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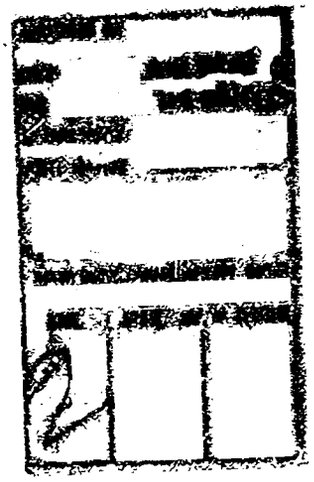
VERIFICATION TESTING OF CONJUGATE STRUCTURE

FINAL REPORT

E. DALE THOMPSON
MARTIN MARIETTA CORPORATION

APRIL 1970

AIR FORCE ROCKET PROPULSION LABORATORY
EDWARDS, CALIFORNIA



VERIFICATION TESTING OF CONJUGATE STRUCTURE

FINAL REPORT

E. Dale Thompson

FOREWORD

This Final Report is submitted in accordance with the requirements of Contract F04611-68-C-0055, Verification Testing of the Conjugate Tankage. The report is submitted in one volume and describes all test work that was planned and accomplished.

The verification testing program was funded by the Air Force Rocket Propulsion Laboratory, Edwards Air Force Base, under the direction of Project Officer Mr. C. H. Richard/RPRPT.

This Technical Report has been reviewed and is approved.

CHARLES H. RICHARD
Project Engineer

ABSTRACT

The conjugate structure was built for the Air Force Rocket Propulsion Laboratory, Edwards Air Force Base, by North American Aviation Inc., Los Angeles Division. The conjugate structure consisted of a forward skirt, forward dome, forward barrel, common dome, aft barrel, aft cone and an aft skirt. The forward and aft barrel sections were made of titanium roll diffusion bonded truss core panels.

The conjugate structure was delivered to the Martin Marietta Corporation, Denver Division for structural testing to demonstrate its ability to withstand design conditions by subjection to limit loads and limit internal tank pressures.

Martin Marietta Corporation Receiving Inspection identified structural discrepancies which brought about a change in the test contract. Instead of the originally planned three test conditions, the conjugate structure was subjected to a detailed inspection and a structural repair operation, and the test portion was modified to include five test conditions.

The first two of these test conditions were completed. A visual and radiographic inspection, made after the completion of the second test, identified seven areas of structural failures. One failure, a 42.5 in. long crack in the inner weld of the aft tank barrel to the lower Y-ring circumferential weld joint, was severe enough to prohibit continued testing. The tank barrel sections, made up of roll-diffusion-bonded-truss-core, successfully carried the design limit loads and internal tank pressures associated with the two test conditions.

Most of the structural failures occurred in areas of circumferential weld joints that were fabricated with mismatch and questionable weld capabilities. Internal tank pressure loads across these mismatch areas caused high bending stresses which contributed to the development of cracks.

This report presents test loads, descriptions of the test setups, test results, and all test data from the two completed test conditions. A failure analysis of the structural failures is included.

The failure analysis investigations concluded that the failure point of the 42.5 in. long crack was approximately at its center. It was a brittle failure resulting from the presence of an oxygen-rich, stabilized alpha layer on the parent metal adjacent to the weld, supplemented by residual restraint and mismatch in the area. It was also concluded that the stabilized alpha layer was present before the welding was accomplished.

CONTENTS

Figures

SECTION I

INTRODUCTION

The original conjugate tank structural test program consisted of three test conditions. However, when structural discrepancies were found during a receiving inspection made by Martin Marietta, the program was revised to include a more detailed inspection with provisions for a structural repair operation prior to structural testing. The test program, as modified, was expanded to five test conditions.

A description of the detailed inspection and repair operation is found in Section II of this report. A complete description of the detailed inspection is found in *Results of Inspection of Conjugate Tankage and Repair Proposal;* published by Martin Marietta Corporation, Technical Report FRPL-TR-69-160 (Final), June 1969. and presented in Appendix I of this report.

As revised, the five planned test conditions were:

Condition 1, Tank Barrel Compression Test;

Condition 2, Hydrostatic Test, 65 psig (Top Dome Pressure);

Condition 3, Stage 0 Boost Test;

Condition 4, Stage II Engine Boost Test;

Condition 5, Hydrostatic Test of Two Tank Configurations.

These five tests were to demonstrate structural capability of the test article through its ability to withstand applied static limit loads and tank internal limit pressures. The tests also provided data which are used to evaluate the behavior of the roll-diffusion-bonded-truss-core structure, and the structural integrity of the overall test article.

Only the Condition-1 and -2 tests were completed. A visual and radiographic inspection after the Condition-2 test identified seven areas of structural failure, one of which was severe enough to cause termination of testing. Section V of this report contains a failure analysis of the areas of structural failure.

The *Test Information Digest and Procedure for Verification Testing of Conjugate Structure*, published by Martin Marietta Corporation, September 1969, describes in detail the manner in which the structural test program was conducted. Test loads and pressures, and descriptions of the test setups for the test conditions that were run are presented in this report. Results and all data from the completed tests are also given, and data pertinent in describing the behavior of the test structure are presented in figures.

SECTION II

PRETEST INSPECTION AND REPAIR

The contract specified that the test specimen be inspected after receipt. The inspection was to provide a basis for the decision on conjugate structure test worthiness, and to determine if any in-transit damage had occurred. The inspection showed no in-transit damage but did reveal a number of structural deficiencies, primarily in welds, creating doubt about the structure's ability to withstand the planned test loads. The results of the inspection were presented to the Air Force during an oral review at Edwards Air Force Base, 1 August 1968. At that time, Martin Marietta asked for direction to undertake a more vigorous inspection, which would include cutting sample plugs from selected welds, evaluating the defects, and determining a repair plan. All work on the contract was stopped until Air Force direction to proceed with the requested course of action was given.

The full description of the inspections and repair proposals is found in *Results of Inspection of Conjugate Tankage and Repair Proposal*, FRPL-TR-69-160 (Final), published by Martin Marietta Corporation, June 1969, and included as Appendix I of this report. The document also included a proposed change in the test conditions.

Repairs consisted of a structural shim modification at the aft skirt to the tank interface, an increase in the size of the skirt Hi-Shear rivets, and the weld-repairing of: (1) local weld discrepancies, (2) cracks in the inside skin of the forward barrel, and (3) sample plug holes taken for examination of the weld beads.

