411E-01   |
| 19    | 0.0 | 0.062608 | 0.086E-04 | 0.108E-01 | 0.245E 01 | 0.119E-01   |
| 20    | 0.0 | 0.425834 | 0.576E-04 | 0.736E-01 | 0.167E 02 | 0.128E 00   |

TIME 22.57.5  
 PAGE NO. 233, VOL. I  
 REP. NO. 6034  
 11/10/67

MT TEST NO. 67  
 PRESSURE SURVEY

TITLE

RUN NO. 2314

MC DONNELL

TIME = 0.0600 PD = 6094.51 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.09261  | 0.144E-04 | 0.183E-01 | 0.415E 01 | 0.257E-01   |
| 2     | 0.0 | 0.097274 | 0.141E-04 | 0.179E-01 | 0.406E 01 | 0.250E-01   |
| 3     | 0.0 | 0.102448 | 0.149E-04 | 0.199E-01 | 0.428E 01 | 0.268E-01   |
| 4     | 0.0 | 0.100049 | 0.145E-04 | 0.194E-01 | 0.418E 01 | 0.260E-01   |
| 5     | 0.0 | 0.098715 | 0.143E-04 | 0.182E-01 | 0.412E 01 | 0.255E-01   |
| 6     | 0.0 | 0.098726 | 0.143E-04 | 0.182E-01 | 0.412E 01 | 0.255E-01   |
| 7     | 0.0 | 0.106476 | 0.154E-04 | 0.196E-01 | 0.445E 01 | 0.282E-01   |
| 8     | 0.0 | 0.087814 | 0.127E-04 | 0.162E-01 | 0.367E 01 | 0.218E-01   |
| 9     | 0.0 | 0.100058 | 0.145E-04 | 0.186E-01 | 0.418E 01 | 0.260E-01   |
| 10    | 0.0 | 0.112503 | 0.163E-04 | 0.207E-01 | 0.470E 01 | 0.302E-01   |
| 11    | 0.0 | 0.096301 | 0.125E-04 | 0.159E-01 | 0.361E 01 | 0.213E-01   |
| 12    | 0.0 | 0.099304 | 0.144E-04 | 0.193E-01 | 0.415E 01 | 0.257E-01   |
| 13    | 0.0 | 0.098948 | 0.128E-04 | 0.163E-01 | 0.370E 01 | 0.221E-01   |
| 14    | 0.0 | 0.117773 | 0.159E-04 | 0.202E-01 | 0.458E 01 | 0.293E-01   |
| 15    | 0.0 | 0.114425 | 0.209E-04 | 0.266E-01 | 0.603E 01 | 0.411E-01   |
| 16    | 0.0 | 0.157990 | 0.229E-04 | 0.291E-01 | 0.660E 01 | 0.457E-01   |
| 17    | 0.0 | 0.160812 | 0.233E-04 | 0.296E-01 | 0.672E 01 | 0.467E-01   |
| 18    | 0.0 | 0.139653 | 0.203E-04 | 0.257E-01 | 0.583E 01 | 0.395E-01   |
| 19    | 0.0 | 0.056531 | 0.870E-05 | 0.104E-01 | 0.236E 01 | 0.111E-01   |
| 20    | 0.0 | 0.387044 | 0.561E-04 | 0.713E-01 | 0.162E 02 | 0.124E 00   |

TIME 22.57.6  
PAGE NO. 234, VOL. I  
REP. NO. 6004  
11/10/67

TITLE  
MCDONNELL

RUN NO. 2314

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0650 PO = 6430.94 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PI    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.092634 | 0.144E-04 | 0.182E-01 | 0.413E 01 | 0.256E-01   |
| 2     | 0.0 | 0.089826 | 0.140E-04 | 0.177E-01 | 0.401E 01 | 0.245E-01   |
| 3     | 0.0 | 0.095564 | 0.149E-04 | 0.188E-01 | 0.426E 01 | 0.266E-01   |
| 4     | 0.0 | 0.092345 | 0.144E-04 | 0.181E-01 | 0.412E 01 | 0.254E-01   |
| 5     | 0.0 | 0.090797 | 0.141E-04 | 0.178E-01 | 0.405E 01 | 0.247E-01   |
| 6     | 0.0 | 0.090309 | 0.140E-04 | 0.177E-01 | 0.403E 01 | 0.247E-01   |
| 7     | 0.0 | 0.097364 | 0.151E-04 | 0.191E-01 | 0.434E 01 | 0.277E-01   |
| 8     | 0.0 | 0.080540 | 0.125E-04 | 0.158E-01 | 0.359E 01 | 0.212E-01   |
| 9     | 0.0 | 0.091761 | 0.142E-04 | 0.179E-01 | 0.407E 01 | 0.251E-01   |
| 10    | 0.0 | 0.103467 | 0.162E-04 | 0.206E-01 | 0.463E 01 | 0.296E-01   |
| 11    | 0.0 | 0.079169 | 0.123E-04 | 0.156E-01 | 0.353E 01 | 0.207E-01   |
| 12    | 0.0 | 0.090905 | 0.141E-04 | 0.179E-01 | 0.406E 01 | 0.247E-01   |
| 13    | 0.0 | 0.081218 | 0.126E-04 | 0.160E-01 | 0.362E 01 | 0.214E-01   |
| 14    | 0.0 | 0.101447 | 0.158E-04 | 0.199E-01 | 0.453E 01 | 0.289E-01   |
| 15    | 0.0 | 0.135736 | 0.211E-04 | 0.267E-01 | 0.606E 01 | 0.412E-01   |
| 16    | 0.0 | 0.146989 | 0.229E-04 | 0.289E-01 | 0.654E 01 | 0.453E-01   |
| 17    | 0.0 | 0.147553 | 0.229E-04 | 0.290E-01 | 0.658E 01 | 0.455E-01   |
| 18    | 0.0 | 0.126345 | 0.197E-04 | 0.249E-01 | 0.566E 01 | 0.380E-01   |
| 19    | 0.0 | 0.051255 | 0.079E-04 | 0.101E-01 | 0.229E 01 | 0.109E-01   |
| 20    | 0.0 | 0.353275 | 0.549E-04 | 0.694E-01 | 0.158E 02 | 0.129E 00   |



TIME 22.57.6  
PAGE NO. 235, VOL. I  
REP. NO. 6004  
11/10/67

MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2314

TIME = 6.0760 PD = 6008.02 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | C.0 | 0.086602 | 0.144E-04 | 0.182E-01 | 0.413E 01 | 0.255E-01   |
| 2     | 0.0 | 0.083123 | 0.139E-04 | 0.175E-01 | 0.398E 01 | 0.242E-01   |
| 3     | 0.0 | 0.089342 | 0.149E-04 | 0.187E-01 | 0.426E 01 | 0.265E-01   |
| 4     | C.0 | 0.085419 | 0.142E-04 | 0.179E-01 | 0.408E 01 | 0.250E-01   |
| 5     | 0.0 | 0.082765 | 0.139E-04 | 0.176E-01 | 0.400E 01 | 0.244E-01   |
| 6     | 0.0 | 0.082943 | 0.138E-04 | 0.174E-01 | 0.396E 01 | 0.241E-01   |
| 7     | 0.0 | 0.089307 | 0.149E-04 | 0.187E-01 | 0.426E 01 | 0.265E-01   |
| 8     | 0.0 | 0.074323 | 0.124E-04 | 0.156E-01 | 0.351E 01 | 0.207E-01   |
| 9     | 0.0 | 0.083605 | 0.139E-04 | 0.175E-01 | 0.399E 01 | 0.243E-01   |
| 10    | C.0 | 0.095942 | 0.160E-04 | 0.201E-01 | 0.458E 01 | 0.291E-01   |
| 11    | C.0 | 0.073389 | 0.122E-04 | 0.153E-01 | 0.349E 01 | 0.202E-01   |
| 12    | C.0 | 0.083485 | 0.139E-04 | 0.175E-01 | 0.398E 01 | 0.243E-01   |
| 13    | 0.0 | 0.074974 | 0.125E-04 | 0.157E-01 | 0.358E 01 | 0.210E-01   |
| 14    | C.0 | 0.093939 | 0.156E-04 | 0.197E-01 | 0.448E 01 | 0.283E-01   |
| 15    | 0.0 | 0.126795 | 0.211E-04 | 0.266E-01 | 0.605E 01 | 0.411E-01   |
| 16    | C.0 | 0.134223 | 0.227E-04 | 0.286E-01 | 0.650E 01 | 0.447E-01   |
| 17    | C.0 | 0.115182 | 0.225E-04 | 0.283E-01 | 0.645E 01 | 0.443E-01   |
| 18    | C.0 | 0.115456 | 0.192E-04 | 0.242E-01 | 0.541E 01 | 0.367E-01   |
| 19    | C.0 | 0.046782 | 0.779E-05 | 0.981E-02 | 0.223E 01 | 0.100E-01   |
| 20    | 0.0 | 0.324520 | 0.540E-04 | 0.681E-01 | 0.155F 02 | 0.118E 00   |

TIME 22.57.7  
PAGE NO. 236, VOL. I  
REP. NO. 0004  
11/1C/67

MC DONNELL

TITLE

RUN NO. 2314

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0750 PD = 5625.74 ALPHA = 15.00

| PROBE | PHI | PON      | POW/PD    | PON/PD2   | PON/P1    | IPON/P1/PD1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.081165 | 0.144E-04 | 0.107E-01 | 0.416E 01 | 0.255E-01   |
| 2     | 0.0 | 0.077765 | 0.148E-04 | 0.176E-01 | 0.398E 01 | 0.241E-01   |
| 3     | 0.0 | 0.083782 | 0.149E-04 | 0.187E-01 | 0.429E 01 | 0.266E-01   |
| 4     | 0.0 | 0.079274 | 0.141E-04 | 0.177E-01 | 0.406E 01 | 0.247E-01   |
| 5     | 0.0 | 0.077612 | 0.138E-04 | 0.176E-01 | 0.398E 01 | 0.240E-01   |
| 6     | 0.0 | 0.076628 | 0.136E-04 | 0.170E-01 | 0.393E 01 | 0.236E-01   |
| 7     | 0.0 | 0.082107 | 0.146E-04 | 0.184E-01 | 0.422E 01 | 0.260E-01   |
| 8     | 0.0 | 0.069163 | 0.123E-04 | 0.155E-01 | 0.354E 01 | 0.205E-01   |
| 9     | 0.0 | 0.077090 | 0.137E-04 | 0.172E-01 | 0.395E 01 | 0.238E-01   |
| 10    | 0.0 | 0.098726 | 0.158E-04 | 0.154E-01 | 0.454E 01 | 0.286E-01   |
| 11    | 0.0 | 0.068141 | 0.121E-04 | 0.152E-01 | 0.349E 01 | 0.201E-01   |
| 12    | 0.0 | 0.072135 | 0.137E-04 | 0.173E-01 | 0.395E 01 | 0.238E-01   |
| 13    | 0.0 | 0.069855 | 0.124E-04 | 0.156E-01 | 0.358E 01 | 0.204E-01   |
| 14    | 0.0 | 0.087249 | 0.155E-04 | 0.194E-01 | 0.447E 01 | 0.280E-01   |
| 15    | 0.0 | 0.117594 | 0.209E-04 | 0.263E-01 | 0.602E 01 | 0.406E-01   |
| 16    | 0.0 | 0.123693 | 0.223E-04 | 0.281E-01 | 0.644E 01 | 0.439E-01   |
| 17    | 0.0 | 0.123700 | 0.220E-04 | 0.277E-01 | 0.634E 01 | 0.421E-01   |
| 18    | 0.0 | 0.105487 | 0.188E-04 | 0.236E-01 | 0.540E 01 | 0.356E-01   |
| 19    | 0.0 | 0.063110 | 0.166E-04 | 0.166E-01 | 0.271E 01 | 0.176E-01   |
| 20    | 0.0 | 0.300803 | 0.535E-04 | 0.673E-01 | 0.154E 02 | 0.116E 00   |

TIME 22.57.7  
PAGE NO. 237, VOL. I  
REP. NO. 6004  
11/10/67

TITLE  
MCDONNELL  
M/T TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2314

TIME = 0.0800 PO = 5284.12 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PD    | PON/PD2   | PON/P1    | (P1N-P1)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.076324 | 0.144E-04 | 0.183E-01 | 0.420E-01 | 0.254E-01   |
| 2     | 0.0 | 0.073152 | 0.140E-04 | 0.174E-01 | 0.402E-01 | 0.242E-01   |
| 3     | 0.0 | 0.073884 | 0.140E-04 | 0.188E-01 | 0.434E-01 | 0.260E-01   |
| 4     | 0.0 | 0.073908 | 0.140E-04 | 0.176E-01 | 0.406E-01 | 0.246E-01   |
| 5     | 0.0 | 0.072342 | 0.137E-04 | 0.171E-01 | 0.398E-01 | 0.239E-01   |
| 6     | 0.0 | 0.071363 | 0.135E-04 | 0.170E-01 | 0.392E-01 | 0.235E-01   |
| 7     | 0.0 | 0.076363 | 0.145E-04 | 0.182E-01 | 0.420E-01 | 0.257E-01   |
| 8     | 0.0 | 0.065058 | 0.123E-04 | 0.155E-01 | 0.358E-01 | 0.207E-01   |
| 9     | 0.0 | 0.071714 | 0.136E-04 | 0.171E-01 | 0.394E-01 | 0.236E-01   |
| 10    | 0.0 | 0.082221 | 0.156E-04 | 0.196E-01 | 0.452E-01 | 0.282E-01   |
| 11    | 0.0 | 0.064325 | 0.122E-04 | 0.153E-01 | 0.354E-01 | 0.203E-01   |
| 12    | 0.0 | 0.071854 | 0.136E-04 | 0.171E-01 | 0.395E-01 | 0.237E-01   |
| 13    | 0.0 | 0.065840 | 0.125E-04 | 0.157E-01 | 0.362E-01 | 0.210E-01   |
| 14    | 0.0 | 0.081376 | 0.154E-04 | 0.194E-01 | 0.447E-01 | 0.279E-01   |
| 15    | 0.0 | 0.108135 | 0.205E-04 | 0.250E-01 | 0.595E-01 | 0.397E-01   |
| 16    | 0.0 | 0.115398 | 0.218E-04 | 0.275E-01 | 0.634E-01 | 0.429E-01   |
| 17    | 0.0 | 0.113106 | 0.214E-04 | 0.270E-01 | 0.622E-01 | 0.419E-01   |
| 18    | 0.0 | 0.096937 | 0.183E-04 | 0.231E-01 | 0.533E-01 | 0.347E-01   |
| 19    | 0.0 | 0.040241 | 0.762E-05 | 0.940E-02 | 0.221E-01 | 0.973E-02   |
| 20    | 0.0 | 0.282098 | 0.534E-04 | 0.673E-01 | 0.155E-02 | 0.116E-03   |

TIME 22.57. 8  
PAGE NO. 238, VOL. I  
REP. NO. 0004  
11/10/67

TITLE

MCDONNELL

RUN NO. 2314

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0850 PO = 4983.16 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/QI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.072077 | 0.145E-04 | 0.183E-01 | 0.425E 01 | 0.259E-01   |
| 2     | C.0 | 0.069485 | 0.139E-04 | 0.177E-01 | 0.410E 01 | 0.247E-01   |
| 3     | 0.0 | 0.074647 | 0.150E-04 | 0.190E-01 | 0.441E 01 | 0.271E-01   |
| 4     | 0.0 | 0.069322 | 0.139E-04 | 0.176E-01 | 0.409E 01 | 0.246E-01   |
| 5     | 0.0 | 0.067954 | 0.136E-04 | 0.173E-01 | 0.401E 01 | 0.240E-01   |
| 6     | 0.0 | 0.067149 | 0.135E-04 | 0.171E-01 | 0.396E 01 | 0.236E-01   |
| 7     | C.0 | 0.071475 | 0.143E-04 | 0.187E-01 | 0.422E 01 | 0.256E-01   |
| 8     | C.0 | 0.062010 | 0.124E-04 | 0.158E-01 | 0.366E 01 | 0.212E-01   |
| 9     | 0.0 | 0.067482 | 0.135E-04 | 0.172E-01 | 0.398E 01 | 0.237E-01   |
| 10    | C.0 | 0.076426 | 0.153E-04 | 0.194E-01 | 0.451E 01 | 0.279E-01   |
| 11    | C.0 | 0.061642 | 0.124E-04 | 0.157E-01 | 0.364E 01 | 0.210E-01   |
| 12    | C.0 | 0.067644 | 0.136E-04 | 0.172E-01 | 0.399E 01 | 0.238E-01   |
| 13    | C.0 | 0.062991 | 0.126E-04 | 0.160E-01 | 0.372E 01 | 0.216E-01   |
| 14    | C.0 | 0.076322 | 0.153E-04 | 0.194E-01 | 0.450E 01 | 0.279E-01   |
| 15    | 0.0 | 0.098420 | 0.198E-04 | 0.250E-01 | 0.581E 01 | 0.383E-01   |
| 16    | 0.0 | 0.105338 | 0.211E-04 | 0.268E-01 | 0.622E 01 | 0.415E-01   |
| 17    | C.0 | 0.103401 | 0.208E-04 | 0.263E-01 | 0.610E 01 | 0.406E-01   |
| 18    | 0.0 | 0.089806 | 0.180E-04 | 0.228E-01 | 0.530E 01 | 0.342E-01   |
| 19    | C.0 | 0.030174 | 0.766E-05 | 0.970E-02 | 0.225E 01 | 0.997E-02   |
| 20    | 0.0 | 0.268417 | 0.539E-04 | 0.682E-01 | 0.158E 02 | 0.110E 00   |

RUN NO. 2314

TITLE

MCDONNELL

TIME 22.57. 9  
PAGE NO. 239, VOL. I  
REP. NO. 6004  
11/10/67

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 6.0960 PO = 4722.85 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/QI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.068426 | 0.145E-04 | 0.185E-01 | 0.434E 01 | 0.263E-01   |
| 2     | 0.0 | 0.066762 | 0.141E-04 | 0.181E-01 | 0.424E 01 | 0.255E-01   |
| 3     | 0.0 | 0.071073 | 0.150E-04 | 0.192E-01 | 0.451E 01 | 0.276E-01   |
| 4     | 0.0 | 0.065515 | 0.139E-04 | 0.177E-01 | 0.416E 01 | 0.248E-01   |
| 5     | 0.0 | 0.064448 | 0.136E-04 | 0.174E-01 | 0.409E 01 | 0.243E-01   |
| 6     | 0.0 | 0.063987 | 0.135E-04 | 0.173E-01 | 0.406E 01 | 0.241E-01   |
| 7     | 0.0 | 0.067642 | 0.143E-04 | 0.183E-01 | 0.429E 01 | 0.259E-01   |
| 8     | 0.0 | 0.060019 | 0.127E-04 | 0.162E-01 | 0.381E 01 | 0.221E-01   |
| 9     | 0.0 | 0.064388 | 0.136E-04 | 0.174E-01 | 0.409E 01 | 0.243E-01   |
| 10    | 0.0 | 0.071341 | 0.151E-04 | 0.193E-01 | 0.453E 01 | 0.278E-01   |
| 11    | 0.0 | 0.060090 | 0.127E-04 | 0.162E-01 | 0.381E 01 | 0.221E-01   |
| 12    | 0.0 | 0.064504 | 0.137E-04 | 0.174E-01 | 0.407E 01 | 0.243E-01   |
| 13    | 0.0 | 0.061247 | 0.130E-04 | 0.166E-01 | 0.389E 01 | 0.227E-01   |
| 14    | 0.0 | 0.072085 | 0.153E-04 | 0.195E-01 | 0.457E 01 | 0.281E-01   |
| 15    | 0.0 | 0.088447 | 0.187E-04 | 0.239E-01 | 0.561E 01 | 0.363E-01   |
| 16    | 0.0 | 0.095513 | 0.202E-04 | 0.258E-01 | 0.606E 01 | 0.398E-01   |
| 17    | 0.0 | 0.094584 | 0.200E-04 | 0.256E-01 | 0.600E 01 | 0.394E-01   |
| 18    | 0.0 | 0.084095 | 0.178E-04 | 0.227E-01 | 0.534E 01 | 0.341E-01   |
| 19    | 0.0 | 0.036908 | 0.781E-05 | 0.998E-02 | 0.234E 01 | 0.106E-01   |
| 20    | 0.0 | 0.259756 | 0.550E-04 | 0.702E-01 | 0.165E 02 | 0.122E 00   |

TIME 22.57.5  
PAGE NO. 240, VOL. I  
REP. NO. 6004  
11/10/67

HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2314

MC DONNELL

TIME = 0.0950 PO = 4503.19 ALPHA = 15.00

| PROBE | PHT | PCN      | PCN/PO    | PCN/PO2   | PCN/PI    | (PCN-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | C.0 | 0.065369 | 0.145E-04 | 0.188E-01 | 0.447E 01 | C.269E-01   |
| 2     | C.0 | 0.064985 | 0.144E-04 | 0.187E-01 | 0.444E 01 | 0.267E-01   |
| 3     | C.0 | 0.064160 | 0.151E-04 | 0.196E-01 | 0.466E 01 | 0.283E-01   |
| 4     | C.0 | 0.063489 | 0.149E-04 | 0.179E-01 | 0.427E 01 | 0.259E-01   |
| 5     | C.0 | 0.061024 | 0.137E-04 | 0.174E-01 | 0.422E 01 | 0.250E-01   |
| 6     | C.0 | 0.061074 | 0.137E-04 | 0.170E-01 | 0.423E 01 | 0.250E-01   |
| 7     | C.0 | 0.064066 | 0.146E-04 | 0.196E-01 | 0.463E 01 | 0.266E-01   |
| 8     | C.0 | 0.059084 | 0.131E-04 | 0.176E-01 | 0.404E 01 | 0.235E-01   |
| 9     | C.0 | 0.062636 | 0.139E-04 | 0.179E-01 | 0.427E 01 | 0.253E-01   |
| 10    | C.0 | 0.066966 | 0.149E-04 | 0.192E-01 | 0.458E 01 | 0.277E-01   |
| 11    | C.0 | 0.059671 | 0.133E-04 | 0.171E-01 | 0.409E 01 | 0.239E-01   |
| 12    | C.0 | 0.062633 | 0.139E-04 | 0.179E-01 | 0.427E 01 | 0.253E-01   |
| 13    | C.0 | 0.060627 | 0.135E-04 | 0.176E-01 | 0.414E 01 | 0.244E-01   |
| 14    | C.0 | 0.068067 | 0.152E-04 | 0.197E-01 | 0.469E 01 | 0.286E-01   |
| 15    | C.0 | 0.078217 | 0.174E-04 | 0.225E-01 | 0.534E 01 | 0.337E-01   |
| 16    | C.0 | 0.085324 | 0.191E-04 | 0.247E-01 | 0.587E 01 | 0.378E-01   |
| 17    | C.0 | 0.086656 | 0.192E-04 | 0.249E-01 | 0.592E 01 | 0.381E-01   |
| 18    | C.0 | 0.079403 | 0.177E-04 | 0.229E-01 | 0.565E 01 | 0.345E-01   |
| 19    | C.0 | 0.036645 | 0.039E-05 | 0.105E-01 | 0.249E 01 | 0.116E-01   |
| 20    | C.0 | 0.256118 | 0.569E-04 | 0.735E-01 | 0.175E 02 | 0.128E 00   |

TIME 22:57.10  
PAGE NO. 243, VOL. I  
REP. NO. 6004  
11/10/67

HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2314

MCDONNELL

TIME = 0.1000 PO = 432.18 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PCN/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.062908 | 0.145E-04 | 0.191E-01 | 0.463E 01 | 0.276E-01   |
| 2     | 0.0 | 0.064153 | 0.145E-04 | 0.195E-01 | 0.472E 01 | 0.283E-01   |
| 3     | 0.0 | 0.065908 | 0.152E-04 | 0.200E-01 | 0.485E 01 | 0.293E-01   |
| 4     | 0.0 | 0.060242 | 0.139E-04 | 0.183E-01 | 0.443E 01 | 0.261E-01   |
| 5     | 0.0 | 0.060042 | 0.139E-04 | 0.183E-01 | 0.442E 01 | 0.261E-01   |
| 6     | 0.0 | 0.060813 | 0.141E-04 | 0.185E-01 | 0.447E 01 | 0.265E-01   |
| 7     | 0.0 | 0.063146 | 0.146E-04 | 0.192E-01 | 0.464E 01 | 0.278E-01   |
| 8     | 0.0 | 0.059205 | 0.137E-04 | 0.180E-01 | 0.435E 01 | 0.256E-01   |
| 9     | 0.0 | 0.061424 | 0.143E-04 | 0.187E-01 | 0.453E 01 | 0.269E-01   |
| 10    | 0.0 | 0.063301 | 0.146E-04 | 0.193E-01 | 0.466E 01 | 0.279E-01   |
| 11    | 0.0 | 0.060384 | 0.140E-04 | 0.184E-01 | 0.444E 01 | 0.262E-01   |
| 12    | 0.0 | 0.061433 | 0.142E-04 | 0.187E-01 | 0.452E 01 | 0.268E-01   |
| 13    | 0.0 | 0.061133 | 0.141E-04 | 0.186E-01 | 0.450E 01 | 0.266E-01   |
| 14    | 0.0 | 0.066066 | 0.153E-04 | 0.201E-01 | 0.486E 01 | 0.294E-01   |
| 15    | 0.0 | 0.067730 | 0.157E-04 | 0.206E-01 | 0.498E 01 | 0.303E-01   |
| 16    | 0.0 | 0.076570 | 0.177E-04 | 0.233E-01 | 0.563E 01 | 0.353E-01   |
| 17    | 0.0 | 0.079616 | 0.186E-04 | 0.242E-01 | 0.586E 01 | 0.370E-01   |
| 18    | 0.0 | 0.076931 | 0.178E-04 | 0.234E-01 | 0.566E 01 | 0.355E-01   |
| 19    | 0.0 | 0.036783 | 0.851E-05 | 0.112E-01 | 0.271E 01 | 0.130E-01   |
| 20    | 0.0 | 0.257501 | 0.595E-04 | 0.783E-01 | 0.189E 02 | 0.137E 00   |

TIME 14.37.47  
PAGE NO. 242, VOL. I  
REP. NO. GOOD  
11/13/67

MC DONNELL

TITLE

RUN NO. 2315

HIT TEST NO. 67

TUNNEL PARAMETERS

| T     | PO    | TO    | HO          | Q-DOT    | PI    | TI    | U      | M1    | RE/F/T    | OL    | ALPHA |
|-------|-------|-------|-------------|----------|-------|-------|--------|-------|-----------|-------|-------|
| (SEC) | (PSI) | (OK)  | (SFT/SEC)   | (B/SF-S) | (PSI) | (OK)  | (FT/S) |       |           | (PSI) | (DEG) |
| .0450 | 8122. | 2287. | 0.29583E 08 | 131.03   | 5.634 | 74.12 | 75.84. | 13.17 | 10828.96. | 3.033 | 15.00 |
| .0500 | 7622. | 2268. | 0.29242E 08 | 125.23   | 5.311 | 73.43 | 75.40. | 13.16 | 10365.86. | 2.859 | 15.00 |
| .0550 | 7153. | 2222. | 0.28572E 08 | 119.43   | 5.006 | 71.71 | 74.51. | 13.16 | 10123.04. | 2.696 | 15.00 |
| .0600 | 6717. | 2190. | 0.28097E 08 | 113.63   | 4.719 | 70.58 | 73.91. | 13.15 | 9789.58.  | 2.542 | 15.00 |
| .0650 | 6313. | 2154. | 0.27565E 08 | 107.83   | 4.451 | 69.25 | 73.20. | 13.15 | 9493.42.  | 2.398 | 15.00 |
| .0700 | 5941. | 2118. | 0.26571E 08 | 102.03   | 4.201 | 67.70 | 72.41. | 13.16 | 9265.99.  | 2.263 | 15.00 |
| .0750 | 5600. | 2071. | 0.26308E 08 | 96.23    | 3.949 | 65.92 | 71.52. | 13.17 | 9104.50.  | 2.139 | 15.00 |
| .0800 | 5292. | 2021. | 0.25570E 08 | 90.43    | 3.755 | 63.89 | 70.51  | 13.19 | 9016.62.  | 2.024 | 15.00 |
| .0850 | 5016. | 1962. | 0.24750E 08 | 84.63    | 3.559 | 61.59 | 69.38. | 13.22 | 9013.61.  | 1.919 | 15.00 |
| .0900 | 4772. | 1901. | 0.23843E 08 | 78.83    | 3.381 | 59.00 | 68.10. | 13.26 | 9110.11.  | 1.824 | 15.00 |
| .0950 | 4560. | 1847. | 0.23114E 08 | 73.03    | 3.222 | 56.91 | 67.05. | 13.29 | 9142.02.  | 1.738 | 15.00 |
| .1000 | 4380. | 1774. | 0.22071E 08 | 67.23    | 3.081 | 53.88 | 65.53. | 13.35 | 9450.17.  | 1.662 | 15.00 |



RUN NO. 2315

TIME 14.37.48  
PAGE NO. 243, VOL. I  
REP. NO. 0004  
11/13/67

TITLE

MCDONNELL

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

| N  | QDOT-N<br>(H/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.1599             | 0.01648       | 0.01648        | 2.1599     |
| 2  | 2.5787             | 0.01968       | 0.01968        | 2.5787     |
| 3  | 3.0033             | 0.02292       | 0.02292        | 3.0033     |
| 4  | 4.0048             | 0.03056       | 0.03056        | 4.0048     |
| 5  | 7.9504             | 0.02252       | 0.02252        | 2.9504     |
| 6  | 4.2598             | 0.03251       | 0.03251        | 4.2598     |
| 7  | 3.8603             | 0.02946       | 0.02946        | 3.8603     |
| 8  | 3.2284             | 0.02464       | 0.02464        | 3.2284     |
| 9  | 4.3392             | 0.03312       | 0.03312        | 4.3392     |
| 10 | 3.2316             | 0.02466       | 0.02466        | 3.2316     |
| 11 | 3.8585             | 0.02945       | 0.02945        | 3.8585     |
| 12 | 3.8899             | 0.02969       | 0.02969        | 3.8899     |
| 13 | 4.4914             | 0.03432       | 0.03432        | 4.4914     |
| 14 | 2.8689             | 0.02190       | 0.02190        | 2.8689     |
| 15 | 3.4050             | 0.02599       | 0.02599        | 3.4050     |
| 16 | 4.1962             | 0.03202       | 0.03202        | 4.1962     |
| 17 | 4.2826             | 0.03268       | 0.03268        | 4.2826     |
| 18 | 4.2757             | 0.03263       | 0.03263        | 4.2757     |
| 19 | 2.7907             | 0.02130       | 0.02130        | 2.7907     |
| 20 | 19.1308            | 0.14600       | 0.14600        | 19.1308    |

RUN NO. 2315

FILE ..... MCDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0500 PO= 7622. PO2= 5.311 PI= 02360 QOXY-A=125.23

| N  | QDOT-N<br>(8/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.134              | 0.01705       | 0.01705        | 2.1346     |
| 2  | 2.545              | 0.02033       | 0.02033        | 2.5453     |
| 3  | 2.963              | 0.02366       | 0.02366        | 2.9630     |
| 4  | 3.8519             | 0.03076       | 0.03076        | 3.8519     |
| 5  | 2.9403             | 0.02348       | 0.02348        | 2.9403     |
| 6  | 4.0983             | 0.03273       | 0.03273        | 4.0983     |
| 7  | 3.7251             | 0.02975       | 0.02975        | 3.7251     |
| 8  | 3.1016             | 0.02477       | 0.02477        | 3.1016     |
| 9  | 4.1722             | 0.03332       | 0.03332        | 4.1722     |
| 10 | 3.1758             | 0.02536       | 0.02536        | 3.1758     |
| 11 | 3.6888             | 0.02946       | 0.02946        | 3.6888     |
| 12 | 3.7258             | 0.02975       | 0.02975        | 3.7258     |
| 13 | 4.2951             | 0.03430       | 0.03430        | 4.2951     |
| 14 | 2.8125             | 0.02246       | 0.02246        | 2.8125     |
| 15 | 3.3611             | 0.02684       | 0.02684        | 3.3611     |
| 16 | 4.1129             | 0.03284       | 0.03284        | 4.1129     |
| 17 | 4.1800             | 0.03338       | 0.03338        | 4.1800     |
| 18 | 4.1637             | 0.03322       | 0.03322        | 4.1637     |
| 19 | 2.7078             | 0.02162       | 0.02162        | 2.7078     |
| 20 | 18.3144            | 0.14625       | 0.14625        | 18.3144    |

100

TIME 14.37.48  
PAGE NO. 245, VOL. I  
REP. NO. 0004  
11/13/67

TITLE  
MCDONNELL

RUN NO. 2315

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.0550 PD= 7153. PD2= 5.006 PI=0.02224 QDOT-A=119.43

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.1092             | 0.01766       | 0.01766        | 2.1092     |
| 2  | 2.5119             | 0.02103       | 0.02103        | 2.5119     |
| 3  | 2.9228             | 0.02447       | 0.02447        | 2.9228     |
| 4  | 3.6991             | 0.03097       | 0.03097        | 3.6991     |
| 5  | 2.9303             | 0.02454       | 0.02454        | 2.9303     |
| 6  | 3.9367             | 0.03296       | 0.03296        | 3.9367     |
| 7  | 3.5898             | 0.03006       | 0.03006        | 3.5898     |
| 8  | 2.9748             | 0.02491       | 0.02491        | 2.9748     |
| 9  | 4.0052             | 0.03354       | 0.03354        | 4.0052     |
| 10 | 3.1199             | 0.02612       | 0.02612        | 3.1199     |
| 11 | 3.5192             | 0.02947       | 0.02947        | 3.5192     |
| 12 | 3.5618             | 0.02982       | 0.02982        | 3.5618     |
| 13 | 4.0927             | 0.03427       | 0.03427        | 4.0927     |
| 14 | 2.7561             | 0.02308       | 0.02308        | 2.7561     |
| 15 | 3.3172             | 0.02777       | 0.02777        | 3.3172     |
| 16 | 4.0296             | 0.03374       | 0.03374        | 4.0296     |
| 17 | 4.0773             | 0.03414       | 0.03414        | 4.0773     |
| 18 | 4.0458             | 0.03380       | 0.03380        | 4.0458     |
| 19 | 2.6249             | 0.02198       | 0.02198        | 2.6249     |
| 20 | 17.4979            | 0.14651       | 0.14651        | 17.4979    |

TIME 14.37.48  
PAGE NO. 246, VOL. I  
REP. NO. GOOD  
11/13/67

MC DONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

RUN NO. 2315

TIME=0600 PO= 6717. P02= 4.719 P1=02099 QDOT-A=113.63

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.0839             | 0.01834       | 0.01834        | 2.0839     |
| 2  | 2.4785             | 0.02181       | 0.02181        | 2.4785     |
| 3  | 2.0825             | 0.02537       | 0.02537        | 2.8825     |
| 4  | 3.5462             | 0.03121       | 0.03121        | 3.5462     |
| 5  | 2.9203             | 0.02570       | 0.02570        | 2.9203     |
| 6  | 3.7752             | 0.03322       | 0.03322        | 3.7752     |
| 7  | 3.4546             | 0.03040       | 0.03040        | 3.4546     |
| 8  | 2.8480             | 0.02506       | 0.02506        | 2.8480     |
| 9  | 3.8382             | 0.03378       | 0.03378        | 3.8382     |
| 10 | 3.0641             | 0.02697       | 0.02697        | 3.0641     |
| 11 | 3.3496             | 0.02948       | 0.02948        | 3.3496     |
| 12 | 3.3978             | 0.02990       | 0.02990        | 3.3978     |
| 13 | 3.8903             | 0.03424       | 0.03424        | 3.8903     |
| 14 | 2.6997             | 0.02376       | 0.02376        | 2.6997     |
| 15 | 3.2732             | 0.02881       | 0.02881        | 3.2732     |
| 16 | 3.9463             | 0.03473       | 0.03473        | 3.9463     |
| 17 | 3.9747             | 0.03498       | 0.03498        | 3.9747     |
| 18 | 3.9309             | 0.03459       | 0.03459        | 3.9309     |
| 19 | 2.5420             | 0.02237       | 0.02237        | 2.5420     |
| 20 | 16.6815            | 0.14680       | 0.14680        | 16.6815    |

TIME 14.37.48  
PAGE NO. 287, VOL. I  
REP. NO. GOOL  
11/13/67

TITLE  
MCDONNELL

RUN NO. 2315

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME = .0650 PO = 6313. PO2 = 4.451 PI = 01980 QDOT-A = 107.83

QDOT-N/REF

| N  | QDOT-N<br>(0/SF-S) | QDOT-N/QDOT-A | QDOT-N/KDOT-A | QDOT-N/REF |
|----|--------------------|---------------|---------------|------------|
| 1  | 2.0586             | 0.01909       | 0.01909       | 2.0586     |
| 2  | 2.4451             | 0.02268       | 0.02268       | 2.4451     |
| 3  | 2.8423             | 0.02636       | 0.02636       | 2.8423     |
| 4  | 3.3934             | 0.03147       | 0.03147       | 3.3934     |
| 5  | 2.9102             | 0.02699       | 0.02699       | 2.9102     |
| 6  | 3.6136             | 0.03351       | 0.03351       | 3.6136     |
| 7  | 3.3194             | 0.03078       | 0.03078       | 3.3194     |
| 8  | 2.7212             | 0.02524       | 0.02524       | 2.7212     |
| 9  | 3.6711             | 0.03605       | 0.03605       | 3.6711     |
| 10 | 3.0083             | 0.02790       | 0.02790       | 3.0083     |
| 11 | 3.1799             | 0.02949       | 0.02949       | 3.1799     |
| 12 | 3.2338             | 0.02999       | 0.02999       | 3.2338     |
| 13 | 3.6879             | 0.03420       | 0.03420       | 3.6879     |
| 14 | 2.6433             | 0.02451       | 0.02451       | 2.6433     |
| 15 | 3.2293             | 0.02795       | 0.02795       | 3.2293     |
| 16 | 3.8630             | 0.03582       | 0.03582       | 3.8630     |
| 17 | 3.8721             | 0.03591       | 0.03591       | 3.8721     |
| 18 | 3.8159             | 0.03539       | 0.03539       | 3.8159     |
| 19 | 2.4591             | 0.02280       | 0.02280       | 2.4591     |
| 20 | 15.8651            | 0.14713       | 0.14713       | 15.8651    |

RUN NO. 2315

TITLE

MCDONNELL

TIME 14.37.48  
PAGE NO. 248 VOL. I  
REP. NO. 000  
11/13/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| TIME=0700 PO= 594.1. PO2= 4.201 PI=0.1868 QDOT-A=102.03 |                    |               |                |            |  |
|---------------------------------------------------------|--------------------|---------------|----------------|------------|--|
| N                                                       | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |  |
| 1                                                       | 2.0333             | 0.01993       | 0.01993        | 2.0333     |  |
| 2                                                       | 2.4117             | 0.02364       | 0.02364        | 2.4117     |  |
| 3                                                       | 2.8021             | 0.02746       | 0.02746        | 2.8021     |  |
| 4                                                       | 3.2405             | 0.03176       | 0.03176        | 3.2405     |  |
| 5                                                       | 2.9002             | 0.02842       | 0.02842        | 2.9002     |  |
| 6                                                       | 3.4521             | 0.03383       | 0.03383        | 3.4521     |  |
| 7                                                       | 3.1841             | 0.03121       | 0.03121        | 3.1841     |  |
| 8                                                       | 2.5945             | 0.02543       | 0.02543        | 2.5945     |  |
| 9                                                       | 3.5041             | 0.03434       | 0.03434        | 3.5041     |  |
| 10                                                      | 2.9525             | 0.02894       | 0.02894        | 2.9525     |  |
| 11                                                      | 3.0103             | 0.02950       | 0.02950        | 3.0103     |  |
| 12                                                      | 3.0697             | 0.03009       | 0.03009        | 3.0697     |  |
| 13                                                      | 3.4855             | 0.03416       | 0.03416        | 3.4855     |  |
| 14                                                      | 2.5869             | 0.02535       | 0.02535        | 2.5869     |  |
| 15                                                      | 3.1854             | 0.03122       | 0.03122        | 3.1854     |  |
| 16                                                      | 3.7798             | 0.03704       | 0.03704        | 3.7798     |  |
| 17                                                      | 3.7695             | 0.03694       | 0.03694        | 3.7695     |  |
| 18                                                      | 3.7010             | 0.03627       | 0.03627        | 3.7010     |  |
| 19                                                      | 2.3761             | 0.02329       | 0.02329        | 2.3761     |  |
| 20                                                      | 15.0486            | 0.14749       | 0.14749        | 15.0486    |  |

RUN NO. 2315

TITLE

MCDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=.0750 PO= 5600. P02= 3.969 P1=.01762 QDOT-A= 96.23

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 2.0080             | 0.02087       | 0.02087        | 2.0080     |
| 2  | 2.3784             | 0.02471       | 0.02471        | 2.3784     |
| 3  | 2.7618             | 0.02870       | 0.02870        | 2.7618     |
| 4  | 3.0876             | 0.03209       | 0.03209        | 3.0876     |
| 5  | 2.8901             | 0.03003       | 0.03003        | 2.8901     |
| 6  | 3.2906             | 0.03419       | 0.03419        | 3.2906     |
| 7  | 3.0489             | 0.03168       | 0.03168        | 3.0489     |
| 8  | 2.4677             | 0.02564       | 0.02564        | 2.4677     |
| 9  | 3.3371             | 0.03468       | 0.03468        | 3.3371     |
| 10 | 2.8967             | 0.03010       | 0.03010        | 2.8967     |
| 11 | 2.8406             | 0.02952       | 0.02952        | 2.8406     |
| 12 | 2.9057             | 0.03019       | 0.03019        | 2.9057     |
| 13 | 3.2832             | 0.03412       | 0.03412        | 3.2832     |
| 14 | 2.5305             | 0.02630       | 0.02630        | 2.5305     |
| 15 | 3.1415             | 0.03264       | 0.03264        | 3.1415     |
| 16 | 3.6965             | 0.03841       | 0.03841        | 3.6965     |
| 17 | 3.6668             | 0.03810       | 0.03810        | 3.6668     |
| 18 | 3.5861             | 0.03726       | 0.03726        | 3.5861     |
| 19 | 2.2932             | 0.02383       | 0.02383        | 2.2932     |
| 20 | 14.2322            | 0.14789       | 0.14789        | 14.2322    |

TIME 14.37.49  
PAGE NO. 250, VOL. 1  
REP. NO. 0004  
11/13/67

TITLE MCDONNELL

RUN NO. 4315

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME=0.0800 P0= 5292. P02= 3.755 P1=0.1662 QDOT-A= 90.43

QDOT- / REF

| N  | QDOT-N<br>(B/SF-SI) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT- / REF |
|----|---------------------|---------------|----------------|-------------|
| 1  | 1.9826              | 0.02192       | 0.02192        | 1.9826      |
| 2  | 2.3450              | 0.02593       | 0.02593        | 2.3450      |
| 3  | 2.7216              | 0.03010       | 0.03010        | 2.7216      |
| 4  | 2.9348              | 0.03245       | 0.03245        | 2.9348      |
| 5  | 2.8801              | 0.03105       | 0.03105        | 2.8801      |
| 6  | 3.1290              | 0.03460       | 0.03460        | 3.1290      |
| 7  | 2.9137              | 0.03222       | 0.03222        | 2.9137      |
| 8  | 2.3609              | 0.02589       | 0.02589        | 2.3609      |
| 9  | 3.1701              | 0.03505       | 0.03505        | 3.1701      |
| 10 | 2.8609              | 0.03141       | 0.03141        | 2.8609      |
| 11 | 2.5710              | 0.02954       | 0.02954        | 2.5710      |
| 12 | 2.7417              | 0.03032       | 0.03032        | 2.7417      |
| 13 | 3.0808              | 0.03607       | 0.03607        | 3.0808      |
| 14 | 2.4741              | 0.02736       | 0.02736        | 2.4741      |
| 15 | 3.0975              | 0.03425       | 0.03425        | 3.0975      |
| 16 | 3.6132              | 0.03995       | 0.03995        | 3.6132      |
| 17 | 3.5662              | 0.03941       | 0.03941        | 3.5662      |
| 18 | 3.4712              | 0.03838       | 0.03838        | 3.4712      |
| 19 | 2.2103              | 0.02444       | 0.02444        | 2.2103      |
| 20 | 13.4158             | 0.14835       | 0.14835        | 13.4158     |