The most significant defects were the severe mismatch of the common dome and forward dome at the Y-frame to the dome weld. The common dome, worst of the two, contained many weld cracks. Repair cost of these areas was prohibitive, and the repair plan decided upon essentially negated the common dome until the last of five scheduled tests. The lack of confidence in the pressure vessel capability, based on weld strengths and mismatch discontinuity stresses, led to the addition of two structural tests to provide a maximum amount of data on the structural capability of the weld-diffusion-bonded-truss-core structure, with minimum cost and minimum risk of catastrophic failure.

SECTION III

CONDITION 1 - TANK BARREL COMPRESSION TEST

1. TEST OBJECTIVE

The Condition-1 test was run to provide data on the behavior of the roll-diffusion-bonded-truss-core structure of the tank barrels under a compressive load. The design compressive load applied during this test was equivalent to an axial load of 269,600 lb at the aft end of the aft tank barrel.

The test was run with the conjugate tankage in essentially a one-tank configuration. This was necessary because the conjugate tank common dome had unplugged weld specimen sample holes. Tank pressure was 10 psig (top dome pressure), which provided the minimum acceptable pressure required for barrel stabilization and also resulted in a low failure probability for the tank as a pressure vessel.

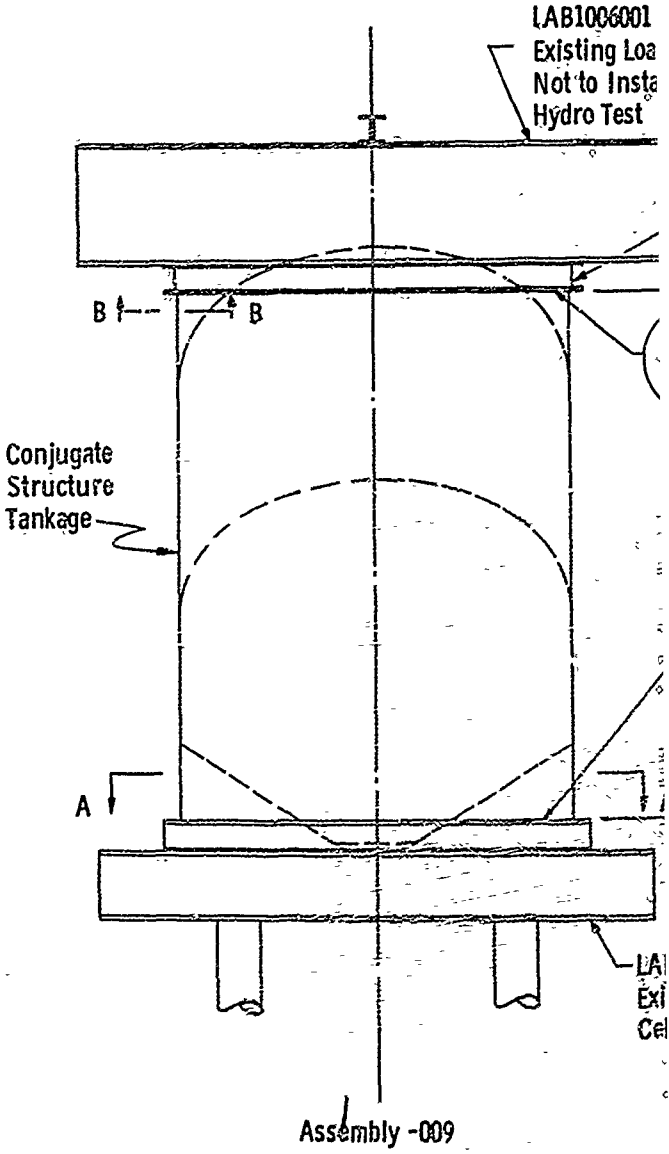
2. TEST SETUP

The test specimen was installed in Cell E-1 of the Vertical Test Facility shown in Fig. 1, 2 and 3. The aft interface of the test specimen (Sta 478) was attached to the base fixture with 40 NAS1004 bolts. A loading head was attached to the forward skirt in the same manner as the joint at the base. The loading head had axial load and moment applied to it through four axial load lines (arrangements of hydraulic jack, load cell and steel linkage), deriving moment by differential axial loads. The required shear load was also applied to the loading head.

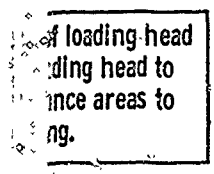
The loading head was weighed, and its dead weight was counterbalanced during instrumentation zero and test loading. This counterbalancing was accomplished by attaching a hydraulic jack, load cell, and structural steel straps to the loading head and a fixed overhead beam arrangement. The load in the counterbalance hydraulic jack was maintained at the prescribed constant load during the test.

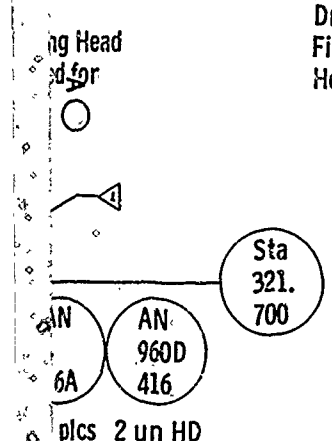
The test specimen was filled with water and pressurized with compressed air. The plumbing associated with filling and pressurizing the tanks is shown in Fig. 4.

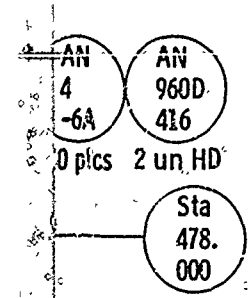
Note: 1. Remove tabs from inside ring, report any other test article dome interfc structural lab, enginee