TIME 14.37.49  
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11/13/67

TITLE  
MCDONNELL

RUN NO. 2315

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0850 P0= 5016. P02= 3.559 P1=01569 QDOT-A= 94.63

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.9573             | 0.02313       | 0.02313        | 1.9573     |
| 2  | 2.3116             | 0.02731       | 0.02731        | 2.3116     |
| 3  | 2.6814             | 0.03169       | 0.03168        | 2.6814     |
| 4  | 2.7019             | 0.03287       | 0.03287        | 2.7819     |
| 5  | 2.8700             | 0.03391       | 0.03391        | 2.8700     |
| 6  | 2.9675             | 0.03506       | 0.03506        | 2.9675     |
| 7  | 2.7784             | 0.03283       | 0.03283        | 2.7784     |
| 8  | 2.2141             | 0.02616       | 0.02616        | 2.2141     |
| 9  | 3.0030             | 0.03568       | 0.03568        | 3.0030     |
| 10 | 2.7851             | 0.03291       | 0.03291        | 2.7851     |
| 11 | 2.5014             | 0.02956       | 0.02956        | 2.5014     |
| 12 | 2.5777             | 0.03046       | 0.03046        | 2.5777     |
| 13 | 2.8784             | 0.03401       | 0.03401        | 2.8784     |
| 14 | 2.4177             | 0.02857       | 0.02857        | 2.4177     |
| 15 | 3.0536             | 0.03608       | 0.03608        | 3.0536     |
| 16 | 3.5299             | 0.04171       | 0.04171        | 3.5299     |
| 17 | 3.4616             | 0.04090       | 0.04090        | 3.4616     |
| 18 | 3.3562             | 0.03966       | 0.03966        | 3.3562     |
| 19 | 2.1274             | 0.02514       | 0.02514        | 2.1274     |
| 20 | 12.5993            | 0.14887       | 0.14887        | 12.5993    |

RUN NO. 2315

TITLE

MCDONNELL

TIME 14.37.49  
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HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.0900 PD= 4772. PD2= 3.381 PI=01483 QDOT-A= 78.83

| N  | QDOT-N<br>(8/SE-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.9320             | 0.02451       | 0.02451        | 1.9320     |
| 2  | 2.2782             | 0.02890       | 0.02890        | 2.2782     |
| 3  | 2.6411             | 0.03350       | 0.03350        | 2.6411     |
| 4  | 2.6290             | 0.03335       | 0.03335        | 2.6290     |
| 5  | 2.8600             | 0.03628       | 0.03628        | 2.8600     |
| 6  | 2.8060             | 0.03559       | 0.03559        | 2.8060     |
| 7  | 2.6432             | 0.03353       | 0.03353        | 2.6432     |
| 8  | 2.0873             | 0.02648       | 0.02648        | 2.0873     |
| 9  | 2.8360             | 0.03597       | 0.03597        | 2.8360     |
| 10 | 2.7293             | 0.03462       | 0.03462        | 2.7293     |
| 11 | 2.3317             | 0.02958       | 0.02958        | 2.3317     |
| 12 | 2.4136             | 0.03062       | 0.03062        | 2.4136     |
| 13 | 2.6760             | 0.03394       | 0.03394        | 2.6760     |
| 14 | 2.3613             | 0.02995       | 0.02995        | 2.3613     |
| 15 | 3.0097             | 0.03818       | 0.03818        | 3.0097     |
| 16 | 3.4467             | 0.04372       | 0.04372        | 3.4467     |
| 17 | 3.3590             | 0.04261       | 0.04261        | 3.3590     |
| 18 | 3.2413             | 0.04112       | 0.04112        | 3.2413     |
| 19 | 2.0444             | 0.02593       | 0.02593        | 2.0444     |
| 20 | 11.7829            | 0.14947       | 0.14947        | 11.7829    |

TIME 14.37.49  
PAGE NO. 253, VOL. I  
REP. NO. 6004  
11/13/67

TITLE  
MCDONNELL

RUN NO. J315

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME-.0950 PO= 4560. P02= 3.222 P1=.01406 QDOT-A= 73.03

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.7067             | 0.02611       | 0.02611        | 1.9067     |
| 2  | 2.2448             | 0.03074       | 0.01074        | 2.2448     |
| 3  | 2.6009             | 0.03561       | 0.03561        | 2.6009     |
| 4  | 2.6762             | 0.03390       | 0.03390        | 2.4762     |
| 5  | 2.8500             | 0.03902       | 0.03902        | 2.8500     |
| 6  | 2.6644             | 0.03621       | 0.03621        | 2.6644     |
| 7  | 2.5000             | 0.03434       | 0.03434        | 2.5000     |
| 8  | 1.9605             | 0.02684       | 0.02684        | 1.9605     |
| 9  | 2.6690             | 0.03654       | 0.03654        | 2.6690     |
| 10 | 2.6734             | 0.03661       | 0.03661        | 2.6734     |
| 11 | 2.1621             | 0.02960       | 0.02960        | 2.1621     |
| 12 | 2.2496             | 0.03080       | 0.03080        | 2.2496     |
| 13 | 2.4736             | 0.03387       | 0.03387        | 2.4736     |
| 14 | 2.3049             | 0.03156       | 0.03156        | 2.3049     |
| 15 | 2.9658             | 0.04061       | 0.04061        | 2.9658     |
| 16 | 3.3634             | 0.04605       | 0.04605        | 3.3634     |
| 17 | 3.2563             | 0.04459       | 0.04459        | 3.2563     |
| 18 | 3.1264             | 0.04281       | 0.04281        | 3.1264     |
| 19 | 1.9615             | 0.02686       | 0.02686        | 1.9615     |
| 20 | 10.9665            | 0.15016       | 0.15016        | 10.9665    |

TIME 14.37.49  
PAGE NO. 254, VOL. I  
REP. NO. 0004  
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RUN NO. 2315  
TITLE  
McDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=1000 PO= 4380. PO2= 3.081 PI= 01333 QDOT-A= 67.23

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.8813             | 0.02798       | 0.02798        | 1.8813     |
| 2  | 2.2114             | 0.03289       | 0.03289        | 2.2114     |
| 3  | 2.5607             | 0.03809       | 0.03809        | 2.5607     |
| 4  | 2.3233             | 0.03456       | 0.03456        | 2.3233     |
| 5  | 2.8399             | 0.04724       | 0.04724        | 2.8399     |
| 6  | 2.4829             | 0.03693       | 0.03693        | 2.4829     |
| 7  | 2.3728             | 0.03529       | 0.03529        | 2.3728     |
| 8  | 1.8337             | 0.02727       | 0.02727        | 1.8337     |
| 9  | 2.5019             | 0.03721       | 0.03721        | 2.5019     |
| 10 | 2.6176             | 0.03893       | 0.03893        | 2.6176     |
| 11 | 1.9925             | 0.02963       | 0.02963        | 1.9925     |
| 12 | 2.0856             | 0.03102       | 0.03102        | 2.0856     |
| 13 | 2.2712             | 0.03378       | 0.03378        | 2.2712     |
| 14 | 2.2485             | 0.03344       | 0.03344        | 2.2485     |
| 15 | 2.9218             | 0.04346       | 0.04346        | 2.9218     |
| 16 | 3.2801             | 0.04879       | 0.04879        | 3.2801     |
| 17 | 3.1537             | 0.04691       | 0.04691        | 3.1537     |
| 18 | 3.0114             | 0.04479       | 0.04479        | 3.0114     |
| 19 | 1.8786             | 0.02794       | 0.02794        | 1.8786     |
| 20 | 10.1500            | 0.15096       | 0.15096        | 10.1500    |

TIME 14.37.49  
PAGE NO. 255, VOL. I  
REP. NO. 0034  
11/13/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2315

TITLE

TIME = 0.0450 PO = 8122.29 ALPHA = 15.00

| PRODE | PHI | PON      | PCN/PO    | PCN/PO2   | PCN/PI    | (PCN-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.097460 | 0.120E-04 | 0.173E-01 | 0.390E 01 | 0.230E-01   |
| 2     | 0.0 | 0.106370 | 0.131E-04 | 0.189E-01 | 0.426E 01 | 0.269E-01   |
| 3     | 0.0 | 0.104505 | 0.129E-04 | 0.186E-01 | 0.419E 01 | 0.262E-01   |
| 4     | 0.0 | 0.104581 | 0.129E-04 | 0.186E-01 | 0.419E 01 | 0.262E-01   |
| 5     | 0.0 | 0.114165 | 0.141E-04 | 0.203E-01 | 0.457E 01 | 0.294E-01   |
| 6     | 0.0 | 0.111704 | 0.137E-04 | 0.197E-01 | 0.445E 01 | 0.284E-01   |
| 7     | 0.0 | 0.125112 | 0.154E-04 | 0.222E-01 | 0.501E 01 | 0.330E-01   |
| 8     | 0.0 | 0.107633 | 0.134E-04 | 0.191E-01 | 0.431E 01 | 0.273E-01   |
| 9     | 0.0 | 0.129625 | 0.160E-04 | 0.230E-01 | 0.519E 01 | 0.345E-01   |
| 10    | 0.0 | 0.125403 | 0.154E-04 | 0.223E-01 | 0.502E 01 | 0.331E-01   |
| 11    | 0.0 | 0.111949 | 0.138E-04 | 0.199E-01 | 0.448E 01 | 0.287E-01   |
| 12    | 0.0 | 0.127659 | 0.157E-04 | 0.227E-01 | 0.511E 01 | 0.339E-01   |
| 13    | 0.0 | 0.112315 | 0.130E-04 | 0.199E-01 | 0.450E 01 | 0.289E-01   |
| 14    | 0.0 | 0.146690 | 0.181E-04 | 0.240E-01 | 0.587E 01 | 0.401E-01   |
| 15    | 0.0 | 0.133301 | 0.164E-04 | 0.237E-01 | 0.534E 01 | 0.387E-01   |
| 16    | 0.0 | 0.157440 | 0.194E-04 | 0.279E-01 | 0.630E 01 | 0.437E-01   |
| 17    | 0.0 | 0.178937 | 0.220E-04 | 0.310E-01 | 0.717E 01 | 0.508E-01   |
| 18    | 0.0 | 0.163983 | 0.207E-04 | 0.291E-01 | 0.656E 01 | 0.458E-01   |
| 19    | 0.0 | 0.073416 | 0.904E-05 | 0.130E-01 | 0.294E 01 | 0.160E-01   |
| 20    | 0.0 | 0.480700 | 0.592E-04 | 0.853E-01 | 0.192E 02 | 0.150E 00   |

TIME 14.37.50  
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11/13/67

TITLE  
MCDONNELL

RUN NO. 2315

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0500 PO = 7621.82 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PCN/PO2   | PON/PI    | (PCN-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.091846 | 0.121E-04 | 0.173E-01 | 0.389E 01 | 0.239E-01   |
| 2     | 0.0 | 0.094035 | 0.123E-04 | 0.177E-01 | 0.398E 01 | 0.246E-01   |
| 3     | 0.0 | 0.098005 | 0.129E-04 | 0.185E-01 | 0.416E 01 | 0.260E-01   |
| 4     | 0.0 | 0.098279 | 0.129E-04 | 0.185E-01 | 0.416E 01 | 0.261E-01   |
| 5     | 0.0 | 0.106615 | 0.140E-04 | 0.201E-01 | 0.452E 01 | 0.290E-01   |
| 6     | 0.0 | 0.103151 | 0.135E-04 | 0.194E-01 | 0.437E 01 | 0.278E-01   |
| 7     | 0.0 | 0.116298 | 0.153E-04 | 0.219E-01 | 0.493E 01 | 0.324E-01   |
| 8     | 0.0 | 0.097899 | 0.131E-04 | 0.189E-01 | 0.423E 01 | 0.267E-01   |
| 9     | 0.0 | 0.120098 | 0.158E-04 | 0.226E-01 | 0.509E 01 | 0.337E-01   |
| 10    | 0.0 | 0.116703 | 0.153E-04 | 0.220E-01 | 0.494E 01 | 0.326E-01   |
| 11    | 0.0 | 0.104269 | 0.137E-04 | 0.196E-01 | 0.442E 01 | 0.282E-01   |
| 12    | 0.0 | 0.117851 | 0.155E-04 | 0.222E-01 | 0.499E 01 | 0.330E-01   |
| 13    | 0.0 | 0.103780 | 0.136E-04 | 0.195E-01 | 0.440E 01 | 0.280E-01   |
| 14    | 0.0 | 0.137438 | 0.180E-04 | 0.259E-01 | 0.582E 01 | 0.398E-01   |
| 15    | 0.0 | 0.128920 | 0.169E-04 | 0.243E-01 | 0.546E 01 | 0.368E-01   |
| 16    | 0.0 | 0.149620 | 0.196E-04 | 0.282E-01 | 0.634E 01 | 0.441E-01   |
| 17    | 0.0 | 0.166283 | 0.218E-04 | 0.313E-01 | 0.704E 01 | 0.499E-01   |
| 18    | 0.0 | 0.150915 | 0.198E-04 | 0.284E-01 | 0.639E 01 | 0.445E-01   |
| 19    | 0.0 | 0.088808 | 0.904E-05 | 0.130E-01 | 0.292E 01 | 0.158E-01   |
| 20    | 0.0 | 0.443311 | 0.582E-04 | 0.835E-01 | 0.188E 02 | 0.147E 00   |

TIME 14.37.50  
PAGE NO. 257 VOL. I  
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11/13/67

MC DONNELL  
MIT TEST NO. 67  
PRESSURE SURVEY

TITLE  
TIME= 0.0550 PO= 7153.41 ALPHA= 15.00

RUN NO. 2315

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.086519 | 0.121E-04 | 0.173E-01 | 0.389E 01 | 0.238E-01   |
| 2     | 0.0 | 0.083120 | 0.116E-04 | 0.166E-01 | 0.374E 01 | 0.226E-01   |
| 3     | 0.0 | 0.091996 | 0.129E-04 | 0.186E-01 | 0.414E 01 | 0.259E-01   |
| 4     | 0.0 | 0.092166 | 0.129E-04 | 0.186E-01 | 0.414E 01 | 0.259E-01   |
| 5     | 0.0 | 0.099477 | 0.133E-04 | 0.199E-01 | 0.447E 01 | 0.287E-01   |
| 6     | 0.0 | 0.075466 | 0.133E-04 | 0.191E-01 | 0.429E 01 | 0.272E-01   |
| 7     | 0.0 | 0.108045 | 0.151E-04 | 0.216E-01 | 0.486E 01 | 0.318E-01   |
| 8     | 0.0 | 0.072575 | 0.129E-04 | 0.185E-01 | 0.416E 01 | 0.261E-01   |
| 9     | 0.0 | 0.111147 | 0.155E-04 | 0.222E-01 | 0.500E 01 | 0.330E-01   |
| 10    | 0.0 | 0.108413 | 0.152E-04 | 0.217E-01 | 0.487E 01 | 0.320E-01   |
| 11    | 0.0 | 0.096998 | 0.136E-04 | 0.194E-01 | 0.436E 01 | 0.277E-01   |
| 12    | 0.0 | 0.108591 | 0.152E-04 | 0.217E-01 | 0.488E 01 | 0.320E-01   |
| 13    | 0.0 | 0.095730 | 0.134E-04 | 0.191E-01 | 0.430E 01 | 0.273E-01   |
| 14    | 0.0 | 0.128656 | 0.180E-04 | 0.257E-01 | 0.578E 01 | 0.395E-01   |
| 15    | 0.0 | 0.124064 | 0.173E-04 | 0.248E-01 | 0.558E 01 | 0.378E-01   |
| 16    | 0.0 | 0.141647 | 0.198E-04 | 0.283E-01 | 0.637E 01 | 0.443E-01   |
| 17    | 0.0 | 0.154095 | 0.215E-04 | 0.308E-01 | 0.693E 01 | 0.489E-01   |
| 18    | 0.0 | 0.138573 | 0.194E-04 | 0.277E-01 | 0.623E 01 | 0.425E-01   |
| 19    | 0.0 | 0.064422 | 0.902E-05 | 0.129E-01 | 0.290E 01 | 0.157E-01   |
| 20    | 0.0 | 0.403284 | 0.571E-04 | 0.816E-01 | 0.184E 02 | 0.143E 00   |

TIME 14.37.50  
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11/13/67

MC DONNELL

TITLE

RUN NO. 2315

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = C.0600 PD = 6717.06 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PCN/PO2   | RUN/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.081479 | 0.121F-04 | 0.173E-01 | 0.388E 01 | 0.238E-01   |
| 2     | 0.0 | 0.073026 | 0.110F-04 | 0.156E-01 | 0.351E 01 | 0.207E-01   |
| 3     | 0.0 | 0.086319 | 0.129E-04 | 0.183E-01 | 0.411E 01 | 0.257E-01   |
| 4     | 0.0 | 0.086261 | 0.129E-04 | 0.183E-01 | 0.411E 01 | 0.257E-01   |
| 5     | 0.0 | 0.092769 | 0.138E-04 | 0.191E-01 | 0.442E 01 | 0.282E-01   |
| 6     | 0.0 | 0.088151 | 0.131E-04 | 0.187E-01 | 0.420E 01 | 0.264E-01   |
| 7     | 0.0 | 0.100356 | 0.142F-04 | 0.213E-01 | 0.478E 01 | 0.312E-01   |
| 8     | 0.0 | 0.085660 | 0.128E-04 | 0.182E-01 | 0.408E 01 | 0.254E-01   |
| 9     | 0.0 | 0.102772 | 0.153E-04 | 0.218E-01 | 0.490E 01 | 0.322E-01   |
| 10    | 0.0 | 0.100533 | 0.150E-04 | 0.213E-01 | 0.479E 01 | 0.313E-01   |
| 11    | 0.0 | 0.090138 | 0.136E-04 | 0.191E-01 | 0.479E 01 | 0.272E-01   |
| 12    | 0.0 | 0.099881 | 0.149E-04 | 0.212E-01 | 0.476E 01 | 0.310E-01   |
| 13    | 0.0 | 0.088164 | 0.131E-04 | 0.187E-01 | 0.420E 01 | 0.264E-01   |
| 14    | 0.0 | 0.120362 | 0.179E-04 | 0.255E-01 | 0.573E 01 | 0.391E-01   |
| 15    | 0.0 | 0.118818 | 0.171E-04 | 0.252E-01 | 0.564E 01 | 0.385E-01   |
| 16    | 0.0 | 0.133670 | 0.199E-04 | 0.283E-01 | 0.673E 01 | 0.443E-01   |
| 17    | 0.0 | 0.142421 | 0.212E-04 | 0.302E-01 | 0.679E 01 | 0.478E-01   |
| 18    | 0.0 | 0.126956 | 0.169E-04 | 0.265E-01 | 0.605E 01 | 0.417E-01   |
| 19    | 0.0 | 0.060226 | 0.097E-03 | 0.125E-01 | 0.287E 01 | 0.156E-01   |
| 20    | 0.0 | 0.375617 | 0.559E-04 | 0.796E-01 | 0.179E 02 | 0.140E 00   |



TIME 14.37.51  
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RFP. NO. 6001  
11/13/67

TITLE  
MCDONNELL

RUN NO. 2315

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0650 PD = 6312.77 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PO4-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.076726 | 0.122E-04 | 0.172E-01 | 0.387E 01 | 0.237E-01   |
| 2     | 0.0 | 0.06555  | 0.104E-04 | 0.147E-01 | 0.331E 01 | 0.191E-01   |
| 3     | 0.0 | 0.08105  | 0.128E-04 | 0.182E-01 | 0.409E 01 | 0.255E-01   |
| 4     | 0.0 | 0.080505 | 0.128E-04 | 0.181E-01 | 0.407E 01 | 0.253E-01   |
| 5     | 0.0 | 0.086834 | 0.137E-04 | 0.194E-01 | 0.437E 01 | 0.278E-01   |
| 6     | 0.0 | 0.081204 | 0.129E-04 | 0.182E-01 | 0.410E 01 | 0.256E-01   |
| 7     | 0.0 | 0.093726 | 0.148E-04 | 0.209E-01 | 0.471E 01 | 0.306E-01   |
| 8     | 0.0 | 0.079155 | 0.125E-04 | 0.178E-01 | 0.400E 01 | 0.248E-01   |
| 9     | 0.0 | 0.094971 | 0.150E-04 | 0.213E-01 | 0.480E 01 | 0.314E-01   |
| 10    | 0.0 | 0.093065 | 0.147E-04 | 0.209E-01 | 0.470E 01 | 0.306E-01   |
| 11    | 0.0 | 0.083487 | 0.133E-04 | 0.188E-01 | 0.423E 01 | 0.266E-01   |
| 12    | 0.0 | 0.091720 | 0.145E-04 | 0.206E-01 | 0.463E 01 | 0.300E-01   |
| 13    | 0.0 | 0.081003 | 0.128E-04 | 0.182E-01 | 0.410E 01 | 0.256E-01   |
| 14    | 0.0 | 0.112497 | 0.178E-04 | 0.253E-01 | 0.568E 01 | 0.387E-01   |
| 15    | 0.0 | 0.113178 | 0.179E-04 | 0.254E-01 | 0.572E 01 | 0.389E-01   |
| 16    | 0.0 | 0.125140 | 0.199E-04 | 0.282E-01 | 0.634E 01 | 0.441E-01   |
| 17    | 0.0 | 0.131262 | 0.208E-04 | 0.295E-01 | 0.663E 01 | 0.465E-01   |
| 18    | 0.0 | 0.116064 | 0.184E-04 | 0.261E-01 | 0.586E 01 | 0.402E-01   |
| 19    | 0.0 | 0.056091 | 0.089E-04 | 0.126E-01 | 0.283E 01 | 0.151E-01   |
| 20    | 0.0 | 0.345311 | 0.547E-04 | 0.776E-01 | 0.174E 02 | 0.136E 00   |

TIME 14.37.51  
PAGE NO. 260, VOL. I  
REP. NO. 6004  
11/13/67

RUN NO. 2315

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0700 PO = 5940.55 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.072261 | 0.122E-04 | 0.172E-01 | 0.307E 01 | 0.237E-01   |
| 2     | 0.0 | 0.058897 | 0.991E-05 | 0.140E-01 | 0.315E 01 | 0.178E-01   |
| 3     | 0.0 | 0.076196 | 0.120E-04 | 0.181E-01 | 0.408E 01 | 0.254E-01   |
| 4     | 0.0 | 0.074957 | 0.126E-04 | 0.170E-01 | 0.401E 01 | 0.249E-01   |
| 5     | 0.0 | 0.090530 | 0.136E-04 | 0.192E-01 | 0.431E 01 | 0.273E-01   |
| 6     | 0.0 | 0.074626 | 0.126E-04 | 0.170E-01 | 0.400E 01 | 0.247E-01   |
| 7     | 0.0 | 0.086659 | 0.146E-04 | 0.204E-01 | 0.444E 01 | 0.300E-01   |
| 8     | 0.0 | 0.073058 | 0.123E-04 | 0.174E-01 | 0.391E 01 | 0.240E-01   |
| 9     | 0.0 | 0.087747 | 0.148E-04 | 0.209E-01 | 0.470E 01 | 0.305E-01   |
| 10    | 0.0 | 0.086006 | 0.145E-04 | 0.205E-01 | 0.461E 01 | 0.298E-01   |
| 11    | 0.0 | 0.077646 | 0.131E-04 | 0.185E-01 | 0.416E 01 | 0.261E-01   |
| 12    | 0.0 | 0.084107 | 0.142E-04 | 0.200E-01 | 0.450E 01 | 0.289E-01   |
| 13    | 0.0 | 0.074487 | 0.125E-04 | 0.177E-01 | 0.399E 01 | 0.247E-01   |
| 14    | 0.0 | 0.105120 | 0.177E-04 | 0.240E-01 | 0.563E 01 | 0.387E-01   |
| 15    | 0.0 | 0.107144 | 0.180E-04 | 0.255E-01 | 0.574E 01 | 0.391E-01   |
| 16    | 0.0 | 0.117307 | 0.197E-04 | 0.279E-01 | 0.628E 01 | 0.436E-01   |
| 17    | 0.0 | 0.120618 | 0.203E-04 | 0.287E-01 | 0.646E 01 | 0.450E-01   |
| 18    | 0.0 | 0.105899 | 0.178E-04 | 0.252E-01 | 0.567E 01 | 0.395E-01   |
| 19    | 0.0 | 0.052087 | 0.077E-05 | 0.124E-01 | 0.279E 01 | 0.148E-01   |
| 20    | 0.0 | 0.317366 | 0.534E-04 | 0.756E-01 | 0.170E 02 | 0.132E 00   |

TIME 14.37.51  
PAGE NO. 251, VOL. I  
REP. NO. GOOD  
11/13/57

TITLE  
MCDONNELL

RUN NO. 2315

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0750 PO = 5600.38 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | C.0 | 0.068083 | 0.122E-04 | 0.172E-01 | 0.386E 01 | 0.236E-01   |
| 2     | 0.0 | 0.053663 | 0.958E-05 | 0.135E-01 | 0.305E 01 | 0.169E-01   |
| 3     | 0.0 | 0.071751 | 0.128E-04 | 0.181E-01 | 0.407E 01 | 0.253E-01   |
| 4     | 0.0 | 0.069597 | 0.124E-04 | 0.175E-01 | 0.395E 01 | 0.243E-01   |
| 5     | 0.0 | 0.075038 | 0.134E-04 | 0.189E-01 | 0.426E 01 | 0.269E-01   |
| 6     | C.0 | 0.068416 | 0.122E-04 | 0.172E-01 | 0.389E 01 | 0.238E-01   |
| 7     | 0.0 | 0.080655 | 0.164E-04 | 0.203E-01 | 0.458E 01 | 0.295E-01   |
| 8     | 0.0 | 0.067372 | 0.120E-04 | 0.170E-01 | 0.382E 01 | 0.233E-01   |
| 9     | 0.0 | 0.081097 | 0.165E-04 | 0.204E-01 | 0.460E 01 | 0.297E-01   |
| 10    | 0.0 | 0.079358 | 0.162E-04 | 0.200E-01 | 0.450E 01 | 0.289E-01   |
| 11    | C.0 | 0.072015 | 0.129E-04 | 0.181E-01 | 0.409E 01 | 0.254E-01   |
| 12    | 0.0 | 0.077044 | 0.138E-04 | 0.194E-01 | 0.437E 01 | 0.278E-01   |
| 13    | 0.0 | 0.068375 | 0.122E-04 | 0.172E-01 | 0.388E 01 | 0.237E-01   |
| 14    | C.0 | 0.090213 | 0.175E-04 | 0.247E-01 | 0.558E 01 | 0.377E-01   |
| 15    | C.0 | 0.100716 | 0.180E-04 | 0.254E-01 | 0.572E 01 | 0.389E-01   |
| 16    | 0.0 | 0.108969 | 0.195E-04 | 0.275E-01 | 0.619E 01 | 0.427E-01   |
| 17    | 0.0 | 0.110489 | 0.197E-04 | 0.278E-01 | 0.627E 01 | 0.434E-01   |
| 18    | C.0 | 0.096659 | 0.172E-04 | 0.243E-01 | 0.548E 01 | 0.369E-01   |
| 19    | C.0 | 0.060214 | 0.061E-05 | 0.121E-01 | 0.274E 01 | 0.143E-01   |
| 20    | 0.0 | 0.291781 | 0.521E-04 | 0.735E-01 | 0.166E 02 | 0.128E 00   |

TIME 14.37.52  
PAGE NO. 262, VOL. I  
REP. NO. 6064  
11/13/67

MCDONNELL  
WIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2315

TIME= 0.0800 PO= 5292.28 ALPHA= 15.00

| PROBE | PHI | PCN      | PON/PO    | PCN/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.064193 | 0.121E-04 | 0.171E-01 | 0.306E 01 | 0.235E-01   |
| 2     | 0.0 | 0.049850 | 0.942E-05 | 0.133E-01 | 0.300E 01 | 0.165E-01   |
| 3     | 0.0 | 0.067717 | 0.128E-04 | 0.180E-01 | 0.407E 01 | 0.259E-01   |
| 4     | 0.0 | 0.064425 | 0.127E-04 | 0.172E-01 | 0.388E 01 | 0.236E-01   |
| 5     | 0.0 | 0.069957 | 0.132E-04 | 0.186E-01 | 0.421E 01 | 0.264E-01   |
| 6     | 0.0 | 0.062576 | 0.118E-04 | 0.167E-01 | 0.376E 01 | 0.272E-01   |
| 7     | 0.0 | 0.075213 | 0.142E-04 | 0.200E-01 | 0.453E 01 | 0.290E-01   |
| 8     | 0.0 | 0.062095 | 0.117E-04 | 0.165E-01 | 0.374E 01 | 0.275E-01   |
| 9     | 0.0 | 0.075023 | 0.142E-04 | 0.200E-01 | 0.451E 01 | 0.289E-01   |
| 10    | 0.0 | 0.073121 | 0.138E-04 | 0.195E-01 | 0.440E 01 | 0.279E-01   |
| 11    | 0.0 | 0.066793 | 0.126E-04 | 0.178E-01 | 0.402E 01 | 0.248E-01   |
| 12    | 0.0 | 0.070529 | 0.135E-04 | 0.188E-01 | 0.424E 01 | 0.266E-01   |
| 13    | 0.0 | 0.062748 | 0.119E-04 | 0.167E-01 | 0.378E 01 | 0.278E-01   |
| 14    | 0.0 | 0.091775 | 0.173E-04 | 0.244E-01 | 0.552E 01 | 0.371E-01   |
| 15    | 0.0 | 0.093896 | 0.177E-04 | 0.250E-01 | 0.565E 01 | 0.382E-01   |
| 16    | 0.0 | 0.100529 | 0.190E-04 | 0.268E-01 | 0.605E 01 | 0.415E-01   |
| 17    | 0.0 | 0.100875 | 0.191E-04 | 0.269E-01 | 0.607E 01 | 0.416E-01   |
| 18    | 0.0 | 0.087745 | 0.166E-04 | 0.234E-01 | 0.528E 01 | 0.351E-01   |
| 19    | 0.0 | 0.044472 | 0.040E-05 | 0.118E-01 | 0.268E 01 | 0.139E-01   |
| 20    | 0.0 | 0.268557 | 0.507E-04 | 0.775E-01 | 0.362E 02 | 0.124E 00   |

TIME 14.37.52  
PAGE NO. 263, VOL. I  
REP. NO. GCOM  
11/13/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2315

TIME= 0.0850 PD= 5016.24 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/QI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | C-0 | 0.060589 | 0.121E-04 | 0.170E-01 | 0.306E 01 | 0.236E-01   |
| 2     | C-0 | 0.067456 | 0.046E-05 | 0.133E-01 | 0.302E 01 | 0.166E-01   |
| 3     | C-0 | 0.064074 | 0.128E-04 | 0.180E-01 | 0.408E 01 | 0.252E-01   |
| 4     | C-0 | 0.059647 | 0.118E-04 | 0.167E-01 | 0.375E 01 | 0.228E-01   |
| 5     | C-0 | 0.065298 | 0.130E-04 | 0.183E-01 | 0.416E 01 | 0.258E-01   |
| 6     | C-0 | 0.057104 | 0.114E-04 | 0.160E-01 | 0.364E 01 | 0.216E-01   |
| 7     | C-0 | 0.070333 | 0.140E-04 | 0.198E-01 | 0.448E 01 | 0.285E-01   |
| 8     | C-0 | 0.057227 | 0.116E-04 | 0.161E-01 | 0.365E 01 | 0.216E-01   |
| 9     | C-0 | 0.068524 | 0.139E-04 | 0.195E-01 | 0.443E 01 | 0.281E-01   |
| 10    | C-0 | 0.067295 | 0.134E-04 | 0.189E-01 | 0.429E 01 | 0.269E-01   |
| 11    | C-0 | 0.061982 | 0.124E-04 | 0.174E-01 | 0.395E 01 | 0.241E-01   |
| 12    | C-0 | 0.064564 | 0.129E-04 | 0.181E-01 | 0.411E 01 | 0.255E-01   |
| 13    | C-0 | 0.057605 | 0.115E-04 | 0.162E-01 | 0.367E 01 | 0.218E-01   |
| 14    | C-0 | 0.085805 | 0.171E-04 | 0.241E-01 | 0.547E 01 | 0.365E-01   |
| 15    | C-0 | 0.084482 | 0.173E-04 | 0.244E-01 | 0.552E 01 | 0.370E-01   |
| 16    | C-0 | 0.091985 | 0.183E-04 | 0.258E-01 | 0.586E 01 | 0.398E-01   |
| 17    | C-0 | 0.091776 | 0.183E-04 | 0.258E-01 | 0.585E 01 | 0.397E-01   |
| 18    | C-0 | 0.079756 | 0.159E-04 | 0.224E-01 | 0.508E 01 | 0.334E-01   |
| 19    | C-0 | 0.040860 | 0.015E-05 | 0.115E-01 | 0.260E 01 | 0.131E-01   |
| 20    | C-0 | 0.247694 | 0.494E-04 | 0.646E-01 | 0.158E 02 | 0.121E 00   |

TIME 14.37.52  
PAGE NO. 264, VOL. I  
REP. NO. 0004  
11/13/67

MC DONNELL

TITLE

RUN NO. 2315

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0900 PO = 4772.26 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PCN/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.057273 | 0.120E-04 | 0.169E-01 | 0.306E 01 | 0.233E-01   |
| 2     | 0.0 | 0.046483 | 0.974E-05 | 0.137E-01 | 0.313E 01 | 0.174E-01   |
| 3     | 0.0 | 0.060081 | 0.128E-04 | 0.180E-01 | 0.411E 01 | 0.253E-01   |
| 4     | 0.0 | 0.054647 | 0.115E-04 | 0.162E-01 | 0.369E 01 | 0.210E-01   |
| 5     | 0.0 | 0.061030 | 0.128E-04 | 0.180E-01 | 0.412E 01 | 0.253E-01   |
| 6     | 0.0 | 0.052907 | 0.109E-04 | 0.154E-01 | 0.351E 01 | 0.204E-01   |
| 7     | 0.0 | 0.056015 | 0.114E-04 | 0.195E-01 | 0.445E 01 | 0.281E-01   |
| 8     | 0.0 | 0.052769 | 0.111E-04 | 0.156E-01 | 0.356E 01 | 0.208E-01   |
| 9     | 0.0 | 0.064600 | 0.135E-04 | 0.191E-01 | 0.436E 01 | 0.273E-01   |
| 10    | 0.0 | 0.061079 | 0.130E-04 | 0.183E-01 | 0.417E 01 | 0.250E-01   |
| 11    | 0.0 | 0.057580 | 0.121E-04 | 0.170E-01 | 0.388E 01 | 0.234E-01   |
| 12    | 0.0 | 0.059140 | 0.124E-04 | 0.175E-01 | 0.397E 01 | 0.243E-01   |
| 13    | 0.0 | 0.052947 | 0.111E-04 | 0.157E-01 | 0.357E 01 | 0.209E-01   |
| 14    | 0.0 | 0.080304 | 0.168E-04 | 0.237E-01 | 0.542E 01 | 0.359E-01   |
| 15    | 0.0 | 0.079075 | 0.166E-04 | 0.234E-01 | 0.533E 01 | 0.352E-01   |
| 16    | 0.0 | 0.081337 | 0.175E-04 | 0.246E-01 | 0.562E 01 | 0.376E-01   |
| 17    | 0.0 | 0.083192 | 0.174E-04 | 0.246E-01 | 0.561E 01 | 0.375E-01   |
| 18    | 0.0 | 0.072493 | 0.152E-04 | 0.216E-01 | 0.489E 01 | 0.316E-01   |
| 19    | 0.0 | 0.037379 | 0.783E-05 | 0.111E-01 | 0.252E 01 | 0.124E-01   |
| 20    | 0.0 | 0.229192 | 0.480E-04 | 0.678E-01 | 0.155E 02 | 0.110E 00   |

TIME 14.37.53  
PAGE NO. 255, VOL. I  
REP. NO. 6004  
11/13/67

FILE  
MC DONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.0950 PO= 4560.34 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.054244 | 0.119E-04 | 0.168E-01 | 0.386E 01 | 0.231E-01   |
| 2     | 0.0 | 0.046930 | 0.107E-04 | 0.146E-01 | 0.334E 01 | 0.189E-01   |
| 3     | 0.0 | 0.050080 | 0.127E-04 | 0.180E-01 | 0.413E 01 | 0.253E-01   |
| 4     | 0.0 | 0.050040 | 0.110E-04 | 0.155E-01 | 0.356E 01 | 0.207E-01   |
| 5     | 0.0 | 0.057184 | 0.125E-04 | 0.177E-01 | 0.407E 01 | 0.248E-01   |
| 6     | 0.0 | 0.047267 | 0.104E-04 | 0.147E-01 | 0.336E 01 | 0.191E-01   |
| 7     | 0.0 | 0.062760 | 0.137E-04 | 0.193E-01 | 0.443E 01 | 0.277E-01   |
| 8     | 0.0 | 0.048720 | 0.107E-04 | 0.151E-01 | 0.347E 01 | 0.199E-01   |
| 9     | 0.0 | 0.060752 | 0.132E-04 | 0.187E-01 | 0.429E 01 | 0.266E-01   |
| 10    | 0.0 | 0.056373 | 0.125E-04 | 0.177E-01 | 0.405E 01 | 0.246E-01   |
| 11    | 0.0 | 0.053588 | 0.118E-04 | 0.166E-01 | 0.381E 01 | 0.227E-01   |
| 12    | 0.0 | 0.054281 | 0.119E-04 | 0.168E-01 | 0.386E 01 | 0.231E-01   |
| 13    | 0.0 | 0.048773 | 0.107E-04 | 0.151E-01 | 0.347E 01 | 0.200E-01   |
| 14    | 0.0 | 0.075272 | 0.165E-04 | 0.234E-01 | 0.535E 01 | 0.352E-01   |
| 15    | 0.0 | 0.071075 | 0.156E-04 | 0.221E-01 | 0.506E 01 | 0.320E-01   |
| 16    | 0.0 | 0.074586 | 0.164E-04 | 0.231E-01 | 0.530E 01 | 0.348E-01   |
| 17    | 0.0 | 0.075122 | 0.165E-04 | 0.233E-01 | 0.534E 01 | 0.351E-01   |
| 18    | 0.0 | 0.065956 | 0.145E-04 | 0.205E-01 | 0.469E 01 | 0.299E-01   |
| 19    | 0.0 | 0.034029 | 0.746E-05 | 0.104E-01 | 0.242E 01 | 0.115E-01   |
| 20    | 0.0 | 0.213050 | 0.467E-04 | 0.661E-01 | 0.152E 02 | 0.114E 00   |

TIME 14.37.53  
PAGE NO. 266, VOL. I  
REP. NO. 0004  
11/13/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2315

TIME = 0.1000 PD = 4380.48 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/OI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.051503 | 0.118E-04 | 0.167E-01 | 0.306E 01 | 0.230E-01   |
| 2     | 0.0 | 0.048798 | 0.111E-04 | 0.158E-01 | 0.366E 01 | 0.211E-01   |
| 3     | 0.0 | 0.055689 | 0.127E-04 | 0.181E-01 | 0.418E 01 | 0.259E-01   |
| 4     | 0.0 | 0.045622 | 0.104E-04 | 0.148E-01 | 0.342E 01 | 0.194E-01   |
| 5     | 0.0 | 0.053749 | 0.123E-04 | 0.174E-01 | 0.403E 01 | 0.241E-01   |
| 6     | 0.0 | 0.042902 | 0.079E-05 | 0.139E-01 | 0.282E 01 | 0.178E-01   |
| 7     | 0.0 | 0.050066 | 0.133E-04 | 0.192E-01 | 0.443E 01 | 0.278E-01   |
| 8     | 0.0 | 0.045000 | 0.103E-04 | 0.146E-01 | 0.338E 01 | 0.191E-01   |
| 9     | 0.0 | 0.046479 | 0.129E-04 | 0.183E-01 | 0.424E 01 | 0.262E-01   |
| 10    | 0.0 | 0.042270 | 0.115E-04 | 0.170E-01 | 0.392E 01 | 0.246E-01   |
| 11    | 0.0 | 0.050006 | 0.116E-04 | 0.162E-01 | 0.375E 01 | 0.230E-01   |
| 12    | 0.0 | 0.049962 | 0.116E-04 | 0.162E-01 | 0.375E 01 | 0.230E-01   |
| 13    | 0.0 | 0.045084 | 0.103E-04 | 0.146E-01 | 0.338E 01 | 0.191E-01   |
| 14    | 0.0 | 0.070709 | 0.161E-04 | 0.230E-01 | 0.520E 01 | 0.365E-01   |
| 15    | 0.0 | 0.042601 | 0.143E-04 | 0.203E-01 | 0.420E 01 | 0.297E-01   |
| 16    | 0.0 | 0.045741 | 0.150E-04 | 0.213E-01 | 0.493E 01 | 0.335E-01   |
| 17    | 0.0 | 0.047563 | 0.154E-04 | 0.219E-01 | 0.507E 01 | 0.349E-01   |
| 18    | 0.0 | 0.040144 | 0.137E-04 | 0.195E-01 | 0.451E 01 | 0.282E-01   |
| 19    | 0.0 | 0.030810 | 0.703E-05 | 0.100E-01 | 0.231E 01 | 0.105E-01   |
| 20    | 0.0 | 0.199269 | 0.455E-04 | 0.647E-01 | 0.149E 02 | 0.112E 00   |



RUN NO. 2316  
 TITLE  
 HODONNELL  
 HIT TEST NO. 67  
 TUNNEL PARAMETERS  
 TIME 12.56.59  
 PAGE NO. 267, VOL. I  
 REP. NO. 6004  
 11/28/67

| TUNNEL PARAMETERS |             |            |                  |                   |                   |             |            |             |       |          |             |                |  |  |
|-------------------|-------------|------------|------------------|-------------------|-------------------|-------------|------------|-------------|-------|----------|-------------|----------------|--|--|
| T<br>(SEC)        | PO<br>(PSI) | TO<br>(OK) | HO<br>(SFT/SSCC) | Q-DOT<br>(B/SF-S) | TUNNEL PARAMETERS |             |            | U<br>(FT/S) | 41    | RE/FT    | Q1<br>(PSI) | ALPHA<br>(DEG) |  |  |
|                   |             |            |                  |                   | P32<br>(PSI)      | P1<br>(PSI) | T1<br>(OK) |             |       |          |             |                |  |  |
| .0500             | 7624.       | 1667.      | 0.20907E 08      | 88.95             | 6.233             | 0.02770     | 52.35      | 6376.       | 13.18 | 2024174. | 3.356       | 15.03          |  |  |
| .0550             | 7163.       | 1645.      | 0.20587E 08      | 85.18             | 5.959             | 0.02669     | 51.94      | 6326.       | 13.12 | 1965854. | 3.218       | 15.03          |  |  |
| .0600             | 6726.       | 1625.      | 0.20243E 08      | 81.40             | 5.699             | 0.02573     | 51.46      | 6272.       | 13.07 | 1913852. | 3.078       | 15.03          |  |  |
| .0650             | 6313.       | 1600.      | 0.19873E 08      | 77.63             | 5.453             | 0.02483     | 50.92      | 6214.       | 13.02 | 1868626. | 2.946       | 15.03          |  |  |
| .0700             | 5924.       | 1572.      | 0.19474E 08      | 73.86             | 5.221             | 0.02397     | 50.30      | 6151.       | 12.97 | 1830438. | 2.821       | 15.03          |  |  |
| .0750             | 5559.       | 1529.      | 0.18845E 08      | 70.08             | 5.004             | 0.02313     | 48.98      | 6050.       | 12.92 | 1831849. | 2.705       | 15.03          |  |  |
| .0800             | 5218.       | 1496.      | 0.18363E 08      | 66.31             | 4.801             | 0.02238     | 48.11      | 5971.       | 12.87 | 1813648. | 2.596       | 15.03          |  |  |
| .0850             | 4901.       | 1458.      | 0.17843E 08      | 62.54             | 4.613             | 0.02168     | 47.11      | 5885.       | 12.82 | 1805647. | 2.494       | 15.03          |  |  |
| .0900             | 4607.       | 1416.      | 0.17285E 08      | 58.76             | 4.439             | 0.02104     | 45.99      | 5792.       | 12.77 | 1809135. | 2.401       | 15.03          |  |  |
| .0950             | 4338.       | 1373.      | 0.16686E 08      | 54.99             | 4.279             | 0.02044     | 44.73      | 5690.       | 12.72 | 1826005. | 2.315       | 15.03          |  |  |