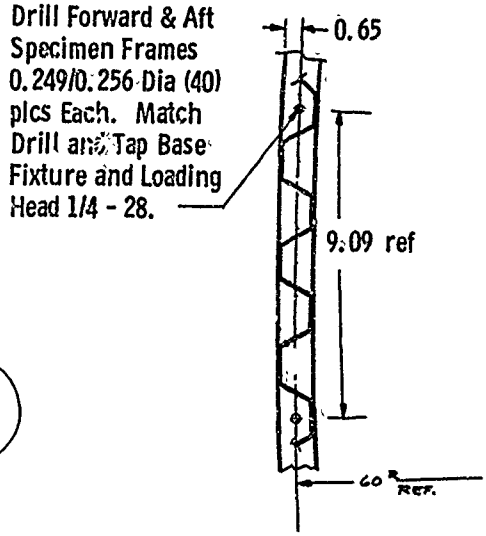
A



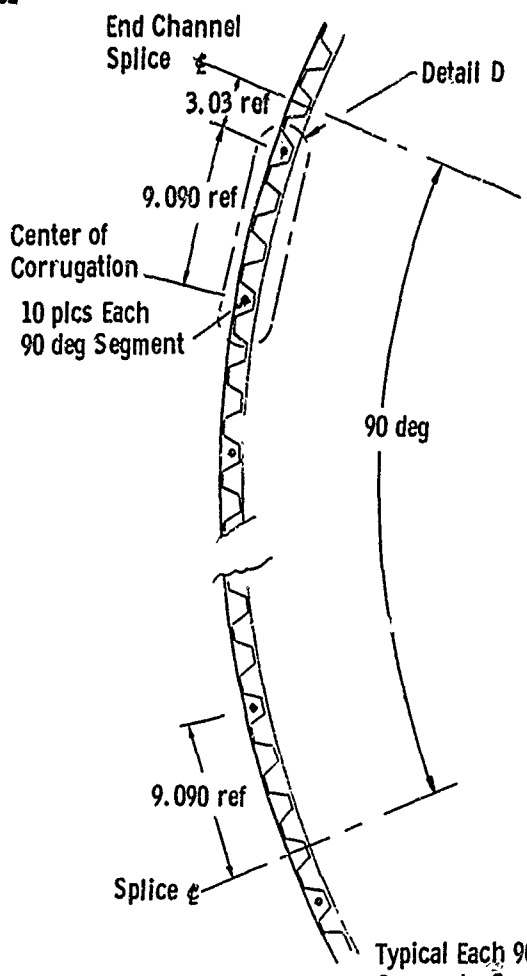




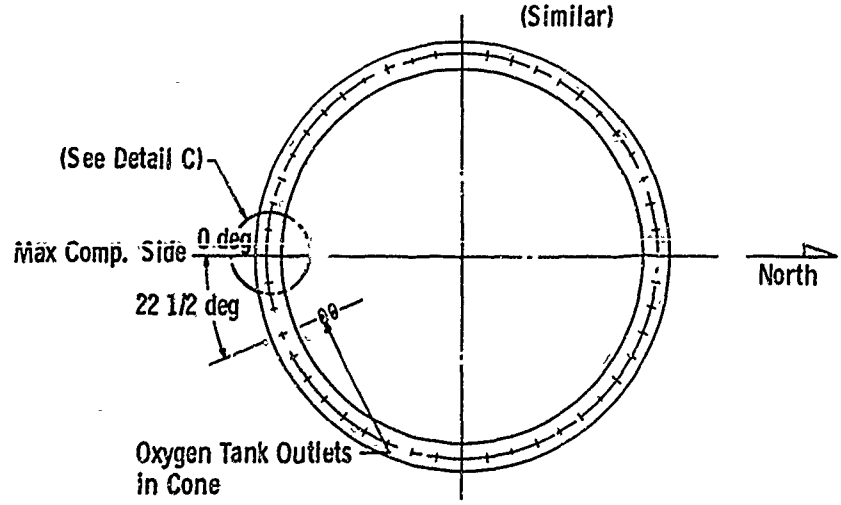
06002
ng Base Fixture,
-1



Detail D
No Scale



Typical Each 90 deg
Segment Section B-B
(Shown) Detail C
(Similar)



Section A-A

Figure 1 Test Setup Drawing

B

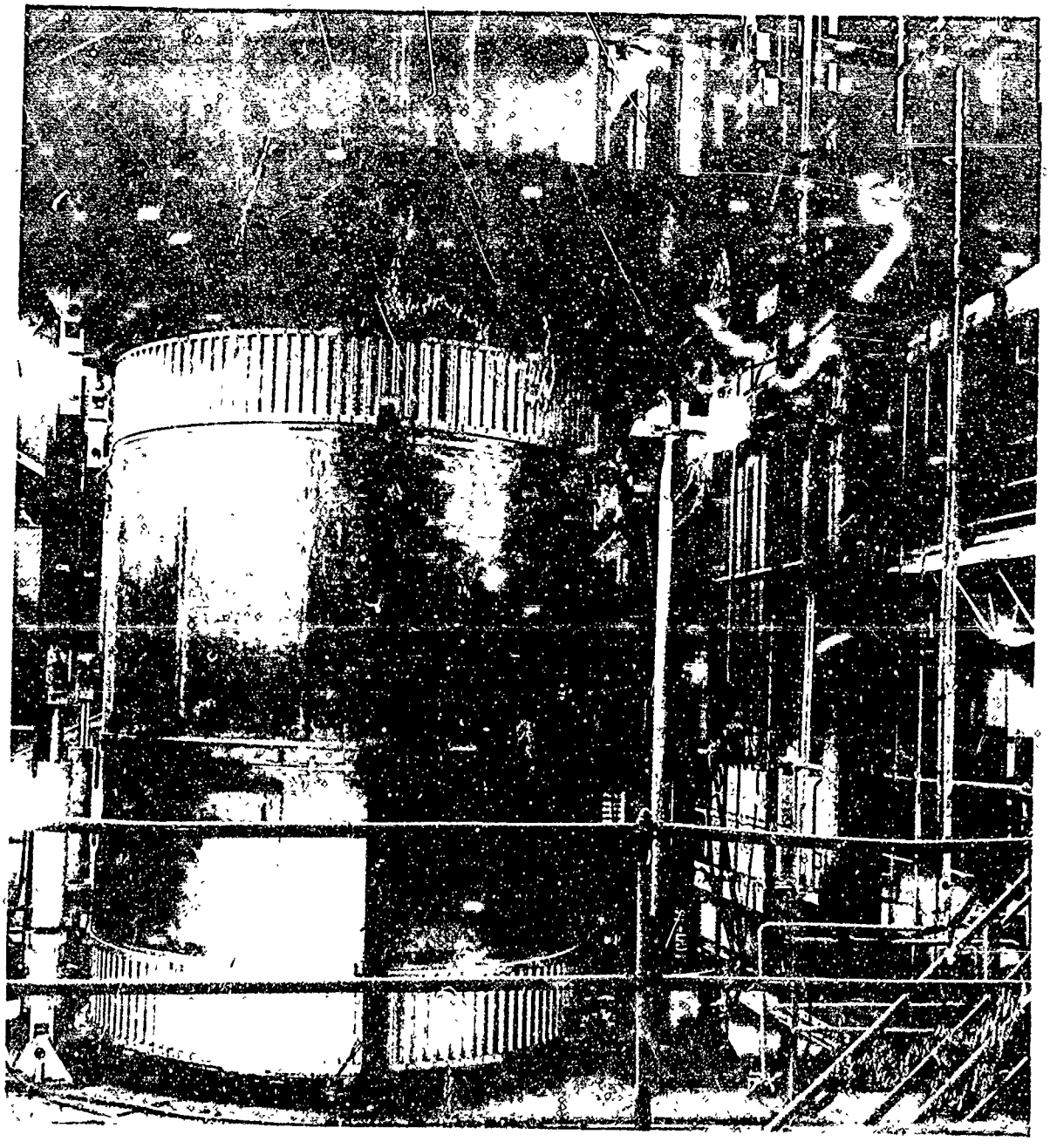


Figure 2 Photograph of Test Setup (Side View)

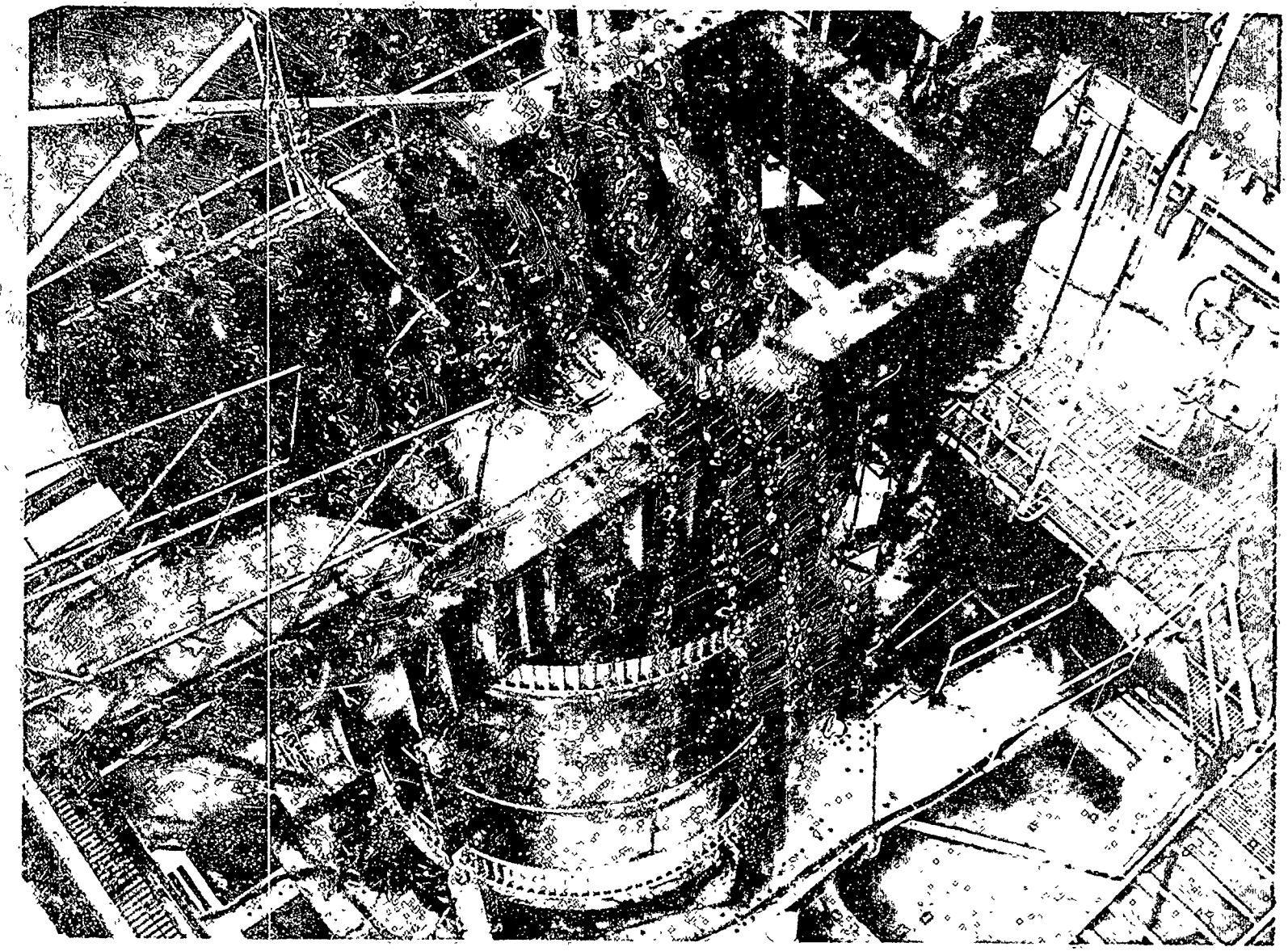
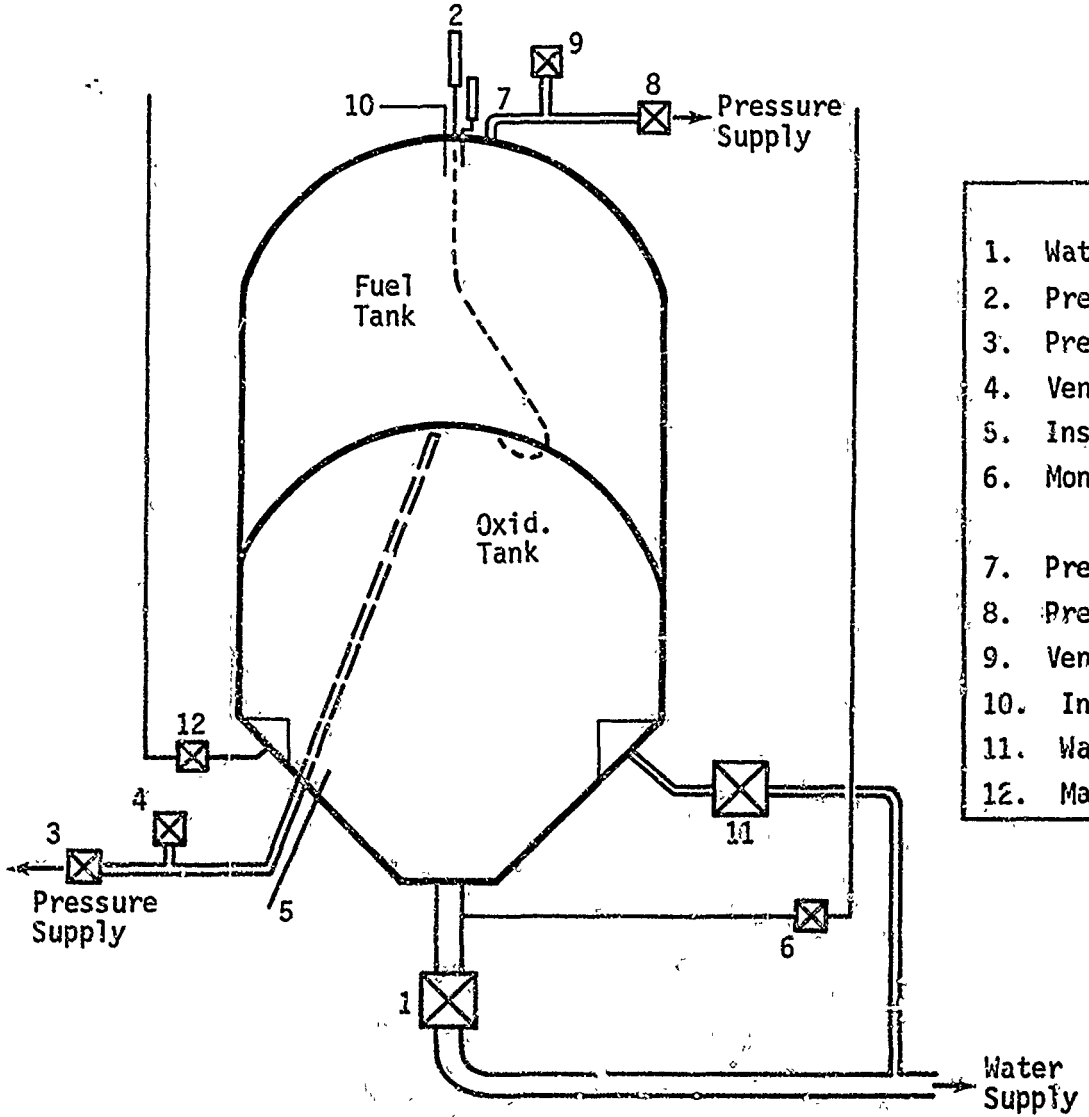