TIME 12.54.59  
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11/28/67

MC DONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

RUN NO. 2316

| TIME=0.0500 PD= 7624. PD2= 6.233 PI=0.02770 ODDT-A= 88.95 |                    |               |               |            |
|-----------------------------------------------------------|--------------------|---------------|---------------|------------|
| N                                                         | ODDT-N<br>(B/SF-S) | QDDT-N/QDDT-A | QDDT-N/KDDT-A | ODDT-N/REF |
| 1                                                         | 2.9675             | 0.03336       | 0.03336       | 2.9675     |
| 2                                                         | 3.9519             | 0.04331       | 0.04331       | 3.8519     |
| 3                                                         | 3.5406             | 0.03980       | 0.03980       | 3.5406     |
| 4                                                         | 3.4954             | 0.03930       | 0.03930       | 3.4954     |
| 5                                                         | 4.2989             | 0.04833       | 0.04833       | 4.2989     |
| 6                                                         | 3.6232             | 0.04073       | 0.04073       | 3.6232     |
| 7                                                         | 3.8301             | 0.04306       | 0.04306       | 3.8301     |
| 8                                                         | 2.6090             | 0.02933       | 0.02933       | 2.6090     |
| 9                                                         | 3.3798             | 0.03800       | 0.03800       | 3.3798     |
| 10                                                        | 3.6876             | 0.04146       | 0.04146       | 3.6876     |
| 11                                                        | 3.1005             | 0.03486       | 0.03486       | 3.1005     |
| 12                                                        | 2.7803             | 0.03126       | 0.03126       | 2.7803     |
| 13                                                        | 3.4485             | 0.03877       | 0.03877       | 3.4485     |
| 14                                                        | 2.9472             | 0.03313       | 0.03313       | 2.9472     |
| 15                                                        | 3.5962             | 0.04043       | 0.04043       | 3.5962     |
| 16                                                        | 4.1550             | 0.04671       | 0.04671       | 4.1550     |
| 17                                                        | 4.0959             | 0.04605       | 0.04605       | 4.0959     |
| 18                                                        | 4.3668             | 0.04909       | 0.04909       | 4.3668     |
| 19                                                        | 2.6705             | 0.03002       | 0.03002       | 2.6705     |
| 20                                                        | 13.6228            | 0.15315       | 0.15315       | 13.6228    |

RUN NO. 2316

TITLE

MCDONNELL

TIME 12.55. 0  
PAGE NO. 269, VOL. I  
REP. NO. GOOD  
11/28/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| TIME=0550 |                    | PO=           | 7163.          | PO2=       | 5.959 | PI= | 02669 | QDOT-A= | 85.18 |
|-----------|--------------------|---------------|----------------|------------|-------|-----|-------|---------|-------|
| N         | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |       |     |       |         |       |
| 1         | 2.8407             | 0.03335       | 0.03335        | 2.8407     |       |     |       |         |       |
| 2         | 3.7025             | 0.04347       | 0.04347        | 3.7025     |       |     |       |         |       |
| 3         | 3.3946             | 0.03985       | 0.03985        | 3.3946     |       |     |       |         |       |
| 4         | 3.3537             | 0.03937       | 0.03937        | 3.3537     |       |     |       |         |       |
| 5         | 4.1017             | 0.04816       | 0.04816        | 4.1017     |       |     |       |         |       |
| 6         | 3.4727             | 0.04077       | 0.04077        | 3.4727     |       |     |       |         |       |
| 7         | 3.6609             | 0.04298       | 0.04298        | 3.6609     |       |     |       |         |       |
| 8         | 2.5227             | 0.02962       | 0.02962        | 2.5227     |       |     |       |         |       |
| 9         | 3.2377             | 0.03801       | 0.03801        | 3.2377     |       |     |       |         |       |
| 10        | 3.5383             | 0.04154       | 0.04154        | 3.5383     |       |     |       |         |       |
| 11        | 3.0042             | 0.03527       | 0.03527        | 3.0042     |       |     |       |         |       |
| 12        | 2.6768             | 0.03143       | 0.03143        | 2.6768     |       |     |       |         |       |
| 13        | 3.3424             | 0.03924       | 0.03924        | 3.3424     |       |     |       |         |       |
| 14        | 2.8297             | 0.03322       | 0.03322        | 2.8297     |       |     |       |         |       |
| 15        | 3.4897             | 0.04097       | 0.04097        | 3.4897     |       |     |       |         |       |
| 16        | 4.0511             | 0.04756       | 0.04756        | 4.0511     |       |     |       |         |       |
| 17        | 3.9793             | 0.04672       | 0.04672        | 3.9793     |       |     |       |         |       |
| 18        | 4.2175             | 0.04952       | 0.04952        | 4.2175     |       |     |       |         |       |
| 19        | 2.5848             | 0.03035       | 0.03035        | 2.5848     |       |     |       |         |       |
| 20        | 13.1564            | 0.15446       | 0.15446        | 13.1564    |       |     |       |         |       |

RUN NO. 2316

TITLE

MCDONNELL

TIME 12.55.0  
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11/28/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES.

| TIME=0.0600 |                    | P0=           | 6726.          | P02=       | 5.699 | PL= | 02573 | QDOT-A= | 81.40 |
|-------------|--------------------|---------------|----------------|------------|-------|-----|-------|---------|-------|
| N           | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |       |     |       |         |       |
| 1           | 2.7140             | 0.03334       | 0.03334        | 2.7140     |       |     |       |         |       |
| 2           | 3.5530             | 0.04365       | 0.04365        | 3.5530     |       |     |       |         |       |
| 3           | 3.2487             | 0.03991       | 0.03991        | 3.2487     |       |     |       |         |       |
| 4           | 3.2120             | 0.03946       | 0.03946        | 3.2120     |       |     |       |         |       |
| 5           | 3.9045             | 0.04796       | 0.04796        | 3.9045     |       |     |       |         |       |
| 6           | 3.3222             | 0.04081       | 0.04081        | 3.3222     |       |     |       |         |       |
| 7           | 3.4918             | 0.04290       | 0.04290        | 3.4918     |       |     |       |         |       |
| 8           | 2.4364             | 0.02993       | 0.02993        | 2.4364     |       |     |       |         |       |
| 9           | 3.0956             | 0.03903       | 0.03903        | 3.0956     |       |     |       |         |       |
| 10          | 3.3890             | 0.04163       | 0.04163        | 3.3890     |       |     |       |         |       |
| 11          | 2.9079             | 0.03572       | 0.03572        | 2.9079     |       |     |       |         |       |
| 12          | 2.5732             | 0.03161       | 0.03161        | 2.5732     |       |     |       |         |       |
| 13          | 3.2363             | 0.03976       | 0.03976        | 3.2363     |       |     |       |         |       |
| 14          | 2.7123             | 0.03332       | 0.03332        | 2.7123     |       |     |       |         |       |
| 15          | 3.3832             | 0.04156       | 0.04156        | 3.3832     |       |     |       |         |       |
| 16          | 3.9472             | 0.04849       | 0.04849        | 3.9472     |       |     |       |         |       |
| 17          | 3.8627             | 0.04745       | 0.04745        | 3.8627     |       |     |       |         |       |
| 18          | 4.0682             | 0.04998       | 0.04998        | 4.0682     |       |     |       |         |       |
| 19          | 2.4992             | 0.03070       | 0.03070        | 2.4992     |       |     |       |         |       |
| 20          | 12.6899            | 0.15589       | 0.15589        | 12.6899    |       |     |       |         |       |

TIME 12.55. 0  
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TITLE  
MCDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0650 PD= 6313. PD2= 5.453 PL=02493 QDOT-A= 77.63

| N  | QDOT-N<br>(B/SE-S) | QDOT-N/QDOT-A | QDOT-N/KDOT-A | QDOT-N/REF |
|----|--------------------|---------------|---------------|------------|
| 1  | 2.5872             | 0.03333       | 0.03333       | 2.5872     |
| 2  | 3.4035             | 0.04304       | 0.04304       | 3.4035     |
| 3  | 3.1027             | 0.03997       | 0.03997       | 3.1027     |
| 4  | 3.0793             | 0.03955       | 0.03955       | 3.0793     |
| 5  | 3.7072             | 0.04776       | 0.04776       | 3.7072     |
| 6  | 3.1718             | 0.04086       | 0.04086       | 3.1718     |
| 7  | 3.3226             | 0.04280       | 0.04280       | 3.3226     |
| 8  | 2.3531             | 0.03027       | 0.03027       | 2.3531     |
| 9  | 2.9536             | 0.03805       | 0.03805       | 2.9536     |
| 10 | 3.2397             | 0.04173       | 0.04173       | 3.2397     |
| 11 | 2.8116             | 0.03622       | 0.03622       | 2.8116     |
| 12 | 2.4697             | 0.03181       | 0.03181       | 2.4697     |
| 13 | 3.1392             | 0.04032       | 0.04032       | 3.1392     |
| 14 | 2.5948             | 0.03343       | 0.03343       | 2.5948     |
| 15 | 3.2767             | 0.04221       | 0.04221       | 3.2767     |
| 16 | 3.8433             | 0.04951       | 0.04951       | 3.8433     |
| 17 | 3.7462             | 0.04826       | 0.04826       | 3.7462     |
| 18 | 3.9189             | 0.05048       | 0.05048       | 3.9189     |
| 19 | 2.4135             | 0.03109       | 0.03109       | 2.4135     |
| 20 | 12.2235            | 0.15746       | 0.15746       | 12.2235    |

TIME 12.55.0  
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 11/28/67

TITLE  
 MCDONNELL

RUN NO. 2316

HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

| TIME=0700 PQ= 5.924. P02= 5.221 P1=02397 Q00T-A= 73.86 |                    |               |                |            |  |
|--------------------------------------------------------|--------------------|---------------|----------------|------------|--|
| N                                                      | Q00T-N<br>(B/SE-S) | Q00T-N/Q00T-A | Q00T-N/KQ00T-A | Q00T-N/REF |  |
| 1                                                      | 2.4605             | 0.03331       | 0.03331        | 2.4605     |  |
| 2                                                      | 3.2541             | 0.04406       | 0.04406        | 3.2541     |  |
| 3                                                      | 2.9567             | 0.04003       | 0.04003        | 2.9567     |  |
| 4                                                      | 2.9286             | 0.03965       | 0.03965        | 2.9286     |  |
| 5                                                      | 3.5100             | 0.04752       | 0.04752        | 3.5100     |  |
| 6                                                      | 3.0213             | 0.04091       | 0.04091        | 3.0213     |  |
| 7                                                      | 3.1535             | 0.04270       | 0.04270        | 3.1535     |  |
| 8                                                      | 2.2638             | 0.03265       | 0.03065        | 2.2638     |  |
| 9                                                      | 2.8115             | 0.03807       | 0.03807        | 2.8115     |  |
| 10                                                     | 3.0904             | 0.04184       | 0.04184        | 3.0904     |  |
| 11                                                     | 2.7157             | 0.03676       | 0.03676        | 2.7157     |  |
| 12                                                     | 2.3661             | 0.03204       | 0.03204        | 2.3661     |  |
| 13                                                     | 3.0242             | 0.04095       | 0.04095        | 3.0242     |  |
| 14                                                     | 2.4774             | 0.03354       | 0.03354        | 2.4774     |  |
| 15                                                     | 3.1703             | 0.04292       | 0.04292        | 3.1703     |  |
| 16                                                     | 3.7304             | 0.05063       | 0.05063        | 3.7304     |  |
| 17                                                     | 3.6296             | 0.04914       | 0.04914        | 3.6296     |  |
| 18                                                     | 3.7696             | 0.05104       | 0.05104        | 3.7696     |  |
| 19                                                     | 2.3279             | 0.03152       | 0.03152        | 2.3279     |  |
| 20                                                     | 11.7571            | 0.15919       | 0.15919        | 11.7571    |  |

RUN NO. 1316

TITLE

MCDONNELL

TIME 12.55.0  
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REP. NO. 0004  
11/28/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RAIFS

TIME=0.0750 PQ= 5559. P02= 5.004 P1=0.0313 QDOT-A= 70.08

| N  | QDOT-N<br>(B/SF-51) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|---------------------|---------------|----------------|------------|
| 1  | 2.3337              | 0.03330       | 0.03330        | 2.3337     |
| 2  | 3.1046              | 0.04430       | 0.04430        | 3.1046     |
| 3  | 2.8107              | 0.04011       | 0.04011        | 2.8107     |
| 4  | 2.7868              | 0.03976       | 0.03976        | 2.7868     |
| 5  | 3.3128              | 0.04727       | 0.04727        | 3.3128     |
| 6  | 2.9709              | 0.04096       | 0.04096        | 2.9709     |
| 7  | 2.9864              | 0.04258       | 0.04258        | 2.9864     |
| 8  | 2.1775              | 0.03107       | 0.03107        | 2.1775     |
| 9  | 2.6694              | 0.03809       | 0.03809        | 2.6694     |
| 10 | 2.9411              | 0.04197       | 0.04197        | 2.9411     |
| 11 | 2.6189              | 0.03737       | 0.03737        | 2.6189     |
| 12 | 2.2625              | 0.03228       | 0.03228        | 2.2625     |
| 13 | 2.9191              | 0.04164       | 0.04164        | 2.9191     |
| 14 | 2.3599              | 0.03367       | 0.03367        | 2.3599     |
| 15 | 3.0638              | 0.04372       | 0.04372        | 3.0638     |
| 16 | 3.6356              | 0.05187       | 0.05187        | 3.6356     |
| 17 | 3.5130              | 0.05013       | 0.05013        | 3.5130     |
| 18 | 3.6202              | 0.05166       | 0.05166        | 3.6202     |
| 19 | 2.2422              | 0.03199       | 0.03199        | 2.2422     |
| 20 | 11.2907             | 0.16110       | 0.16110        | 11.2907    |

11/22/67

TIME=-0800 PN= 5210. PWT= 4.801 P1=-02718 QDIT-A= 66.31

| N  | QDNT-H<br>(B/SF-S) | QDNT-N/ODNT-A | QDNT-N/KDNT-A | QDNT-N/REF |
|----|--------------------|---------------|---------------|------------|
| 1  | 2.2070             | 0.03328       | 0.03328       | 2.2070     |
| 2  | 2.2070             | 0.04457       | 0.04457       | 2.9551     |
| 3  | 2.6648             | 0.04019       | 0.04019       | 2.6648     |
| 4  | 2.6651             | 0.03909       | 0.03909       | 2.6651     |
| 5  | 3.1155             | 0.04698       | 0.04698       | 3.1155     |
| 6  | 2.7206             | 0.06103       | 0.06103       | 2.7206     |
| 7  | 2.0152             | 0.04266       | 0.04266       | 2.0152     |
| 8  | 2.0012             | 0.03156       | 0.03156       | 2.0012     |
| 9  | 2.5273             | 0.03811       | 0.03811       | 2.5273     |
| 10 | 2.7018             | 0.04219       | 0.04219       | 2.7018     |
| 11 | 2.5276             | 0.03806       | 0.03806       | 2.5276     |
| 12 | 2.1590             | 0.03256       | 0.03256       | 2.1590     |
| 13 | 2.8120             | 0.04241       | 0.04241       | 2.8120     |
| 14 | 2.2425             | 0.03302       | 0.03302       | 2.2425     |
| 15 | 2.9573             | 0.04650       | 0.04650       | 2.9573     |
| 16 | 3.5317             | 0.05326       | 0.05326       | 3.5317     |
| 17 | 3.3965             | 0.05122       | 0.05122       | 3.3965     |
| 18 | 3.4709             | 0.05236       | 0.05236       | 3.4709     |
| 19 | 2.1566             | 0.03252       | 0.03252       | 2.1566     |
| 20 | 10.8242            | 0.16326       | 0.16326       | 10.8242    |



TITLE  
 MCDONNELL

RUN NO. 2316

HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

| TIME=.0850 PO= 4901. P02= 4.613 P1=.02168 QDOT-A= 62.54 |                    |               |                |            |
|---------------------------------------------------------|--------------------|---------------|----------------|------------|
| N                                                       | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
| 1                                                       | 2.0802             | 0.03326       | 0.03326        | 2.0802     |
| 2                                                       | 2.3057             | 0.04485       | 0.04486        | 2.8057     |
| 3                                                       | 2.5188             | 0.04028       | 0.04028        | 2.5188     |
| 4                                                       | 2.5034             | 0.04003       | 0.04003        | 2.5034     |
| 5                                                       | 2.9183             | 0.04667       | 0.04667        | 2.9183     |
| 6                                                       | 2.5699             | 0.04109       | 0.04109        | 2.5699     |
| 7                                                       | 2.6661             | 0.04231       | 0.04231        | 2.6661     |
| 8                                                       | 2.0048             | 0.03206       | 0.03206        | 2.0048     |
| 9                                                       | 2.3852             | 0.03814       | 0.03814        | 2.3852     |
| 10                                                      | 2.6425             | 0.04226       | 0.04226        | 2.6425     |
| 11                                                      | 2.4263             | 0.03880       | 0.03880        | 2.4263     |
| 12                                                      | 2.0554             | 0.03287       | 0.03287        | 2.0554     |
| 13                                                      | 2.7059             | 0.04327       | 0.04327        | 2.7059     |
| 14                                                      | 2.1250             | 0.03398       | 0.03398        | 2.1250     |
| 15                                                      | 2.8508             | 0.04559       | 0.04559        | 2.8508     |
| 16                                                      | 3.4278             | 0.05481       | 0.05481        | 3.4278     |
| 17                                                      | 3.2799             | 0.05245       | 0.05245        | 3.2799     |
| 18                                                      | 3.3216             | 0.05311       | 0.05311        | 3.3216     |
| 19                                                      | 2.0709             | 0.03312       | 0.03312        | 2.0709     |
| 20                                                      | 10.3578            | 0.16563       | 0.16563        | 10.3578    |

RUN NO. 2316

TITLE

MCDONNELL

TIME 12.55.1  
PAGE NO. 276, VOL. I  
REP. NO. 6004  
11/28/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=.0900 PO= 4607. PO2= 4.439 PI=.02104 ODOT-A= 58.76

| N  | QDOT-N<br>(0/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.9535             | 0.03324       | 0.03324        | 1.9535     |
| 2  | 2.6562             | 0.04520       | 0.04520        | 2.6562     |
| 3  | 2.3728             | 0.04038       | 0.04038        | 2.3728     |
| 4  | 2.3617             | 0.04019       | 0.04019        | 2.3617     |
| 5  | 2.7211             | 0.04631       | 0.04631        | 2.7211     |
| 6  | 2.4195             | 0.04117       | 0.04117        | 2.4195     |
| 7  | 2.4770             | 0.04215       | 0.04215        | 2.4770     |
| 8  | 1.9185             | 0.03265       | 0.03265        | 1.9185     |
| 9  | 2.2432             | 0.03817       | 0.03817        | 2.2432     |
| 10 | 2.4932             | 0.04243       | 0.04243        | 2.4932     |
| 11 | 2.3300             | 0.03965       | 0.03965        | 2.3300     |
| 12 | 1.9519             | 0.03322       | 0.03322        | 1.9519     |
| 13 | 2.5999             | 0.04424       | 0.04424        | 2.5999     |
| 14 | 2.0076             | 0.03416       | 0.03416        | 2.0076     |
| 15 | 2.7444             | 0.04670       | 0.04670        | 2.7444     |
| 16 | 3.3239             | 0.05656       | 0.05656        | 3.3239     |
| 17 | 3.1633             | 0.05383       | 0.05383        | 3.1633     |
| 18 | 3.1723             | 0.05398       | 0.05398        | 3.1723     |
| 19 | 1.9853             | 0.03378       | 0.03378        | 1.9853     |
| 20 | 9.8914             | 0.16832       | 0.16832        | 9.8914     |

RUN NO. 2316

TITLE

MCDONNELL

TIME 12.55. 1  
PAGE NO. 277, VOL. I  
REP. NO. 6004  
11/28/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=.0950 PO= 4338. P02= 4.279 P1=.02044 QDOT-A= 54.99

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/RFF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.0267             | 0.03327       | 0.0332         | 1.8267     |
| 2  | 2.5067             | 0.04558       | 0.04558        | 2.5067     |
| 3  | 2.2268             | 0.04049       | 0.04049        | 2.2268     |
| 4  | 2.2200             | 0.04037       | 0.04037        | 2.2200     |
| 5  | 2.5239             | 0.04590       | 0.04590        | 2.5239     |
| 6  | 2.2690             | 0.04126       | 0.04126        | 2.2690     |
| 7  | 2.3078             | 0.04197       | 0.04197        | 2.3078     |
| 8  | 1.0322             | 0.03332       | 0.03332        | 1.8322     |
| 9  | 2.1011             | 0.03821       | 0.03821        | 2.1011     |
| 10 | 2.3439             | 0.04262       | 0.04262        | 2.3439     |
| 11 | 2.2337             | 0.04062       | 0.04062        | 2.2337     |
| 12 | 1.8483             | 0.03361       | 0.03361        | 1.8483     |
| 13 | 2.4938             | 0.04535       | 0.04535        | 2.4938     |
| 14 | 1.8901             | 0.03437       | 0.03437        | 1.8901     |
| 15 | 2.6379             | 0.04797       | 0.04797        | 2.6379     |
| 16 | 3.2200             | 0.05856       | 0.05856        | 3.2200     |
| 17 | 3.0468             | 0.05541       | 0.05541        | 3.0468     |
| 18 | 3.0230             | 0.05497       | 0.05497        | 3.0230     |
| 19 | 1.8996             | 0.03454       | 0.03454        | 1.8996     |
| 20 | 2.4249             | 0.037139      | 0.037139       | 2.4249     |

TIME 12.55.1  
PAGE NO. 278, VOL. I  
REP. VO. G004  
11/28/67

TITLE  
MCDONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2316

TIME = 0.0500 PO = 7623.68 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.127085 | 0.157E-04 | 0.204E-01 | 0.459E 01 | 0.295E-01   |
| 2     | 0.0 | 0.122378 | 0.161E-04 | 0.196E-01 | 0.442E 01 | 0.281E-01   |
| 3     | 0.0 | 0.130472 | 0.171E-04 | 0.209E-01 | 0.471E 01 | 0.305E-01   |
| 4     | 0.0 | 0.130454 | 0.171E-04 | 0.209E-01 | 0.471E 01 | 0.305E-01   |
| 5     | 0.0 | 0.110868 | 0.145E-04 | 0.178E-01 | 0.400E 01 | 0.247E-01   |
| 6     | 0.0 | 0.115503 | 0.152E-04 | 0.185E-01 | 0.417E 01 | 0.261E-01   |
| 7     | 0.0 | 0.120171 | 0.158E-04 | 0.193E-01 | 0.434E 01 | 0.275E-01   |
| 8     | 0.0 | 0.102847 | 0.135E-04 | 0.165E-01 | 0.371E 01 | 0.223E-01   |
| 9     | 0.0 | 0.114429 | 0.150E-04 | 0.184E-01 | 0.413E 01 | 0.258E-01   |
| 10    | 0.0 | 0.125783 | 0.165E-04 | 0.202E-01 | 0.454E 01 | 0.291E-01   |
| 11    | 0.0 | 0.101433 | 0.133E-04 | 0.163E-01 | 0.366E 01 | 0.219E-01   |
| 12    | 0.0 | 0.107163 | 0.141E-04 | 0.172E-01 | 0.387E 01 | 0.236E-01   |
| 13    | 0.0 | 0.101622 | 0.133E-04 | 0.163E-01 | 0.367E 01 | 0.220E-01   |
| 14    | 0.0 | 0.141591 | 0.186E-04 | 0.227E-01 | 0.511E 01 | 0.339E-01   |
| 15    | 0.0 | 0.167126 | 0.219E-04 | 0.268E-01 | 0.603E 01 | 0.414E-01   |
| 16    | 0.0 | 0.184469 | 0.242E-04 | 0.296E-01 | 0.666E 01 | 0.466E-01   |
| 17    | 0.0 | 0.167072 | 0.219E-04 | 0.268E-01 | 0.603E 01 | 0.414E-01   |
| 18    | 0.0 | 0.125531 | 0.165E-04 | 0.201E-01 | 0.453E 01 | 0.291E-01   |
| 19    | 0.0 | 0.075768 | 0.094E-05 | 0.122E-01 | 0.274E 01 | 0.143E-01   |
| 20    | 0.0 | 0.388846 | 0.510E-04 | 0.624E-01 | 0.140E 02 | 0.107E 00   |

TITLE  
 MCDONNELL

HIT TEST NO. 67  
 PRESSURE SURVEY

RUN NO. 2316

TIME = 0.0550 PO = 7163.08 ALPHA = 15.00

| PROBE | P/HI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|------|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0  | 0.120680 | 0.168E-04 | 0.203E-01 | 0.452E 01 | 0.292E-01   |
| 2     | 0.0  | 0.113822 | 0.159E-04 | 0.191E-01 | 0.426E 01 | 0.271E-01   |
| 3     | 0.0  | 0.125916 | 0.176E-04 | 0.211E-01 | 0.472E 01 | 0.308E-01   |
| 4     | 0.0  | 0.123406 | 0.172E-04 | 0.207E-01 | 0.442E 01 | 0.301E-01   |
| 5     | 0.0  | 0.105133 | 0.147E-04 | 0.176E-01 | 0.394E 01 | 0.244E-01   |
| 6     | 0.0  | 0.107206 | 0.150E-04 | 0.180E-01 | 0.402E 01 | 0.250E-01   |
| 7     | 0.0  | 0.112486 | 0.157E-04 | 0.189E-01 | 0.421E 01 | 0.267E-01   |
| 8     | 0.0  | 0.093894 | 0.131E-04 | 0.158E-01 | 0.352E 01 | 0.209E-01   |
| 9     | 0.0  | 0.106220 | 0.148E-04 | 0.178E-01 | 0.398E 01 | 0.247E-01   |
| 10    | 0.0  | 0.120016 | 0.168E-04 | 0.201E-01 | 0.450E 01 | 0.290E-01   |
| 11    | 0.0  | 0.093313 | 0.130E-04 | 0.157E-01 | 0.350E 01 | 0.207E-01   |
| 12    | 0.0  | 0.099545 | 0.139E-04 | 0.167E-01 | 0.373E 01 | 0.226E-01   |
| 13    | 0.0  | 0.092142 | 0.129E-04 | 0.155E-01 | 0.345E 01 | 0.203E-01   |
| 14    | 0.0  | 0.132348 | 0.195E-04 | 0.222E-01 | 0.496E 01 | 0.328E-01   |
| 15    | 0.0  | 0.151210 | 0.211E-04 | 0.254E-01 | 0.567E 01 | 0.387E-01   |
| 16    | 0.0  | 0.172284 | 0.241E-04 | 0.289E-01 | 0.645E 01 | 0.452E-01   |
| 17    | 0.0  | 0.159186 | 0.222E-04 | 0.267E-01 | 0.596E 01 | 0.412E-01   |
| 18    | 0.0  | 0.133795 | 0.187E-04 | 0.225E-01 | 0.501E 01 | 0.333E-01   |
| 19    | 0.0  | 0.070924 | 0.090E-05 | 0.119E-01 | 0.266E 01 | 0.137E-01   |
| 20    | 0.0  | 0.368249 | 0.514E-04 | 0.618E-01 | 0.138E 02 | 0.106E 00   |

TIME 12.55. 2  
PAGE NO. 280, VOL. I  
REP. NO. 0004  
11/28/67

TITLE  
MCDONNELL

RUN NO. 2316

HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.0600 PO= 6726.35 ALPHA= 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.114098 | 0.170E-04 | 0.200E-01 | 0.443E 01 | 0.287E-01   |
| 2     | 0.0 | 0.105524 | 0.157E-04 | 0.185E-01 | 0.410E 01 | 0.259E-01   |
| 3     | 0.0 | 0.120834 | 0.180E-04 | 0.212E-01 | 0.470E 01 | 0.309E-01   |
| 4     | 0.0 | 0.116126 | 0.173E-04 | 0.204E-01 | 0.451E 01 | 0.294E-01   |
| 5     | 0.0 | 0.099422 | 0.148E-04 | 0.174E-01 | 0.386E 01 | 0.239E-01   |
| 6     | 0.0 | 0.099344 | 0.148E-04 | 0.174E-01 | 0.386E 01 | 0.239E-01   |
| 7     | 0.0 | 0.105054 | 0.156E-04 | 0.184E-01 | 0.408E 01 | 0.258E-01   |
| 8     | 0.0 | 0.085697 | 0.127E-04 | 0.150E-01 | 0.333E 01 | 0.195E-01   |
| 9     | 0.0 | 0.098282 | 0.146E-04 | 0.172E-01 | 0.392E 01 | 0.236E-01   |
| 10    | 0.0 | 0.113884 | 0.169E-04 | 0.200E-01 | 0.443E 01 | 0.286E-01   |
| 11    | 0.0 | 0.085600 | 0.127E-04 | 0.150E-01 | 0.333E 01 | 0.195E-01   |
| 12    | 0.0 | 0.092323 | 0.137E-04 | 0.162E-01 | 0.359E 01 | 0.216E-01   |
| 13    | 0.0 | 0.083229 | 0.124E-04 | 0.146E-01 | 0.323E 01 | 0.187E-01   |
| 14    | 0.0 | 0.123480 | 0.184E-04 | 0.217E-01 | 0.480E 01 | 0.318E-01   |
| 15    | 0.0 | 0.136961 | 0.204E-04 | 0.240E-01 | 0.532E 01 | 0.361E-01   |
| 16    | 0.0 | 0.160255 | 0.238E-04 | 0.281E-01 | 0.623E 01 | 0.437E-01   |
| 17    | 0.0 | 0.150575 | 0.224E-04 | 0.264E-01 | 0.585E 01 | 0.406E-01   |
| 18    | 0.0 | 0.137818 | 0.205E-04 | 0.242E-01 | 0.536E 01 | 0.364E-01   |
| 19    | 0.0 | 0.065971 | 0.931E-05 | 0.116E-01 | 0.256E 01 | 0.131E-01   |
| 20    | 0.0 | 0.347922 | 0.517E-04 | 0.611E-01 | 0.135E 02 | 0.105E 00   |

TIME 12.55.3  
PAGE NO. 201, VOL. I  
REP. NO. 6004  
11/28/67

TITLE  
MCDONNELL

RUN NO. 2316

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0650 PO = 6313.48 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.107338 | 0.170E-04 | 0.197E-01 | 0.432E 01 | 0.280E-01   |
| 2     | 0.0 | 0.097483 | 0.154E-04 | 0.179E-01 | 0.393E 01 | 0.247E-01   |
| 3     | 0.0 | 0.115224 | 0.183E-04 | 0.211E-01 | 0.464E 01 | 0.307E-01   |
| 4     | 0.0 | 0.108613 | 0.172E-04 | 0.199E-01 | 0.437E 01 | 0.284E-01   |
| 5     | 0.0 | 0.093735 | 0.148E-04 | 0.172E-01 | 0.378E 01 | 0.234E-01   |
| 6     | 0.0 | 0.091917 | 0.146E-04 | 0.169E-01 | 0.370E 01 | 0.228E-01   |
| 7     | 0.0 | 0.097878 | 0.155E-04 | 0.180E-01 | 0.394E 01 | 0.248E-01   |
| 8     | 0.0 | 0.078257 | 0.124E-04 | 0.144E-01 | 0.315E 01 | 0.181E-01   |
| 9     | 0.0 | 0.090615 | 0.144E-04 | 0.166E-01 | 0.365E 01 | 0.223E-01   |
| 10    | 0.0 | 0.107386 | 0.170E-04 | 0.197E-01 | 0.433E 01 | 0.280E-01   |
| 11    | 0.0 | 0.078296 | 0.124E-04 | 0.144E-01 | 0.315E 01 | 0.182E-01   |
| 12    | 0.0 | 0.085498 | 0.135E-04 | 0.157E-01 | 0.344E 01 | 0.206E-01   |
| 13    | 0.0 | 0.074981 | 0.119E-04 | 0.137E-01 | 0.302E 01 | 0.170E-01   |
| 14    | 0.0 | 0.115087 | 0.182E-04 | 0.211E-01 | 0.464E 01 | 0.306E-01   |
| 15    | 0.0 | 0.124379 | 0.197E-04 | 0.228E-01 | 0.501E 01 | 0.338E-01   |
| 16    | 0.0 | 0.148383 | 0.235E-04 | 0.272E-01 | 0.598E 01 | 0.419E-01   |
| 17    | 0.0 | 0.141239 | 0.224E-04 | 0.259E-01 | 0.569E 01 | 0.395E-01   |
| 18    | 0.0 | 0.137601 | 0.218E-04 | 0.252E-01 | 0.554E 01 | 0.383E-01   |
| 19    | 0.0 | 0.060909 | 0.965E-05 | 0.112E-01 | 0.245E 01 | 0.122E-01   |
| 20    | 0.0 | 0.327866 | 0.519E-04 | 0.601E-01 | 0.132E 02 | 0.103E 00   |

TIME 12.55.3  
PAGE NO. 282, VOL. J  
REP. NO. 0004  
11/28/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2316

TIME = 0.0700 PO = 5924.48 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PH     | PON/PO2    | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|------------|------------|-----------|-------------|
| 1     | 0.0 | 0.100399 | 0.169E-04  | 0.192E-01  | 0.419E 01 | 0.271E-01   |
| 2     | 0.0 | 0.089699 | 0.151E-04  | 0.172E-01  | 0.374E 01 | 0.233E-01   |
| 3     | 0.0 | 0.109097 | 0.194E-04  | 0.209E-01  | 0.455E 01 | 0.302E-01   |
| 4     | 0.0 | 0.109868 | 0.170E-04  | 0.193E-01  | 0.421E 01 | 0.273E-01   |
| 5     | 0.0 | 0.088072 | 0.149E-04  | 0.169E-01  | 0.367E 01 | 0.227E-01   |
| 6     | 0.0 | 0.094926 | 0.143E-04  | 0.163E-01  | 0.354E 01 | 0.216E-01   |
| 7     | 0.0 | 0.090956 | 0.154E-04  | 0.176E-01  | 0.370E 01 | 0.237E-01   |
| 8     | 0.0 | 0.071574 | 0.121E-04  | 0.137E-01  | 0.299E 01 | 0.169E-01   |
| 9     | 0.0 | 0.093218 | 0.140E-04  | 0.159E-01  | 0.347E 01 | 0.210E-01   |
| 10    | 0.0 | 0.100522 | 0.170E-04  | 0.193E-01  | 0.419E 01 | 0.271E-01   |
| 11    | 0.0 | 0.071600 | 0.121E-04  | 0.137E-01  | 0.298E 01 | 0.168E-01   |
| 12    | 0.0 | 0.070969 | 0.133E-04  | 0.151E-01  | 0.330E 01 | 0.195E-01   |
| 13    | 0.0 | 0.067100 | 0.113E-04  | 0.129E-01  | 0.269E 01 | 0.153E-01   |
| 14    | 0.0 | 0.107169 | 0.181E-04  | 0.205E-01  | 0.447E 01 | 0.295E-01   |
| 15    | 0.0 | 0.113664 | 0.192E-04  | 0.217E-01  | 0.473E 01 | 0.317E-01   |
| 16    | 0.0 | 0.136667 | 0.231E-04  | 0.262E-01  | 0.570E 01 | 0.399E-01   |
| 17    | 0.0 | 0.131177 | 0.221E-04  | 0.251E-01  | 0.547E 01 | 0.380E-01   |
| 18    | 0.0 | 0.133144 | 0.225E-04  | 0.255E-01  | 0.555E 01 | 0.387E-01   |
| 19    | 0.0 | 0.055137 | 0.941E-05  | 0.107E-01  | 0.232E 01 | 0.113E-01   |
| 20    | 0.0 | 0.108079 | 0.1420E-04 | 0.1590E-01 | 0.347E 02 | 0.101E 00   |



TIME 12.55.4  
PAGE NO. 283, VOL. I  
REP. NO. 0004  
11/28/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0750 PO = 5559.36 ALPHA = 15.30

| PROBE | PHT | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.093282 | 0.168E-04 | 0.106E-01 | 0.403E 01 | 0.259E-01   |
| 2     | 0.0 | 0.092173 | 0.148E-04 | 0.144E-01 | 0.355E 01 | 0.218E-01   |
| 3     | 0.0 | 0.102423 | 0.144E-04 | 0.205E-01 | 0.443E 01 | 0.293E-01   |
| 4     | 0.0 | 0.092891 | 0.167E-04 | 0.186E-01 | 0.427E 01 | 0.259E-01   |
| 5     | 0.0 | 0.092433 | 0.148E-04 | 0.165E-01 | 0.356E 01 | 0.219E-01   |
| 6     | 0.0 | 0.078170 | 0.141E-04 | 0.157E-01 | 0.339E 01 | 0.204E-01   |
| 7     | 0.0 | 0.094289 | 0.152E-04 | 0.168E-01 | 0.364E 01 | 0.226E-01   |
| 8     | 0.0 | 0.065647 | 0.118E-04 | 0.131E-01 | 0.294E 01 | 0.157E-01   |
| 9     | 0.0 | 0.074091 | 0.137E-04 | 0.152E-01 | 0.329E 01 | 0.196E-01   |
| 10    | 0.0 | 0.093293 | 0.168E-04 | 0.186E-01 | 0.403E 01 | 0.259E-01   |
| 11    | 0.0 | 0.064912 | 0.117E-04 | 0.130E-01 | 0.281E 01 | 0.154E-01   |
| 12    | 0.0 | 0.073937 | 0.131E-04 | 0.144E-01 | 0.316E 01 | 0.185E-01   |
| 13    | 0.0 | 0.059905 | 0.108E-04 | 0.120E-01 | 0.259E 01 | 0.136E-01   |
| 14    | 0.0 | 0.099726 | 0.179E-04 | 0.199E-01 | 0.431E 01 | 0.283E-01   |
| 15    | 0.0 | 0.104217 | 0.187E-04 | 0.208E-01 | 0.450E 01 | 0.300E-01   |
| 16    | 0.0 | 0.125108 | 0.225E-04 | 0.250E-01 | 0.541E 01 | 0.377E-01   |
| 17    | 0.0 | 0.120391 | 0.217E-04 | 0.241E-01 | 0.520E 01 | 0.360E-01   |
| 18    | 0.0 | 0.124446 | 0.224E-04 | 0.249E-01 | 0.538E 01 | 0.375E-01   |
| 19    | 0.0 | 0.050456 | 0.908E-05 | 0.101E-01 | 0.218E 01 | 0.101E-01   |
| 20    | 0.0 | 0.288561 | 0.519E-04 | 0.577E-01 | 0.125E 02 | 0.981E-01   |

TIME 12.55.4  
PAGE NO. 284 VOL. I  
REP. NO. 0004  
11/28/67

TITLE  
MCDONNELL  
MIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2316

TIME = 0.0800 PN = 5218.10 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | 190V-PI1/01 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.085987 | 0.165E-04 | 0.179E-01 | 0.384E 01 | 0.245E-01   |
| 2     | 0.0 | 0.074904 | 0.148E-04 | 0.156E-01 | 0.335E 01 | 0.202E-01   |
| 3     | 0.0 | 0.095232 | 0.183E-04 | 0.198E-01 | 0.425E 01 | 0.281E-01   |
| 4     | 0.0 | 0.084681 | 0.162E-04 | 0.176E-01 | 0.370E 01 | 0.240E-01   |
| 5     | 0.0 | 0.076819 | 0.147E-04 | 0.160E-01 | 0.343E 01 | 0.210E-01   |
| 6     | 0.0 | 0.072250 | 0.130E-04 | 0.150E-01 | 0.323E 01 | 0.192E-01   |
| 7     | 0.0 | 0.077875 | 0.149E-04 | 0.162E-01 | 0.348E 01 | 0.214E-01   |
| 8     | 0.0 | 0.060477 | 0.116E-04 | 0.126E-01 | 0.270E 01 | 0.147E-01   |
| 9     | 0.0 | 0.069235 | 0.133E-04 | 0.144E-01 | 0.309E 01 | 0.181E-01   |
| 10    | 0.0 | 0.085699 | 0.164E-04 | 0.178E-01 | 0.383E 01 | 0.244E-01   |
| 11    | 0.0 | 0.058932 | 0.113E-04 | 0.123E-01 | 0.263E 01 | 0.140E-01   |
| 12    | 0.0 | 0.067401 | 0.129E-04 | 0.140E-01 | 0.301E 01 | 0.173E-01   |
| 13    | 0.0 | 0.053236 | 0.102E-04 | 0.111E-01 | 0.238E 01 | 0.119E-01   |
| 14    | 0.0 | 0.092758 | 0.178E-04 | 0.193E-01 | 0.414E 01 | 0.271E-01   |
| 15    | 0.0 | 0.096536 | 0.185E-04 | 0.201E-01 | 0.432E 01 | 0.286E-01   |
| 16    | 0.0 | 0.113705 | 0.218E-04 | 0.237E-01 | 0.508E 01 | 0.352E-01   |
| 17    | 0.0 | 0.108879 | 0.209E-04 | 0.227E-01 | 0.486E 01 | 0.333E-01   |
| 18    | 0.0 | 0.111508 | 0.214E-04 | 0.232E-01 | 0.498E 01 | 0.343E-01   |
| 19    | 0.0 | 0.045065 | 0.844E-05 | 0.939E-02 | 0.201E 01 | 0.874E-02   |
| 20    | 0.0 | 0.269314 | 0.516E-04 | 0.561E-01 | 0.120E 02 | 0.951E-01   |