Figure 3 Photograph of Test Setup (Top View)



Oxidizer Tank Plumbing

1. Water Fill and Drain
2. Pressure Transducer
3. Pressurization Valve
4. Vent Valve
5. Instrumentation Feedthrough
6. Monometer Valve

Fuel Tank Plumbing

7. Pressure Transducer
8. Pressurization Valve
9. Vent Valve
10. Instrumentation Feedthrough
11. Water Fill and Drain
12. Manometer Valve

Figure 4 Plumbing Schematic

3. TEST LOADS

The test specimen was filled (Sta 316) with 62,000 lb of water and pressurized to 10 psig (top dome pressure). Maximum loads applied at Sta 321.7 were 222,700 lb (axial), 1,589,000 in.-lb (bending moment), and 24,450 lb (shear). These loads were applied simultaneously in increments to 20, 40, 60, 80, 90, 95 and 100% of the maximum loads, while the test specimen was pressurized to 10 psig. Instrumentation data were obtained at each increment of load.

4. INSTRUMENTATION

a. Strain Gages. The installation of 138 electrical resistance strain gages on the specimen is shown in Fig. 5. The individual strain gage output was recorded on magnetic tape by a low-level analog-to-digital data logging system. The tape was then used in an IBM 360/30 computer to provide a stress tabulation. During the test, data from each strain gage were recorded independent of other gages. Rosette gage data were reduced to principal strains and directions after the test completion.

b. Deflection Transducers. Seventeen deflection transducers were installed on the test specimen. The effects of the linear displacement on the electrical transducers were recorded by a digital printout system, and the following locations and directions were recorded:

1) Forward Y-ring, Sta 345.2; four points, 90 deg apart around the tank circumference, reading radially outward;

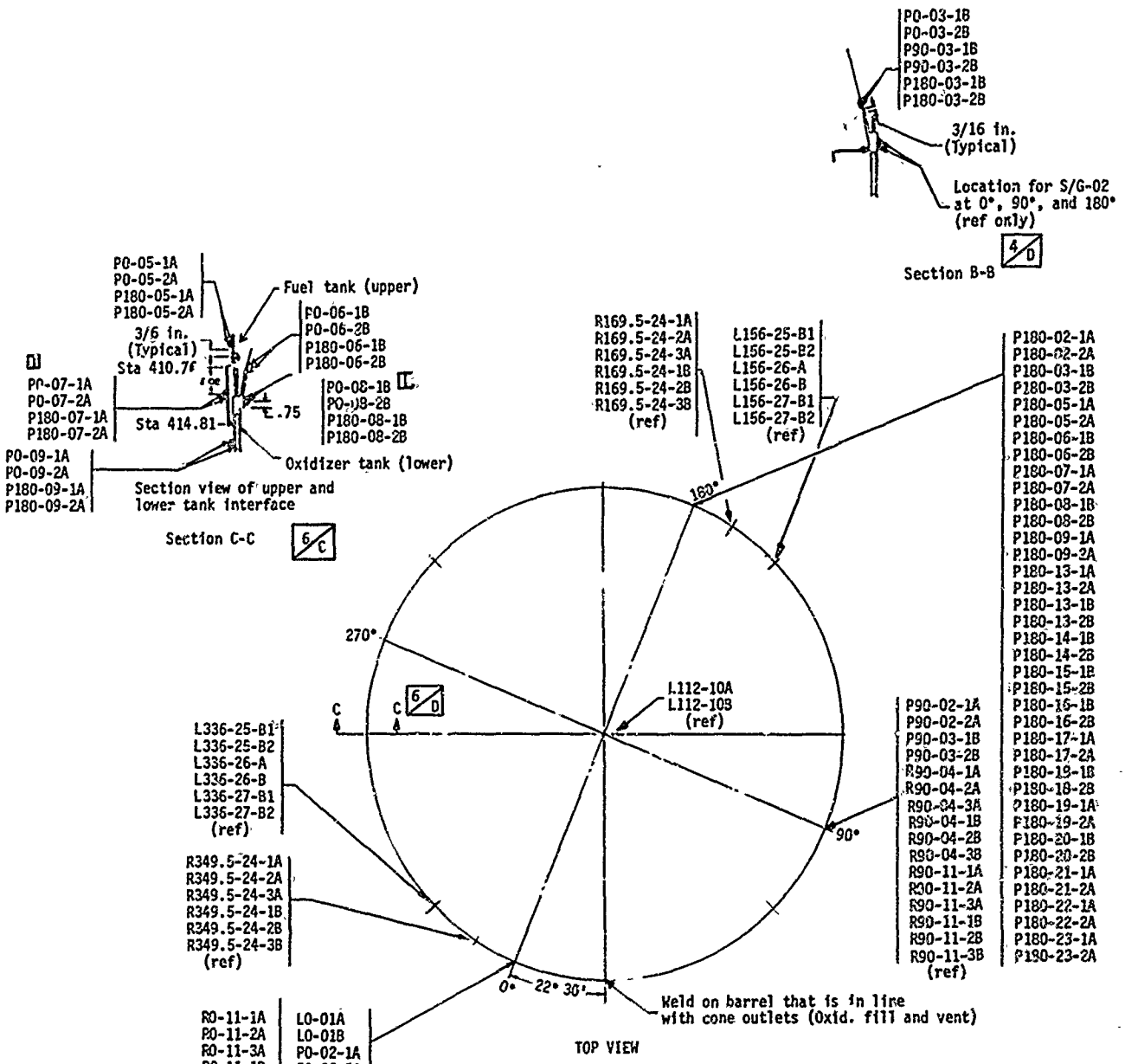
2) Intermediate Y-ring, Sta 413.8; four points, 90 deg apart around the tank circumference, reading radially outward;

3) Aft Y-ring, Sta 455.61; four points, 90 deg apart around the tank circumference, reading radially outward;

4) Four points, 90 deg apart around tank circumference, reading axially relative to the forward Y-ring as to the aft Y-ring;

5) Engine mounting ring, approximately Sta 485, reading axially.

Deflection locations are shown in Fig. 6.


PO-03-1B
PO-03-2B
P90-03-1B
P90-03-2B
P180-03-1B
P180-03-2B
3/16 in. (Typical)
Location for S/G-02 at 0°, 90°, and 180° (ref only)
4/D
Section B-B
PO-05-1A
PO-05-2A
P180-05-1A
P180-05-2A
Fuel tank (upper)
3/6 in. (Typical)
Sta 410.76
PO-06-1B
PO-06-2B
P180-06-1B
P180-06-2B
PO-07-1A
PO-07-2A
P180-07-1A
P180-07-2A
Sta 414.81
.75
PO-08-1B
PO-08-2B
P180-08-1B
P180-08-2B
PO-09-1A
PO-09-2A
P180-09-1A
P180-09-2A
Oxidizer tank (lower)
Section view of upper and lower tank interface
Section C-C
5/C
R169.5-24-1A
R169.5-24-2A
R169.5-24-3A
R169.5-24-1B
R169.5-24-2B
R169.5-24-3B
(ref)
L156-25-B1
L156-25-B2
L156-26-A
L156-26-B
L156-27-B1
L156-27-B2
(ref)
P180-02-1A
P180-02-2A
P180-03-1B
P180-03-2B
P180-05-1A
P180-05-2A
P180-06-1B
P180-06-2B
P180-07-1A
P180-07-2A
P180-08-1B
P180-08-2B
P180-09-1A
P180-09-2A
P180-13-1A
P180-13-2A
P180-13-1B
P180-13-2B
P180-14-1B
P180-14-2B
P180-15-1B
P180-15-2B
P180-16-1B
P180-16-2B
P180-17-1A
P180-17-2A
P180-18-1B
P180-18-2B
P180-19-1A
P180-19-2A
P180-20-1B
P180-20-2B
P180-21-1A
P180-21-2A
P180-22-1A
P180-22-2A
P180-23-1A
P180-23-2A
Sta. 410
Sta 41
160°
270°
90°
0°
22° 30'
C
C
6/D
L112-10A
L112-10B
(ref)
L336-25-B1
L336-25-B2
L336-26-A
L336-26-B
L336-27-B1
L336-27-B2
(ref)
R349.5-24-1A
R349.5-24-2A
R349.5-24-3A
R349.5-24-1B
R349.5-24-2B
R349.5-24-3B
(ref)
P90-02-1A
P90-02-2A
P90-03-1B
P90-03-2B
P90-04-1A
P90-04-2A
P90-04-3A
P90-04-1B
P90-04-2B
P90-04-3B
P90-11-1A
P90-11-2A
P90-11-3A
P90-11-1B
P90-11-2B
P90-11-3B
(ref)
Weld on barrel that is in line with cone outlets (Oxid. fill and vent)
TOP VIEW
RO-11-1A
RO-11-2A
RO-11-3A
RO-11-1B
RO-11-2B
RO-11-3B
PO-13-1A
PO-13-2A
PO-13-1B
PO-13-2B
PO-14-1B
PO-14-2B
PO-15-1B
PO-15-2B
PO-16-1B
PO-16-2B
PO-17-1A
PO-17-2A
PO-18-1B
PO-18-2B
PO-19-1A
PO-19-2A
PO-20-1B
PO-20-2B
PO-21-1A
PO-21-2A
PO-22-1A
PO-22-2A
PO-23-1A
PO-23-2A
LO-01A
LO-01B
PO-02-1A
PO-02-2A
PO-03-1B
PO-03-2B
RO-04-1A
RO-04-2A
RO-04-3A
RO-04-1B
RO-04-2B
RO-04-3B
PO-05-1A
PO-05-2A
PO-06-1B
PO-06-2B
PO-07-1A
PO-07-2A
PO-08-1B
PO-08-2B
PO-09-1A
PO-09-2A
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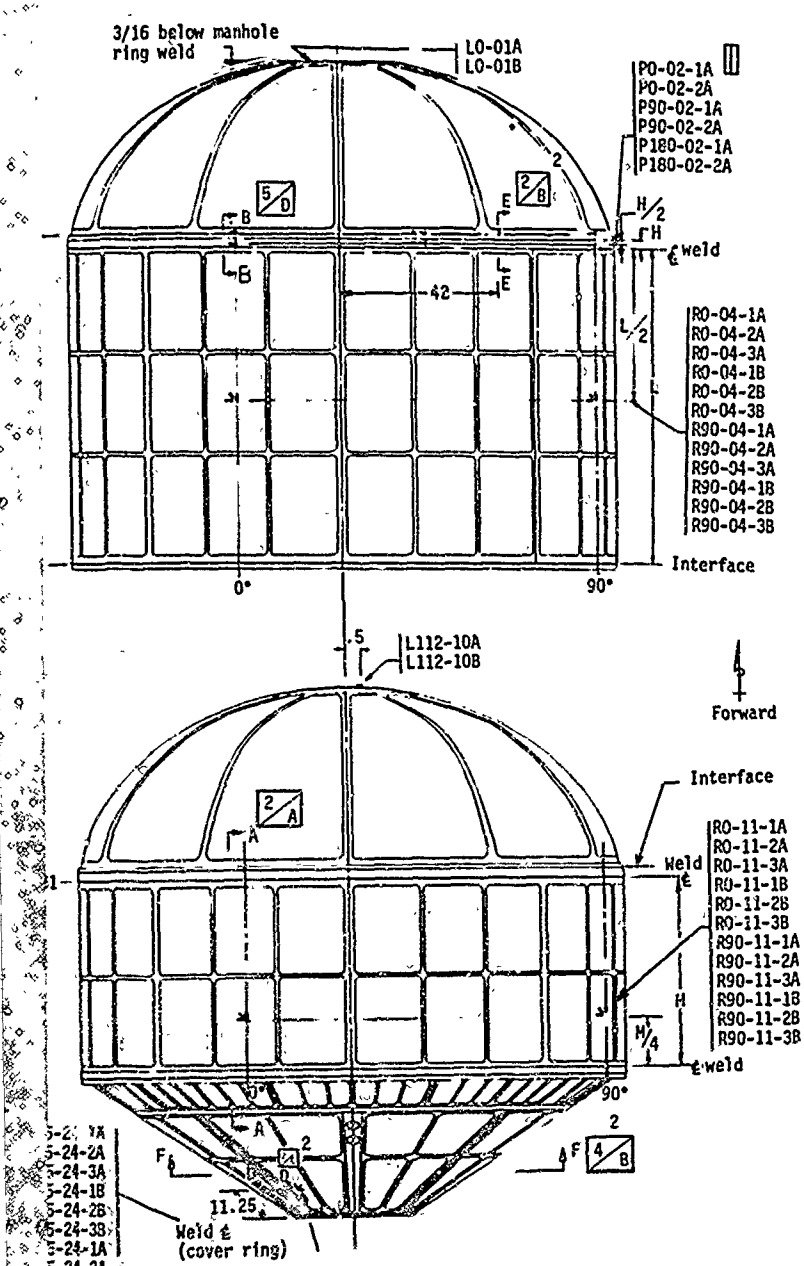
R16