TIME 12.55. 5  
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 11/28/67

TITLE  
 MCDONNELL

RUN NO. 2316

HIT TEST NO. 67  
 PRESSURE SURVEY

TIME= 0.0850 PO= 4900.71 ALPHA= 15.30

| PROBE | PHT | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.078514 | 0.159E-04 | 0.170E-01 | 0.342E 01 | 0.224E-01   |
| 2     | 0.0 | 0.067893 | 0.139E-04 | 0.147E-01 | 0.312E 01 | 0.185E-01   |
| 3     | 0.0 | 0.087514 | 0.179E-04 | 0.190E-01 | 0.404E 01 | 0.266E-01   |
| 4     | 0.0 | 0.076239 | 0.156E-04 | 0.165E-01 | 0.352E 01 | 0.219E-01   |
| 5     | 0.0 | 0.071227 | 0.145E-04 | 0.154E-01 | 0.320E 01 | 0.199E-01   |
| 6     | 0.0 | 0.066564 | 0.135E-04 | 0.144E-01 | 0.307E 01 | 0.180E-01   |
| 7     | 0.0 | 0.071716 | 0.146E-04 | 0.155E-01 | 0.331E 01 | 0.201E-01   |
| 8     | 0.0 | 0.056063 | 0.114E-04 | 0.122E-01 | 0.259E 01 | 0.130E-01   |
| 9     | 0.0 | 0.062649 | 0.128E-04 | 0.136E-01 | 0.269E 01 | 0.164E-01   |
| 10    | 0.0 | 0.077739 | 0.159E-04 | 0.169E-01 | 0.359E 01 | 0.225E-01   |
| 11    | 0.0 | 0.053160 | 0.108E-04 | 0.115E-01 | 0.245E 01 | 0.124E-01   |
| 12    | 0.0 | 0.062162 | 0.127E-04 | 0.135E-01 | 0.287E 01 | 0.162E-01   |
| 13    | 0.0 | 0.047154 | 0.062E-05 | 0.102E-01 | 0.217E 01 | 0.102E-01   |
| 14    | 0.0 | 0.066264 | 0.176E-04 | 0.187E-01 | 0.308E 01 | 0.259E-01   |
| 15    | 0.0 | 0.060722 | 0.185E-04 | 0.197E-01 | 0.418E 01 | 0.277E-01   |
| 16    | 0.0 | 0.102459 | 0.209E-04 | 0.222E-01 | 0.473E 01 | 0.324E-01   |
| 17    | 0.0 | 0.096642 | 0.197E-04 | 0.210E-01 | 0.446E 01 | 0.301E-01   |
| 18    | 0.0 | 0.094330 | 0.192E-04 | 0.204E-01 | 0.435E 01 | 0.291E-01   |
| 19    | 0.0 | 0.039565 | 0.007E-05 | 0.050E-02 | 0.102E 01 | 0.717E-02   |
| 20    | 0.0 | 0.250336 | 0.511E-04 | 0.543E-01 | 0.115E 02 | 0.917E-01   |

TITLE  
MCDONNELL

RUN NO. 316

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0900 PD = 4607.20 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.070863 | 0.154E-04 | 0.160E-01 | 0.337E 01 | 0.208E-01   |
| 2     | 0.0 | 0.061139 | 0.133E-04 | 0.138E-01 | 0.291E 01 | 0.167E-01   |
| 3     | 0.0 | 0.079269 | 0.172E-04 | 0.179E-01 | 0.377E 01 | 0.243E-01   |
| 4     | 0.0 | 0.067565 | 0.147E-04 | 0.152E-01 | 0.321E 01 | 0.194E-01   |
| 5     | 0.0 | 0.065661 | 0.143E-04 | 0.148E-01 | 0.312E 01 | 0.186E-01   |
| 6     | 0.0 | 0.061314 | 0.133E-04 | 0.138E-01 | 0.291E 01 | 0.168E-01   |
| 7     | 0.0 | 0.065812 | 0.143E-04 | 0.148E-01 | 0.313E 01 | 0.186E-01   |
| 8     | 0.0 | 0.052406 | 0.114E-04 | 0.118E-01 | 0.269E 01 | 0.131E-01   |
| 9     | 0.0 | 0.056334 | 0.122E-04 | 0.127E-01 | 0.258E 01 | 0.147E-01   |
| 10    | 0.0 | 0.069413 | 0.151E-04 | 0.156E-01 | 0.330E 01 | 0.201E-01   |
| 11    | 0.0 | 0.047896 | 0.104E-04 | 0.108E-01 | 0.228E 01 | 0.112E-01   |
| 12    | 0.0 | 0.057319 | 0.124E-04 | 0.129E-01 | 0.272E 01 | 0.151E-01   |
| 13    | 0.0 | 0.041637 | 0.094E-05 | 0.098E-02 | 0.198E 01 | 0.858E-02   |
| 14    | 0.0 | 0.080246 | 0.174E-04 | 0.181E-01 | 0.381E 01 | 0.247E-01   |
| 15    | 0.0 | 0.086475 | 0.188E-04 | 0.195E-01 | 0.411E 01 | 0.273E-01   |
| 16    | 0.0 | 0.091369 | 0.198E-04 | 0.206E-01 | 0.434E 01 | 0.293E-01   |
| 17    | 0.0 | 0.083581 | 0.182E-04 | 0.189E-01 | 0.398E 01 | 0.261E-01   |
| 18    | 0.0 | 0.072911 | 0.158E-04 | 0.164E-01 | 0.347E 01 | 0.216E-01   |
| 19    | 0.0 | 0.033955 | 0.737E-05 | 0.765E-02 | 0.161E 01 | 0.538E-02   |
| 20    | 0.0 | 0.231628 | 0.503E-04 | 0.522E-01 | 0.110E 02 | 0.877E-01   |

TIME 12.55. 6  
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TITLE  
MCDONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2316

TIME = 0.0950 PO = 4337.54 ALPHA = 15.00

| PROBE | PHI | PON      | PON/PO    | PCN/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.063033 | 0.145E-04 | 0.147E-01 | 0.308E 01 | 0.184E-01   |
| 2     | 0.0 | 0.054642 | 0.126E-04 | 0.128E-01 | 0.267E 01 | 0.148E-01   |
| 3     | 0.0 | 0.070497 | 0.163E-04 | 0.165E-01 | 0.345E 01 | 0.216E-01   |
| 4     | 0.0 | 0.058659 | 0.135E-04 | 0.137E-01 | 0.287E 01 | 0.165E-01   |
| 5     | 0.0 | 0.060118 | 0.139E-04 | 0.141E-01 | 0.294E 01 | 0.171E-01   |
| 6     | 0.0 | 0.056499 | 0.130E-04 | 0.132E-01 | 0.276E 01 | 0.156E-01   |
| 7     | 0.0 | 0.060162 | 0.139E-04 | 0.141E-01 | 0.294E 01 | 0.172E-01   |
| 8     | 0.0 | 0.049506 | 0.114E-04 | 0.116E-01 | 0.242E 01 | 0.126E-01   |
| 9     | 0.0 | 0.050289 | 0.116E-04 | 0.118E-01 | 0.246E 01 | 0.129E-01   |
| 10    | 0.0 | 0.060723 | 0.140E-04 | 0.142E-01 | 0.297E 01 | 0.174E-01   |
| 11    | 0.0 | 0.043041 | 0.992E-05 | 0.101E-01 | 0.211E 01 | 0.976E-02   |
| 12    | 0.0 | 0.052872 | 0.122E-04 | 0.124E-01 | 0.259E 01 | 0.140E-01   |
| 13    | 0.0 | 0.036687 | 0.846E-05 | 0.857E-02 | 0.179E 01 | 0.702E-02   |
| 14    | 0.0 | 0.074703 | 0.172E-04 | 0.175E-01 | 0.365E 01 | 0.234E-01   |
| 15    | 0.0 | 0.083896 | 0.193E-04 | 0.196E-01 | 0.410E 01 | 0.274E-01   |
| 16    | 0.0 | 0.080435 | 0.185E-04 | 0.188E-01 | 0.393E 01 | 0.259E-01   |
| 17    | 0.0 | 0.069994 | 0.161E-04 | 0.164E-01 | 0.342E 01 | 0.214E-01   |
| 18    | 0.0 | 0.047251 | 0.109E-04 | 0.110E-01 | 0.231E 01 | 0.116E-01   |
| 19    | 0.0 | 0.028235 | 0.651E-05 | 0.660E-02 | 0.138E 01 | 0.337E-02   |
| 20    | 0.0 | 0.213190 | 0.492E-04 | 0.498E-01 | 0.104E 02 | 0.832E-01   |

TIME 13.33.37  
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11/28/67

TITLE  
MCDONNELL

RUN NO. 2317  
HIT TEST NO. 67  
TUNNEL PARAMETERS

| T<br>(SEC) | P0<br>(PSI) | T0<br>(OK) | H0<br>(SFT/SSC) | Q-DOT<br>(8/SF-S) | P02<br>(PSI) | P1<br>(PSI) | T1<br>(OK) | U<br>(FT/S) | M1    | REF-T    | Q1<br>(PSI) | ALPHA<br>(DEG) |
|------------|-------------|------------|-----------------|-------------------|--------------|-------------|------------|-------------|-------|----------|-------------|----------------|
| .0400      | 8589.       | 1649.      | 0.20766E 08     | 90.73             | 6.534        | 0.02838     | 50.33      | 6357.       | 13.40 | 2236910. | 3.556       | 10.03          |
| .0450      | 8027.       | 1632.      | 0.20454E 08     | 86.07             | 6.193        | 0.02669     | 49.69      | 6309.       | 13.38 | 2141307. | 3.344       | 10.03          |
| .0500      | 7497.       | 1610.      | 0.20105E 08     | 81.42             | 5.899        | 0.02509     | 48.96      | 6255.       | 13.37 | 2056289. | 3.137       | 10.03          |
| .0550      | 6999.       | 1582.      | 0.19717E 08     | 76.77             | 5.449        | 0.02360     | 48.12      | 6194.       | 13.35 | 1982397. | 2.944       | 10.03          |
| .0600      | 6534.       | 1552.      | 0.19284E 08     | 72.12             | 5.116        | 0.02221     | 47.17      | 6125.       | 13.33 | 1920320. | 2.754       | 10.03          |
| .0650      | 6100.       | 1503.      | 0.18591E 08     | 67.46             | 4.808        | 0.02088     | 45.48      | 6014.       | 13.33 | 1906790. | 2.598       | 10.03          |
| .0700      | 5699.       | 1464.      | 0.18029E 08     | 62.81             | 4.525        | 0.01969     | 44.18      | 5922.       | 13.32 | 1876949. | 2.446       | 10.03          |
| .0750      | 5330.       | 1421.      | 0.17402E 08     | 58.16             | 4.258        | 0.01861     | 42.70      | 5818.       | 13.31 | 1844636. | 2.308       | 10.03          |
| .0800      | 4994.       | 1370.      | 0.16707E 08     | 53.51             | 4.036        | 0.01763     | 41.04      | 5701.       | 13.30 | 1813338. | 2.184       | 10.03          |
| .0850      | 4689.       | 1326.      | 0.16110E 08     | 48.86             | 3.830        | 0.01677     | 39.67      | 5598.       | 13.29 | 1873891. | 2.073       | 10.03          |
| .0900      | 4417.       | 1261.      | 0.15314E 08     | 44.20             | 3.650        | 0.01601     | 37.74      | 5458.       | 13.28 | 1925745. | 1.976       | 10.03          |
| .0950      | 4177.       | 1177.      | 0.14297E 08     | 39.55             | 3.495        | 0.01533     | 35.21      | 5274.       | 13.29 | 2047055. | 1.894       | 10.03          |
| .1000      | 3969.       | 1107.      | 0.13446E 08     | 34.90             | 3.366        | 0.01478     | 33.15      | 5114.       | 13.28 | 2160709. | 1.825       | 10.03          |
| .1050      | 3793.       | 1002.      | 0.12296E 08     | 30.25             | 3.252        | 0.01432     | 30.28      | 4891.       | 13.29 | 2399636. | 1.770       | 10.03          |

RUN NO. 2317

TITLE

MCDONNELL

TIME 13.33.38  
PAGE NO. 289, VOL. I  
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11/28/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=.0400 PN= 8589. P02= 6.604 PI=.02838 QDOT-A= 90.73

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.9488             | 0.02148       | 0.02148        | 1.9488     |
| 2  | 2.2222             | 0.02449       | 0.02449        | 2.2222     |
| 3  | 2.6470             | 0.02918       | 0.02918        | 2.6470     |
| 4  | 2.3822             | 0.02626       | 0.02626        | 2.3822     |
| 5  | 2.9840             | 0.03289       | 0.03289        | 2.9840     |
| 6  | 2.5708             | 0.02834       | 0.02834        | 2.5708     |
| 7  | 2.6975             | 0.02973       | 0.02973        | 2.6975     |
| 8  | 2.3423             | 0.02582       | 0.02582        | 2.3423     |
| 9  | 2.5722             | 0.02835       | 0.02835        | 2.5722     |
| 10 | 2.7497             | 0.03031       | 0.03031        | 2.7497     |
| 11 | 2.1332             | 0.02351       | 0.02351        | 2.1332     |
| 12 | 2.2730             | 0.02505       | 0.02505        | 2.2730     |
| 13 | 2.3073             | 0.02543       | 0.02543        | 2.3073     |
| 14 | 2.3641             | 0.02606       | 0.02606        | 2.3641     |
| 15 | 2.5381             | 0.02798       | 0.02798        | 2.5381     |
| 16 | 2.8967             | 0.03193       | 0.03193        | 2.8967     |
| 17 | 2.8250             | 0.03114       | 0.03114        | 2.8250     |
| 18 | 3.1856             | 0.03511       | 0.03511        | 3.1856     |
| 19 | 1.7523             | 0.01931       | 0.01931        | 1.7523     |
| 20 | 11.3539            | 0.12514       | 0.12514        | 11.3539    |

TIME 13.33.38  
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MC DONNELL

TITLE

RUN NO. 3317

HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

TIME=0450 PO= 8027. PO2= 6.193 PI=02669 QDOT-A= 86.07

| N  | QDOT-N<br>(B/5F-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.8562             | 0.02157       | 0.02157        | 1.8562     |
| 2  | 2.1155             | 0.02458       | 0.02458        | 2.1155     |
| 3  | 2.5119             | 0.02918       | 0.02918        | 2.5119     |
| 4  | 2.2698             | 0.02637       | 0.02637        | 2.2698     |
| 5  | 2.8432             | 0.03303       | 0.03303        | 2.8432     |
| 6  | 2.4420             | 0.02837       | 0.02837        | 2.4420     |
| 7  | 2.5602             | 0.02974       | 0.02974        | 2.5602     |
| 8  | 2.2327             | 0.02594       | 0.02594        | 2.2327     |
| 9  | 2.4495             | 0.02846       | 0.02846        | 2.4495     |
| 10 | 2.6115             | 0.03034       | 0.03034        | 2.6115     |
| 11 | 2.0241             | 0.02352       | 0.02352        | 2.0241     |
| 12 | 2.1607             | 0.02510       | 0.02510        | 2.1607     |
| 13 | 2.1930             | 0.02548       | 0.02548        | 2.1930     |
| 14 | 2.2533             | 0.02618       | 0.02618        | 2.2533     |
| 15 | 2.4270             | 0.02820       | 0.02820        | 2.4270     |
| 16 | 2.7632             | 0.03210       | 0.03210        | 2.7632     |
| 17 | 2.6895             | 0.03125       | 0.03125        | 2.6895     |
| 18 | 3.0244             | 0.03514       | 0.03514        | 3.0244     |
| 19 | 1.6751             | 0.01946       | 0.01946        | 1.6751     |
| 20 | 10.8357            | 0.12589       | 0.12589        | 10.8357    |



TIME 13.33.38  
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MC DONNELL

HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

RUN NO. 2317

TIME = 0.0500 PM = 7497. PMZ = 5.809 PI = 0.02530 QDOT-A = 01.47

| N  | QDOT-N  | QDOT-N/QDOT-A | QDOT-N/K QDOT-A | QDOT-N/REF |
|----|---------|---------------|-----------------|------------|
| 1  | 1.7636  | 0.02166       | 0.02166         | 1.7636     |
| 2  | 2.0099  | 0.02467       | 0.02467         | 2.0099     |
| 3  | 2.3768  | 0.02919       | 0.02919         | 2.3768     |
| 4  | 2.1573  | 0.02650       | 0.02650         | 2.1573     |
| 5  | 2.7024  | 0.03319       | 0.03319         | 2.7024     |
| 6  | 2.3132  | 0.02841       | 0.02841         | 2.3132     |
| 7  | 2.4229  | 0.02976       | 0.02976         | 2.4229     |
| 8  | 2.1230  | 0.02607       | 0.02607         | 2.1230     |
| 9  | 2.3269  | 0.02958       | 0.02958         | 2.3269     |
| 10 | 2.4734  | 0.03038       | 0.03038         | 2.4734     |
| 11 | 1.9149  | 0.02352       | 0.02352         | 1.9149     |
| 12 | 2.0483  | 0.02516       | 0.02516         | 2.0483     |
| 13 | 2.0786  | 0.02553       | 0.02553         | 2.0786     |
| 14 | 2.1425  | 0.02631       | 0.02631         | 2.1425     |
| 15 | 2.3159  | 0.02844       | 0.02844         | 2.3159     |
| 16 | 2.6298  | 0.03230       | 0.03230         | 2.6298     |
| 17 | 2.5539  | 0.03137       | 0.03137         | 2.5539     |
| 18 | 2.8632  | 0.03516       | 0.03516         | 2.8632     |
| 19 | 1.5980  | 0.01963       | 0.01963         | 1.5980     |
| 20 | 10.3174 | 0.12672       | 0.12672         | 10.3174    |

RUN NO. 2317

TITLE

MC DONNELL

TIME 13.33.38  
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11/28/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| TIME=0.550 PO= 6999. P02= 5.449 PI=0.2360 QDOT-A= 76.77 |                    |               |                |            |
|---------------------------------------------------------|--------------------|---------------|----------------|------------|
| N                                                       | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
| 1                                                       | 1.6709             | 0.02177       | 0.02177        | 1.6709     |
| 2                                                       | 1.9022             | 0.02478       | 0.02478        | 1.9022     |
| 3                                                       | 2.2417             | 0.02920       | 0.02920        | 2.2417     |
| 4                                                       | 2.0449             | 0.02564       | 0.02564        | 2.0449     |
| 5                                                       | 2.5617             | 0.03337       | 0.03337        | 2.5617     |
| 6                                                       | 2.1844             | 0.02845       | 0.02845        | 2.1844     |
| 7                                                       | 2.2856             | 0.02977       | 0.02977        | 2.2856     |
| 8                                                       | 2.0134             | 0.02523       | 0.02523        | 2.0134     |
| 9                                                       | 2.2042             | 0.02871       | 0.02871        | 2.2042     |
| 10                                                      | 2.3353             | 0.03042       | 0.03042        | 2.3353     |
| 11                                                      | 1.8058             | 0.02352       | 0.02352        | 1.8058     |
| 12                                                      | 1.9160             | 0.02522       | 0.02522        | 1.9160     |
| 13                                                      | 1.9643             | 0.02559       | 0.02559        | 1.9643     |
| 14                                                      | 2.0318             | 0.02647       | 0.02647        | 2.0318     |
| 15                                                      | 2.2048             | 0.02872       | 0.02872        | 2.2048     |
| 16                                                      | 2.4963             | 0.03252       | 0.03252        | 2.4963     |
| 17                                                      | 2.4183             | 0.03150       | 0.03150        | 2.4183     |
| 18                                                      | 2.7019             | 0.03520       | 0.03520        | 2.7019     |
| 19                                                      | 1.5209             | 0.01981       | 0.01981        | 1.5208     |
| 20                                                      | 9.7992             | 0.12765       | 0.12765        | 9.7992     |

TIME 13.33.38  
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TITLE

MC DONNELL

RUN NO. 2317

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0600 P0= 6534. P02= 5.116 P1=0.02221 QDOT-A= 72.12

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.5783             | 0.02189       | 0.02189        | 1.5783     |
| 2  | 1.7955             | 0.02490       | 0.02490        | 1.7955     |
| 3  | 2.1066             | 0.02921       | 0.02921        | 2.1066     |
| 4  | 1.9375             | 0.02680       | 0.02680        | 1.9375     |
| 5  | 2.4209             | 0.03357       | 0.03357        | 2.4209     |
| 6  | 2.0556             | 0.02850       | 0.02850        | 2.0556     |
| 7  | 2.1483             | 0.02979       | 0.02979        | 2.1483     |
| 8  | 1.9037             | 0.02640       | 0.02640        | 1.9037     |
| 9  | 2.0816             | 0.02886       | 0.02886        | 2.0816     |
| 10 | 2.1971             | 0.03047       | 0.03047        | 2.1971     |
| 11 | 1.6967             | 0.02353       | 0.02353        | 1.6967     |
| 12 | 1.8236             | 0.02529       | 0.02529        | 1.8236     |
| 13 | 1.8500             | 0.02565       | 0.02565        | 1.8500     |
| 14 | 1.9210             | 0.02664       | 0.02664        | 1.9210     |
| 15 | 2.0936             | 0.02903       | 0.02903        | 2.0936     |
| 16 | 2.3629             | 0.03276       | 0.03276        | 2.3629     |
| 17 | 2.2828             | 0.03165       | 0.03165        | 2.2828     |
| 18 | 2.5407             | 0.03523       | 0.03523        | 2.5407     |
| 19 | 1.4437             | 0.02002       | 0.02002        | 1.4437     |
| 20 | 9.2810             | 0.12869       | 0.12869        | 9.2810     |

RUN NO. 2317

TITLE

MLT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=.0650 P0= 6100. P02= 4.808 P1=.02088 Q0Y-A= 67.46

| N  | QDOT-N<br>(D/SE-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.4857             | 0.02202       | 0.02202        | 1.4857     |
| 2  | 1.6889             | 0.02503       | 0.02503        | 1.6889     |
| 3  | 1.9715             | 0.02922       | 0.02922        | 1.9715     |
| 4  | 1.8201             | 0.02698       | 0.02698        | 1.8201     |
| 5  | 2.2402             | 0.03383       | 0.03380        | 2.2402     |
| 6  | 1.9268             | 0.02856       | 0.02956        | 1.9268     |
| 7  | 2.0110             | 0.02981       | 0.02981        | 2.0110     |
| 8  | 1.7940             | 0.02659       | 0.02659        | 1.7940     |
| 9  | 1.9589             | 0.02904       | 0.02904        | 1.9589     |
| 10 | 2.0590             | 0.03052       | 0.03052        | 2.0590     |
| 11 | 1.5875             | 0.02353       | 0.02353        | 1.5875     |
| 12 | 1.7113             | 0.02537       | 0.02537        | 1.7113     |
| 13 | 1.7357             | 0.02571       | 0.02573        | 1.7357     |
| 14 | 1.8102             | 0.02683       | 0.02693        | 1.8102     |
| 15 | 1.9825             | 0.02939       | 0.03005        | 1.9825     |
| 16 | 2.2294             | 0.03305       | 0.03305        | 2.2294     |
| 17 | 2.1472             | 0.03183       | 0.03183        | 2.1472     |
| 18 | 2.3794             | 0.03527       | 0.03527        | 2.3794     |
| 19 | 1.3665             | 0.02226       | 0.02026        | 1.3665     |
| 20 | 8.7628             | 0.12989       | 0.12989        | 8.7628     |

RUN NO. 2317

TITLE

MCDONNELL

TIME 13.33.39  
PAGE NO. 295, VOL. I  
REP. NO. 0004  
11/28/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| TIME=0700 |                     | PN=           | 5699.           | PN2=       | 4.525 | PL= | 01969 | QDOT-A= | 62.81 |
|-----------|---------------------|---------------|-----------------|------------|-------|-----|-------|---------|-------|
| N         | QDOT-N<br>(B/SF-SI) | QDOT-N/QDOT-A | QDOT-N/K-QDOT-A | QDOT-N/REF |       |     |       |         |       |
| 1         | 1.3931              | 0.02218       | 0.02218         | 1.3931     |       |     |       |         |       |
| 2         | 1.5822              | 0.02519       | 0.02519         | 1.5822     |       |     |       |         |       |
| 3         | 1.8364              | 0.02924       | 0.02924         | 1.8364     |       |     |       |         |       |
| 4         | 1.7077              | 0.02719       | 0.02719         | 1.7077     |       |     |       |         |       |
| 5         | 2.1394              | 0.03406       | 0.03406         | 2.1394     |       |     |       |         |       |
| 6         | 1.7979              | 0.02862       | 0.02862         | 1.7979     |       |     |       |         |       |
| 7         | 1.8737              | 0.02983       | 0.02983         | 1.8737     |       |     |       |         |       |
| 8         | 1.6844              | 0.02682       | 0.02682         | 1.6844     |       |     |       |         |       |
| 9         | 1.8363              | 0.02923       | 0.02923         | 1.8363     |       |     |       |         |       |
| 10        | 1.9208              | 0.03058       | 0.03058         | 1.9208     |       |     |       |         |       |
| 11        | 1.4704              | 0.02354       | 0.02354         | 1.4704     |       |     |       |         |       |
| 12        | 1.5989              | 0.02546       | 0.02546         | 1.5989     |       |     |       |         |       |
| 13        | 1.6214              | 0.02581       | 0.02581         | 1.6214     |       |     |       |         |       |
| 14        | 1.6994              | 0.02706       | 0.02706         | 1.6994     |       |     |       |         |       |
| 15        | 1.8714              | 0.02979       | 0.02979         | 1.8714     |       |     |       |         |       |
| 16        | 2.0960              | 0.03337       | 0.03337         | 2.0960     |       |     |       |         |       |
| 17        | 2.0116              | 0.03203       | 0.03203         | 2.0116     |       |     |       |         |       |
| 18        | 2.2182              | 0.03531       | 0.03531         | 2.2182     |       |     |       |         |       |
| 19        | 1.2894              | 0.02053       | 0.02053         | 1.2894     |       |     |       |         |       |
| 20        | 8.2445              | 0.13126       | 0.13126         | 8.2445     |       |     |       |         |       |

RUN NO. 2317

TITLE

MCDONNELL

TIME 13.31.39  
PAGE NO. 256, VOL. I  
REP. NO. 6004  
11/22/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.750 PN= 5330. P02= 4.268 P1=01961 QDOT-A= 58.16

| N  | QDOT-N<br>(10/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|---------------------|---------------|----------------|------------|
| 1  | 1.3074              | 0.02236       | 0.02236        | 1.3004     |
| 2  | 1.4755              | 0.02537       | 0.02537        | 1.4755     |
| 3  | 1.7013              | 0.02925       | 0.02925        | 1.7013     |
| 4  | 1.5952              | 0.02743       | 0.02743        | 1.5952     |
| 5  | 1.9986              | 0.03436       | 0.03436        | 1.9986     |
| 6  | 1.6691              | 0.02870       | 0.02870        | 1.6691     |
| 7  | 1.7364              | 0.02986       | 0.02986        | 1.7364     |
| 8  | 1.5747              | 0.02708       | 0.02708        | 1.5747     |
| 9  | 1.7136              | 0.02946       | 0.02946        | 1.7136     |
| 10 | 1.7827              | 0.03065       | 0.03065        | 1.7827     |
| 11 | 1.3693              | 0.02354       | 0.02354        | 1.3693     |
| 12 | 1.6865              | 0.02556       | 0.02556        | 1.6865     |
| 13 | 1.5971              | 0.02591       | 0.02591        | 1.5971     |
| 14 | 1.5866              | 0.02731       | 0.02731        | 1.5866     |
| 15 | 1.7603              | 0.03027       | 0.03027        | 1.7603     |
| 16 | 1.8625              | 0.03374       | 0.03374        | 1.8625     |
| 17 | 1.8760              | 0.03226       | 0.03226        | 1.8760     |
| 18 | 2.0569              | 0.03537       | 0.03537        | 2.0569     |
| 19 | 1.2172              | 0.02084       | 0.02084        | 1.2172     |
| 20 | 7.7263              | 0.13285       | 0.13285        | 7.7263     |

TIME 13.33.39  
 PAGE NO. 297, VOL. I  
 REP. NO. 6004  
 11/28/67

TITLE MCDONNELL

RUN NO. 2317

MIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

| TIME=0800 |                    | PO=           | 4994.          | P02=       | 4.036      | P1= | 01763 | QDOT-A= | 53.51 |
|-----------|--------------------|---------------|----------------|------------|------------|-----|-------|---------|-------|
| N         | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF | QDOT-N/REF |     |       |         |       |
| 1         | 1.2078             | 0.02257       | 0.0257         | 1.2078     | 1.2078     |     |       |         |       |
| 2         | 1.3699             | 0.02558       | 0.02927        | 1.3699     | 1.3699     |     |       |         |       |
| 3         | 1.5662             | 0.02927       | 0.02771        | 1.5662     | 1.5662     |     |       |         |       |
| 4         | 1.4828             | 0.02771       | 0.03472        | 1.4828     | 1.4828     |     |       |         |       |
| 5         | 1.8579             | 0.03472       | 0.02879        | 1.8579     | 1.8579     |     |       |         |       |
| 6         | 1.5403             | 0.02879       | 0.02989        | 1.5403     | 1.5403     |     |       |         |       |
| 7         | 1.5991             | 0.02989       | 0.02738        | 1.5991     | 1.5991     |     |       |         |       |
| 8         | 1.4651             | 0.02738       | 0.02973        | 1.4651     | 1.4651     |     |       |         |       |
| 9         | 1.5910             | 0.02973       | 0.03073        | 1.5910     | 1.5910     |     |       |         |       |
| 10        | 1.6446             | 0.03073       | 0.02355        | 1.6446     | 1.6446     |     |       |         |       |
| 11        | 1.2601             | 0.02355       | 0.02568        | 1.2601     | 1.2601     |     |       |         |       |
| 12        | 1.3742             | 0.02568       | 0.02603        | 1.3742     | 1.3742     |     |       |         |       |
| 13        | 1.3928             | 0.02603       | 0.02762        | 1.3928     | 1.3928     |     |       |         |       |
| 14        | 1.4778             | 0.02762       | 0.03082        | 1.4778     | 1.4778     |     |       |         |       |
| 15        | 1.6492             | 0.03082       | 0.03418        | 1.6492     | 1.6492     |     |       |         |       |
| 16        | 1.8291             | 0.03418       | 0.03253        | 1.8291     | 1.8291     |     |       |         |       |
| 17        | 1.7405             | 0.03253       | 0.03543        | 1.7405     | 1.7405     |     |       |         |       |
| 18        | 1.8957             | 0.03543       | 0.02121        | 1.8957     | 1.8957     |     |       |         |       |
| 19        | 1.1351             | 0.02121       | 0.13471        | 1.1351     | 1.1351     |     |       |         |       |
| 20        | 7.2081             | 0.13471       |                | 7.2081     | 7.2081     |     |       |         |       |

RUN NO. 2317

TITLE

McDONNELL

TIME 13.33.39  
PAGE NO. 298 VOL. I  
REP. NO. 0004  
11/28/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0850 PQ= 6689. P02= 3.830 PI=01677 QDOT-A= 48.86

| N  | QDOT-N<br>(B/SE-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.1152             | 0.02283       | 0.02283        | 1.1152     |
| 2  | 1.2622             | 0.02584       | 0.02584        | 1.2622     |
| 3  | 1.4311             | 0.02929       | 0.02929        | 1.4311     |
| 4  | 1.3704             | 0.02805       | 0.02805        | 1.3704     |
| 5  | 1.7171             | 0.03515       | 0.03515        | 1.7171     |
| 6  | 1.4115             | 0.02889       | 0.02889        | 1.4115     |
| 7  | 1.4618             | 0.02992       | 0.02992        | 1.4618     |
| 8  | 1.3554             | 0.02774       | 0.02774        | 1.3554     |
| 9  | 1.4683             | 0.03005       | 0.03005        | 1.4683     |
| 10 | 1.5064             | 0.03083       | 0.03083        | 1.5064     |
| 11 | 1.1510             | 0.02356       | 0.02356        | 1.1510     |
| 12 | 1.2618             | 0.02583       | 0.02583        | 1.2618     |
| 13 | 1.2785             | 0.02617       | 0.02617        | 1.2785     |
| 14 | 1.3671             | 0.02798       | 0.02798        | 1.3671     |
| 15 | 1.5381             | 0.03148       | 0.03148        | 1.5381     |
| 16 | 1.4956             | 0.03471       | 0.03471        | 1.4956     |
| 17 | 1.6289             | 0.03285       | 0.03285        | 1.6289     |
| 18 | 1.7345             | 0.03550       | 0.03550        | 1.7345     |
| 19 | 1.0579             | 0.02165       | 0.02165        | 1.0579     |
| 20 | 6.6899             | 0.13693       | 0.13693        | 6.6899     |



TIME 13.33.39  
PAGE NO. 299, VOL. I  
REP. NO. 0004  
11/28/67

MCINNELL  
HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

RUN NO. 3317  
TITLE

TIME=0900 PD= 4417. P02= 3.650 PI=01601 QDOT-A= 44.20

| N  | QDOT-N<br>(B/SE-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.0226             | 0.02313       | 0.02313        | 1.0226     |
| 2  | 1.1556             | 0.02414       | 0.02614        | 1.1556     |
| 3  | 1.2960             | 0.02932       | 0.02932        | 1.2960     |
| 4  | 1.2580             | 0.02846       | 0.02846        | 1.2580     |
| 5  | 1.5764             | 0.03566       | 0.03566        | 1.5764     |
| 6  | 1.2827             | 0.02902       | 0.02902        | 1.2827     |
| 7  | 1.3245             | 0.02996       | 0.02996        | 1.3245     |
| 8  | 1.2458             | 0.02818       | 0.02818        | 1.2458     |
| 9  | 1.3457             | 0.03044       | 0.03044        | 1.3457     |
| 10 | 1.3693             | 0.03095       | 0.03095        | 1.3693     |
| 11 | 1.0419             | 0.02157       | 0.02357        | 1.0419     |
| 12 | 1.1495             | 0.02600       | 0.02670        | 1.1495     |
| 13 | 1.1642             | 0.02634       | 0.02634        | 1.1642     |
| 14 | 1.2563             | 0.02842       | 0.02842        | 1.2563     |
| 15 | 1.4270             | 0.03228       | 0.03228        | 1.4270     |
| 16 | 1.5622             | 0.03534       | 0.03534        | 1.5622     |
| 17 | 1.4693             | 0.03324       | 0.03324        | 1.4693     |
| 18 | 1.5732             | 0.03559       | 0.03559        | 1.5732     |
| 19 | 0.9808             | 0.02219       | 0.02219        | 0.9808     |
| 20 | 6.1717             | 0.13967       | 0.13967        | 6.1717     |

RUN NO. 2317

TITLE

MCDONNELL

TIME 13.33.40  
PAGE NO. 300, VOL. I  
REP. NO. 6004  
11/28/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.950 PD= 4177. P02= 3.495 PI=0.01533 QDOT-A= 39.55

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 0.9300             | 0.02351       | 0.02351        | 0.9300     |
| 2  | 1.0489             | 0.02652       | 0.02652        | 1.0489     |
| 3  | 1.1609             | 0.02935       | 0.02935        | 1.1609     |
| 4  | 1.1455             | 0.02896       | 0.02896        | 1.1455     |
| 5  | 1.4356             | 0.03630       | 0.03630        | 1.4356     |
| 6  | 1.1539             | 0.02917       | 0.02917        | 1.1539     |
| 7  | 1.1872             | 0.03002       | 0.03002        | 1.1872     |
| 8  | 1.1361             | 0.02873       | 0.02873        | 1.1361     |
| 9  | 1.2230             | 0.03092       | 0.03092        | 1.2230     |
| 10 | 1.2301             | 0.03110       | 0.03110        | 1.2301     |
| 11 | 0.9327             | 0.02358       | 0.02358        | 0.9327     |
| 12 | 1.0371             | 0.02622       | 0.02622        | 1.0371     |
| 13 | 1.0499             | 0.02654       | 0.02654        | 1.0499     |
| 14 | 1.1455             | 0.02896       | 0.02896        | 1.1455     |
| 15 | 1.3159             | 0.03327       | 0.03327        | 1.3159     |
| 16 | 1.4287             | 0.03612       | 0.03612        | 1.4287     |
| 17 | 1.3310             | 0.03372       | 0.03372        | 1.3310     |
| 18 | 1.4120             | 0.03570       | 0.03570        | 1.4120     |
| 19 | 0.9036             | 0.02285       | 0.02285        | 0.9036     |
| 20 | 5.6534             | 0.14294       | 0.14294        | 5.6534     |

TIME 13.33.40  
PAGE NO. 301, VOL. I  
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11/20/67

TITLE

MC DONNELL

RUN NO. 2317

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=1000 PD= 3969. P02= 3.366 P1=0.01478 QDOT-A= 34.90

| N  | QDOT-N<br>(R/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 0.8373             | 0.02399       | 0.02399        | 0.8373     |
| 2  | 0.9422             | 0.02700       | 0.02700        | 0.9422     |
| 3  | 1.0238             | 0.02730       | 0.02730        | 1.0258     |
| 4  | 1.0331             | 0.02969       | 0.02969        | 1.0331     |
| 5  | 1.2948             | 0.03710       | 0.03710        | 1.2948     |
| 6  | 1.0250             | 0.02937       | 0.02937        | 1.0250     |
| 7  | 1.0499             | 0.03008       | 0.03008        | 1.0499     |
| 8  | 1.0265             | 0.02941       | 0.02941        | 1.0265     |
| 9  | 1.1004             | 0.03153       | 0.03153        | 1.1004     |
| 10 | 1.0920             | 0.03129       | 0.03129        | 1.0920     |
| 11 | 0.8236             | 0.02360       | 0.02360        | 0.8236     |
| 12 | 0.9248             | 0.02650       | 0.02650        | 0.9248     |
| 13 | 0.9355             | 0.02681       | 0.02681        | 0.9355     |
| 14 | 1.0347             | 0.02965       | 0.02965        | 1.0347     |
| 15 | 1.2048             | 0.03452       | 0.03452        | 1.2048     |
| 16 | 1.2953             | 0.03712       | 0.03712        | 1.2953     |
| 17 | 1.1982             | 0.03433       | 0.03433        | 1.1982     |
| 18 | 1.2507             | 0.03584       | 0.03584        | 1.2507     |
| 19 | 0.8265             | 0.02368       | 0.02368        | 0.8265     |
| 20 | 5.1352             | 0.14715       | 0.14715        | 5.1352     |

TITLE  
 MCDONNELL

RUN NO. 2317

HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

| TIME=1.050 PO= 3793. P02= 3.262 P1=0.1432 QDOT-A= 30.25 |                    |               |                |            |  |  |
|---------------------------------------------------------|--------------------|---------------|----------------|------------|--|--|
| N                                                       | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |  |  |
| 1                                                       | 0.7447             | 0.02462       | 0.02462        | 0.7447     |  |  |
| 2                                                       | 0.8356             | 0.02763       | 0.02763        | 0.8356     |  |  |
| 3                                                       | 0.8907             | 0.02945       | 0.02945        | 0.8907     |  |  |
| 4                                                       | 0.9207             | 0.03044       | 0.03044        | 0.9207     |  |  |
| 5                                                       | 1.1541             | 0.03816       | 0.03816        | 1.1541     |  |  |
| 6                                                       | 0.8962             | 0.02963       | 0.02963        | 0.8962     |  |  |
| 7                                                       | 0.9126             | 0.03017       | 0.03017        | 0.9126     |  |  |
| 8                                                       | 0.9168             | 0.03031       | 0.03031        | 0.9168     |  |  |
| 9                                                       | 0.9777             | 0.03233       | 0.03233        | 0.9777     |  |  |
| 10                                                      | 0.9538             | 0.03154       | 0.03154        | 0.9538     |  |  |
| 11                                                      | 0.7145             | 0.02362       | 0.02362        | 0.7145     |  |  |
| 12                                                      | 0.8124             | 0.02686       | 0.02686        | 0.8124     |  |  |
| 13                                                      | 0.8212             | 0.02715       | 0.02715        | 0.8212     |  |  |
| 14                                                      | 0.9239             | 0.03055       | 0.03055        | 0.9239     |  |  |
| 15                                                      | 1.0937             | 0.03616       | 0.03616        | 1.0937     |  |  |
| 16                                                      | 1.1618             | 0.03841       | 0.03841        | 1.1618     |  |  |
| 17                                                      | 1.0626             | 0.03513       | 0.03513        | 1.0626     |  |  |
| 18                                                      | 1.0895             | 0.03602       | 0.03602        | 1.0895     |  |  |
| 19                                                      | 0.7493             | 0.02477       | 0.02477        | 0.7493     |  |  |
| 20                                                      | 4.6170             | 0.15265       | 0.15265        | 4.6170     |  |  |

TIME 13.33.40  
PAGE NO. 303, VOL. I  
REP. NO. G004  
11/28/67

MCDONNELL

TITLE

RUN NO. 2317

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0400 PO = 8588.74 ALPHA = 10.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.101891 | 0.119E-04 | 0.154E-01 | 0.359E 01 | 0.206E-01   |
| 2     | 0.0 | 0.097229 | 0.113E-04 | 0.147E-01 | 0.343E 01 | 0.193E-01   |
| 3     | 0.0 | 0.104255 | 0.121E-04 | 0.158E-01 | 0.367E 01 | 0.213E-01   |
| 4     | 0.0 | 0.087791 | 0.102E-04 | 0.133E-01 | 0.309E 01 | 0.167E-01   |
| 5     | 0.0 | 0.089781 | 0.105E-04 | 0.136E-01 | 0.316E 01 | 0.172E-01   |
| 6     | 0.0 | 0.077762 | 0.905E-05 | 0.118E-01 | 0.274E 01 | 0.138E-01   |
| 7     | 0.0 | 0.088322 | 0.103E-04 | 0.134E-01 | 0.311E 01 | 0.168E-01   |
| 8     | 0.0 | 0.069168 | 0.805E-05 | 0.105E-01 | 0.244E 01 | 0.114E-01   |
| 9     | 0.0 | 0.085436 | 0.995E-05 | 0.129E-01 | 0.301E 01 | 0.160E-01   |
| 10    | 0.0 | 0.101324 | 0.118E-04 | 0.153E-01 | 0.357E 01 | 0.205E-01   |
| 11    | 0.0 | 0.073072 | 0.851E-05 | 0.111E-01 | 0.257E 01 | 0.125E-01   |
| 12    | 0.0 | 0.080715 | 0.940E-05 | 0.122E-01 | 0.284E 01 | 0.147E-01   |
| 13    | 0.0 | 0.078208 | 0.911E-05 | 0.118E-01 | 0.276E 01 | 0.140E-01   |
| 14    | 0.0 | 0.099100 | 0.115E-04 | 0.150E-01 | 0.349E 01 | 0.198E-01   |
| 15    | 0.0 | 0.103155 | 0.120E-04 | 0.156E-01 | 0.363E 01 | 0.210E-01   |
| 16    | 0.0 | 0.115715 | 0.135E-04 | 0.175E-01 | 0.408E 01 | 0.245E-01   |
| 17    | 0.0 | 0.130976 | 0.152E-04 | 0.198E-01 | 0.461E 01 | 0.288E-01   |
| 18    | 0.0 | 0.109887 | 0.128E-04 | 0.166E-01 | 0.387E 01 | 0.229E-01   |
| 19    | 0.0 | 0.073831 | 0.860E-05 | 0.112E-01 | 0.260E 01 | 0.127E-01   |
| 20    | 0.0 | 0.353858 | 0.412E-04 | 0.536E-01 | 0.125E 02 | 0.913E-01   |

TIME 13.33.40  
PAGE NO. 304, VOL. I  
REP. NO. 6004  
11/28/67

TITLE  
MCDONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2317

TIME= 0.0450 PO= 8026.69 ALPHA= 10.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.095331 | 0.119E-04 | 0.154E-01 | 0.357E 01 | 0.205E-01   |
| 2     | 0.0 | 0.091859 | 0.114E-04 | 0.148E-01 | 0.344E 01 | 0.195E-01   |
| 3     | 0.0 | 0.097657 | 0.122E-04 | 0.158E-01 | 0.366E 01 | 0.212E-01   |
| 4     | 0.0 | 0.083272 | 0.104E-04 | 0.134E-01 | 0.312E 01 | 0.169E-01   |
| 5     | 0.0 | 0.084983 | 0.106E-04 | 0.137E-01 | 0.318E 01 | 0.174E-01   |
| 6     | 0.0 | 0.074489 | 0.928E-05 | 0.120E-01 | 0.279E 01 | 0.143E-01   |
| 7     | 0.0 | 0.084196 | 0.105E-04 | 0.136E-01 | 0.315E 01 | 0.172E-01   |
| 8     | 0.0 | 0.066629 | 0.830E-05 | 0.108E-01 | 0.250E 01 | 0.119E-01   |
| 9     | 0.0 | 0.082192 | 0.102E-04 | 0.133E-01 | 0.308E 01 | 0.166E-01   |
| 10    | 0.0 | 0.097914 | 0.122E-04 | 0.158E-01 | 0.367E 01 | 0.213E-01   |
| 11    | 0.0 | 0.071063 | 0.885E-05 | 0.115E-01 | 0.266E 01 | 0.133E-01   |
| 12    | 0.0 | 0.077793 | 0.969E-05 | 0.126E-01 | 0.291E 01 | 0.153E-01   |
| 13    | 0.0 | 0.075779 | 0.944E-05 | 0.122E-01 | 0.284E 01 | 0.147E-01   |
| 14    | 0.0 | 0.095890 | 0.119E-04 | 0.155E-01 | 0.359E 01 | 0.207E-01   |
| 15    | 0.0 | 0.100124 | 0.125E-04 | 0.162E-01 | 0.375E 01 | 0.220E-01   |
| 16    | 0.0 | 0.110342 | 0.137E-04 | 0.178E-01 | 0.413E 01 | 0.250E-01   |
| 17    | 0.0 | 0.119681 | 0.149E-04 | 0.193E-01 | 0.448E 01 | 0.278E-01   |
| 18    | 0.0 | 0.098258 | 0.122E-04 | 0.159E-01 | 0.368E 01 | 0.214E-01   |
| 19    | 0.0 | 0.068093 | 0.848E-05 | 0.110E-01 | 0.255E 01 | 0.124E-01   |
| 20    | 0.0 | 0.326159 | 0.406E-04 | 0.527E-01 | 0.122E 02 | 0.895E-01   |