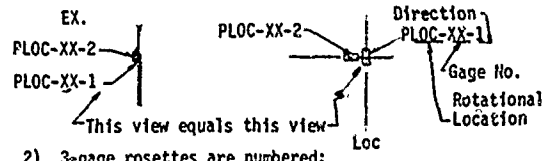
A



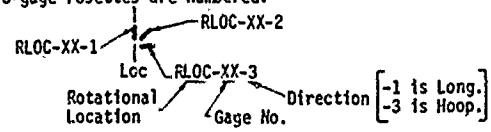
SEPARATED FRONT VIEW

General Notes:

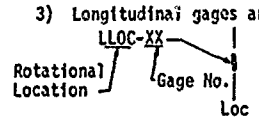
1) Where 2-gage rosettes are used, the longitudinal one is centered at the position shown and the hoop gage is located off-side as close as possible.



2) 3-gage rosettes are numbered:

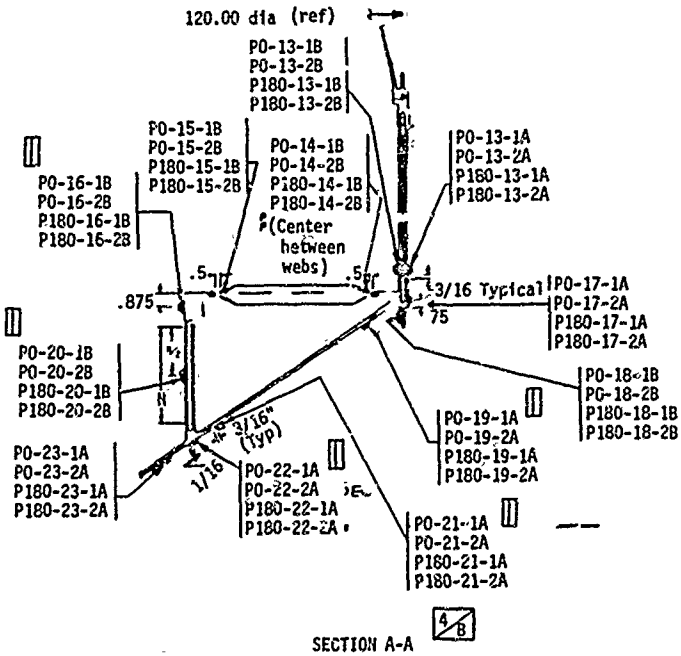


3) Longitudinal gages are designated:



4) A indicates outsides gage, B indicates inside gage.

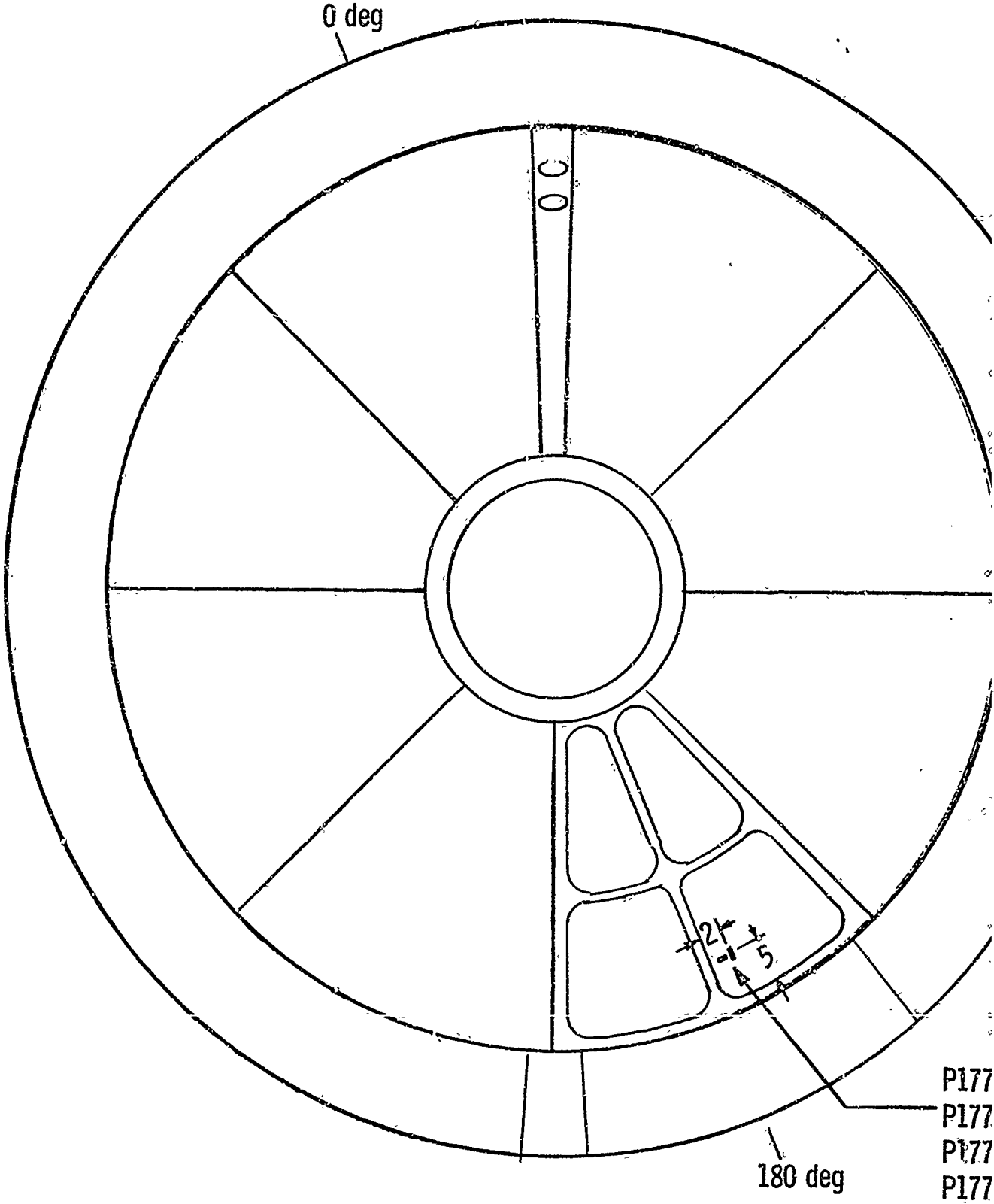
5) In case of weld bead interference, move location perpendicular to the weld so that ¼ in. clearance between gage and weld edge is obtained.