TIME 13.33.41  
PAGE NO. 305, VOL. I  
REP. NO. 0004  
11/28/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0500 PO = 7496.84 ALPH = 10.20

| PROBE | PHT | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.089343 | 0.119F-04 | 0.154F-01 | 0.356F 01 | 0.205F-01   |
| 2     | 0.0 | 0.086909 | 0.116F-04 | 0.150F-01 | 0.346F 01 | 0.197F-01   |
| 3     | 0.0 | 0.091534 | 0.122F-04 | 0.158F-01 | 0.345F 01 | 0.212F-01   |
| 4     | 0.0 | 0.079107 | 0.106F-04 | 0.136F-01 | 0.315F 01 | 0.172F-01   |
| 5     | 0.0 | 0.080505 | 0.107F-04 | 0.139F-01 | 0.311F 01 | 0.177F-01   |
| 6     | 0.0 | 0.071369 | 0.052F-05 | 0.123F-01 | 0.294F 01 | 0.148F-01   |
| 7     | 0.0 | 0.080208 | 0.107F-04 | 0.134F-01 | 0.320F 01 | 0.176F-01   |
| 8     | 0.0 | 0.064195 | 0.056F-05 | 0.111F-01 | 0.266F 01 | 0.126F-01   |
| 9     | 0.0 | 0.079021 | 0.105F-04 | 0.136F-01 | 0.315F 01 | 0.172F-01   |
| 10    | 0.0 | 0.064402 | 0.126F-04 | 0.163F-01 | 0.376F 01 | 0.221F-01   |
| 11    | 0.0 | 0.069021 | 0.121F-05 | 0.119F-01 | 0.275F 01 | 0.140F-01   |
| 12    | 0.0 | 0.074867 | 0.090F-05 | 0.129F-01 | 0.298F 01 | 0.159F-01   |
| 13    | 0.0 | 0.073319 | 0.078F-05 | 0.126F-01 | 0.292F 01 | 0.154F-01   |
| 14    | 0.0 | 0.092601 | 0.124F-04 | 0.159F-01 | 0.369F 01 | 0.215F-01   |
| 15    | 0.0 | 0.096701 | 0.129F-04 | 0.166F-01 | 0.345F 01 | 0.228F-01   |
| 16    | 0.0 | 0.105601 | 0.140F-04 | 0.181F-01 | 0.418F 01 | 0.255F-01   |
| 17    | 0.0 | 0.109366 | 0.146F-04 | 0.189F-01 | 0.436F 01 | 0.269F-01   |
| 18    | 0.0 | 0.087673 | 0.117F-04 | 0.151F-01 | 0.349F 01 | 0.199F-01   |
| 19    | 0.0 | 0.092862 | 0.038F-05 | 0.109F-01 | 0.250F 01 | 0.120F-01   |
| 20    | 0.0 | 0.300966 | 0.401F-04 | 0.518F-01 | 0.120F 02 | 0.879F-01   |

TIME 13.33.41  
PAGE NO. 306, VOL. I  
REP. NO. 6004  
11/28/67

TITLE WCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.0550 PO= 6999.16 ALPHA= 10.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.083029 | 0.129E-04 | 0.154E-01 | 0.356E 01 | 0.205E-01   |
| 2     | 0.0 | 0.082380 | 0.118E-04 | 0.151E-01 | 0.349E 01 | 0.203E-01   |
| 3     | 0.0 | 0.095087 | 0.123E-04 | 0.159E-01 | 0.364E 01 | 0.212E-01   |
| 4     | 0.0 | 0.075297 | 0.104E-04 | 0.138E-01 | 0.319E 01 | 0.176E-01   |
| 5     | 0.0 | 0.076346 | 0.109E-04 | 0.140E-01 | 0.323E 01 | 0.179E-01   |
| 6     | 0.0 | 0.068402 | 0.977E-05 | 0.126E-01 | 0.290E 01 | 0.152E-01   |
| 7     | 0.0 | 0.076359 | 0.109E-04 | 0.140E-01 | 0.324E 01 | 0.179E-01   |
| 8     | 0.0 | 0.061864 | 0.844E-05 | 0.114E-01 | 0.262E 01 | 0.130E-01   |
| 9     | 0.0 | 0.075924 | 0.109E-04 | 0.139E-01 | 0.322E 01 | 0.178E-01   |
| 10    | 0.0 | 0.090788 | 0.130E-04 | 0.167E-01 | 0.385E 01 | 0.229E-01   |
| 11    | 0.0 | 0.066945 | 0.956E-05 | 0.123E-01 | 0.294E 01 | 0.147E-01   |
| 12    | 0.0 | 0.071935 | 0.103E-04 | 0.132E-01 | 0.305E 01 | 0.164E-01   |
| 13    | 0.0 | 0.070826 | 0.101E-04 | 0.130E-01 | 0.300E 01 | 0.160E-01   |
| 14    | 0.0 | 0.09233  | 0.127E-04 | 0.164E-01 | 0.378E 01 | 0.223E-01   |
| 15    | 0.0 | 0.092485 | 0.133E-04 | 0.170E-01 | 0.394E 01 | 0.234E-01   |
| 16    | 0.0 | 0.096693 | 0.142E-04 | 0.183E-01 | 0.422E 01 | 0.259E-01   |
| 17    | 0.0 | 0.100032 | 0.143E-04 | 0.184E-01 | 0.424E 01 | 0.260E-01   |
| 18    | 0.0 | 0.078133 | 0.112E-04 | 0.143E-01 | 0.331E 01 | 0.185E-01   |
| 19    | 0.0 | 0.058077 | 0.830E-05 | 0.107E-01 | 0.244E 01 | 0.117E-01   |
| 20    | 0.0 | 0.278221 | 0.398E-04 | 0.511E-01 | 0.118E 02 | 0.865E-01   |



TIME 13.33.42  
 PAGE NO. 307, VOL. I  
 REP. NO. 6004  
 11/28/67

W. DONNELL  
 HIT TEST NO. 67  
 PRESSURE SURVEY

TITLE

RUN NO. 2317

TIME = 0.0600 PO = 6533.68 ALPHA = 10.00

| PROBE | PHI | PON      | PON/PO    | PON/PD2   | PON/OL    | (PON-OL)/OL |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.079086 | 0.121E-04 | 0.155E-01 | 0.356E 01 | 0.206E-01   |
| 2     | 0.0 | 0.078272 | 0.120E-04 | 0.153E-01 | 0.352E 01 | 0.203E-01   |
| 3     | 0.0 | 0.040716 | 0.124E-04 | 0.159E-01 | 0.363E 01 | 0.212E-01   |
| 4     | 0.0 | 0.071860 | 0.110E-04 | 0.140E-01 | 0.323E 01 | 0.189E-01   |
| 5     | 0.0 | 0.072508 | 0.111E-04 | 0.142E-01 | 0.326E 01 | 0.192E-01   |
| 6     | 0.0 | 0.065587 | 0.100E-04 | 0.128E-01 | 0.295E 01 | 0.157E-01   |
| 7     | 0.0 | 0.072647 | 0.111E-04 | 0.142E-01 | 0.327E 01 | 0.192E-01   |
| 8     | 0.0 | 0.059638 | 0.913E-05 | 0.117E-01 | 0.269E 01 | 0.135E-01   |
| 9     | 0.0 | 0.072902 | 0.112E-04 | 0.143E-01 | 0.328E 01 | 0.193E-01   |
| 10    | 0.0 | 0.047071 | 0.133E-04 | 0.170E-01 | 0.392E 01 | 0.235E-01   |
| 11    | 0.0 | 0.064936 | 0.992E-05 | 0.127E-01 | 0.292E 01 | 0.154E-01   |
| 12    | 0.0 | 0.068908 | 0.104E-04 | 0.135E-01 | 0.311E 01 | 0.169E-01   |
| 13    | 0.0 | 0.068302 | 0.105E-04 | 0.134E-01 | 0.308E 01 | 0.167E-01   |
| 14    | 0.0 | 0.045787 | 0.131E-04 | 0.168E-01 | 0.366E 01 | 0.230E-01   |
| 15    | 0.0 | 0.088677 | 0.136E-04 | 0.173E-01 | 0.390E 01 | 0.240E-01   |
| 16    | 0.0 | 0.094417 | 0.145E-04 | 0.185E-01 | 0.425E 01 | 0.261E-01   |
| 17    | 0.0 | 0.091679 | 0.140E-04 | 0.179E-01 | 0.413E 01 | 0.251E-01   |
| 18    | 0.0 | 0.062637 | 0.107E-04 | 0.136E-01 | 0.314E 01 | 0.172E-01   |
| 19    | 0.0 | 0.053799 | 0.823E-05 | 0.105E-01 | 0.242E 01 | 0.114E-01   |
| 20    | 0.0 | 0.251982 | 0.305E-04 | 0.504E-01 | 0.116E 02 | 0.853E-01   |

TIME 13.33.42  
PAGE NO. 308, VOL. I  
REP. NO. 6004  
11/28/67

TITLE  
MCDONNELL

RUN NO. 2317

HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.0650 PO= 6100.39 ALPHA= 10.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.074816 | 0.123F-04 | 0.156F-01 | 0.358F 01 | 0.208F-01   |
| 2     | 0.0 | 0.074584 | 0.122E-04 | 0.155E-01 | 0.357F 01 | 0.207F-01   |
| 3     | 0.0 | 0.076020 | 0.125E-04 | 0.158E-01 | 0.364E 01 | 0.212E-01   |
| 4     | 0.0 | 0.068737 | 0.113F-04 | 0.143F-01 | 0.329E 01 | 0.184E-01   |
| 5     | 0.0 | 0.068988 | 0.113F-04 | 0.144F-01 | 0.330E 01 | 0.185F-01   |
| 6     | 0.0 | 0.062926 | 0.103F-04 | 0.131F-01 | 0.301F 01 | 0.162E-01   |
| 7     | 0.0 | 0.069075 | 0.113F-04 | 0.144E-01 | 0.331E 01 | 0.185E-01   |
| 8     | 0.0 | 0.057516 | 0.094F-05 | 0.120F-01 | 0.275E 01 | 0.141E-01   |
| 9     | 0.0 | 0.069953 | 0.115E-04 | 0.146E-01 | 0.335E 01 | 0.189E-01   |
| 10    | 0.0 | 0.083253 | 0.136F-04 | 0.173F-01 | 0.399E 01 | 0.240E-01   |
| 11    | 0.0 | 0.062694 | 0.103E-04 | 0.130F-01 | 0.300E 01 | 0.161E-01   |
| 12    | 0.0 | 0.066055 | 0.108E-04 | 0.137F-01 | 0.316E 01 | 0.174E-01   |
| 13    | 0.0 | 0.065746 | 0.108E-04 | 0.137F-01 | 0.315E 01 | 0.173F-01   |
| 14    | 0.0 | 0.082263 | 0.135E-04 | 0.171E-01 | 0.394E 01 | 0.236F-01   |
| 15    | 0.0 | 0.084076 | 0.138E-04 | 0.175E-01 | 0.403E 01 | 0.243E-01   |
| 16    | 0.0 | 0.089174 | 0.146E-04 | 0.185F-01 | 0.427E 01 | 0.263E-01   |
| 17    | 0.0 | 0.084306 | 0.139E-04 | 0.175E-01 | 0.404E 01 | 0.244E-01   |
| 18    | 0.0 | 0.062185 | 0.102E-04 | 0.129F-01 | 0.298E 01 | 0.159F-01   |
| 19    | 0.0 | 0.050007 | 0.020E-05 | 0.104F-01 | 0.239E 01 | 0.112E-01   |
| 20    | 0.0 | 0.240230 | 0.394F-04 | 0.500F-01 | 0.115F 02 | 0.844E-01   |

TIME 13.33.43  
PAGE NO. 309 VOL. I  
REP. NO. 0004  
11/28/67

MC DONNELL

TITLE

RUN NO. 2317

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0700 PD = 5699.29 ALPHA = 10.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.071119 | 0.125E-04 | 0.157E-01 | 0.341E 01 | 0.210E-01   |
| 2     | 0.0 | 0.071317 | 0.125E-04 | 0.159E-01 | 0.342E 01 | 0.211E-01   |
| 3     | 0.0 | 0.071800 | 0.126E-04 | 0.159E-01 | 0.345E 01 | 0.213E-01   |
| 4     | 0.0 | 0.065988 | 0.116E-04 | 0.146E-01 | 0.335E 01 | 0.189E-01   |
| 5     | 0.0 | 0.065788 | 0.115E-04 | 0.145E-01 | 0.334E 01 | 0.184E-01   |
| 6     | 0.0 | 0.066417 | 0.106E-04 | 0.134E-01 | 0.307E 01 | 0.166E-01   |
| 7     | 0.0 | 0.065640 | 0.115E-04 | 0.145E-01 | 0.334E 01 | 0.180E-01   |
| 8     | 0.0 | 0.055497 | 0.097E-05 | 0.123E-01 | 0.282E 01 | 0.166E-01   |
| 9     | 0.0 | 0.067079 | 0.118E-04 | 0.149E-01 | 0.341E 01 | 0.194E-01   |
| 10    | 0.0 | 0.079332 | 0.139E-04 | 0.175E-01 | 0.403E 01 | 0.244E-01   |
| 11    | 0.0 | 0.060518 | 0.106E-04 | 0.134E-01 | 0.307E 01 | 0.167E-01   |
| 12    | 0.0 | 0.063107 | 0.111E-04 | 0.139E-01 | 0.320E 01 | 0.177E-01   |
| 13    | 0.0 | 0.063159 | 0.111E-04 | 0.140E-01 | 0.321E 01 | 0.178E-01   |
| 14    | 0.0 | 0.078660 | 0.139E-04 | 0.174E-01 | 0.399E 01 | 0.241E-01   |
| 15    | 0.0 | 0.079083 | 0.139E-04 | 0.175E-01 | 0.402E 01 | 0.243E-01   |
| 16    | 0.0 | 0.083963 | 0.147E-04 | 0.186E-01 | 0.426E 01 | 0.263E-01   |
| 17    | 0.0 | 0.077913 | 0.137E-04 | 0.172E-01 | 0.396E 01 | 0.238E-01   |
| 18    | 0.0 | 0.055777 | 0.099E-05 | 0.123E-01 | 0.283E 01 | 0.149E-01   |
| 19    | 0.0 | 0.046702 | 0.081E-05 | 0.103E-01 | 0.237E 01 | 0.118E-01   |
| 20    | 0.0 | 0.224965 | 0.395E-04 | 0.497E-01 | 0.114E 02 | 0.839E-01   |

TIME 13.33.43  
PAGE NO. 310, VOL. I  
REP. NO. GOOD  
11/28/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2317

TIME = 0.0750 PO = 5330.37 ALPHA = 10.00

| PROBE | PHI | PON      | PON/PO    | POM/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.067994 | 0.128E-04 | 0.159E-01 | 0.365E 01 | 0.214E-01   |
| 2     | 0.0 | 0.068470 | 0.128E-04 | 0.160E-01 | 0.368E 01 | 0.216E-01   |
| 3     | 0.0 | 0.068056 | 0.128E-04 | 0.159E-01 | 0.366E 01 | 0.214E-01   |
| 4     | 0.0 | 0.063594 | 0.119E-04 | 0.149E-01 | 0.362E 01 | 0.195E-01   |
| 5     | 0.0 | 0.062908 | 0.110E-04 | 0.147E-01 | 0.338E 01 | 0.192E-01   |
| 6     | 0.0 | 0.058062 | 0.109E-04 | 0.136E-01 | 0.312E 01 | 0.171E-01   |
| 7     | 0.0 | 0.062344 | 0.117E-04 | 0.146E-01 | 0.356E 01 | 0.189E-01   |
| 8     | 0.0 | 0.053583 | 0.101E-04 | 0.126E-01 | 0.204E 01 | 0.152E-01   |
| 9     | 0.0 | 0.064278 | 0.121E-04 | 0.151E-01 | 0.365E 01 | 0.196E-01   |
| 10    | 0.0 | 0.075310 | 0.141E-04 | 0.176E-01 | 0.405E 01 | 0.246E-01   |
| 11    | 0.0 | 0.058309 | 0.109E-04 | 0.137E-01 | 0.313E 01 | 0.172E-01   |
| 12    | 0.0 | 0.060154 | 0.113E-04 | 0.141E-01 | 0.323E 01 | 0.180E-01   |
| 13    | 0.0 | 0.060538 | 0.114E-04 | 0.142E-01 | 0.325E 01 | 0.182E-01   |
| 14    | 0.0 | 0.074979 | 0.141E-04 | 0.176E-01 | 0.403E 01 | 0.244E-01   |
| 15    | 0.0 | 0.073697 | 0.138E-04 | 0.173E-01 | 0.396E 01 | 0.239E-01   |
| 16    | 0.0 | 0.078784 | 0.148E-04 | 0.185E-01 | 0.423E 01 | 0.261E-01   |
| 17    | 0.0 | 0.072901 | 0.136E-04 | 0.170E-01 | 0.390E 01 | 0.231E-01   |
| 18    | 0.0 | 0.050413 | 0.046E-05 | 0.119E-01 | 0.273E 01 | 0.138E-01   |
| 19    | 0.0 | 0.043083 | 0.023E-05 | 0.103E-01 | 0.236E 01 | 0.110E-01   |
| 20    | 0.0 | 0.212186 | 0.398E-04 | 0.497E-01 | 0.114E 02 | 0.039E-01   |

TIME 13.33.44  
PAGE NO. 311, VOL. I  
REP. NO. G004  
11/28/67

TITLE  
MCDONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2317

TIME = 0.0800 PD = 4993.63 ALPHA = 10.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/21 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.065642 | 0.131E-04 | 0.162E-01 | 0.371E 01 | 0.210E-01   |
| 2     | 0.0 | 0.066044 | 0.132E-04 | 0.164E-01 | 0.375E 01 | 0.222E-01   |
| 3     | 0.0 | 0.066787 | 0.130E-04 | 0.161E-01 | 0.368E 01 | 0.216E-01   |
| 4     | 0.0 | 0.061553 | 0.123E-04 | 0.152E-01 | 0.349E 01 | 0.201E-01   |
| 5     | 0.0 | 0.060348 | 0.121E-04 | 0.150E-01 | 0.342E 01 | 0.196E-01   |
| 6     | 0.0 | 0.059859 | 0.112E-04 | 0.139E-01 | 0.317E 01 | 0.179E-01   |
| 7     | 0.0 | 0.059187 | 0.110E-04 | 0.147E-01 | 0.316E 01 | 0.190E-01   |
| 8     | 0.0 | 0.051773 | 0.104E-04 | 0.128E-01 | 0.294E 01 | 0.156E-01   |
| 9     | 0.0 | 0.061562 | 0.123E-04 | 0.152E-01 | 0.349E 01 | 0.201E-01   |
| 10    | 0.0 | 0.071185 | 0.163E-04 | 0.176E-01 | 0.404E 01 | 0.245E-01   |
| 11    | 0.0 | 0.056067 | 0.112E-04 | 0.139E-01 | 0.318E 01 | 0.176E-01   |
| 12    | 0.0 | 0.057105 | 0.115E-04 | 0.142E-01 | 0.324E 01 | 0.181E-01   |
| 13    | 0.0 | 0.057986 | 0.116E-04 | 0.143E-01 | 0.328E 01 | 0.186E-01   |
| 14    | 0.0 | 0.071219 | 0.143E-04 | 0.176E-01 | 0.404E 01 | 0.245E-01   |
| 15    | 0.0 | 0.067918 | 0.136E-04 | 0.168E-01 | 0.385E 01 | 0.230E-01   |
| 16    | 0.0 | 0.073638 | 0.147E-04 | 0.182E-01 | 0.418E 01 | 0.256E-01   |
| 17    | 0.0 | 0.068069 | 0.136E-04 | 0.169E-01 | 0.386E 01 | 0.231E-01   |
| 18    | 0.0 | 0.066094 | 0.923E-05 | 0.114E-01 | 0.262E 01 | 0.130E-01   |
| 19    | 0.0 | 0.041551 | 0.832E-05 | 0.103E-01 | 0.236E 01 | 0.110E-01   |
| 20    | 0.0 | 0.202894 | 0.404E-04 | 0.500E-01 | 0.115E 02 | 0.844E-01   |

TIME 13.33.45  
PAGE NO. 312, VOL. I  
REP. VO. 0004  
11/28/67

WCDONNELL

TITLE

RUN NO. 2317

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0850 PO = 4689.09 ALPHA = 13.00

| PROBE | PHI | PON      | PON/PG    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.063462 | 0.135F-04 | 0.166F-01 | 0.378E 01 | 0.225E-01   |
| 2     | 0.0 | 0.064030 | 0.137F-04 | 0.167F-01 | 0.382E 01 | 0.228E-01   |
| 3     | 0.0 | 0.061995 | 0.132F-04 | 0.162F-01 | 0.370E 01 | 0.218E-01   |
| 4     | 0.0 | 0.059866 | 0.128F-04 | 0.156E-01 | 0.357E 01 | 0.209E-01   |
| 5     | 0.0 | 0.058107 | 0.124F-04 | 0.152E-01 | 0.346E 01 | 0.199E-01   |
| 6     | 0.0 | 0.053809 | 0.115E-04 | 0.140E-01 | 0.321E 01 | 0.179E-01   |
| 7     | 0.0 | 0.056167 | 0.120E-04 | 0.147E-01 | 0.335E 01 | 0.190E-01   |
| 8     | 0.0 | 0.050067 | 0.107E-04 | 0.131E-01 | 0.299E 01 | 0.161E-01   |
| 9     | 0.0 | 0.058999 | 0.126F-04 | 0.154E-01 | 0.351E 01 | 0.204E-01   |
| 10    | 0.0 | 0.066958 | 0.143E-04 | 0.175E-01 | 0.399E 01 | 0.242E-01   |
| 11    | 0.0 | 0.053792 | 0.115E-04 | 0.140E-01 | 0.321E 01 | 0.179E-01   |
| 12    | 0.0 | 0.054231 | 0.116F-04 | 0.142E-01 | 0.323E 01 | 0.181E-01   |
| 13    | 0.0 | 0.055202 | 0.118F-04 | 0.144E-01 | 0.329E 01 | 0.185E-01   |
| 14    | 0.0 | 0.067381 | 0.144E-04 | 0.176E-01 | 0.407E 01 | 0.244E-01   |
| 15    | 0.0 | 0.061747 | 0.132E-04 | 0.161E-01 | 0.369E 01 | 0.217E-01   |
| 16    | 0.0 | 0.068524 | 0.146E-04 | 0.179E-01 | 0.409E 01 | 0.250E-01   |
| 17    | 0.0 | 0.064618 | 0.138E-04 | 0.169E-01 | 0.385E 01 | 0.231E-01   |
| 18    | 0.0 | 0.062819 | 0.013E-05 | 0.112E-01 | 0.259E 01 | 0.126E-01   |
| 19    | 0.0 | 0.039705 | 0.047E-05 | 0.104E-01 | 0.237E 01 | 0.111E-01   |
| 20    | 0.0 | 0.194089 | 0.414E-04 | 0.507E-01 | 0.116E 02 | 0.855E-01   |

TIME 13.33.45  
PAGE NO. 313, VOL. I  
REP. NO. 6004  
11/28/67

TITLE MCDONNELL

RUN NO. 2317

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0900 PO = 4416.73 ALPHA = 10.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.062054 | 0.140E-04 | 0.170E-01 | 0.308E 01 | 0.231E-01   |
| 2     | 0.0 | 0.062453 | 0.141E-04 | 0.171E-01 | 0.300E 01 | 0.235E-01   |
| 3     | 0.0 | 0.059678 | 0.135E-04 | 0.163E-01 | 0.373E 01 | 0.221E-01   |
| 4     | 0.0 | 0.058534 | 0.133E-04 | 0.160E-01 | 0.366E 01 | 0.215E-01   |
| 5     | 0.0 | 0.056185 | 0.127E-04 | 0.154E-01 | 0.351E 01 | 0.203E-01   |
| 6     | 0.0 | 0.051913 | 0.110E-04 | 0.142E-01 | 0.324E 01 | 0.182E-01   |
| 7     | 0.0 | 0.053286 | 0.121E-04 | 0.146E-01 | 0.331E 01 | 0.189E-01   |
| 8     | 0.0 | 0.048465 | 0.110E-04 | 0.133E-01 | 0.300 01  | 0.166E-01   |
| 9     | 0.0 | 0.046321 | 0.120E-04 | 0.141E-01 | 0.312 01  | 0.204E-01   |
| 10    | 0.0 | 0.047629 | 0.142E-04 | 0.172E-01 | 0.391E 01 | 0.234E-01   |
| 11    | 0.0 | 0.051483 | 0.117E-04 | 0.141E-01 | 0.322E 01 | 0.180E-01   |
| 12    | 0.0 | 0.051261 | 0.116E-04 | 0.140E-01 | 0.320E 01 | 0.170E-01   |
| 13    | 0.0 | 0.052487 | 0.119E-04 | 0.144E-01 | 0.328E 01 | 0.185E-01   |
| 14    | 0.0 | 0.063464 | 0.144E-04 | 0.174E-01 | 0.397E 01 | 0.240E-01   |
| 15    | 0.0 | 0.055183 | 0.125E-04 | 0.151E-01 | 0.345E 01 | 0.198E-01   |
| 16    | 0.0 | 0.063443 | 0.144E-04 | 0.174E-01 | 0.396E 01 | 0.240E-01   |
| 17    | 0.0 | 0.062148 | 0.141E-04 | 0.170E-01 | 0.388E 01 | 0.233E-01   |
| 18    | 0.0 | 0.040588 | 0.919E-05 | 0.111E-01 | 0.254E 01 | 0.124E-01   |
| 19    | 0.0 | 0.038346 | 0.868E-05 | 0.105E-01 | 0.240E 01 | 0.113E-01   |
| 20    | 0.0 | 0.148770 | 0.427E-04 | 0.517E-01 | 0.118E 02 | 0.874E-01   |

TIME 13.33.46  
PAGE NO. 314 VOL. I  
REP. NO. 6004  
11/28/67

TITLE  
MCDONNELL

RUN NO. 2317

HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.0950 PO= 4176.56 ALPHA= 10.30

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | IPON-PI1/21 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.061219 | 0.147E-04 | 0.175E-01 | 0.399E 01 | 0.242E-01   |
| 2     | 0.0 | 0.061289 | 0.147E-04 | 0.175E-01 | 0.400E 01 | 0.243E-01   |
| 3     | 0.0 | 0.057836 | 0.138E-04 | 0.165E-01 | 0.377E 01 | 0.224E-01   |
| 4     | 0.0 | 0.057555 | 0.138E-04 | 0.165E-01 | 0.376E 01 | 0.223E-01   |
| 5     | 0.0 | 0.054583 | 0.131E-04 | 0.156E-01 | 0.356E 01 | 0.207E-01   |
| 6     | 0.0 | 0.050169 | 0.120E-04 | 0.144E-01 | 0.327E 01 | 0.186E-01   |
| 7     | 0.0 | 0.050544 | 0.121E-04 | 0.145E-01 | 0.330E 01 | 0.186E-01   |
| 8     | 0.0 | 0.066966 | 0.112E-04 | 0.134E-01 | 0.326E 01 | 0.167E-01   |
| 9     | 0.0 | 0.053817 | 0.129E-04 | 0.154E-01 | 0.351E 01 | 0.203E-01   |
| 10    | 0.0 | 0.059198 | 0.139E-04 | 0.163E-01 | 0.380E 01 | 0.226E-01   |
| 11    | 0.0 | 0.049140 | 0.114E-04 | 0.141E-01 | 0.321E 01 | 0.179E-01   |
| 12    | 0.0 | 0.048286 | 0.116E-04 | 0.139E-01 | 0.315E 01 | 0.174E-01   |
| 13    | 0.0 | 0.049739 | 0.119E-04 | 0.142E-01 | 0.325E 01 | 0.182E-01   |
| 14    | 0.0 | 0.059459 | 0.142E-04 | 0.179E-01 | 0.388E 01 | 0.233E-01   |
| 15    | 0.0 | 0.048226 | 0.115E-04 | 0.139E-01 | 0.315E 01 | 0.174E-01   |
| 16    | 0.0 | 0.058395 | 0.140E-04 | 0.167E-01 | 0.381E 01 | 0.227E-01   |
| 17    | 0.0 | 0.060657 | 0.145E-04 | 0.174E-01 | 0.396E 01 | 0.239E-01   |
| 18    | 0.0 | 0.039401 | 0.043E-05 | 0.113E-01 | 0.257E 01 | 0.127E-01   |
| 19    | 0.0 | 0.037473 | 0.007E-05 | 0.107E-01 | 0.245E 01 | 0.117E-01   |
| 20    | 0.0 | 0.185938 | 0.445E-04 | 0.532E-01 | 0.121E 02 | 0.901E-01   |



TIME 13.33.47  
 PAGE NO. 315, VOL. I  
 REP. NO. 6004  
 11/28/67

MC DONNELL  
 H/T TEST NO. 67  
 PRESSURE SURVEY

TITLE

RUN NO. 2317

TIME = 0.1000 PO = 3968.58 ALPHA = 10.30

| PROBE | P41 | PON      | PON/P0    | PON/P02   | PON/P01   | (PON-P11)/01 |
|-------|-----|----------|-----------|-----------|-----------|--------------|
| 1     | 0.0 | 0.060957 | 0.154E-04 | 0.181E-01 | 0.412E 01 | 0.253E-01    |
| 2     | 0.0 | 0.060545 | 0.153E-04 | 0.180E-01 | 0.410E 01 | 0.251E-01    |
| 3     | 0.0 | 0.056471 | 0.142E-04 | 0.160E-01 | 0.302E 01 | 0.278E-01    |
| 4     | 0.0 | 0.056910 | 0.143E-04 | 0.160E-01 | 0.305E 01 | 0.231E-01    |
| 5     | 0.0 | 0.053301 | 0.134E-04 | 0.150E-01 | 0.361E 01 | 0.211E-01    |
| 6     | 0.0 | 0.068578 | 0.122E-04 | 0.144E-01 | 0.320E 01 | 0.185E-01    |
| 7     | 0.0 | 0.047940 | 0.121E-04 | 0.142E-01 | 0.324E 01 | 0.182E-01    |
| 8     | 0.0 | 0.065572 | 0.115E-04 | 0.135E-01 | 0.308E 01 | 0.149E-01    |
| 9     | 0.0 | 0.051386 | 0.129E-04 | 0.153E-01 | 0.368E 01 | 0.201E-01    |
| 10    | 0.0 | 0.053665 | 0.135E-04 | 0.159E-01 | 0.363E 01 | 0.213E-01    |
| 11    | 0.0 | 0.066765 | 0.118E-04 | 0.139E-01 | 0.316E 01 | 0.175E-01    |
| 12    | 0.0 | 0.065306 | 0.114E-04 | 0.135E-01 | 0.306E 01 | 0.167E-01    |
| 13    | 0.0 | 0.046960 | 0.118E-04 | 0.140E-01 | 0.318E 01 | 0.176E-01    |
| 14    | 0.0 | 0.055396 | 0.140E-04 | 0.165E-01 | 0.375E 01 | 0.273E-01    |
| 15    | 0.0 | 0.060377 | 0.103E-04 | 0.121E-01 | 0.277E 01 | 0.143E-01    |
| 16    | 0.0 | 0.053378 | 0.135E-04 | 0.159E-01 | 0.361E 01 | 0.212E-01    |
| 17    | 0.0 | 0.060148 | 0.152E-04 | 0.179E-01 | 0.407E 01 | 0.249E-01    |
| 18    | 0.0 | 0.039258 | 0.909E-05 | 0.117E-01 | 0.266E 01 | 0.134E-01    |
| 19    | 0.0 | 0.037387 | 0.935E-05 | 0.110E-01 | 0.241E 01 | 0.122E-01    |
| 20    | 0.0 | 0.185593 | 0.498E-04 | 0.551E-01 | 0.126E 02 | 0.936E-01    |

TIME 13.33.48  
PAGE NO. 316, VOL. I  
REP. NO. 6004  
11/28/67

TITLE  
MCDONNELL

RUN NO. 2317

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.1050 PO = 3792.79 ALPHA = 10.30

| PROBE | PHT | PON      | PON/PD    | PON/PD2   | PON/P1    | (PON-P1)/P1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.051267 | 0.192E-04 | 0.188E-01 | 0.428E 01 | 0.265E-01   |
| 2     | 0.0 | 0.060221 | 0.159E-04 | 0.185E-01 | 0.421E 01 | 0.259E-01   |
| 3     | 0.0 | 0.055590 | 0.147E-04 | 0.170E-01 | 0.399E 01 | 0.233E-01   |
| 4     | 0.0 | 0.056660 | 0.149E-04 | 0.174E-01 | 0.396E 01 | 0.239E-01   |
| 5     | 0.0 | 0.052339 | 0.138E-04 | 0.169E-01 | 0.365E 01 | 0.215E-01   |
| 6     | 0.0 | 0.047140 | 0.124E-04 | 0.145E-01 | 0.329E 01 | 0.185E-01   |
| 7     | 0.0 | 0.045674 | 0.120E-04 | 0.139E-01 | 0.319E 01 | 0.176E-01   |
| 8     | 0.0 | 0.044282 | 0.117E-04 | 0.134E-01 | 0.309E 01 | 0.169E-01   |
| 9     | 0.0 | 0.045030 | 0.129E-04 | 0.150E-01 | 0.342E 01 | 0.194E-01   |
| 10    | 0.0 | 0.049030 | 0.129E-04 | 0.150E-01 | 0.342E 01 | 0.196E-01   |
| 11    | 0.0 | 0.044356 | 0.117E-04 | 0.136E-01 | 0.310E 01 | 0.170E-01   |
| 12    | 0.0 | 0.042321 | 0.112E-04 | 0.130E-01 | 0.296E 01 | 0.158E-01   |
| 13    | 0.0 | 0.044149 | 0.116E-04 | 0.135E-01 | 0.308E 01 | 0.169E-01   |
| 14    | 0.0 | 0.051244 | 0.135E-04 | 0.157E-01 | 0.354E 01 | 0.200E-01   |
| 15    | 0.0 | 0.033135 | 0.074E-05 | 0.102E-01 | 0.231E 01 | 0.104E-01   |
| 16    | 0.0 | 0.048394 | 0.124E-04 | 0.148E-01 | 0.338E 01 | 0.192E-01   |
| 17    | 0.0 | 0.060519 | 0.160E-04 | 0.184E-01 | 0.423E 01 | 0.262E-01   |
| 18    | 0.0 | 0.040160 | 0.106E-04 | 0.123E-01 | 0.280E 01 | 0.146E-01   |
| 19    | 0.0 | 0.037187 | 0.930E-05 | 0.114E-01 | 0.260E 01 | 0.129E-01   |
| 20    | 0.0 | 0.187735 | 0.495E-04 | 0.576E-01 | 0.131E 02 | 0.980E-01   |

RUN NO. 2318

TITLE

MC DONNELL

TIME 10. 4.32  
PAGE NO. 317, VOL. I  
REP. NO. 6004  
11/17/67

HIT TEST NO. 67  
TUNNEL PARAMETERS

| T<br>(SEC) | PO<br>(PSI) | TO<br>(IN) | HO<br>(SEI/SECC) | Q-DOT<br>(R/SE-S) | PI<br>(PSI) | PI<br>(PSI) | TI<br>(IN) | U<br>(FT/S) | M1    | RE/T     | QI<br>(PSI) | ALPHA<br>(DEG) |
|------------|-------------|------------|------------------|-------------------|-------------|-------------|------------|-------------|-------|----------|-------------|----------------|
| .0400      | 7404.       | 1876.      | 0.23782E 08      | 99.03             | 5.170       | 0.02272     | 56.83      | 69.04.      | 13.50 | 1503225. | 2.896       | 10.03          |
| .0450      | 7376.       | 1868.      | 0.23665E 08      | 96.87             | 5.113       | 0.02174     | 56.83      | 67.88.      | 13.46 | 1434684. | 2.757       | 10.03          |
| .0500      | 6968.       | 1844.      | 0.23302E 08      | 90.71             | 4.866       | 0.02076     | 56.11      | 67.35.      | 13.44 | 1394165. | 2.625       | 10.03          |
| .0550      | 6581.       | 1817.      | 0.22905E 08      | 86.54             | 4.630       | 0.01981     | 55.31      | 66.77.      | 13.42 | 1357640. | 2.498       | 10.03          |
| .0600      | 6214.       | 1793.      | 0.22486E 08      | 82.38             | 4.405       | 0.01889     | 54.61      | 65.15.      | 13.41 | 1325181. | 2.377       | 10.03          |
| .0650      | 5867.       | 1763.      | 0.22030E 08      | 78.22             | 4.190       | 0.01800     | 53.41      | 65.68.      | 13.40 | 1297842. | 2.261       | 10.03          |
| .0700      | 5541.       | 1728.      | 0.21542E 08      | 74.06             | 3.936       | 0.01716     | 52.31      | 64.75.      | 13.38 | 1275925. | 2.151       | 10.03          |
| .0750      | 5236.       | 1691.      | 0.21156E 08      | 69.89             | 3.792       | 0.01635     | 51.10      | 63.95.      | 13.38 | 1257486. | 2.047       | 10.03          |
| .0800      | 4951.       | 1651.      | 0.20458E 08      | 65.73             | 3.609       | 0.01557     | 49.76      | 63.09.      | 13.37 | 1245966. | 1.949       | 10.03          |
| .0850      | 4686.       | 1611.      | 0.19851E 08      | 61.57             | 3.436       | 0.01483     | 48.29      | 62.16.      | 13.37 | 1241071. | 1.856       | 10.03          |
| .0900      | 4442.       | 1547.      | 0.19021E 08      | 57.40             | 3.274       | 0.01410     | 46.15      | 61.94.      | 13.39 | 1266773. | 1.769       | 10.03          |
| .0950      | 4218.       | 1498.      | 0.18300E 08      | 53.24             | 3.123       | 0.01343     | 44.32      | 59.68.      | 13.40 | 1281096. | 1.688       | 10.03          |
| .1000      | 4014.       | 1439.      | 0.17524E 08      | 49.08             | 2.982       | 0.01279     | 42.32      | 58.40.      | 13.42 | 1309596. | 1.612       | 10.03          |
| .1050      | 3831.       | 1375.      | 0.16690E 08      | 44.91             | 2.851       | 0.01218     | 40.14      | 57.00.      | 13.45 | 1353217. | 1.543       | 10.03          |

RUN NO. 3318

TITLE

MCDONNELL

TIME 10. 4.33  
PAGE NO. 318, VOL. I  
REP. VO. 0004  
11/17/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.0400 PO= 7804. PU2= 5.370 PI=0.02272 QDOT-A= 99.03

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.5187             | 0.01533       | 0.01533        | 1.5187     |
| 2  | 2.3452             | 0.02368       | 0.02368        | 2.3452     |
| 3  | 2.3360             | 0.02359       | 0.02359        | 2.3360     |
| 4  | 2.0766             | 0.02097       | 0.02097        | 2.0766     |
| 5  | 2.7817             | 0.02809       | 0.02809        | 2.7817     |
| 6  | 2.2432             | 0.02265       | 0.02265        | 2.2432     |
| 7  | 2.4404             | 0.02464       | 0.02464        | 2.4404     |
| 8  | 1.6951             | 0.01712       | 0.01712        | 1.6951     |
| 9  | 2.3431             | 0.02366       | 0.02366        | 2.3431     |
| 10 | 2.4931             | 0.02517       | 0.02517        | 2.4931     |
| 11 | 1.9761             | 0.01995       | 0.01995        | 1.9761     |
| 12 | 2.1696             | 0.02191       | 0.02191        | 2.1696     |
| 13 | 2.2860             | 0.02308       | 0.02308        | 2.2860     |
| 14 | 2.2123             | 0.02234       | 0.02234        | 2.2123     |
| 15 | 2.0530             | 0.02073       | 0.02073        | 2.0530     |
| 16 | 2.4317             | 0.02455       | 0.02455        | 2.4317     |
| 17 | 2.4961             | 0.02520       | 0.02520        | 2.4961     |
| 18 | 2.8638             | 0.02892       | 0.02892        | 2.8638     |
| 19 | 1.6865             | 0.01703       | 0.01703        | 1.6865     |
| 20 | 13.2693            | 0.13399       | 0.13399        | 13.2693    |

RUN NO. 2318

TITLE

MCDONNELL

TIME 10. 4.33  
PAGE NO. 319, VOL. I  
REP. NO. 0004  
11/17/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.450 P0= 7376. P02= 5.113 P1=0.02174 QDOT-A= 94.87

| N  | QDOT-N<br>(R/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.4660             | 0.01545       | 0.01545        | 1.4660     |
| 2  | 2.2647             | 0.02387       | 0.02387        | 2.2647     |
| 3  | 2.2548             | 0.02377       | 0.02377        | 2.2548     |
| 4  | 2.0068             | 0.02115       | 0.02115        | 2.0068     |
| 5  | 2.6894             | 0.02835       | 0.02835        | 2.6894     |
| 6  | 2.1721             | 0.02290       | 0.02290        | 2.1721     |
| 7  | 2.3701             | 0.02498       | 0.02498        | 2.3701     |
| 8  | 1.6394             | 0.01728       | 0.01728        | 1.6394     |
| 9  | 2.2755             | 0.02399       | 0.02399        | 2.2755     |
| 10 | 2.4291             | 0.02560       | 0.02560        | 2.4291     |
| 11 | 1.9091             | 0.02012       | 0.02012        | 1.9091     |
| 12 | 2.1038             | 0.02217       | 0.02217        | 2.1038     |
| 13 | 2.2188             | 0.02339       | 0.02339        | 2.2188     |
| 14 | 2.1647             | 0.02282       | 0.02282        | 2.1647     |
| 15 | 1.9934             | 0.02101       | 0.02101        | 1.9934     |
| 16 | 2.3611             | 0.02489       | 0.02489        | 2.3611     |
| 17 | 2.4138             | 0.02544       | 0.02544        | 2.4138     |
| 18 | 2.7862             | 0.02937       | 0.02937        | 2.7862     |
| 19 | 1.6406             | 0.01729       | 0.01729        | 1.6406     |
| 20 | 12.8616            | 0.13557       | 0.13557        | 12.8616    |

TIME 10. 4.33  
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TITLE  
MCDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=.0500 PD= 6968. PD2= 4.866 PI=.02076 QDOT-A= 90.71

| N  | QDOT-N<br>(B/ST-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.4134             | 0.0158        | 0.0158         | 1.4134     |
| 2  | 2.1841             | 0.02408       | 0.02408        | 2.1841     |
| 3  | 2.1735             | 0.02396       | 0.02396        | 2.1735     |
| 4  | 1.9371             | 0.02136       | 0.02136        | 1.9371     |
| 5  | 2.5971             | 0.02863       | 0.02863        | 2.5971     |
| 6  | 2.1010             | 0.02316       | 0.02316        | 2.1010     |
| 7  | 2.2998             | 0.02535       | 0.02535        | 2.2998     |
| 8  | 1.5836             | 0.01746       | 0.01746        | 1.5836     |
| 9  | 2.2079             | 0.02434       | 0.02434        | 2.2079     |
| 10 | 2.3651             | 0.02607       | 0.02607        | 2.3651     |
| 11 | 1.8622             | 0.02031       | 0.02031        | 1.8622     |
| 12 | 2.0379             | 0.02247       | 0.02247        | 2.0379     |
| 13 | 2.1517             | 0.02372       | 0.02372        | 2.1517     |
| 14 | 2.1170             | 0.02336       | 0.02336        | 2.1170     |
| 15 | 1.9339             | 0.02132       | 0.02132        | 1.9339     |
| 16 | 2.2495             | 0.02525       | 0.02525        | 2.2495     |
| 17 | 2.3315             | 0.02570       | 0.02570        | 2.3315     |
| 18 | 2.7086             | 0.02986       | 0.02986        | 2.7086     |
| 19 | 1.5946             | 0.01758       | 0.01758        | 1.5946     |
| 20 | 12.4510            | 0.13730       | 0.13730        | 12.4533    |

TIME 10. 4.33  
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11/17/67

TITLE  
MCDONNELL

RUN NO. 2310

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| N  | QDOT-N<br>(B/SE-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.3608             | 0.01572       | 0.01572        | 1.3608     |
| 2  | 2.1035             | 0.02631       | 0.02631        | 2.1035     |
| 3  | 2.0923             | 0.02618       | 0.02618        | 2.0923     |
| 4  | 1.8673             | 0.02158       | 0.02158        | 1.8673     |
| 5  | 2.5048             | 0.02894       | 0.02894        | 2.5048     |
| 6  | 2.0299             | 0.02365       | 0.02365        | 2.0299     |
| 7  | 2.2296             | 0.02576       | 0.02576        | 2.2296     |
| 8  | 1.5278             | 0.01765       | 0.01765        | 1.5278     |
| 9  | 2.1403             | 0.02473       | 0.02473        | 2.1403     |
| 10 | 2.3010             | 0.02659       | 0.02659        | 2.3010     |
| 11 | 1.7752             | 0.02051       | 0.02051        | 1.7752     |
| 12 | 1.6721             | 0.02279       | 0.02279        | 1.6721     |
| 13 | 2.0845             | 0.02409       | 0.02409        | 2.0845     |
| 14 | 2.0693             | 0.02391       | 0.02391        | 2.0693     |
| 15 | 1.8746             | 0.02166       | 0.02166        | 1.8746     |
| 16 | 2.2198             | 0.02565       | 0.02565        | 2.2198     |
| 17 | 2.2492             | 0.02599       | 0.02599        | 2.2492     |
| 18 | 2.6310             | 0.03040       | 0.03040        | 2.6310     |
| 19 | 1.5486             | 0.01789       | 0.01789        | 1.5486     |
| 20 | 12.0461            | 0.13919       | 0.13919        | 12.0461    |

TIME 10. 4.33  
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 11/17/67

TITLE  
 MCDONNELL

HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

TIME=0600 PO= 6214. P02= 4.405 P1=01889 QDOT-A= 82.38

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.3092             | 0.01580       | 0.01584        | 1.3092     |
| 2  | 2.0210             | 0.02456       | 0.02456        | 2.0230     |
| 3  | 2.0110             | 0.02441       | 0.02441        | 2.0110     |
| 4  | 1.7976             | 0.02182       | 0.02182        | 1.7976     |
| 5  | 2.4125             | 0.02928       | 0.02928        | 2.4125     |
| 6  | 1.9587             | 0.02378       | 0.02378        | 1.9587     |
| 7  | 2.1593             | 0.02621       | 0.02621        | 2.1593     |
| 8  | 1.4720             | 0.01787       | 0.01787        | 1.4720     |
| 9  | 2.0727             | 0.02516       | 0.02516        | 2.0727     |
| 10 | 2.2370             | 0.02715       | 0.02715        | 2.2370     |
| 11 | 1.7083             | 0.02074       | 0.02074        | 1.7083     |
| 12 | 1.9062             | 0.02314       | 0.02314        | 1.9062     |
| 13 | 2.0173             | 0.02449       | 0.02449        | 2.0173     |
| 14 | 2.0216             | 0.02454       | 0.02454        | 2.0216     |
| 15 | 1.8149             | 0.02203       | 0.02203        | 1.8149     |
| 16 | 2.1492             | 0.02609       | 0.02609        | 2.1492     |
| 17 | 2.1669             | 0.02630       | 0.02630        | 2.1669     |
| 18 | 2.5534             | 0.03099       | 0.03099        | 2.5534     |
| 19 | 1.5026             | 0.01824       | 0.01824        | 1.5026     |
| 20 | 11.6383            | 0.14127       | 0.14127        | 11.6383    |



RUN NO. 2318

TITLE

MC DONNELL

TIME 10. 4.33  
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11/17/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| N  | QDOT-N<br>(B/SEC-S) | QDOT-N/QDOT-A | QDOT-N/KDOT-A | QDOT-N/REF |
|----|---------------------|---------------|---------------|------------|
| 1  | 1.2555              | 0.01605       | 0.01605       | 1.2555     |
| 2  | 1.9624              | 0.02483       | 0.02483       | 1.9624     |
| 3  | 1.9298              | 0.02467       | 0.02467       | 1.9298     |
| 4  | 1.7278              | 0.02209       | 0.02209       | 1.7278     |
| 5  | 2.3202              | 0.02966       | 0.02966       | 2.3202     |
| 6  | 1.9876              | 0.02413       | 0.02413       | 1.9876     |
| 7  | 2.0890              | 0.02671       | 0.02671       | 2.0890     |
| 8  | 1.4163              | 0.01811       | 0.01811       | 1.4163     |
| 9  | 2.0051              | 0.02564       | 0.02564       | 2.0051     |
| 10 | 2.1730              | 0.02778       | 0.02778       | 2.1730     |
| 11 | 1.6413              | 0.02098       | 0.02098       | 1.6413     |
| 12 | 1.8404              | 0.02353       | 0.02353       | 1.8404     |
| 13 | 1.9502              | 0.02493       | 0.02493       | 1.9502     |
| 14 | 1.9760              | 0.02524       | 0.02524       | 1.9760     |
| 15 | 1.7553              | 0.02244       | 0.02244       | 1.7553     |
| 16 | 2.0796              | 0.02657       | 0.02657       | 2.0796     |
| 17 | 2.0866              | 0.02665       | 0.02665       | 2.0866     |
| 18 | 2.4757              | 0.03165       | 0.03165       | 2.4757     |
| 19 | 1.4567              | 0.01862       | 0.01862       | 1.4567     |
| 20 | 11.2306             | 0.14358       | 0.14358       | 11.2306    |

TIME=0650 P0= 5.67. P02= 4.190 P1= 0.1800 QDOT-A= 78.22

TIME 10. 4.34  
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11/17/67

TITLE  
MCDONNELL

RUN NO. 2318

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0700 PO= 5541. P02= 3.986 P1=01716 QDOT-A= 74.06

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.2029             | 0.01624       | 0.01624        | 1.2029     |
| 2  | 1.8618             | 0.02514       | 0.02514        | 1.8618     |
| 3  | 1.9485             | 0.02496       | 0.02496        | 1.8485     |
| 4  | 1.6531             | 0.02230       | 0.02239        | 1.6581     |
| 5  | 2.2280             | 0.03009       | 0.03009        | 2.2280     |
| 6  | 1.8165             | 0.02453       | 0.02453        | 1.8165     |
| 7  | 2.0107             | 0.02726       | 0.02726        | 2.0107     |
| 8  | 1.3605             | 0.01837       | 0.01837        | 1.3605     |
| 9  | 1.9375             | 0.02616       | 0.02616        | 1.9375     |
| 10 | 2.1090             | 0.02848       | 0.02848        | 2.1090     |
| 11 | 1.5744             | 0.02126       | 0.02126        | 1.5744     |
| 12 | 1.7745             | 0.02396       | 0.02396        | 1.7745     |
| 13 | 1.8830             | 0.02563       | 0.02563        | 1.8830     |
| 14 | 1.9263             | 0.02601       | 0.02601        | 1.9263     |
| 15 | 1.6958             | 0.02290       | 0.02290        | 1.6958     |
| 16 | 2.0079             | 0.02711       | 0.02711        | 2.0079     |
| 17 | 2.0023             | 0.02704       | 0.02704        | 2.0023     |
| 18 | 2.3981             | 0.03238       | 0.03238        | 2.3981     |
| 19 | 1.4107             | 0.01905       | 0.01905        | 1.4107     |
| 20 | 10.8228            | 0.14615       | 0.14615        | 10.8228    |

TIME 10.4.34  
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11/17/67

TITLE MCDONWELL

RUN NO. 2318

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.0750 W0= 5236. P02= 3.792 P1=0.01635 QDOT-A= 69.89

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.1503             | 0.01646       | 0.01646        | 1.1503     |
| 2  | 1.7813             | 0.02549       | 0.02549        | 1.7813     |
| 3  | 1.7673             | 0.02529       | 0.02529        | 1.7673     |
| 4  | 1.5883             | 0.02273       | 0.02273        | 1.5883     |
| 5  | 2.1357             | 0.03056       | 0.03056        | 2.1357     |
| 6  | 1.7454             | 0.02497       | 0.02497        | 1.7454     |
| 7  | 1.9485             | 0.02788       | 0.02788        | 1.9485     |
| 8  | 1.3047             | 0.01867       | 0.01867        | 1.3047     |
| 9  | 1.8700             | 0.02675       | 0.02675        | 1.8700     |
| 10 | 2.0450             | 0.02926       | 0.02926        | 2.0450     |
| 11 | 1.5074             | 0.02157       | 0.02157        | 1.5074     |
| 12 | 1.7087             | 0.02445       | 0.02445        | 1.7087     |
| 13 | 1.8158             | 0.02598       | 0.02598        | 1.8158     |
| 14 | 1.8786             | 0.02688       | 0.02688        | 1.8786     |
| 15 | 1.6363             | 0.02341       | 0.02341        | 1.6363     |
| 16 | 1.9373             | 0.02772       | 0.02772        | 1.9373     |
| 17 | 1.9200             | 0.02747       | 0.02747        | 1.9200     |
| 18 | 2.3205             | 0.03320       | 0.03320        | 2.3205     |
| 19 | 1.3647             | 0.01953       | 0.01953        | 1.3647     |
| 20 | 10.4151            | 0.14902       | 0.14902        | 10.4151    |

TIME 10. 4.34  
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11/17/67

TITLE  
MCDONNELL  
HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0.0800 PO= 4951. P02= 3.409 PI=01557 QDOT-A= 65.73

| N  | QDOT-N<br>(0/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/PEF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.0977             | 0.01670       | 0.01670        | 1.0977     |
| 2  | 1.7007             | 0.02597       | 0.02597        | 1.7007     |
| 3  | 1.6860             | 0.02565       | 0.02565        | 1.6860     |
| 4  | 1.5186             | 0.02310       | 0.02310        | 1.5186     |
| 5  | 2.0424             | 0.03109       | 0.03109        | 2.0434     |
| 6  | 1.6743             | 0.02547       | 0.02547        | 1.6743     |
| 7  | 1.8782             | 0.02857       | 0.02857        | 1.8782     |
| 8  | 1.2439             | 0.01900       | 0.01900        | 1.2439     |
| 9  | 1.8024             | 0.02742       | 0.02742        | 1.8024     |
| 10 | 1.9809             | 0.03014       | 0.03014        | 1.9809     |
| 11 | 1.4405             | 0.02192       | 0.02192        | 1.4405     |
| 12 | 1.6428             | 0.02499       | 0.02499        | 1.6428     |
| 13 | 1.7487             | 0.02660       | 0.02660        | 1.7487     |
| 14 | 1.8309             | 0.02734       | 0.02734        | 1.8309     |
| 15 | 1.5767             | 0.02399       | 0.02399        | 1.5767     |
| 16 | 1.8667             | 0.02860       | 0.02860        | 1.8667     |
| 17 | 1.8377             | 0.02796       | 0.02796        | 1.8377     |
| 18 | 2.2429             | 0.03412       | 0.03412        | 2.2429     |
| 19 | 1.3187             | 0.02006       | 0.02006        | 1.3187     |
| 20 | 10.0073            | 0.15225       | 0.15225        | 10.0073    |

TIME 10. 4.34  
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11/17/67

TITLE  
MCDONNELL

WT TEST NO. 67  
MODEL HEAT TRANSFER RATES

RUN NO. 2318

| TIME=.0050 PO= 4686. PO2= 3.436 PI=.01483 QDOT-A= 61.57 |                    |               |                |            |  |
|---------------------------------------------------------|--------------------|---------------|----------------|------------|--|
| N                                                       | QDOT-N<br>(B/SF-5) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |  |
| 1                                                       | 1.0450             | 0.01697       | 0.01697        | 1.0450     |  |
| 2                                                       | 1.6202             | 0.02632       | 0.02632        | 1.6202     |  |
| 3                                                       | 1.6048             | 0.02607       | 0.02607        | 1.6048     |  |
| 4                                                       | 1.4489             | 0.02353       | 0.02353        | 1.4489     |  |
| 5                                                       | 1.9511             | 0.03169       | 0.03169        | 1.9511     |  |
| 6                                                       | 1.6032             | 0.02604       | 0.02604        | 1.6032     |  |
| 7                                                       | 1.8079             | 0.02937       | 0.02937        | 1.8079     |  |
| 8                                                       | 1.1932             | 0.01938       | 0.01938        | 1.1932     |  |
| 9                                                       | 1.7348             | 0.02818       | 0.02818        | 1.7348     |  |
| 10                                                      | 1.9160             | 0.03114       | 0.03114        | 1.9169     |  |
| 11                                                      | 1.3735             | 0.02231       | 0.02231        | 1.3735     |  |
| 12                                                      | 1.5770             | 0.02561       | 0.02561        | 1.5770     |  |
| 13                                                      | 1.6815             | 0.02731       | 0.02731        | 1.6815     |  |
| 14                                                      | 1.7832             | 0.02896       | 0.02896        | 1.7832     |  |
| 15                                                      | 1.5172             | 0.02464       | 0.02464        | 1.5172     |  |
| 16                                                      | 1.7960             | 0.02917       | 0.02917        | 1.7960     |  |
| 17                                                      | 1.7554             | 0.02851       | 0.02851        | 1.7554     |  |
| 18                                                      | 2.1653             | 0.03517       | 0.03517        | 2.1653     |  |
| 19                                                      | 1.2728             | 0.02067       | 0.02067        | 1.2728     |  |
| 20                                                      | 9.5996             | 0.15592       | 0.15592        | 9.5996     |  |

RUN NO. 2318

TITLE

McDONNELL

TIME 10. 4.34  
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11/17/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=0900 PO= 4442. PO2= 3.27% PI=01410 QDOT-A= 57.40

| N  | QDOT-N<br>(W/SE-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 0.9924             | 0.01729       | 0.01729        | 0.9924     |
| 2  | 1.5396             | 0.02682       | 0.02682        | 1.5396     |
| 3  | 1.5235             | 0.02656       | 0.02656        | 1.5235     |
| 4  | 1.3791             | 0.02603       | 0.02603        | 1.3791     |
| 5  | 1.8548             | 0.03238       | 0.03238        | 1.8548     |
| 6  | 1.5321             | 0.02669       | 0.02669        | 1.5321     |
| 7  | 1.7376             | 0.03027       | 0.03027        | 1.7376     |
| 8  | 1.1374             | 0.01981       | 0.01981        | 1.1374     |
| 9  | 1.6612             | 0.02904       | 0.02904        | 1.6612     |
| 10 | 1.8529             | 0.03228       | 0.03228        | 1.8529     |
| 11 | 1.3066             | 0.02276       | 0.02276        | 1.3066     |
| 12 | 1.5111             | 0.02633       | 0.02633        | 1.5111     |
| 13 | 1.6143             | 0.02812       | 0.02812        | 1.6143     |
| 14 | 1.7356             | 0.03023       | 0.03023        | 1.7356     |
| 15 | 1.4577             | 0.02539       | 0.02539        | 1.4577     |
| 16 | 1.7254             | 0.03006       | 0.03006        | 1.7254     |
| 17 | 1.6731             | 0.02915       | 0.02915        | 1.6731     |
| 18 | 2.0877             | 0.03637       | 0.03637        | 2.0877     |
| 19 | 1.2268             | 0.02137       | 0.02137        | 1.2268     |
| 20 | 9.1918             | 0.16013       | 0.16013        | 9.1918     |

TIME 10. 4.34  
PAGE NO. 329, VOL. I  
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11/17/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=.0950 PO= 4218. PO2= 3.123 PI=.01343 QDOT-A= 53.24

| N  | QDOT-N<br>(8/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 0.9398             | 0.01765       | 0.01765        | 0.9398     |
| 2  | 1.4590             | 0.02741       | 0.02741        | 1.4590     |
| 3  | 1.4423             | 0.02709       | 0.02709        | 1.4423     |
| 4  | 1.3094             | 0.02459       | 0.02459        | 1.3094     |
| 5  | 1.7665             | 0.03318       | 0.03318        | 1.7665     |
| 6  | 1.4610             | 0.02744       | 0.02744        | 1.4610     |
| 7  | 1.6673             | 0.03132       | 0.03132        | 1.6673     |
| 8  | 1.0816             | 0.02032       | 0.02032        | 1.0816     |
| 9  | 1.5996             | 0.03005       | 0.03005        | 1.5996     |
| 10 | 1.7889             | 0.03360       | 0.03360        | 1.7889     |
| 11 | 1.2396             | 0.02328       | 0.02328        | 1.2396     |
| 12 | 1.4453             | 0.02715       | 0.02715        | 1.4453     |
| 13 | 1.5472             | 0.02906       | 0.02906        | 1.5472     |
| 14 | 1.6879             | 0.03170       | 0.03170        | 1.6879     |
| 15 | 1.3982             | 0.02626       | 0.02626        | 1.3982     |
| 16 | 1.6548             | 0.03108       | 0.03108        | 1.6548     |
| 17 | 1.5908             | 0.02988       | 0.02988        | 1.5908     |
| 18 | 2.0101             | 0.03776       | 0.03776        | 2.0101     |
| 19 | 1.1808             | 0.02218       | 0.02218        | 1.1808     |
| 20 | 8.7840             | 0.16499       | 0.16499        | 8.7840     |

RUN NO. 1318

TITLE

MC DONNELL

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME 10. 4.34  
PAGE NO. 330, VOL. I  
REP. NO. 6004  
11/17/67

TIME=.1000 PO= 4014. PO2= 2.982 P1=.01279 QDOT-A= 49.08

| N  | QDOT-N<br>(R/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 0.8871             | 0.01808       | 0.01808        | 0.8871     |
| 2  | 1.3785             | 0.02809       | 0.02809        | 1.3785     |
| 3  | 1.3611             | 0.02773       | 0.02773        | 1.3611     |
| 4  | 1.2396             | 0.02526       | 0.02526        | 1.2396     |
| 5  | 1.6742             | 0.03411       | 0.03411        | 1.6742     |
| 6  | 1.3898             | 0.02832       | 0.02832        | 1.3898     |
| 7  | 1.5971             | 0.03254       | 0.03254        | 1.5971     |
| 8  | 1.0258             | 0.02090       | 0.02090        | 1.0258     |
| 9  | 1.5320             | 0.03122       | 0.03122        | 1.5320     |
| 10 | 1.7249             | 0.03515       | 0.03515        | 1.7249     |
| 11 | 1.1726             | 0.02389       | 0.02389        | 1.1726     |
| 12 | 1.3795             | 0.02811       | 0.02811        | 1.3795     |
| 13 | 1.4800             | 0.03016       | 0.03016        | 1.4800     |
| 14 | 1.6402             | 0.03342       | 0.03342        | 1.6402     |
| 15 | 1.3386             | 0.02728       | 0.02728        | 1.3386     |
| 16 | 1.5841             | 0.03228       | 0.03228        | 1.5841     |
| 17 | 1.5085             | 0.03074       | 0.03074        | 1.5085     |
| 18 | 1.9325             | 0.03938       | 0.03938        | 1.9325     |
| 19 | 1.1349             | 0.02312       | 0.02312        | 1.1349     |
| 20 | 8.3763             | 0.17068       | 0.17068        | 8.3763     |



TIME 10. 4.35  
 PAGE NO. 331, VOL. I  
 REP. NO. 6004  
 11/17/67

MCDONNELL  
 HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

TITLE

RUN NO. 2318

TIME=1050 PU= 3831. PD2= 2.851 PI=01218 QDOT-A= 44.91

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KDOT-A | QDOT-N/REF |
|----|--------------------|---------------|---------------|------------|
| 1  | 0.8345             | 0.01858       | 0.01858       | 0.8345     |
| 2  | 1.2979             | 0.02890       | 0.02890       | 1.2979     |
| 3  | 1.2798             | 0.02849       | 0.02849       | 1.2798     |
| 4  | 1.1699             | 0.02605       | 0.02605       | 1.1699     |
| 5  | 1.5819             | 0.03522       | 0.03522       | 1.5819     |
| 6  | 1.3187             | 0.02936       | 0.02936       | 1.3187     |
| 7  | 1.5268             | 0.03399       | 0.03399       | 1.5268     |
| 8  | 0.9700             | 0.02160       | 0.02160       | 0.9700     |
| 9  | 1.4664             | 0.03261       | 0.03261       | 1.4664     |
| 10 | 1.6608             | 0.03698       | 0.03698       | 1.6608     |
| 11 | 1.1057             | 0.02462       | 0.02462       | 1.1057     |
| 12 | 1.3136             | 0.02925       | 0.02925       | 1.3136     |
| 13 | 1.4128             | 0.03146       | 0.03146       | 1.4128     |
| 14 | 1.5925             | 0.03546       | 0.03546       | 1.5925     |
| 15 | 1.2791             | 0.02848       | 0.02848       | 1.2791     |
| 16 | 1.5135             | 0.03370       | 0.03370       | 1.5135     |
| 17 | 1.4263             | 0.03176       | 0.03176       | 1.4263     |
| 18 | 1.8548             | 0.04130       | 0.04130       | 1.8548     |
| 19 | 1.0809             | 0.02424       | 0.02424       | 1.0809     |
| 20 | 7.9685             | 0.17742       | 0.17742       | 7.9685     |

TIME 10. 4.35  
PAGE NO. 332, VOL. 1  
RFP. NO. 6004  
11/17/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0460 PO = 7804.37 ALPHA = 10.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.064448 | 0.826F-05 | 0.120F-01 | 0.284E 01 | 0.144E-01   |
| 2     | 0.0 | 0.058446 | 0.799F-05 | 0.109F-01 | 0.257E 01 | 0.123E-01   |
| 3     | 0.0 | 0.072724 | 0.932F-05 | 0.135F-01 | 0.320F 01 | 0.173E-01   |
| 4     | 0.0 | 0.065108 | 0.934F-05 | 0.121F-01 | 0.287E 01 | 0.146E-01   |
| 5     | 0.0 | 0.064785 | 0.894F-05 | 0.130F-01 | 0.307E 01 | 0.163E-01   |
| 6     | 0.0 | 0.069834 | 0.895E-05 | 0.130F-01 | 0.307E 01 | 0.163E-01   |
| 7     | 0.0 | 0.060044 | 0.103F-04 | 0.149F-01 | 0.353E 01 | 0.190E-01   |
| 8     | 0.0 | 0.068418 | 0.877E-05 | 0.127F-01 | 0.301E 01 | 0.158E-01   |
| 9     | 0.0 | 0.076050 | 0.974F-05 | 0.142F-01 | 0.335E 01 | 0.184E-01   |
| 10    | 0.0 | 0.100388 | 0.128E-04 | 0.186F-01 | 0.461E 01 | 0.267E-01   |
| 11    | 0.0 | 0.070022 | 0.897F-05 | 0.130F-01 | 0.308E 01 | 0.163E-01   |
| 12    | 0.0 | 0.077024 | 0.987F-05 | 0.143F-01 | 0.335E 01 | 0.188E-01   |
| 13    | 0.0 | 0.079456 | 0.102F-04 | 0.148F-01 | 0.350E 01 | 0.196E-01   |
| 14    | 0.0 | 0.096179 | 0.123F-04 | 0.179F-01 | 0.423E 01 | 0.254E-01   |
| 15    | 0.0 | 0.072044 | 0.101E-04 | 0.147F-01 | 0.348E 01 | 0.195E-01   |
| 16    | 0.0 | 0.094171 | 0.121E-04 | 0.175F-01 | 0.415E 01 | 0.247E-01   |
| 17    | 0.0 | 0.113172 | 0.145F-04 | 0.211F-01 | 0.498E 01 | 0.317E-01   |
| 18    | 0.0 | 0.132418 | 0.170E-04 | 0.247E-01 | 0.583E 01 | 0.379E-01   |
| 19    | 0.0 | 0.067879 | 0.870F-05 | 0.124F-01 | 0.299E 01 | 0.156E-01   |
| 20    | 0.0 | 0.341797 | 0.438E-04 | 0.637E-01 | 0.150E 02 | 0.110E 00   |

TIME 10. 4.35  
PAGE NO. 333, VOL. I  
REP. NO. 0004  
11/17/67

TIME 0.0450 PO= 7376.10 ALPHA= 10.00  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2318

MCDONNELL

| PROBE | PHI | PUN      | PUN/PO    | PCN/PO2   | PCN/PI    | PCN-PI1/Q1 |
|-------|-----|----------|-----------|-----------|-----------|------------|
| 1     | C.0 | 0.062485 | 0.847E-05 | 0.122E-01 | 0.287E 01 | 0.148E-01  |
| 2     | C.0 | 0.051662 | 0.700E-05 | 0.101E-01 | 0.230E 01 | 0.109E-01  |
| 3     | C.0 | 0.068811 | 0.933E-05 | 0.135E-01 | 0.317E 01 | 0.171E-01  |
| 4     | C.0 | 0.062391 | 0.846E-05 | 0.122E-01 | 0.287E 01 | 0.147E-01  |
| 5     | C.0 | 0.066196 | 0.897E-05 | 0.129E-01 | 0.304E 01 | 0.161E-01  |
| 6     | C.0 | 0.066717 | 0.905E-05 | 0.130E-01 | 0.307E 01 | 0.163E-01  |
| 7     | C.0 | 0.075428 | 0.102E-04 | 0.148E-01 | 0.347E 01 | 0.195E-01  |
| 8     | C.0 | 0.065077 | 0.882E-05 | 0.127E-01 | 0.299E 01 | 0.157E-01  |
| 9     | C.0 | 0.072086 | 0.977E-05 | 0.141E-01 | 0.332E 01 | 0.193E-01  |
| 10    | C.0 | 0.094557 | 0.128E-04 | 0.185E-01 | 0.435E 01 | 0.266E-01  |
| 11    | C.0 | 0.066509 | 0.902E-05 | 0.130E-01 | 0.304E 01 | 0.162E-01  |
| 12    | C.0 | 0.073259 | 0.993E-05 | 0.143E-01 | 0.337E 01 | 0.187E-01  |
| 13    | C.0 | 0.074829 | 0.101E-04 | 0.146E-01 | 0.346E 01 | 0.193E-01  |
| 14    | C.0 | 0.090271 | 0.122E-04 | 0.177E-01 | 0.415E 01 | 0.249E-01  |
| 15    | C.0 | 0.076121 | 0.103E-04 | 0.149E-01 | 0.340E 01 | 0.197E-01  |
| 16    | C.0 | 0.089704 | 0.122E-04 | 0.175E-01 | 0.413E 01 | 0.246E-01  |
| 17    | C.0 | 0.105570 | 0.143E-04 | 0.206E-01 | 0.466E 01 | 0.304E-01  |
| 18    | C.0 | 0.123044 | 0.167E-04 | 0.241E-01 | 0.566E 01 | 0.367E-01  |
| 19    | C.0 | 0.063759 | 0.866E-05 | 0.125E-01 | 0.293E 01 | 0.152E-01  |
| 20    | C.0 | 0.318791 | 0.432E-04 | 0.624E-01 | 0.147E 02 | 0.108E 00  |

TIME 10. 4.36  
PAGE NO. 334 VOL. I  
REP. NO. 6004  
11/17/67

TITLE  
MCDONNELL  
HIT TEST NC. 67  
PRESSURE SURVEY

RUN NO. 2318

TIME = 0.0500 PD = 6968.27 ALPHA = 10.00

| PROBE | PHI | PON      | PON/PO    | PCN/PO2   | PON/PI    | (PCN-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.060526 | 0.869E-05 | 0.124E-01 | 0.292E 01 | 0.152E-01   |
| 2     | 0.0 | 0.045704 | 0.656E-05 | 0.939E-02 | 0.270E 01 | 0.950E-02   |
| 3     | 0.0 | 0.065172 | 0.935E-05 | 0.134E-01 | 0.314E 01 | 0.169E-01   |
| 4     | 0.0 | 0.059821 | 0.858E-05 | 0.123E-01 | 0.298E 01 | 0.149E-01   |
| 5     | 0.0 | 0.062848 | 0.902E-05 | 0.129E-01 | 0.303E 01 | 0.160E-01   |
| 6     | 0.0 | 0.063752 | 0.915E-05 | 0.131E-01 | 0.307E 01 | 0.164E-01   |
| 7     | 0.0 | 0.071109 | 0.102E-04 | 0.146E-01 | 0.343E 01 | 0.192E-01   |
| 8     | 0.0 | 0.061952 | 0.839E-05 | 0.127E-01 | 0.298E 01 | 0.157E-01   |
| 9     | 0.0 | 0.063387 | 0.911E-05 | 0.141E-01 | 0.329E 01 | 0.181E-01   |
| 10    | 0.0 | 0.089414 | 0.128E-04 | 0.184E-01 | 0.431E 01 | 0.262E-01   |
| 11    | 0.0 | 0.063195 | 0.907E-05 | 0.130E-01 | 0.304E 01 | 0.162E-01   |
| 12    | 0.0 | 0.069710 | 0.100E-04 | 0.143E-01 | 0.336E 01 | 0.187E-01   |
| 13    | 0.0 | 0.070553 | 0.101E-04 | 0.145E-01 | 0.340E 01 | 0.190E-01   |
| 14    | 0.0 | 0.084832 | 0.122E-04 | 0.174E-01 | 0.409E 01 | 0.244E-01   |
| 15    | 0.0 | 0.073142 | 0.105E-04 | 0.150E-01 | 0.352E 01 | 0.200E-01   |
| 16    | 0.0 | 0.085295 | 0.122E-04 | 0.175E-01 | 0.411E 01 | 0.246E-01   |
| 17    | 0.0 | 0.098475 | 0.141E-04 | 0.202E-01 | 0.474E 01 | 0.296E-01   |
| 18    | 0.0 | 0.114498 | 0.164E-04 | 0.235E-01 | 0.552E 01 | 0.357E-01   |
| 19    | 0.0 | 0.059926 | 0.860E-05 | 0.123E-01 | 0.289E 01 | 0.149E-01   |
| 20    | 0.0 | 0.297761 | 0.427E-04 | 0.612E-01 | 0.143E 02 | 0.106E 00   |

TIME 10. 4.16  
PAGE NO. 335, VOL. I  
REF. NO. G004  
11/17/67

TITLE  
MCDINNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2318

TIME= 0.0550 PO= 6580.09 ALPHA= 10.00

| PROBE | PHI | PCN      | PON/PO    | PON/PO7   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | C.0 | 0.058571 | 0.400E-05 | 0.126E-01 | 0.296E 01 | 0.155E-01   |
| 2     | C.0 | 0.060571 | 0.617E-05 | 0.876E-02 | 0.205E 01 | 0.811E-02   |
| 3     | C.0 | 0.061P08 | 0.939E-05 | 0.133E-01 | 0.312E 01 | 0.163E-01   |
| 4     | C.0 | 0.057398 | 0.872E-05 | 0.126E-01 | 0.290E 01 | 0.150E-01   |
| 5     | C.0 | 0.059760 | 0.903E-05 | 0.120E-01 | 0.302E 01 | 0.160E-01   |
| 6     | C.0 | 0.060938 | 0.926E-05 | 0.132E-01 | 0.309E 01 | 0.165E-01   |
| 7     | C.0 | 0.067129 | 0.102E-04 | 0.144E-01 | 0.330E 01 | 0.189E-01   |
| 8     | C.0 | 0.069062 | 0.897E-05 | 0.120E-01 | 0.298E 01 | 0.157E-01   |
| 9     | C.0 | 0.066921 | 0.947E-05 | 0.140E-01 | 0.328E 01 | 0.191E-01   |
| 10    | C.0 | 0.084650 | 0.129E-04 | 0.183E-01 | 0.427E 01 | 0.260E-01   |
| 11    | C.0 | 0.060106 | 0.913E-05 | 0.130E-01 | 0.303E 01 | 0.161E-01   |
| 12    | C.0 | 0.066377 | 0.101E-04 | 0.143E-01 | 0.345E 01 | 0.186E-01   |
| 13    | C.0 | 0.066628 | 0.101E-04 | 0.146E-01 | 0.366E 01 | 0.197E-01   |
| 14    | C.0 | 0.079862 | 0.121E-04 | 0.172E-01 | 0.403E 01 | 0.240E-01   |
| 15    | C.0 | 0.070108 | 0.107E-04 | 0.151E-01 | 0.354E 01 | 0.201E-01   |
| 16    | C.0 | 0.080966 | 0.124E-04 | 0.175E-01 | 0.409E 01 | 0.245E-01   |
| 17    | C.0 | 0.091390 | 0.140E-04 | 0.196E-01 | 0.466E 01 | 0.289E-01   |
| 18    | C.0 | 0.106778 | 0.162E-04 | 0.231E-01 | 0.539E 01 | 0.343E-01   |
| 19    | C.0 | 0.056381 | 0.857E-05 | 0.122E-01 | 0.285E 01 | 0.146E-01   |
| 20    | C.0 | 0.278705 | 0.424E-04 | 0.602E-01 | 0.141E 02 | 0.104E 00   |

TIME 10. 4.36  
PAGE NO. 336, VOL. I  
REP. NO. 0004  
11/17/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2318

TIME= 0.0600 PO= 6213.95 ALPHA= 10.00

| PROBE | PHI | PCN      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.056621 | 0.911E-04 | 0.129E-01 | 0.300E 01 | 0.159E-01   |
| 2     | 0.0 | 0.016265 | 0.594E-05 | 0.823E-02 | 0.192E 01 | 0.731E-02   |
| 3     | 0.0 | 0.058717 | 0.945E-05 | 0.133E-01 | 0.311E 01 | 0.169E-01   |
| 4     | 0.0 | 0.055121 | 0.947E-05 | 0.125E-01 | 0.292E 01 | 0.152E-01   |
| 5     | 0.0 | 0.056473 | 0.915E-05 | 0.120E-01 | 0.301E 01 | 0.160E-01   |
| 6     | 0.0 | 0.058276 | 0.938E-05 | 0.132E-01 | 0.299E 01 | 0.166E-01   |
| 7     | 0.0 | 0.063606 | 0.102E-04 | 0.144E-01 | 0.336E 01 | 0.180E-01   |
| 8     | 0.0 | 0.056347 | 0.997E-05 | 0.128E-01 | 0.299E 01 | 0.158E-01   |
| 9     | 0.0 | 0.061699 | 0.993E-05 | 0.140E-01 | 0.327E 01 | 0.180E-01   |
| 10    | 0.0 | 0.080293 | 0.129E-04 | 0.182E-01 | 0.425E 01 | 0.258E-01   |
| 11    | 0.0 | 0.057233 | 0.921E-05 | 0.130E-01 | 0.303E 01 | 0.161E-01   |
| 12    | 0.0 | 0.063260 | 0.102E-04 | 0.146E-01 | 0.335E 01 | 0.187E-01   |
| 13    | 0.0 | 0.063053 | 0.101E-04 | 0.143E-01 | 0.334E 01 | 0.185E-01   |
| 14    | 0.0 | 0.075361 | 0.121E-04 | 0.171E-01 | 0.399E 01 | 0.238E-01   |
| 15    | 0.0 | 0.067010 | 0.108E-04 | 0.152E-01 | 0.355E 01 | 0.202E-01   |
| 16    | 0.0 | 0.076655 | 0.123E-04 | 0.174E-01 | 0.403E 01 | 0.243E-01   |
| 17    | 0.0 | 0.085813 | 0.138E-04 | 0.195E-01 | 0.454E 01 | 0.282E-01   |
| 18    | 0.0 | 0.099886 | 0.161E-04 | 0.227E-01 | 0.529E 01 | 0.341E-01   |
| 19    | 0.0 | 0.053124 | 0.855E-05 | 0.121E-01 | 0.281E 01 | 0.146E-01   |
| 20    | 0.0 | 0.261625 | 0.421E-04 | 0.594E-01 | 0.139E 02 | 0.102E 00   |

TIME 10. 4.37  
PAGE NO. 337, VOL. I  
REP. NO. 0004  
11/17/67

TITLE  
MCDONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.0650 PO= 5867.46 ALPHA= 10.00

| PROBE | PHI | PON      | POR/PN    | PON/PD2   | PON/P1    | (PON-P1)/D1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.054676 | 0.937F-05 | 0.130E-01 | 0.304E 01 | 0.162E-01   |
| 2     | 0.0 | 0.032704 | 0.559E-05 | 0.782E-02 | 0.182E 01 | 0.654E-02   |
| 3     | 0.0 | 0.055201 | 0.953E-05 | 0.133E-01 | 0.310E 01 | 0.161E-01   |
| 4     | 0.0 | 0.052991 | 0.953E-05 | 0.126E-01 | 0.294E 01 | 0.155E-01   |
| 5     | 0.0 | 0.054247 | 0.953E-05 | 0.129E-01 | 0.301E 01 | 0.160E-01   |
| 6     | 0.0 | 0.055765 | 0.950E-05 | 0.133E-01 | 0.310E 01 | 0.167E-01   |
| 7     | 0.0 | 0.060140 | 0.103E-04 | 0.146E-01 | 0.334E 01 | 0.187E-01   |
| 8     | 0.0 | 0.053867 | 0.916E-05 | 0.129E-01 | 0.299E 01 | 0.159E-01   |
| 9     | 0.0 | 0.058721 | 0.100E-04 | 0.140E-01 | 0.326E 01 | 0.180E-01   |
| 10    | 0.0 | 0.076315 | 0.130E-04 | 0.182E-01 | 0.424E 01 | 0.255E-01   |
| 11    | 0.0 | 0.054576 | 0.940E-05 | 0.130E-01 | 0.303E 01 | 0.162E-01   |
| 12    | 0.0 | 0.060360 | 0.103E-04 | 0.144E-01 | 0.335E 01 | 0.187E-01   |
| 13    | 0.0 | 0.059829 | 0.102E-04 | 0.143E-01 | 0.332E 01 | 0.185E-01   |
| 14    | 0.0 | 0.071328 | 0.122E-04 | 0.170E-01 | 0.396E 01 | 0.236E-01   |
| 15    | 0.0 | 0.063873 | 0.109E-04 | 0.152E-01 | 0.355E 01 | 0.203E-01   |
| 16    | 0.0 | 0.072422 | 0.123E-04 | 0.173E-01 | 0.402E 01 | 0.241E-01   |
| 17    | 0.0 | 0.080244 | 0.137E-04 | 0.192E-01 | 0.446E 01 | 0.275E-01   |
| 18    | 0.0 | 0.093820 | 0.160E-04 | 0.224E-01 | 0.521E 01 | 0.335E-01   |
| 19    | 0.0 | 0.050153 | 0.855E-05 | 0.120E-01 | 0.279E 01 | 0.142E-01   |
| 20    | 0.0 | 0.246521 | 0.420E-04 | 0.508E-01 | 0.137E 02 | 0.101E 00   |

TIME 10. 4.37  
PAGE NO. 338, VOL. 2  
REP. NO. 0004  
11/17/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 1318

TIME = 0.0700 PD = 5541.41 ALPHA = 10.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.052734 | 0.952F-05 | 0.132F-01 | 0.307E 01 | 0.165E-01   |
| 2     | C.C | 0.030130 | 0.544E-05 | 0.756E-02 | 0.176E 01 | 0.603E-02   |
| 3     | 0.0 | 0.053358 | 0.963F-05 | 0.134E-01 | 0.311E 01 | 0.169E-01   |
| 4     | C.C | 0.051008 | 0.920E-05 | 0.128E-01 | 0.297E 01 | 0.157E-01   |
| 5     | 0.0 | 0.051462 | 0.936F-05 | 0.130E-01 | 0.302E 01 | 0.161E-01   |
| 6     | 0.0 | 0.053407 | 0.964E-05 | 0.134E-01 | 0.311F 01 | 0.168E-01   |
| 7     | 0.0 | 0.057213 | 0.101E-04 | 0.144E-01 | 0.315E 01 | 0.106E-01   |
| 8     | 0.0 | 0.051602 | 0.941F-05 | 0.129E-01 | 0.301E 01 | 0.160E-01   |
| 9     | C.C | 0.055987 | 0.101E-04 | 0.140E-01 | 0.326E 01 | 0.100E-01   |
| 10    | 0.0 | 0.072725 | 0.131E-04 | 0.182E-01 | 0.424E 01 | 0.259E-01   |
| 11    | C.C | 0.052136 | 0.941E-05 | 0.131E-01 | 0.309E 01 | 0.163E-01   |
| 12    | 0.0 | 0.057675 | 0.106E-04 | 0.145E-01 | 0.336E 01 | 0.108E-01   |
| 13    | C.C | 0.056985 | 0.103E-04 | 0.143E-01 | 0.312E 01 | 0.105E-01   |
| 14    | 0.0 | 0.067764 | 0.122E-04 | 0.170E-01 | 0.305E 01 | 0.235E-01   |
| 15    | 0.0 | 0.060632 | 0.109E-04 | 0.152E-01 | 0.354E 01 | 0.202E-01   |
| 16    | C.C | 0.068249 | 0.123E-04 | 0.171E-01 | 0.398E 01 | 0.237E-01   |
| 17    | 0.0 | 0.075184 | 0.136E-04 | 0.189E-01 | 0.438E 01 | 0.270E-01   |
| 18    | C.C | 0.088582 | 0.160E-04 | 0.222E-01 | 0.516E 01 | 0.332E-01   |
| 19    | 0.0 | 0.047471 | 0.857E-05 | 0.119E-01 | 0.277E 01 | 0.141E-01   |
| 20    | 0.0 | 0.233391 | 0.421E-04 | 0.586E-01 | 0.136E 02 | 0.101E 00   |



TIME 10. 4.38  
PAGE NO. 339, VOL. I  
REP. NO. 6004  
11/17/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0750 PO = 5235.80 ALPHA = 10.00

| PROBE | PRI | PON      | PON/PO    | PON/PO2   | PON/PI    | PON-PI1/Q1 |
|-------|-----|----------|-----------|-----------|-----------|------------|
| 1     | 0.0 | 0.050797 | 0.970E-05 | 0.134E-01 | 0.311E 01 | 0.163E-01  |
| 2     | 0.0 | 0.028101 | 0.541E-05 | 0.746E-02 | 0.173E 01 | 0.584E-02  |
| 3     | 0.0 | 0.051090 | 0.976E-05 | 0.135E-01 | 0.313E 01 | 0.170E-01  |
| 4     | 0.0 | 0.049172 | 0.939E-05 | 0.130E-01 | 0.301E 01 | 0.160E-01  |
| 5     | 0.0 | 0.049717 | 0.950E-05 | 0.131E-01 | 0.304E 01 | 0.163E-01  |
| 6     | 0.0 | 0.051199 | 0.978E-05 | 0.135E-01 | 0.313E 01 | 0.170E-01  |
| 7     | 0.0 | 0.046503 | 0.194E-04 | 0.144E-01 | 0.334E 01 | 0.187E-01  |
| 8     | 0.0 | 0.049552 | 0.946E-05 | 0.131E-01 | 0.303E 01 | 0.162E-01  |
| 9     | 0.0 | 0.053497 | 0.102E-04 | 0.141E-01 | 0.327E 01 | 0.181E-01  |
| 10    | 0.0 | 0.049524 | 0.133E-04 | 0.183E-01 | 0.424E 01 | 0.260E-01  |
| 11    | 0.0 | 0.049911 | 0.953E-05 | 0.132E-01 | 0.304E 01 | 0.164E-01  |
| 12    | 0.0 | 0.045206 | 0.105E-04 | 0.146E-01 | 0.338E 01 | 0.190E-01  |
| 13    | 0.0 | 0.044432 | 0.104E-04 | 0.144E-01 | 0.333E 01 | 0.186E-01  |
| 14    | 0.0 | 0.046669 | 0.124E-04 | 0.171E-01 | 0.396E 01 | 0.236E-01  |
| 15    | 0.0 | 0.057415 | 0.110E-04 | 0.151E-01 | 0.341E 01 | 0.201E-01  |
| 16    | 0.0 | 0.044134 | 0.122E-04 | 0.169E-01 | 0.392E 01 | 0.233E-01  |
| 17    | 0.0 | 0.070633 | 0.136E-04 | 0.186E-01 | 0.432E 01 | 0.265E-01  |
| 18    | 0.0 | 0.044171 | 0.161E-04 | 0.222E-01 | 0.519E 01 | 0.315E-01  |
| 19    | 0.0 | 0.045075 | 0.161E-04 | 0.117E-01 | 0.274E 01 | 0.140E-01  |
| 20    | 0.0 | 0.222237 | 0.424E-04 | 0.586E-01 | 0.136E 02 | 0.101E 00  |

TIME 10. 4.38  
PAGE NO. 360, VOL. I  
REP. NO. 0004  
11/17/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2318

TIME = 0.0800 PO = 4950.64 ALPHA = 10.00

| PRIDE | PHT | PON      | PON/PD    | PON/PD2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.048864 | 0.947E-05 | 0.135E-01 | 0.314E 01 | 0.171E-01   |
| 2     | 0.0 | 0.027299 | 0.591E-05 | 0.756E-02 | 0.175E 01 | 0.502E-02   |
| 3     | 0.0 | 0.049096 | 0.992E-05 | 0.136E-01 | 0.315E 01 | 0.172E-01   |
| 4     | 0.0 | 0.047483 | 0.959E-05 | 0.132E-01 | 0.305E 01 | 0.164E-01   |
| 5     | 0.0 | 0.047813 | 0.966E-05 | 0.132E-01 | 0.307E 01 | 0.165E-01   |
| 6     | 0.0 | 0.049144 | 0.993E-05 | 0.136E-01 | 0.316E 01 | 0.172E-01   |
| 7     | 0.0 | 0.052290 | 0.106E-04 | 0.145E-01 | 0.336E 01 | 0.188E-01   |
| 8     | 0.0 | 0.047717 | 0.904E-05 | 0.132E-01 | 0.306E 01 | 0.165E-01   |
| 9     | 0.0 | 0.051251 | 0.104E-04 | 0.142E-01 | 0.329E 01 | 0.183E-01   |
| 10    | 0.0 | 0.066710 | 0.135E-04 | 0.185E-01 | 0.428E 01 | 0.262E-01   |
| 11    | 0.0 | 0.047903 | 0.968E-05 | 0.133E-01 | 0.308E 01 | 0.166E-01   |
| 12    | 0.0 | 0.052953 | 0.107E-04 | 0.147E-01 | 0.340E 01 | 0.192E-01   |
| 13    | 0.0 | 0.052259 | 0.106E-04 | 0.145E-01 | 0.336E 01 | 0.188E-01   |
| 14    | 0.0 | 0.062043 | 0.125E-04 | 0.172E-01 | 0.390E 01 | 0.238E-01   |
| 15    | 0.0 | 0.054103 | 0.109E-04 | 0.150E-01 | 0.347E 01 | 0.198E-01   |
| 16    | 0.0 | 0.060077 | 0.121E-04 | 0.166E-01 | 0.386E 01 | 0.228E-01   |
| 17    | 0.0 | 0.066590 | 0.135E-04 | 0.185E-01 | 0.428E 01 | 0.262E-01   |
| 18    | 0.0 | 0.080587 | 0.163E-04 | 0.223E-01 | 0.518E 01 | 0.334E-01   |
| 19    | 0.0 | 0.042967 | 0.888E-05 | 0.119E-01 | 0.276E 01 | 0.141E-01   |
| 20    | 0.0 | 0.213058 | 0.430E-04 | 0.590E-01 | 0.137E 02 | 0.101E 00   |

TIME 10. 4.39  
PAGE NO. 341, VOL. I  
REP. NO. 0004  
11/17/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.0850 PD= 4685.92 ALPHA= 10.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/P1    | IPON-P11/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.045936 | 0.100C-04 | 0.137E-01 | 0.317E 01 | 0.173E-01   |
| 2     | 0.0 | 0.027122 | 0.579E-05 | 0.789E-02 | 0.103E 01 | 0.662E-02   |
| 3     | 0.0 | 0.047376 | 0.101E-04 | 0.138E-01 | 0.320E 01 | 0.175E-01   |
| 4     | 0.0 | 0.045940 | 0.980E-05 | 0.134E-01 | 0.310E 01 | 0.168E-01   |
| 5     | 0.0 | 0.046150 | 0.985E-05 | 0.134E-01 | 0.311E 01 | 0.169E-01   |
| 6     | 0.0 | 0.047240 | 0.101E-04 | 0.137E-01 | 0.319E 01 | 0.175E-01   |
| 7     | 0.0 | 0.050336 | 0.107E-04 | 0.146E-01 | 0.330E 01 | 0.191E-01   |
| 8     | 0.0 | 0.046098 | 0.984E-05 | 0.134E-01 | 0.311E 01 | 0.168E-01   |
| 9     | 0.0 | 0.049248 | 0.105E-04 | 0.143E-01 | 0.332E 01 | 0.185E-01   |
| 10    | 0.0 | 0.064285 | 0.137E-04 | 0.187E-01 | 0.434E 01 | 0.266E-01   |
| 11    | 0.0 | 0.046111 | 0.994E-05 | 0.134E-01 | 0.311E 01 | 0.169E-01   |
| 12    | 0.0 | 0.050916 | 0.109E-04 | 0.148E-01 | 0.343E 01 | 0.194E-01   |
| 13    | 0.0 | 0.050437 | 0.108E-04 | 0.147E-01 | 0.340E 01 | 0.192E-01   |
| 14    | 0.0 | 0.059885 | 0.120E-04 | 0.174E-01 | 0.404E 01 | 0.243E-01   |
| 15    | 0.0 | 0.050735 | 0.108E-04 | 0.148E-01 | 0.342E 01 | 0.193E-01   |
| 16    | 0.0 | 0.056079 | 0.120E-04 | 0.163E-01 | 0.378E 01 | 0.222E-01   |
| 17    | 0.0 | 0.063056 | 0.135E-04 | 0.183E-01 | 0.425E 01 | 0.260E-01   |
| 18    | 0.0 | 0.077830 | 0.166E-04 | 0.226E-01 | 0.525E 01 | 0.339E-01   |
| 19    | 0.0 | 0.041147 | 0.870E-05 | 0.120E-01 | 0.278E 01 | 0.142E-01   |
| 20    | 0.0 | 0.205854 | 0.439E-04 | 0.599E-01 | 0.130E 02 | 0.103E 00   |

TIME 10. 4.39  
PAGE NO. 342, VOL. I  
REP. NO. 6004  
11/17/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2318

TIME = 0.0900 PD = 4441.65 ALPHA = 10.00

| PROBE | PHI | PON      | POM/PO    | PON/PO2   | PON/PI    | (POM-PI)/OI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.045011 | 0.101E-04 | 0.137E-01 | 0.319E 01 | 0.175E-01   |
| 2     | 0.0 | 0.027772 | 0.625E-05 | 0.84E-02  | 0.197E 01 | 0.773E-02   |
| 3     | 0.0 | 0.045930 | 0.103E-04 | 0.140E-01 | 0.326E 01 | 0.180E-01   |
| 4     | 0.0 | 0.044544 | 0.100E-04 | 0.136E-01 | 0.316E 01 | 0.172E-01   |
| 5     | 0.0 | 0.044728 | 0.101E-04 | 0.137E-01 | 0.317E 01 | 0.173E-01   |
| 6     | 0.0 | 0.045488 | 0.102E-04 | 0.139E-01 | 0.323E 01 | 0.177E-01   |
| 7     | 0.0 | 0.044719 | 0.110E-04 | 0.144E-01 | 0.346E 01 | 0.196E-01   |
| 8     | 0.0 | 0.044693 | 0.101E-04 | 0.136E-01 | 0.317E 01 | 0.173E-02   |
| 9     | 0.0 | 0.047690 | 0.107E-04 | 0.145E-01 | 0.337E 01 | 0.189E-01   |
| 10    | 0.0 | 0.062248 | 0.140E-04 | 0.190E-01 | 0.442E 01 | 0.272E-01   |
| 11    | 0.0 | 0.044535 | 0.100E-04 | 0.136E-01 | 0.316E 01 | 0.172E-01   |
| 12    | 0.0 | 0.049095 | 0.111E-04 | 0.150E-01 | 0.348E 01 | 0.198E-01   |
| 13    | 0.0 | 0.048965 | 0.110E-04 | 0.150E-01 | 0.347E 01 | 0.197E-01   |
| 14    | 0.0 | 0.050197 | 0.131E-04 | 0.178E-01 | 0.413E 01 | 0.249E-01   |
| 15    | 0.0 | 0.047311 | 0.107E-04 | 0.144E-01 | 0.336E 01 | 0.188E-01   |
| 16    | 0.0 | 0.052140 | 0.117E-04 | 0.159E-01 | 0.370E 01 | 0.215E-01   |
| 17    | 0.0 | 0.060031 | 0.135E-04 | 0.183E-01 | 0.426E 01 | 0.260E-01   |
| 18    | 0.0 | 0.075900 | 0.171E-04 | 0.232E-01 | 0.538E 01 | 0.349E-01   |
| 19    | 0.0 | 0.039614 | 0.892E-05 | 0.121E-01 | 0.281E 01 | 0.144E-01   |
| 20    | 0.0 | 0.200625 | 0.452E-04 | 0.613E-01 | 0.142E 02 | 0.105E 00   |

TIME 10. 4.40  
PAGE NO. 343, VOL. I  
REP. NO. 6004  
11/17/67

MCDONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2318

TIME= 0.0950 PO= 4217.42 ALPHA= 10.00

| PROBE | PHI | PON      | PON/PO    | PON/P02   | PON/PI    | (P0N-P11)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|--------------|
| 1     | 0.0 | 0.043092 | 0.102F-04 | 0.138E-01 | 0.321F 01 | 0.176E-01    |
| 2     | 0.0 | 0.029247 | 0.693F-05 | 0.937F-02 | 0.218E 01 | 0.937E-02    |
| 3     | 0.0 | 0.044758 | 0.106E-04 | 0.143E-01 | 0.373E 01 | 0.186E-01    |
| 4     | 0.0 | 0.043295 | 0.103F-04 | 0.139F-01 | 0.322E 01 | 0.177E-01    |
| 5     | 0.0 | 0.043546 | 0.103F-04 | 0.139F-01 | 0.324E 01 | 0.178E-01    |
| 6     | 0.0 | 0.043888 | 0.104E-04 | 0.141E-01 | 0.327E 01 | 0.180E-01    |
| 7     | 0.0 | 0.047439 | 0.112E-04 | 0.152F-01 | 0.354E 01 | 0.202E-01    |
| 8     | 0.0 | 0.043504 | 0.103F-04 | 0.139F-01 | 0.324E 01 | 0.178E-01    |
| 9     | 0.0 | 0.045976 | 0.109E-04 | 0.147E-01 | 0.347E 01 | 0.193E-01    |
| 10    | 0.0 | 0.060509 | 0.144E-04 | 0.194E-01 | 0.451E 01 | 0.279E-01    |
| 11    | 0.0 | 0.043175 | 0.102F-04 | 0.138E-01 | 0.327E 01 | 0.176E-01    |
| 12    | 0.0 | 0.047491 | 0.113F-04 | 0.152F-01 | 0.354E 01 | 0.202E-01    |
| 13    | 0.0 | 0.047844 | 0.113F-04 | 0.153E-01 | 0.356E 01 | 0.204E-01    |
| 14    | 0.0 | 0.046976 | 0.115F-04 | 0.162E-01 | 0.424E 01 | 0.258E-01    |
| 15    | 0.0 | 0.043832 | 0.104E-04 | 0.140F-01 | 0.326E 01 | 0.180E-01    |
| 16    | 0.0 | 0.048260 | 0.114F-04 | 0.155F-01 | 0.359E 01 | 0.206E-01    |
| 17    | 0.0 | 0.057514 | 0.136E-04 | 0.184E-01 | 0.428E 01 | 0.261E-01    |
| 18    | 0.0 | 0.047997 | 0.177E-04 | 0.240F-01 | 0.557E 01 | 0.364E-01    |
| 19    | 0.0 | 0.038369 | 0.910E-05 | 0.123E-01 | 0.286F 01 | 0.148E-01    |
| 20    | 0.0 | 0.197372 | 0.468E-04 | 0.632F-01 | 0.147E 02 | 0.109E 00    |

TIME 10. 4.40  
PAGE NO. 344 VOL. I  
REP. NO. 0004  
11/17/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.1000 PD = 4014.43 ALPHA = 10.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.041176 | 0.103E-04 | 0.139E-01 | 0.322E 01 | 0.176E-01   |
| 2     | 0.0 | 0.031548 | 0.786E-05 | 0.106E-01 | 0.247E 01 | 0.116E-01   |
| 3     | 0.0 | 0.043860 | 0.109E-04 | 0.147E-01 | 0.343E 01 | 0.193E-01   |
| 4     | 0.0 | 0.042193 | 0.105E-04 | 0.142E-01 | 0.330E 01 | 0.182E-01   |
| 5     | 0.0 | 0.042605 | 0.106E-04 | 0.143E-01 | 0.333E 01 | 0.185E-01   |
| 6     | 0.0 | 0.042439 | 0.106E-04 | 0.142E-01 | 0.332E 01 | 0.184E-01   |
| 7     | 0.0 | 0.046498 | 0.116E-04 | 0.156E-01 | 0.364E 01 | 0.209E-01   |
| 8     | 0.0 | 0.042530 | 0.106E-04 | 0.143E-01 | 0.333E 01 | 0.184E-01   |
| 9     | 0.0 | 0.044705 | 0.111E-04 | 0.150E-01 | 0.350E 01 | 0.199E-01   |
| 10    | 0.0 | 0.059339 | 0.148E-04 | 0.199E-01 | 0.464E 01 | 0.249E-01   |
| 11    | 0.0 | 0.042031 | 0.105E-04 | 0.141E-01 | 0.329E 01 | 0.181E-01   |
| 12    | 0.0 | 0.046102 | 0.115E-04 | 0.155E-01 | 0.361E 01 | 0.207E-01   |
| 13    | 0.0 | 0.047674 | 0.117E-04 | 0.158E-01 | 0.368E 01 | 0.213E-01   |
| 14    | 0.0 | 0.056225 | 0.140E-04 | 0.189E-01 | 0.440E 01 | 0.269E-01   |
| 15    | 0.0 | 0.040297 | 0.100E-04 | 0.135E-01 | 0.315E 01 | 0.171E-01   |
| 16    | 0.0 | 0.044438 | 0.111E-04 | 0.149E-01 | 0.348E 01 | 0.196E-01   |
| 17    | 0.0 | 0.055505 | 0.138E-04 | 0.186E-01 | 0.434E 01 | 0.265E-01   |
| 18    | 0.0 | 0.074521 | 0.186E-04 | 0.250E-01 | 0.583E 01 | 0.383E-01   |
| 19    | 0.0 | 0.037411 | 0.932E-05 | 0.125E-01 | 0.293E 01 | 0.153E-01   |
| 20    | 0.0 | 0.196093 | 0.408E-04 | 0.658E-01 | 0.153E 02 | 0.114E 00   |

TIME 10. 4.41  
PAGE NO. 355, VOL. I  
REP. NO. 0004  
11/17/67

TITLE  
MCDONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TIME= 0.1050 PO= 3831.49 ALPHA= 10.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.039265 | 0.102F-04 | 0.138F-01 | 0.322E 01 | 0.176E-01   |
| 2     | 0.0 | 0.034676 | 0.905F-05 | 0.122F-01 | 0.285E 01 | 0.146E-01   |
| 3     | 0.0 | 0.043236 | 0.113F-04 | 0.152F-01 | 0.355E-01 | 0.201E-01   |
| 4     | 0.0 | 0.041238 | 0.108F-04 | 0.145E-01 | 0.339E 01 | 0.188E-01   |
| 5     | 0.0 | 0.041904 | 0.109F-04 | 0.147E-01 | 0.344E 01 | 0.193E-01   |
| 6     | 0.0 | 0.041142 | 0.107F-04 | 0.144E-01 | 0.338E 01 | 0.188E-01   |
| 7     | 0.0 | 0.045894 | 0.120F-04 | 0.161E-01 | 0.377E 01 | 0.219E-01   |
| 8     | 0.0 | 0.041771 | 0.109E-04 | 0.146E-01 | 0.343E 01 | 0.192E-01   |
| 9     | 0.0 | 0.043678 | 0.114E-04 | 0.153E-01 | 0.359E-01 | 0.204E-01   |
| 10    | 0.0 | 0.058467 | 0.153F-04 | 0.205E-01 | 0.480E 01 | 0.300E-01   |
| 11    | 0.0 | 0.041104 | 0.107E-04 | 0.144E-01 | 0.337E 01 | 0.187E-01   |
| 12    | 0.0 | 0.044929 | 0.117E-04 | 0.158E-01 | 0.369E 01 | 0.212F-01   |
| 13    | 0.0 | 0.046654 | 0.122E-04 | 0.166F-01 | 0.393E 01 | 0.223F-01   |
| 14    | 0.0 | 0.055442 | 0.146E-04 | 0.196F-01 | 0.459E 01 | 0.284E-01   |
| 15    | 0.0 | 0.036707 | 0.958C-05 | 0.129E-01 | 0.301E 01 | 0.159E-01   |
| 16    | 0.0 | 0.040675 | 0.106E-04 | 0.143E-01 | 0.334E 01 | 0.185E-01   |
| 17    | 0.0 | 0.054005 | 0.141E-04 | 0.189E-01 | 0.443E 01 | 0.271E-01   |
| 18    | 0.0 | 0.075072 | 0.196E-04 | 0.263E-01 | 0.616E 01 | 0.408E-01   |
| 19    | 0.0 | 0.036740 | 0.959E-05 | 0.129E-01 | 0.302E 01 | 0.159E-01   |
| 20    | 0.0 | 0.196791 | 0.514E-04 | 0.690E-01 | 0.162E 02 | 0.120E 00   |

TIME 11.51.11  
 PAGE NO. 346, VOL. I  
 REP. NO. 0004  
 11/28/67

TITLE  
 MCDOONNELL

RUN NO. 4319

HIT TEST NO. 67

TUNNEL PARAMETERS

| T<br>(SEC) | PO<br>(PSI) | YO<br>(IN) | HO<br>(SFT/SSFC) | Q-DOT<br>(R/SF-S) | P22<br>(PSI) | P1<br>(PSI) | TL<br>(IN) | U<br>(FT/S) | M1    | RE/T     | OI<br>(PSI) | ALPHA<br>(DEG) |
|------------|-------------|------------|------------------|-------------------|--------------|-------------|------------|-------------|-------|----------|-------------|----------------|
| .0400      | 8649.       | 2377.      | 0.3085E 08       | 140.80            | 5.808        | 0.02557     | 76.82      | 77.66       | 13.21 | 1054126. | 3.125       | 10.03          |
| .0450      | 8129.       | 2353.      | 0.3048E 08       | 134.91            | 5.506        | 0.02434     | 76.18      | 77.00       | 13.19 | 1014926. | 2.963       | 10.03          |
| .0500      | 7637.       | 2326.      | 0.3009E 08       | 129.02            | 5.216        | 0.02314     | 75.43      | 76.49       | 13.17 | 976714.  | 2.808       | 10.03          |
| .0550      | 7174.       | 2298.      | 0.2966E 08       | 123.13            | 4.938        | 0.02197     | 74.56      | 75.94       | 13.15 | 942340.  | 2.658       | 10.03          |
| .0600      | 6739.       | 2272.      | 0.2920E 08       | 117.23            | 4.672        | 0.02083     | 73.56      | 75.34       | 13.13 | 911030.  | 2.515       | 10.03          |
| .0650      | 6333.       | 2217.      | 0.2839E 08       | 111.34            | 4.418        | 0.01969     | 71.46      | 74.29       | 13.14 | 899516.  | 2.379       | 10.03          |
| .0700      | 5956.       | 2174.      | 0.2778E 08       | 105.45            | 4.175        | 0.01861     | 69.93      | 73.49       | 13.14 | 878283.  | 2.249       | 10.03          |
| .0750      | 5606.       | 2130.      | 0.2712E 08       | 99.56             | 3.945        | 0.01756     | 68.20      | 72.62       | 13.15 | 861289.  | 2.125       | 10.03          |
| .0800      | 5286.       | 2080.      | 0.2640E 08       | 93.67             | 3.726        | 0.01655     | 66.24      | 71.65       | 13.16 | 849058.  | 2.008       | 10.03          |
| .0850      | 4994.       | 2028.      | 0.2562E 08       | 87.77             | 3.519        | 0.01548     | 64.03      | 70.59       | 13.19 | 842216.  | 1.896       | 10.03          |
| .0900      | 4730.       | 1968.      | 0.2477E 08       | 81.98             | 3.323        | 0.01463     | 61.56      | 69.41       | 13.23 | 841521.  | 1.792       | 10.03          |
| .0950      | 4495.       | 1903.      | 0.2388E 08       | 75.99             | 3.140        | 0.01372     | 59.82      | 68.11       | 13.28 | 848511.  | 1.693       | 10.03          |
| .1000      | 4288.       | 1851.      | 0.2311E 08       | 70.10             | 2.958        | 0.01298     | 56.58      | 67.06       | 13.33 | 847128.  | 1.601       | 10.03          |



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 11/28/67

TITLE  
 MCDONNELL

RUN NO. 1319

HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

| TIME=0400 |                    | PO= 8649.     | PO2= 5.808     | PI= 02557  | QDOT-A=140.80 |
|-----------|--------------------|---------------|----------------|------------|---------------|
| N         | QDOT-N<br>(R/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |               |
| 1         | 1.1787             | 0.00837       | 0.00837        | 1.1787     |               |
| 2         | 2.6519             | 0.01883       | 0.01883        | 2.6519     |               |
| 3         | 2.9257             | 0.02078       | 0.02078        | 2.9257     |               |
| 4         | 2.3164             | 0.01645       | 0.01645        | 2.3164     |               |
| 5         | 3.9810             | 0.02827       | 0.02827        | 3.9810     |               |
| 6         | 2.4733             | 0.01757       | 0.01757        | 2.4733     |               |
| 7         | 3.4546             | 0.02453       | 0.02453        | 3.4546     |               |
| 8         | 1.6445             | 0.01168       | 0.01168        | 1.6445     |               |
| 9         | 3.3052             | 0.02347       | 0.02347        | 3.3052     |               |
| 10        | 4.0359             | 0.02866       | 0.02866        | 4.0359     |               |
| 11        | 2.1018             | 0.01493       | 0.01493        | 2.1018     |               |
| 12        | 3.1740             | 0.02254       | 0.02254        | 3.1740     |               |
| 13        | 3.0087             | 0.02137       | 0.02137        | 3.0087     |               |
| 14        | 3.5843             | 0.02566       | 0.02566        | 3.5843     |               |
| 15        | 2.1863             | 0.01553       | 0.01553        | 2.1863     |               |
| 16        | 2.5944             | 0.01843       | 0.01843        | 2.5944     |               |
| 17        | 2.8324             | 0.02012       | 0.02012        | 2.8324     |               |
| 18        | 3.2483             | 0.02307       | 0.02307        | 3.2483     |               |
| 19        | 2.2373             | 0.01589       | 0.01589        | 2.2373     |               |
| 20        | 17.4775            | 0.12413       | 0.12413        | 17.4775    |               |

TIME 11.51.11  
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TITLE  
 MCDONNELL

RUN NO. 2319

MIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

TIME=0.0450 PO= 9129. PO2= 5.506 P1=0.02434 QDIT-A=134.91

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.1493             | 0.00852       | 0.00852        | 1.1493     |
| 2  | 2.5500             | 0.01890       | 0.01890        | 2.5500     |
| 3  | 2.7985             | 0.02074       | 0.02074        | 2.7985     |
| 4  | 2.2298             | 0.01653       | 0.01653        | 2.2298     |
| 5  | 3.7739             | 0.02797       | 0.02797        | 3.7739     |
| 6  | 2.3965             | 0.01776       | 0.01776        | 2.3965     |
| 7  | 3.3135             | 0.02456       | 0.02456        | 3.3135     |
| 8  | 1.0146             | 0.01197       | 0.01197        | 1.0146     |
| 9  | 3.1779             | 0.02356       | 0.02356        | 3.1779     |
| 10 | 3.8554             | 0.02858       | 0.02858        | 3.8554     |
| 11 | 2.0504             | 0.01520       | 0.01520        | 2.0504     |
| 12 | 3.0593             | 0.02268       | 0.02268        | 3.0593     |
| 13 | 2.0963             | 0.02147       | 0.02147        | 2.0963     |
| 14 | 3.4345             | 0.02546       | 0.02546        | 3.4345     |
| 15 | 2.1411             | 0.01587       | 0.01587        | 2.1411     |
| 16 | 2.5479             | 0.01899       | 0.01899        | 2.5479     |
| 17 | 2.7585             | 0.02045       | 0.02045        | 2.7585     |
| 18 | 3.1395             | 0.02327       | 0.02327        | 3.1395     |
| 19 | 2.1602             | 0.01601       | 0.01601        | 2.1602     |
| 20 | 16.6674            | 0.12354       | 0.12354        | 16.6674    |

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RUN NO. 4310  
 TITLE  
 MCDONNELL

MIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

TIME=0.0500 PO= 7637. PD2= 5.216 PI=0.02314 QDOT-A=129.02

| N  | QDOT-N<br>(B/SF-5) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 1.1200             | 0.00868       | 0.00868        | 1.1200     |
| 2  | 2.4480             | 0.01897       | 0.01897        | 2.4480     |
| 3  | 2.6713             | 0.02070       | 0.02070        | 2.6713     |
| 4  | 2.1432             | 0.01661       | 0.01661        | 2.1432     |
| 5  | 3.5667             | 0.02764       | 0.02764        | 3.5667     |
| 6  | 2.3197             | 0.01798       | 0.01798        | 2.3198     |
| 7  | 3.1725             | 0.02459       | 0.02459        | 3.1725     |
| 8  | 1.5867             | 0.01228       | 0.01228        | 1.5847     |
| 9  | 3.0505             | 0.02364       | 0.02364        | 3.0505     |
| 10 | 3.6749             | 0.02848       | 0.02848        | 3.6749     |
| 11 | 1.9920             | 0.01549       | 0.01549        | 1.9920     |
| 12 | 2.9446             | 0.02282       | 0.02282        | 2.9446     |
| 13 | 2.1839             | 0.02158       | 0.02158        | 2.1839     |
| 14 | 3.2867             | 0.02546       | 0.02546        | 3.2847     |
| 15 | 2.0958             | 0.01624       | 0.01624        | 2.0958     |
| 16 | 2.5015             | 0.01939       | 0.01939        | 2.5015     |
| 17 | 2.6846             | 0.02081       | 0.02081        | 2.6846     |
| 18 | 3.0306             | 0.02349       | 0.02349        | 3.0306     |
| 19 | 2.0832             | 0.01615       | 0.01615        | 2.0832     |
| 20 | 15.8573            | 0.12291       | 0.12291        | 15.8573    |

TIME 11.51.12  
PAGE NO. 350, VOL. I  
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11/28/67

TITLE  
MCDONNELL

RUN NO. 3319

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| TIME=0550 PO= 7174. PO2= 4.938 PI= 02197 QDOT-A=123.13 |                    |               |                |            |
|--------------------------------------------------------|--------------------|---------------|----------------|------------|
| N                                                      | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
| 1                                                      | 1.0907             | 0.00866       | 0.00866        | 1.0907     |
| 2                                                      | 2.3460             | 0.01905       | 0.01905        | 2.3460     |
| 3                                                      | 2.5441             | 0.02066       | 0.02066        | 2.5441     |
| 4                                                      | 2.0567             | 0.01670       | 0.01670        | 2.0567     |
| 5                                                      | 3.3596             | 0.02729       | 0.02729        | 3.3596     |
| 6                                                      | 2.2430             | 0.01822       | 0.01822        | 2.2430     |
| 7                                                      | 3.0315             | 0.02462       | 0.02462        | 3.0315     |
| 8                                                      | 1.5548             | 0.01263       | 0.01263        | 1.5548     |
| 9                                                      | 2.9231             | 0.02374       | 0.02374        | 2.9231     |
| 10                                                     | 3.4944             | 0.02838       | 0.02838        | 3.4944     |
| 11                                                     | 1.9476             | 0.01582       | 0.01582        | 1.9476     |
| 12                                                     | 2.8299             | 0.02298       | 0.02298        | 2.8299     |
| 13                                                     | 2.6715             | 0.02170       | 0.02170        | 2.6715     |
| 14                                                     | 3.1349             | 0.02546       | 0.02546        | 3.1349     |
| 15                                                     | 2.0506             | 0.01665       | 0.01665        | 2.0506     |
| 16                                                     | 2.4550             | 0.01994       | 0.01994        | 2.4550     |
| 17                                                     | 2.6107             | 0.02120       | 0.02120        | 2.6107     |
| 18                                                     | 2.9218             | 0.02373       | 0.02373        | 2.9218     |
| 19                                                     | 2.0062             | 0.01629       | 0.01629        | 2.0062     |
| 20                                                     | 15.0472            | 0.12221       | 0.12221        | 15.0472    |

RUN NO. 2319

TITLE

MCDONNELL

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATFS

TIME 11.51.12  
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R.P. NO. 0004  
11/28/67

| TIME=0600 PD= 6739. PD2= 4.672 P1=02093 QDOT-A=117.23 |                    |               |                |            |
|-------------------------------------------------------|--------------------|---------------|----------------|------------|
| N                                                     | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
| 1                                                     | 1.0613             | 0.00905       | 0.00905        | 1.0613     |
| 2                                                     | 2.2440             | 0.01914       | 0.01914        | 2.2440     |
| 3                                                     | 2.4169             | 0.02062       | 0.02062        | 2.4169     |
| 4                                                     | 1.9701             | 0.01680       | 0.01680        | 1.9701     |
| 5                                                     | 3.1524             | 0.02689       | 0.02689        | 3.1524     |
| 6                                                     | 2.1663             | 0.01949       | 0.01949        | 2.1663     |
| 7                                                     | 2.8905             | 0.02466       | 0.02466        | 2.8905     |
| 8                                                     | 1.5249             | 0.01301       | 0.01301        | 1.5249     |
| 9                                                     | 2.7958             | 0.02385       | 0.02385        | 2.7958     |
| 10                                                    | 3.3119             | 0.02827       | 0.02827        | 3.3119     |
| 11                                                    | 1.8963             | 0.01618       | 0.01618        | 1.8963     |
| 12                                                    | 2.7152             | 0.02316       | 0.02316        | 2.7152     |
| 13                                                    | 2.5590             | 0.02183       | 0.02183        | 2.5590     |
| 14                                                    | 2.9851             | 0.02546       | 0.02546        | 2.9851     |
| 15                                                    | 2.0053             | 0.01711       | 0.01711        | 2.0053     |
| 16                                                    | 2.4085             | 0.02054       | 0.02054        | 2.4085     |
| 17                                                    | 2.5368             | 0.02164       | 0.02164        | 2.5368     |
| 18                                                    | 2.8130             | 0.02399       | 0.02399        | 2.8130     |
| 19                                                    | 1.9291             | 0.01646       | 0.01646        | 1.9291     |
| 20                                                    | 14.2371            | 0.12144       | 0.12144        | 14.2371    |

TIME 11.51.12  
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TITLE  
MCDONNELL  
HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

RUN NO. 2319

TIME=0.0650 PD= 6333. PD2= 4.418 PI=0.969 QDOT-A=111.34

| N  | QDOT-N<br>(B/SF-SI) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|---------------------|---------------|----------------|------------|
| 1  | 1.0320              | 0.00927       | 0.00927        | 1.0320     |
| 2  | 2.1420              | 0.01924       | 0.01924        | 2.1420     |
| 3  | 2.2897              | 0.02056       | 0.02056        | 2.2897     |
| 4  | 1.8835              | 0.01692       | 0.01692        | 1.8835     |
| 5  | 2.9453              | 0.02645       | 0.02645        | 2.9453     |
| 6  | 2.0895              | 0.01877       | 0.01877        | 2.0895     |
| 7  | 2.7495              | 0.02469       | 0.02469        | 2.7495     |
| 8  | 1.4950              | 0.01343       | 0.01343        | 1.4950     |
| 9  | 2.6684              | 0.02397       | 0.02397        | 2.6684     |
| 10 | 3.1334              | 0.02814       | 0.02814        | 3.1334     |
| 11 | 1.8449              | 0.01657       | 0.01657        | 1.8449     |
| 12 | 2.6006              | 0.02336       | 0.02336        | 2.6006     |
| 13 | 2.4466              | 0.02197       | 0.02197        | 2.4466     |
| 14 | 2.8353              | 0.02546       | 0.02546        | 2.8353     |
| 15 | 1.9601              | 0.01760       | 0.01760        | 1.9601     |
| 16 | 2.3620              | 0.02121       | 0.02121        | 2.3620     |
| 17 | 2.4629              | 0.02212       | 0.02212        | 2.4629     |
| 18 | 2.7042              | 0.02429       | 0.02429        | 2.7042     |
| 19 | 1.8521              | 0.01663       | 0.01663        | 1.8521     |
| 20 | 13.4270             | 0.12059       | 0.12059        | 13.4270    |

RUN NO. 2319

TITLE

MC DONNELL

HIT TEST NO. 67

MODEL HEAT TRANSFER RATES

TIME 11.51.12  
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TIME=0700 PD= 5956. PD2= 4.175 PI=0.01861 QDOT-A=105.45

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KDOT-A | QDOT-N/REF |
|----|--------------------|---------------|---------------|------------|
| 1  | 1.0027             | 0.00951       | 0.00951       | 1.0027     |
| 2  | 2.0400             | 0.01935       | 0.01935       | 2.0400     |
| 3  | 2.1625             | 0.02051       | 0.02051       | 2.1625     |
| 4  | 1.7969             | 0.01704       | 0.01704       | 1.7969     |
| 5  | 2.7181             | 0.02597       | 0.02597       | 2.7181     |
| 6  | 2.0128             | 0.01909       | 0.01909       | 2.0128     |
| 7  | 2.6085             | 0.02474       | 0.02474       | 2.6085     |
| 8  | 1.4652             | 0.01389       | 0.01389       | 1.4652     |
| 9  | 2.5410             | 0.02410       | 0.02410       | 2.5410     |
| 10 | 2.9528             | 0.02800       | 0.02800       | 2.9528     |
| 11 | 1.7935             | 0.01701       | 0.01701       | 1.7935     |
| 12 | 2.4859             | 0.02357       | 0.02357       | 2.4859     |
| 13 | 2.3342             | 0.02214       | 0.02214       | 2.3342     |
| 14 | 2.6055             | 0.02547       | 0.02547       | 2.6055     |
| 15 | 1.9148             | 0.01916       | 0.01916       | 1.9148     |
| 16 | 2.3156             | 0.02196       | 0.02196       | 2.3156     |
| 17 | 2.3890             | 0.02266       | 0.02266       | 2.3890     |
| 18 | 2.5954             | 0.02461       | 0.02461       | 2.5954     |
| 19 | 1.7750             | 0.01683       | 0.01683       | 1.7750     |
| 20 | 12.6169            | 0.11965       | 0.11965       | 12.6169    |

TIME 11.51.12  
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TITLE  
 MCDONNELL  
 HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

TIME=0.0750 PD= 5606. PD2= 3.945 PL=0.1756 QDOT-A= 99.56

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 0.9733             | 0.00978       | 0.00978        | 0.9731     |
| 2  | 1.9381             | 0.01947       | 0.01947        | 1.9381     |
| 3  | 2.9053             | 0.02044       | 0.02044        | 2.9053     |
| 4  | 1.7104             | 0.01718       | 0.01718        | 1.7104     |
| 5  | 2.5310             | 0.02542       | 0.02542        | 2.5310     |
| 6  | 1.9360             | 0.01945       | 0.01945        | 1.9360     |
| 7  | 2.4675             | 0.02478       | 0.02478        | 2.4675     |
| 8  | 1.4353             | 0.01442       | 0.01442        | 1.4353     |
| 9  | 2.4137             | 0.02424       | 0.02424        | 2.4137     |
| 10 | 2.7723             | 0.02785       | 0.02785        | 2.7723     |
| 11 | 1.7422             | 0.01750       | 0.01750        | 1.7422     |
| 12 | 2.3712             | 0.02382       | 0.02382        | 2.3712     |
| 13 | 2.2217             | 0.02232       | 0.02232        | 2.2217     |
| 14 | 2.5357             | 0.02547       | 0.02547        | 2.5357     |
| 15 | 1.8696             | 0.01878       | 0.01878        | 1.8696     |
| 16 | 2.2691             | 0.02279       | 0.02279        | 2.2691     |
| 17 | 2.3151             | 0.02325       | 0.02325        | 2.3151     |
| 18 | 2.4866             | 0.02498       | 0.02498        | 2.4866     |
| 19 | 1.6980             | 0.01706       | 0.01706        | 1.6980     |
| 20 | 11.8068            | 0.11859       | 0.11859        | 11.8068    |



TIME 11.31.12  
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MC DONNELL

TITLE

RUN NO. 2319

HIT TEST NO. 67  
 MODEL HEAT TRANSFER RATES

TIME=0.0800 P0= 5286. P02= 3.726 P1=0.01655 QDOT-A= 93.67

| N  | QDOT-N<br>(B/SP-S) | QDOT-N/QDOT-A | QDOT-N/KDOT-A | QDOT-N/REF |
|----|--------------------|---------------|---------------|------------|
| 1  | 0.9440             | 0.01008       | 0.01008       | 0.9440     |
| 2  | 1.8361             | 0.01963       | 0.01960       | 1.8361     |
| 3  | 1.9081             | 0.02037       | 0.02037       | 1.9081     |
| 4  | 1.6238             | 0.01734       | 0.01734       | 1.6238     |
| 5  | 2.3238             | 0.02481       | 0.02481       | 2.3238     |
| 6  | 1.8593             | 0.01985       | 0.01985       | 1.8593     |
| 7  | 2.3265             | 0.02484       | 0.02484       | 2.3265     |
| 8  | 1.4054             | 0.01500       | 0.01500       | 1.4054     |
| 9  | 2.2863             | 0.02441       | 0.02441       | 2.2863     |
| 10 | 2.5918             | 0.02767       | 0.02767       | 2.5918     |
| 11 | 1.6908             | 0.01805       | 0.01805       | 1.6908     |
| 12 | 2.2565             | 0.02409       | 0.02409       | 2.2565     |
| 13 | 2.1093             | 0.02252       | 0.02252       | 2.1093     |
| 14 | 2.3859             | 0.02547       | 0.02547       | 2.3859     |
| 15 | 1.8243             | 0.01948       | 0.01948       | 1.8243     |
| 16 | 2.2226             | 0.02373       | 0.02373       | 2.2226     |
| 17 | 2.2412             | 0.02393       | 0.02393       | 2.2412     |
| 18 | 2.3778             | 0.02539       | 0.02539       | 2.3778     |
| 19 | 1.6209             | 0.01731       | 0.01731       | 1.6209     |
| 20 | 10.9967            | 0.11740       | 0.11740       | 10.9967    |

RUN NO. 2319

TITLE

MC DONNELL

TIME 11.51.12  
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11/28/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

| TIME=0.850 PO= 4994. PD= 3.519 PI=0.1558 QDOT-A= 87.77 |                     | QDOT-N/QDOT-A |                | QDOT-N/KQDOT-A |            | QDOT-N/REF |            |
|--------------------------------------------------------|---------------------|---------------|----------------|----------------|------------|------------|------------|
| N                                                      | QDOT-N<br>(R/SF-SI) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF     | QDOT-N/REF | QDOT-N/REF | QDOT-N/REF |
| 1                                                      | 0.9147              | 0.01047       | 0.01042        | 0.9147         | 0.9147     | 0.9147     | 0.9147     |
| 2                                                      | 1.7341              | 0.01975       | 0.01976        | 1.7341         | 1.7341     | 1.7341     | 1.7341     |
| 3                                                      | 1.7810              | 0.02029       | 0.02029        | 1.7810         | 1.7810     | 1.7810     | 1.7810     |
| 4                                                      | 1.5372              | 0.01751       | 0.01751        | 1.5372         | 1.5372     | 1.5372     | 1.5372     |
| 5                                                      | 2.1167              | 0.02412       | 0.02412        | 2.1167         | 2.1167     | 2.1167     | 2.1167     |
| 6                                                      | 1.7825              | 0.02031       | 0.02031        | 1.7825         | 1.7825     | 1.7825     | 1.7825     |
| 7                                                      | 2.1855              | 0.02490       | 0.02490        | 2.1855         | 2.1855     | 2.1855     | 2.1855     |
| 8                                                      | 1.3755              | 0.01567       | 0.01567        | 1.3755         | 1.3755     | 1.3755     | 1.3755     |
| 9                                                      | 2.1589              | 0.02460       | 0.02460        | 2.1589         | 2.1589     | 2.1589     | 2.1589     |
| 10                                                     | 2.4113              | 0.02747       | 0.02747        | 2.4113         | 2.4113     | 2.4113     | 2.4113     |
| 11                                                     | 1.6194              | 0.01868       | 0.01868        | 1.6194         | 1.6194     | 1.6194     | 1.6194     |
| 12                                                     | 2.1418              | 0.02440       | 0.02440        | 2.1418         | 2.1418     | 2.1418     | 2.1418     |
| 13                                                     | 1.9969              | 0.02275       | 0.02275        | 1.9969         | 1.9969     | 1.9969     | 1.9969     |
| 14                                                     | 2.2361              | 0.02548       | 0.02548        | 2.2361         | 2.2361     | 2.2361     | 2.2361     |
| 15                                                     | 1.7790              | 0.02027       | 0.02027        | 1.7790         | 1.7790     | 1.7790     | 1.7790     |
| 16                                                     | 2.1761              | 0.02479       | 0.02479        | 2.1761         | 2.1761     | 2.1761     | 2.1761     |
| 17                                                     | 2.1673              | 0.02469       | 0.02469        | 2.1673         | 2.1673     | 2.1673     | 2.1673     |
| 18                                                     | 2.2690              | 0.02585       | 0.02585        | 2.2690         | 2.2690     | 2.2690     | 2.2690     |
| 19                                                     | 1.5439              | 0.01759       | 0.01759        | 1.5439         | 1.5439     | 1.5439     | 1.5439     |
| 20                                                     | 10.1866             | 0.11606       | 0.11606        | 10.1866        | 10.1866    | 10.1866    | 10.1866    |

TIME 11.51.12  
PAGE NO. 357 VOL. I  
REP. NO. 0004  
11/28/67

MC DONNELL  
HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

RUN NO. 2319

TITLE

TIME=0900 PD= 4730. PDZ= 3.323 PL=01463 QDOT-A= 81.88

| N  | QDOT-N<br>(B/SE-S) | QDOT-N/QDOT-A | QDOT-N/KDOT-A | QDOT-N/REF |
|----|--------------------|---------------|---------------|------------|
| 1  | 0.8853             | 0.01081       | 0.01081       | 0.8853     |
| 2  | 1.6321             | 0.01993       | 0.01993       | 1.6321     |
| 3  | 1.6538             | 0.02020       | 0.02020       | 1.6538     |
| 4  | 1.4506             | 0.01772       | 0.01772       | 1.4506     |
| 5  | 1.9096             | 0.02332       | 0.02332       | 1.9096     |
| 6  | 1.7058             | 0.02083       | 0.02083       | 1.7058     |
| 7  | 2.0444             | 0.02497       | 0.02497       | 2.0444     |
| 8  | 1.3456             | 0.01643       | 0.01643       | 1.3456     |
| 9  | 2.0316             | 0.02481       | 0.02481       | 2.0316     |
| 10 | 2.2308             | 0.02724       | 0.02724       | 2.2308     |
| 11 | 1.5881             | 0.01939       | 0.01939       | 1.5881     |
| 12 | 2.0272             | 0.02476       | 0.02476       | 2.0272     |
| 13 | 1.8845             | 0.02301       | 0.02301       | 1.8845     |
| 14 | 2.0862             | 0.02548       | 0.02548       | 2.0862     |
| 15 | 1.7338             | 0.02117       | 0.02117       | 1.7338     |
| 16 | 2.1296             | 0.02601       | 0.02601       | 2.1296     |
| 17 | 2.0933             | 0.02557       | 0.02557       | 2.0933     |
| 18 | 2.1602             | 0.02638       | 0.02638       | 2.1602     |
| 19 | 1.4668             | 0.01791       | 0.01791       | 1.4668     |
| 20 | 9.3765             | 0.11451       | 0.11451       | 9.3765     |

RUN NO. 2319

TITLE

MC DONNELL

TIME 11.51.13  
PAGE NO. 358, VOL. I  
REP. NO. GOOD  
11/28/67

HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

TIME=.0950 PO= 4495. P02= 3.140 P1=.01372 QDOT-A= 75.99

| N  | QDOT-N<br>(B/SF-S) | QDOT-N/QDOT-A | QDOT-N/KQDOT-A | QDOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 0.8560             | 0.01124       | 0.01126        | 0.8560     |
| 2  | 1.5301             | 0.02014       | 0.02014        | 1.5301     |
| 3  | 1.5266             | 0.02009       | 0.02009        | 1.5266     |
| 4  | 1.3641             | 0.01795       | 0.01795        | 1.3641     |
| 5  | 1.7024             | 0.02240       | 0.02240        | 1.7024     |
| 6  | 1.6290             | 0.02144       | 0.02144        | 1.6290     |
| 7  | 1.9034             | 0.02505       | 0.02505        | 1.9034     |
| 8  | 1.3157             | 0.01731       | 0.01731        | 1.3157     |
| 9  | 1.9042             | 0.02506       | 0.02506        | 1.9042     |
| 10 | 2.0502             | 0.02698       | 0.02698        | 2.0502     |
| 11 | 1.5367             | 0.02022       | 0.02022        | 1.5367     |
| 12 | 1.9125             | 0.02517       | 0.02517        | 1.9125     |
| 13 | 1.7720             | 0.02332       | 0.02332        | 1.7720     |
| 14 | 1.9364             | 0.02548       | 0.02548        | 1.9364     |
| 15 | 1.6885             | 0.02222       | 0.02222        | 1.6885     |
| 16 | 2.0832             | 0.02741       | 0.02741        | 2.0832     |
| 17 | 2.0194             | 0.02658       | 0.02658        | 2.0194     |
| 18 | 2.0513             | 0.02700       | 0.02700        | 2.0513     |
| 19 | 1.3898             | 0.01829       | 0.01829        | 1.3898     |
| 20 | 8.5664             | 0.11273       | 0.11273        | 8.5664     |

TIME 11.51.13  
PAGE NO. 359, VOL. I  
R.P. NO. 6004  
11/28/67

TITLE  
MCDONNELL  
HIT TEST NO. 67  
MODEL HEAT TRANSFER RATES

RUN NO. 2319

TIME=1.000 PD= 4288. P02= 2.969 P1=0.1288 QOOT-A= 70.10

| N  | QOOT-N<br>(B/SF-S) | QOOT-N/QOOT-A | QOOT-N/KQOOT-A | QOOT-N/REF |
|----|--------------------|---------------|----------------|------------|
| 1  | 0.8267             | 0.01179       | 0.01179        | 0.8267     |
| 2  | 1.4281             | 0.02037       | 0.02037        | 1.4281     |
| 3  | 1.3994             | 0.01996       | 0.01996        | 1.3994     |
| 4  | 1.2775             | 0.01822       | 0.01822        | 1.2775     |
| 5  | 1.4953             | 0.02133       | 0.02133        | 1.4953     |
| 6  | 1.5523             | 0.02215       | 0.02215        | 1.5523     |
| 7  | 1.7624             | 0.02514       | 0.02514        | 1.7624     |
| 8  | 1.2059             | 0.01634       | 0.01634        | 1.2059     |
| 9  | 1.7768             | 0.02535       | 0.02535        | 1.7768     |
| 10 | 1.8697             | 0.02667       | 0.02667        | 1.8697     |
| 11 | 1.4653             | 0.02119       | 0.02119        | 1.4653     |
| 12 | 1.7970             | 0.02565       | 0.02565        | 1.7970     |
| 13 | 1.6596             | 0.02368       | 0.02368        | 1.6596     |
| 14 | 1.7866             | 0.02549       | 0.02549        | 1.7866     |
| 15 | 1.6433             | 0.02344       | 0.02344        | 1.6433     |
| 16 | 2.0367             | 0.02906       | 0.02906        | 2.0367     |
| 17 | 1.9455             | 0.02775       | 0.02775        | 1.9455     |
| 18 | 1.9425             | 0.02771       | 0.02771        | 1.9425     |
| 19 | 1.3127             | 0.01873       | 0.01873        | 1.3127     |
| 20 | 7.7563             | 0.11065       | 0.11065        | 7.7563     |

TIME 11.51.13  
 PAGE NO. 360, VOL. 1  
 REP. NO. 6004  
 11/28/67

MC DONNELL

TITLE

RUN NO. 2319

HIT TEST NO. 67  
 PRESSURE SURVEY

TIME = 0.0400 PD = 8648.59 ALPHA = 10.00

| PROBE | PHI | PIN      | PON/PO    | PON/PO2   | PON/PI    | (POV-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.059238 | 0.695E-05 | 0.102E-01 | 0.232E 01 | 0.108E-01   |
| 2     | 0.0 | 0.067298 | 0.778E-05 | 0.116E-01 | 0.263E 01 | 0.134E-01   |
| 3     | 0.0 | 0.082486 | 0.954E-05 | 0.142E-01 | 0.323E 01 | 0.182E-01   |
| 4     | 0.0 | 0.067955 | 0.786E-05 | 0.117E-01 | 0.266E 01 | 0.136E-01   |
| 5     | 0.0 | 0.078968 | 0.913E-05 | 0.136E-01 | 0.309E 01 | 0.171E-01   |
| 6     | 0.0 | 0.081145 | 0.938E-05 | 0.140E-01 | 0.317E 01 | 0.178E-01   |
| 7     | 0.0 | 0.101600 | 0.117E-04 | 0.175E-01 | 0.397E 01 | 0.243E-01   |
| 8     | 0.0 | 0.079277 | 0.917E-05 | 0.137E-01 | 0.310E 01 | 0.172E-01   |
| 9     | 0.0 | 0.095403 | 0.110E-04 | 0.166E-01 | 0.373E 01 | 0.223E-01   |
| 10    | 0.0 | 0.123567 | 0.143E-04 | 0.213E-01 | 0.483E 01 | 0.314E-01   |
| 11    | 0.0 | 0.086584 | 0.100E-04 | 0.149E-01 | 0.330E 01 | 0.195E-01   |
| 12    | 0.0 | 0.097873 | 0.113E-04 | 0.169E-01 | 0.383E 01 | 0.231E-01   |
| 13    | 0.0 | 0.101169 | 0.117E-04 | 0.174E-01 | 0.396E 01 | 0.242E-01   |
| 14    | 0.0 | 0.124646 | 0.144E-04 | 0.215E-01 | 0.447E 01 | 0.317E-01   |
| 15    | 0.0 | 0.098181 | 0.673E-05 | 0.100E-01 | 0.228E 01 | 0.104E-01   |
| 16    | 0.0 | 0.087313 | 0.101E-04 | 0.150E-01 | 0.341E 01 | 0.198E-01   |
| 17    | 0.0 | 0.119032 | 0.138E-04 | 0.201E-01 | 0.465E 01 | 0.299E-01   |
| 18    | 0.0 | 0.174842 | 0.202E-04 | 0.301E-01 | 0.694E 01 | 0.478E-01   |
| 19    | 0.0 | 0.076306 | 0.883E-05 | 0.132E-01 | 0.299E 01 | 0.163E-01   |
| 20    | 0.0 | 0.454847 | 0.526E-04 | 0.783E-01 | 0.178E 02 | 0.137E 00   |

TIME 11.51.13  
PAGE NO. 361 VOL. I  
REP. NO. 0004  
11/28/67

TITLE

RUN NO. 2319

MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0450 PO = 8128.58 ALPHA = 10.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/21 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.057091 | 0.702E-05 | 0.104E-01 | 0.235E 01 | 0.111E-01   |
| 2     | 0.0 | 0.064123 | 0.709E-05 | 0.116E-01 | 0.263E 01 | 0.134E-01   |
| 3     | 0.0 | 0.076424 | 0.743E-05 | 0.139E-01 | 0.314E 01 | 0.176E-01   |
| 4     | 0.0 | 0.065059 | 0.800E-05 | 0.118E-01 | 0.267E 01 | 0.137E-01   |
| 5     | 0.0 | 0.073989 | 0.910E-05 | 0.136E-01 | 0.304E 01 | 0.169E-01   |
| 6     | 0.0 | 0.076534 | 0.942E-05 | 0.139E-01 | 0.314E 01 | 0.176E-01   |
| 7     | 0.0 | 0.073798 | 0.115E-04 | 0.170E-01 | 0.385E 01 | 0.234E-01   |
| 8     | 0.0 | 0.075010 | 0.923E-05 | 0.136E-01 | 0.308E 01 | 0.171E-01   |
| 9     | 0.0 | 0.089757 | 0.110E-04 | 0.163E-01 | 0.369E 01 | 0.221E-01   |
| 10    | 0.0 | 0.114081 | 0.140E-04 | 0.207E-01 | 0.469E 01 | 0.303E-01   |
| 11    | 0.0 | 0.092083 | 0.101E-04 | 0.149E-01 | 0.337E 01 | 0.195E-01   |
| 12    | 0.0 | 0.091332 | 0.112E-04 | 0.166E-01 | 0.375E 01 | 0.226E-01   |
| 13    | 0.0 | 0.094261 | 0.116E-04 | 0.171E-01 | 0.387E 01 | 0.236E-01   |
| 14    | 0.0 | 0.115893 | 0.143E-04 | 0.210E-01 | 0.476E 01 | 0.309E-01   |
| 15    | 0.0 | 0.058247 | 0.717E-05 | 0.106E-01 | 0.239E 01 | 0.114E-01   |
| 16    | 0.0 | 0.082885 | 0.102E-04 | 0.151E-01 | 0.341E 01 | 0.199E-01   |
| 17    | 0.0 | 0.109354 | 0.135E-04 | 0.199E-01 | 0.449E 01 | 0.287E-01   |
| 18    | 0.0 | 0.158483 | 0.195E-04 | 0.288E-01 | 0.651E 01 | 0.453E-01   |
| 19    | 0.0 | 0.071422 | 0.879E-05 | 0.130E-01 | 0.293E 01 | 0.159E-01   |
| 20    | 0.0 | 0.413469 | 0.409E-04 | 0.751E-01 | 0.170E 02 | 0.131E 00   |

TIME 11.51.13  
 PAGE NO. 362, VOL. I  
 REP. NO. 0004  
 11/28/67

TITLE  
 MCDONNELL

RUN NO. 2319

HIT TEST NO. 67  
 PRESSURE SURVEY

TIME = 0.0500 PO = 7637.04 ALPHA = 10.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.054894 | 0.719F-05 | 0.105E-01 | 0.237E 01 | 0.113F-01   |
| 2     | 0.0 | 0.060998 | 0.709F-05 | 0.117F-01 | 0.264E 01 | 0.135F-01   |
| 3     | 0.0 | 0.070812 | 0.927E-05 | 0.136E-01 | 0.306E 01 | 0.170E-01   |
| 4     | 0.0 | 0.062162 | 0.814F-05 | 0.119E-01 | 0.269E 01 | 0.139E-01   |
| 5     | 0.0 | 0.069286 | 0.907E-05 | 0.133E-01 | 0.299E 01 | 0.164F-01   |
| 6     | 0.0 | 0.072090 | 0.944F-05 | 0.138E-01 | 0.312F 01 | 0.174E-01   |
| 7     | 0.0 | 0.086582 | 0.113F-04 | 0.166F-01 | 0.374F 01 | 0.224F-01   |
| 8     | 0.0 | 0.070895 | 0.928E-05 | 0.136E-01 | 0.304E 01 | 0.170F-01   |
| 9     | 0.0 | 0.084357 | 0.110E-04 | 0.162E-01 | 0.365E 01 | 0.218F-01   |
| 10    | 0.0 | 0.105297 | 0.138E-04 | 0.202E-01 | 0.455E 01 | 0.293F-01   |
| 11    | 0.0 | 0.077695 | 0.102E-04 | 0.149F-01 | 0.336E 01 | 0.194F-01   |
| 12    | 0.0 | 0.085151 | 0.111F-04 | 0.163F-01 | 0.378E 01 | 0.221F-01   |
| 13    | 0.0 | 0.087907 | 0.115F-04 | 0.169F-01 | 0.390E 01 | 0.231E-01   |
| 14    | 0.0 | 0.107725 | 0.141F-04 | 0.207F-01 | 0.466E 01 | 0.301E-01   |
| 15    | 0.0 | 0.057985 | 0.759E-05 | 0.111E-01 | 0.251E 01 | 0.124E-01   |
| 16    | 0.0 | 0.078694 | 0.103F-04 | 0.151F-01 | 0.340E 01 | 0.198E-01   |
| 17    | 0.0 | 0.100597 | 0.132F-04 | 0.193F-01 | 0.435E 01 | 0.276F-01   |
| 18    | 0.0 | 0.143866 | 0.188F-04 | 0.276F-01 | 0.622E 01 | 0.430E-01   |
| 19    | 0.0 | 0.066408 | 0.875E-05 | 0.128E-01 | 0.289E 01 | 0.154E-01   |
| 20    | 0.0 | 0.375902 | 0.492E-04 | 0.721F-01 | 0.162E 02 | 0.126E 00   |



RUN NO. 2319

TITLE

MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TIME 11.51.14  
PAGE NO. 363, VOL. I  
REP. NO. 6004  
11/28/67.

TIME = 0.0550 PO = 7173.7 ALPHA = 10.30

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.052619 | 0.733E-05 | 0.107E-01 | 0.240E 01 | 0.115E-01   |
| 2     | 0.0 | 0.057923 | 0.807E-05 | 0.117E-01 | 0.264E 01 | 0.135E-01   |
| 3     | 0.0 | 0.055649 | 0.915E-05 | 0.131E-01 | 0.299E 01 | 0.164E-01   |
| 4     | 0.0 | 0.059263 | 0.826E-05 | 0.120E-01 | 0.279E 01 | 0.140E-01   |
| 5     | 0.0 | 0.064859 | 0.904E-05 | 0.131E-01 | 0.295E 01 | 0.161E-01   |
| 6     | 0.0 | 0.067812 | 0.945E-05 | 0.137E-01 | 0.309E 01 | 0.172E-01   |
| 7     | 0.0 | 0.079952 | 0.111E-04 | 0.162E-01 | 0.364E 01 | 0.218E-01   |
| 8     | 0.0 | 0.066934 | 0.933E-05 | 0.136E-01 | 0.405E 01 | 0.160E-01   |
| 9     | 0.0 | 0.079203 | 0.110E-04 | 0.160E-01 | 0.361E 01 | 0.215E-01   |
| 10    | 0.0 | 0.07215  | 0.136E-04 | 0.197E-01 | 0.443E 01 | 0.238E-01   |
| 11    | 0.0 | 0.073420 | 0.102E-04 | 0.149E-01 | 0.334E 01 | 0.194E-01   |
| 12    | 0.0 | 0.079329 | 0.111E-04 | 0.161E-01 | 0.361E 01 | 0.216E-01   |
| 13    | 0.0 | 0.082107 | 0.114E-04 | 0.166E-01 | 0.374E 01 | 0.226E-01   |
| 14    | 0.0 | 0.100142 | 0.140E-04 | 0.203E-01 | 0.454E 01 | 0.294E-01   |
| 15    | 0.0 | 0.057395 | 0.809E-05 | 0.116E-01 | 0.261E 01 | 0.133E-01   |
| 16    | 0.0 | 0.074740 | 0.104E-04 | 0.151E-01 | 0.340E 01 | 0.199E-01   |
| 17    | 0.0 | 0.092762 | 0.129E-04 | 0.188E-01 | 0.422E 01 | 0.266E-01   |
| 18    | 0.0 | 0.130931 | 0.183E-04 | 0.265E-01 | 0.596E 01 | 0.419E-01   |
| 19    | 0.0 | 0.062544 | 0.872E-05 | 0.127E-01 | 0.285E 01 | 0.153E-01   |
| 20    | 0.0 | 0.342147 | 0.477E-04 | 0.693E-01 | 0.156E 02 | 0.120E 00   |

TIME 51.14  
PAGE 03, 364, VOL. I  
REP. NO. 6004  
11/28/67

TITLE  
MCDONNELL

RUN NO. 2319

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0600 PO = 6739.39 ALPHA = 12.00

| PROBE | PHE | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.050295 | 0.746E-05 | 0.108E-01 | 0.241E-01 | 0.117E-01   |
| 2     | 0.0 | 0.054899 | 0.815E-05 | 0.118E-01 | 0.264E-01 | 0.135E-01   |
| 3     | 0.0 | 0.060935 | 0.904E-05 | 0.130E-01 | 0.292E-01 | 0.159E-01   |
| 4     | 0.0 | 0.06362  | 0.836E-05 | 0.121E-01 | 0.271E-01 | 0.141E-01   |
| 5     | 0.0 | 0.060710 | 0.901E-05 | 0.130E-01 | 0.291E-01 | 0.159E-01   |
| 6     | 0.0 | 0.063700 | 0.945E-05 | 0.136E-01 | 0.306E-01 | 0.170E-01   |
| 7     | 0.0 | 0.073908 | 0.110E-04 | 0.158E-01 | 0.355E-01 | 0.211E-01   |
| 8     | 0.0 | 0.063125 | 0.937E-05 | 0.135E-01 | 0.303E-01 | 0.168E-01   |
| 9     | 0.0 | 0.074297 | 0.110E-04 | 0.159E-01 | 0.357E-01 | 0.213E-01   |
| 10    | 0.0 | 0.089836 | 0.133E-04 | 0.192E-01 | 0.431E-01 | 0.274E-01   |
| 11    | 0.0 | 0.069259 | 0.103E-04 | 0.148E-01 | 0.332E-01 | 0.193E-01   |
| 12    | 0.0 | 0.073865 | 0.110E-04 | 0.158E-01 | 0.355E-01 | 0.211E-01   |
| 13    | 0.0 | 0.076862 | 0.114E-04 | 0.165E-01 | 0.369E-01 | 0.223E-01   |
| 14    | 0.0 | 0.093144 | 0.138E-04 | 0.199E-01 | 0.447E-01 | 0.287E-01   |
| 15    | 0.0 | 0.056478 | 0.838E-05 | 0.121E-01 | 0.271E-01 | 0.142E-01   |
| 16    | 0.0 | 0.071024 | 0.105E-04 | 0.152E-01 | 0.341E-01 | 0.200E-01   |
| 17    | 0.0 | 0.085047 | 0.127E-04 | 0.184E-01 | 0.412E-01 | 0.258E-01   |
| 18    | 0.0 | 0.119737 | 0.178E-04 | 0.256E-01 | 0.575E-01 | 0.393E-01   |
| 19    | 0.0 | 0.058630 | 0.870E-05 | 0.125E-01 | 0.281E-01 | 0.150E-01   |
| 20    | 0.0 | 0.312203 | 0.463E-04 | 0.668E-01 | 0.150E-02 | 0.116E-00   |

TIME 11.51.14  
PAGE NO. 365, VOL. I  
REP. NO. 6004  
11/28/67

MC DONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2319

TIME = 0.0650 PO = 6333.28 ALPHA = 19.30

| PROBE | PHI | PON      | PON/P0    | PON/P02   | PON/P1    | (PON-P1)/P1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.047912 | 0.757E-05 | 0.109E-01 | 0.243E 01 | 0.110E-01   |
| 2     | 0.0 | 0.051925 | 0.420E-05 | 0.118E-01 | 0.264E 01 | 0.134E-01   |
| 3     | 0.0 | 0.056670 | 0.895E-05 | 0.129E-01 | 0.288E 01 | 0.155E-01   |
| 4     | 0.0 | 0.053459 | 0.844E-05 | 0.121E-01 | 0.272E 01 | 0.147E-01   |
| 5     | 0.0 | 0.056937 | 0.897E-05 | 0.129E-01 | 0.289E 01 | 0.156E-01   |
| 6     | 0.0 | 0.059754 | 0.963E-05 | 0.135E-01 | 0.304E 01 | 0.169E-01   |
| 7     | 0.0 | 0.068451 | 0.109E-04 | 0.155E-01 | 0.348E 01 | 0.205E-01   |
| 8     | 0.0 | 0.059469 | 0.939E-05 | 0.135E-01 | 0.307E 01 | 0.167E-01   |
| 9     | 0.0 | 0.069637 | 0.110E-04 | 0.158E-01 | 0.354E 01 | 0.210E-01   |
| 10    | 0.0 | 0.083158 | 0.131E-04 | 0.188E-01 | 0.427E 01 | 0.267E-01   |
| 11    | 0.0 | 0.065211 | 0.103E-04 | 0.149E-01 | 0.331E 01 | 0.191E-01   |
| 12    | 0.0 | 0.068761 | 0.109E-04 | 0.156E-01 | 0.349E 01 | 0.206E-01   |
| 13    | 0.0 | 0.072171 | 0.114E-04 | 0.163E-01 | 0.367E 01 | 0.221E-01   |
| 14    | 0.0 | 0.086731 | 0.137E-04 | 0.196E-01 | 0.441E 01 | 0.282E-01   |
| 15    | 0.0 | 0.055233 | 0.872E-05 | 0.125E-01 | 0.281E 01 | 0.149E-01   |
| 16    | 0.0 | 0.067545 | 0.107E-04 | 0.153E-01 | 0.343E 01 | 0.201E-01   |
| 17    | 0.0 | 0.079855 | 0.126E-04 | 0.181E-01 | 0.406E 01 | 0.253E-01   |
| 18    | 0.0 | 0.110266 | 0.174E-04 | 0.250E-01 | 0.560E 01 | 0.341E-01   |
| 19    | 0.0 | 0.055066 | 0.869E-05 | 0.125E-01 | 0.280E 01 | 0.149E-01   |
| 20    | 0.0 | 0.286071 | 0.452E-04 | 0.648E-01 | 0.145E 02 | 0.112E 00   |

TIME 11.51.14  
PAGE NO. 366, VOL. I  
REP. NO. 6004  
11/28/67

TITLE  
MCDONNELL

HIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2319

TIME= 0.0700 PO= 5955.65 ALPHA= 10.30

| PROBE | PHI | PON      | PON/PD    | PON/PD2   | PON/P1    | (PON-P1)/21 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.045670 | 0.763E-05 | 0.109E-01 | 0.244E 01 | 0.119E-01   |
| 2     | 0.0 | 0.049002 | 0.823E-05 | 0.117E-01 | 0.263E 01 | 0.135E-01   |
| 3     | 0.0 | 0.052855 | 0.897E-05 | 0.127E-01 | 0.284E 01 | 0.152E-01   |
| 4     | 0.0 | 0.050554 | 0.849E-05 | 0.121E-01 | 0.272E 01 | 0.142E-01   |
| 5     | 0.0 | 0.053240 | 0.904E-05 | 0.128E-01 | 0.286E 01 | 0.154E-01   |
| 6     | 0.0 | 0.054975 | 0.940E-05 | 0.134E-01 | 0.301E 01 | 0.164E-01   |
| 7     | 0.0 | 0.043580 | 0.107E-04 | 0.152E-01 | 0.342E 01 | 0.200E-01   |
| 8     | 0.0 | 0.055965 | 0.940E-05 | 0.134E-01 | 0.301E 01 | 0.164E-01   |
| 9     | 0.0 | 0.045223 | 0.110E-04 | 0.156E-01 | 0.351E 01 | 0.207E-01   |
| 10    | 0.0 | 0.077183 | 0.130E-04 | 0.185E-01 | 0.415E 01 | 0.260E-01   |
| 11    | 0.0 | 0.041276 | 0.103E-04 | 0.147E-01 | 0.329E 01 | 0.193E-01   |
| 12    | 0.0 | 0.044016 | 0.107E-04 | 0.153E-01 | 0.344E 01 | 0.203E-01   |
| 13    | 0.0 | 0.048034 | 0.114E-04 | 0.163E-01 | 0.366E 01 | 0.220E-01   |
| 14    | 0.0 | 0.040902 | 0.134E-04 | 0.194E-01 | 0.475E 01 | 0.277E-01   |
| 15    | 0.0 | 0.053661 | 0.901E-05 | 0.129E-01 | 0.288E 01 | 0.156E-01   |
| 16    | 0.0 | 0.044303 | 0.106E-04 | 0.154E-01 | 0.346E 01 | 0.203E-01   |
| 17    | 0.0 | 0.074783 | 0.126E-04 | 0.179E-01 | 0.402E 01 | 0.250E-01   |
| 18    | 0.0 | 0.102515 | 0.172E-04 | 0.246E-01 | 0.551E 01 | 0.373E-01   |
| 19    | 0.0 | 0.051851 | 0.871E-05 | 0.124E-01 | 0.279E 01 | 0.148E-01   |
| 20    | 0.0 | 0.063750 | 0.443E-04 | 0.632E-01 | 0.142E 02 | 0.109E 00   |

TIME 11.51.15  
PAGE NO. 367, VOL. I  
REP. NO. 0004  
11/28/67

TITLE  
MCDONNELL

RUN NO. 2319

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0750 PD = 5606.48 ALPHA = 10.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.042969 | 0.766E-05 | 0.109E-01 | 0.245E 01 | 0.120E-01   |
| 2     | 0.0 | 0.046130 | 0.823E-05 | 0.117E-01 | 0.263E 01 | 0.134E-01   |
| 3     | 0.0 | 0.049488 | 0.883E-05 | 0.125E-01 | 0.282E 01 | 0.150E-01   |
| 4     | 0.0 | 0.047648 | 0.850E-05 | 0.121E-01 | 0.271E 01 | 0.142E-01   |
| 5     | 0.0 | 0.049920 | 0.890E-05 | 0.127E-01 | 0.284E 01 | 0.152E-01   |
| 6     | 0.0 | 0.052362 | 0.934E-05 | 0.133E-01 | 0.298E 01 | 0.164E-01   |
| 7     | 0.0 | 0.059295 | 0.106E-04 | 0.150E-01 | 0.338E 01 | 0.196E-01   |
| 8     | 0.0 | 0.052615 | 0.938E-05 | 0.133E-01 | 0.300E 01 | 0.165E-01   |
| 9     | 0.0 | 0.061056 | 0.109E-04 | 0.155E-01 | 0.340E 01 | 0.205E-01   |
| 10    | 0.0 | 0.071911 | 0.128E-04 | 0.187E-01 | 0.409E 01 | 0.256E-01   |
| 11    | 0.0 | 0.057455 | 0.102E-04 | 0.146E-01 | 0.327E 01 | 0.188E-01   |
| 12    | 0.0 | 0.059629 | 0.106E-04 | 0.151E-01 | 0.339E 01 | 0.198E-01   |
| 13    | 0.0 | 0.064452 | 0.115E-04 | 0.163E-01 | 0.367E 01 | 0.221E-01   |
| 14    | 0.0 | 0.075659 | 0.135E-04 | 0.192E-01 | 0.431E 01 | 0.273E-01   |
| 15    | 0.0 | 0.051761 | 0.923E-05 | 0.131E-01 | 0.295E 01 | 0.161E-01   |
| 16    | 0.0 | 0.061299 | 0.109E-04 | 0.155E-01 | 0.349E 01 | 0.206E-01   |
| 17    | 0.0 | 0.070633 | 0.126E-04 | 0.179E-01 | 0.402E 01 | 0.250E-01   |
| 18    | 0.0 | 0.096487 | 0.172E-04 | 0.245E-01 | 0.549E 01 | 0.371E-01   |
| 19    | 0.0 | 0.048986 | 0.874E-05 | 0.124E-01 | 0.279E 01 | 0.148E-01   |
| 20    | 0.0 | 0.245240 | 0.437E-04 | 0.622E-01 | 0.140E 02 | 0.107E 00   |

TIME 11.51.15  
PAGE NO. 368 VOL. I  
REP. NO. 0004  
11/28/67

TITLE MCDONNELL

RUN NO. 2319

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0800 PO = 5285.80 ALPHA = 10.00

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/Q1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.040409 | 0.764E-05 | 0.108E-01 | 0.244E 01 | 0.119E-01   |
| 2     | 0.0 | 0.043308 | 0.819E-05 | 0.116E-01 | 0.262E 01 | 0.133E-01   |
| 3     | 0.0 | 0.046571 | 0.881E-05 | 0.125E-01 | 0.281E 01 | 0.150E-01   |
| 4     | 0.0 | 0.044740 | 0.846E-05 | 0.120E-01 | 0.270E 01 | 0.140E-01   |
| 5     | 0.0 | 0.046877 | 0.897E-05 | 0.126E-01 | 0.283E 01 | 0.151E-01   |
| 6     | 0.0 | 0.048915 | 0.925E-05 | 0.131E-01 | 0.295E 01 | 0.161E-01   |
| 7     | 0.0 | 0.055596 | 0.105E-04 | 0.149E-01 | 0.336E 01 | 0.194E-01   |
| 8     | 0.0 | 0.049417 | 0.935E-05 | 0.133E-01 | 0.299E 01 | 0.164E-01   |
| 9     | 0.0 | 0.057136 | 0.108E-04 | 0.153E-01 | 0.345E 01 | 0.202E-01   |
| 10    | 0.0 | 0.067340 | 0.127E-04 | 0.181E-01 | 0.407E 01 | 0.253E-01   |
| 11    | 0.0 | 0.053746 | 0.102E-04 | 0.144E-01 | 0.325E 01 | 0.185E-01   |
| 12    | 0.0 | 0.055602 | 0.105E-04 | 0.149E-01 | 0.336E 01 | 0.195E-01   |
| 13    | 0.0 | 0.061424 | 0.116E-04 | 0.165E-01 | 0.371E 01 | 0.224E-01   |
| 14    | 0.0 | 0.071000 | 0.134E-04 | 0.191E-01 | 0.429E 01 | 0.271E-01   |
| 15    | 0.0 | 0.049533 | 0.937E-05 | 0.133E-01 | 0.299E 01 | 0.164E-01   |
| 16    | 0.0 | 0.058531 | 0.111E-04 | 0.157E-01 | 0.354E 01 | 0.209E-01   |
| 17    | 0.0 | 0.067405 | 0.128E-04 | 0.181E-01 | 0.407E 01 | 0.253E-01   |
| 18    | 0.0 | 0.092180 | 0.174E-04 | 0.247E-01 | 0.557E 01 | 0.377E-01   |
| 19    | 0.0 | 0.046470 | 0.879E-05 | 0.125E-01 | 0.281E 01 | 0.149E-01   |
| 20    | 0.0 | 0.230541 | 0.436E-04 | 0.619E-01 | 0.139E 02 | 0.107E 00   |

TIME 11.51.15  
PAGE NO. 369 VOL. I  
REP. NO. 6004  
11/2/67

MC DONNELL  
WIT TEST NO. 67  
PRESSURE SURVEY

RUN NO. 2319

TITLE

TIME= 0.0850 PO= 4993.59 ALPHA= 10.30

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/OI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.037791 | 0.757E-05 | 0.107E-01 | 0.243E 01 | 0.117E-01   |
| 2     | 0.0 | 0.040536 | 0.812E-05 | 0.115E-01 | 0.260E 01 | 0.132E-01   |
| 3     | 0.0 | 0.044103 | 0.893E-05 | 0.125E-01 | 0.283E 01 | 0.150E-01   |
| 4     | 0.0 | 0.041830 | 0.838E-05 | 0.119E-01 | 0.269E 01 | 0.139E-01   |
| 5     | 0.0 | 0.044111 | 0.893E-05 | 0.125E-01 | 0.283E 01 | 0.150E-01   |
| 6     | 0.0 | 0.045635 | 0.914E-05 | 0.130E-01 | 0.293E 01 | 0.158E-01   |
| 7     | 0.0 | 0.052483 | 0.105E-04 | 0.149E-01 | 0.337E 01 | 0.195E-01   |
| 8     | 0.0 | 0.046372 | 0.929E-05 | 0.132E-01 | 0.298E 01 | 0.162E-01   |
| 9     | 0.0 | 0.053462 | 0.107E-04 | 0.152E-01 | 0.343E 01 | 0.200E-01   |
| 10    | 0.0 | 0.043472 | 0.127E-04 | 0.180E-01 | 0.407E 01 | 0.253E-01   |
| 11    | 0.0 | 0.050152 | 0.100E-04 | 0.143E-01 | 0.322E 01 | 0.182E-01   |
| 12    | 0.0 | 0.051934 | 0.104E-04 | 0.148E-01 | 0.333E 01 | 0.192E-01   |
| 13    | 0.0 | 0.058950 | 0.118E-04 | 0.168E-01 | 0.378E 01 | 0.220E-01   |
| 14    | 0.0 | 0.066927 | 0.134E-04 | 0.190E-01 | 0.430E 01 | 0.271E-01   |
| 15    | 0.0 | 0.046977 | 0.941E-05 | 0.134E-01 | 0.302E 01 | 0.166E-01   |
| 16    | 0.0 | 0.056001 | 0.112E-04 | 0.159E-01 | 0.360E 01 | 0.211E-01   |
| 17    | 0.0 | 0.065097 | 0.130E-04 | 0.185E-01 | 0.418E 01 | 0.261E-01   |
| 18    | 0.0 | 0.089595 | 0.179E-04 | 0.255E-01 | 0.575E 01 | 0.309E-01   |
| 19    | 0.0 | 0.044305 | 0.887E-05 | 0.126E-01 | 0.284E 01 | 0.151E-01   |
| 20    | 0.0 | 0.219655 | 0.440E-04 | 0.624E-01 | 0.141E 02 | 0.108E 00   |

RUN NO. 2319

TITLE

MCDONNELL

TIME 11.51.16

PAGE NO. 370, VOL. I

REP. NO. 6004

11/28/67

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.0900 PO = 4729.87 ALPHA = 19.30

| PROBE | PHI | PCN      | PON/PO    | PIN/PO2   | PON/PI    | (PON-PI)/O1 |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.035113 | 0.742E-05 | 0.106E-01 | 0.240E 01 | 0.114E-01   |
| 2     | 0.0 | 0.037815 | 0.799E-05 | 0.114E-01 | 0.258E 01 | 0.129E-01   |
| 3     | 0.0 | 0.042085 | 0.890E-05 | 0.127E-01 | 0.248E 01 | 0.153E-01   |
| 4     | 0.0 | 0.038919 | 0.871E-05 | 0.117E-01 | 0.266E 01 | 0.136E-01   |
| 5     | 0.0 | 0.041621 | 0.880E-05 | 0.125E-01 | 0.204E 01 | 0.151E-01   |
| 6     | 0.0 | 0.042520 | 0.899E-05 | 0.120E-01 | 0.291E 01 | 0.156E-01   |
| 7     | 0.0 | 0.049957 | 0.106E-04 | 0.150E-01 | 0.361E 01 | 0.197E-01   |
| 8     | 0.0 | 0.043480 | 0.919E-05 | 0.131E-01 | 0.297E 01 | 0.161E-01   |
| 9     | 0.0 | 0.050035 | 0.106E-04 | 0.151E-01 | 0.342E 01 | 0.198E-01   |
| 10    | 0.0 | 0.060305 | 0.127E-04 | 0.181E-01 | 0.412E 01 | 0.255E-01   |
| 11    | 0.0 | 0.066670 | 0.907E-05 | 0.140E-01 | 0.319E 01 | 0.179E-01   |
| 12    | 0.0 | 0.068625 | 0.103E-04 | 0.146E-01 | 0.332E 01 | 0.190E-01   |
| 13    | 0.0 | 0.057031 | 0.121E-04 | 0.172E-01 | 0.390E 01 | 0.237E-01   |
| 14    | 0.0 | 0.063438 | 0.134E-04 | 0.191E-01 | 0.434E 01 | 0.272E-01   |
| 15    | 0.0 | 0.064094 | 0.932E-05 | 0.133E-01 | 0.301E 01 | 0.164E-01   |
| 16    | 0.0 | 0.053708 | 0.114E-04 | 0.162E-01 | 0.367E 01 | 0.218E-01   |
| 17    | 0.0 | 0.063711 | 0.135E-04 | 0.192E-01 | 0.435E 01 | 0.274E-01   |
| 18    | 0.0 | 0.088731 | 0.180E-04 | 0.267E-01 | 0.606E 01 | 0.414E-01   |
| 19    | 0.0 | 0.042489 | 0.898E-05 | 0.124E-01 | 0.290E 01 | 0.155E-01   |
| 20    | 0.0 | 0.212579 | 0.449E-04 | 0.640E-01 | 0.145E 02 | 0.110E 00   |



TIME 11.51.16  
PAGE NO. 372, VOL. I  
REP. NO. 0004  
11/28/67

MC DONNELL  
HIT TEST NO. 67  
PRESSURE SURVEY

TITLE

RUN NO. 2319

TIME = 0.0950 PO = 4494.61 ALPHA = 13.30

| PROBE | PHI | PON      | PON/PO    | PON/PO2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.032376 | 0.722E-05 | 0.103E-01 | 0.236E 01 | 0.110E-01   |
| 2     | 0.0 | 0.035144 | 0.782E-05 | 0.112E-01 | 0.256E 01 | 0.126E-01   |
| 3     | 0.0 | 0.040515 | 0.901E-05 | 0.120E-01 | 0.295E 01 | 0.150E-01   |
| 4     | 0.0 | 0.036005 | 0.801E-05 | 0.115E-01 | 0.262E 01 | 0.132E-01   |
| 5     | 0.0 | 0.039408 | 0.877E-05 | 0.126E-01 | 0.287E 01 | 0.152E-01   |
| 6     | 0.0 | 0.039572 | 0.880E-05 | 0.126E-01 | 0.288E 01 | 0.153E-01   |
| 7     | 0.0 | 0.048016 | 0.107E-04 | 0.153E-01 | 0.350E 01 | 0.203E-01   |
| 8     | 0.0 | 0.040741 | 0.906E-05 | 0.130E-01 | 0.297E 01 | 0.160E-01   |
| 9     | 0.0 | 0.046855 | 0.104E-04 | 0.149E-01 | 0.341E 01 | 0.196E-01   |
| 10    | 0.0 | 0.057847 | 0.129E-04 | 0.184E-01 | 0.421E 01 | 0.261E-01   |
| 11    | 0.0 | 0.043302 | 0.963E-05 | 0.138E-01 | 0.316E 01 | 0.175E-01   |
| 12    | 0.0 | 0.045674 | 0.102E-04 | 0.145E-01 | 0.333E 01 | 0.189E-01   |
| 13    | 0.0 | 0.055646 | 0.124E-04 | 0.177E-01 | 0.404E 01 | 0.248E-01   |
| 14    | 0.0 | 0.060534 | 0.135E-04 | 0.193E-01 | 0.441E 01 | 0.276E-01   |
| 15    | 0.0 | 0.040883 | 0.910E-05 | 0.130E-01 | 0.298E 01 | 0.150E-01   |
| 16    | 0.0 | 0.051653 | 0.115E-04 | 0.165E-01 | 0.376E 01 | 0.224E-01   |
| 17    | 0.0 | 0.063247 | 0.141E-04 | 0.201E-01 | 0.461E 01 | 0.292E-01   |
| 18    | 0.0 | 0.089589 | 0.199E-04 | 0.285E-01 | 0.653E 01 | 0.448E-01   |
| 19    | 0.0 | 0.041023 | 0.913E-05 | 0.131E-01 | 0.299E 01 | 0.161E-01   |
| 20    | 0.0 | 0.209315 | 0.466E-04 | 0.667E-01 | 0.153E 02 | 0.116E 00   |

RUN NO. 2319

TITLE

MCDONNELL

TIME 11.51.17  
PAGE NO. 372, VOL. I  
REP. NO. 0008  
11/28/67

HIT TEST NO. 67  
PRESSURE SURVEY

TIME = 0.1000 PO = 4287.83 ALPHA = 10.30

| PROBE | PHI | PON      | PON/PN    | PON/PN2   | PON/PI    | (PON-PI)/PI |
|-------|-----|----------|-----------|-----------|-----------|-------------|
| 1     | 0.0 | 0.029581 | 0.690E-05 | 0.997E-02 | 0.230E 01 | 0.104E-01   |
| 2     | 0.0 | 0.032524 | 0.759E-05 | 0.110E-01 | 0.253E 01 | 0.123E-01   |
| 3     | 0.0 | 0.039395 | 0.919E-05 | 0.135E-01 | 0.306E 01 | 0.166E-01   |
| 4     | 0.0 | 0.033090 | 0.772E-05 | 0.111E-01 | 0.257E 01 | 0.126E-01   |
| 5     | 0.0 | 0.037471 | 0.874E-05 | 0.126E-01 | 0.291E 01 | 0.154E-01   |
| 6     | 0.0 | 0.036791 | 0.858E-05 | 0.124E-01 | 0.286E 01 | 0.149E-01   |
| 7     | 0.0 | 0.046662 | 0.109E-04 | 0.157E-01 | 0.362E 01 | 0.211E-01   |
| 8     | 0.0 | 0.038155 | 0.890E-05 | 0.129E-01 | 0.294E 01 | 0.158E-01   |
| 9     | 0.0 | 0.043921 | 0.102E-04 | 0.149E-01 | 0.341E 01 | 0.194E-01   |
| 10    | 0.0 | 0.056080 | 0.131E-04 | 0.189E-01 | 0.436E 01 | 0.270E-01   |
| 11    | 0.0 | 0.040047 | 0.934E-05 | 0.135E-01 | 0.311E 01 | 0.170E-01   |
| 12    | 0.0 | 0.043083 | 0.100E-04 | 0.145E-01 | 0.335E 01 | 0.189E-01   |
| 13    | 0.0 | 0.054856 | 0.128E-04 | 0.185E-01 | 0.424E 01 | 0.262E-01   |
| 14    | 0.0 | 0.058215 | 0.136E-04 | 0.196E-01 | 0.452E 01 | 0.283E-01   |
| 15    | 0.0 | 0.037345 | 0.871E-05 | 0.126E-01 | 0.290E 01 | 0.153E-01   |
| 16    | 0.0 | 0.049834 | 0.116E-04 | 0.168E-01 | 0.387E 01 | 0.231E-01   |
| 17    | 0.0 | 0.063703 | 0.149E-04 | 0.215E-01 | 0.495E 01 | 0.317E-01   |
| 18    | 0.0 | 0.092169 | 0.215E-04 | 0.311E-01 | 0.716E 01 | 0.495E-01   |
| 19    | 0.0 | 0.039907 | 0.931E-05 | 0.134E-01 | 0.310E 01 | 0.169E-01   |
| 20    | 0.0 | 0.209862 | 0.489E-04 | 0.707E-01 | 0.163E 02 | 0.123E 00   |