SECTION A-A

Fig. 5 Strain Gage Locations Conjugate Structure

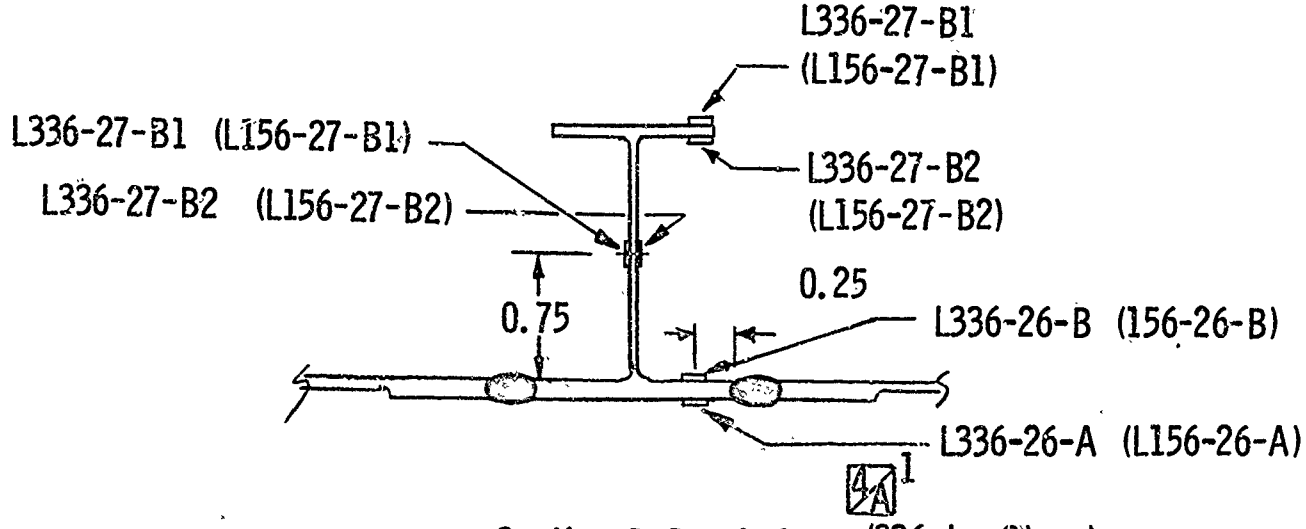
B



3/A 1

View F-F

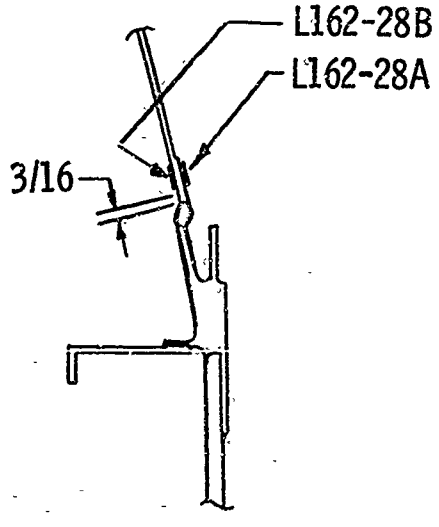
A



4A 1

Section D-D 4 A (336 deg Show)
(156 deg Similar)

Full Scale

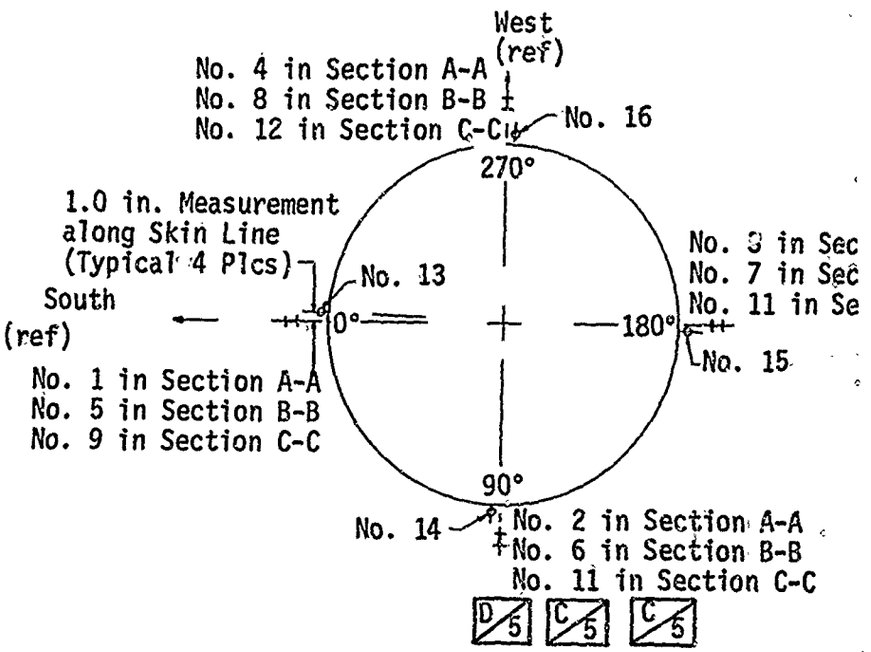


3D 1

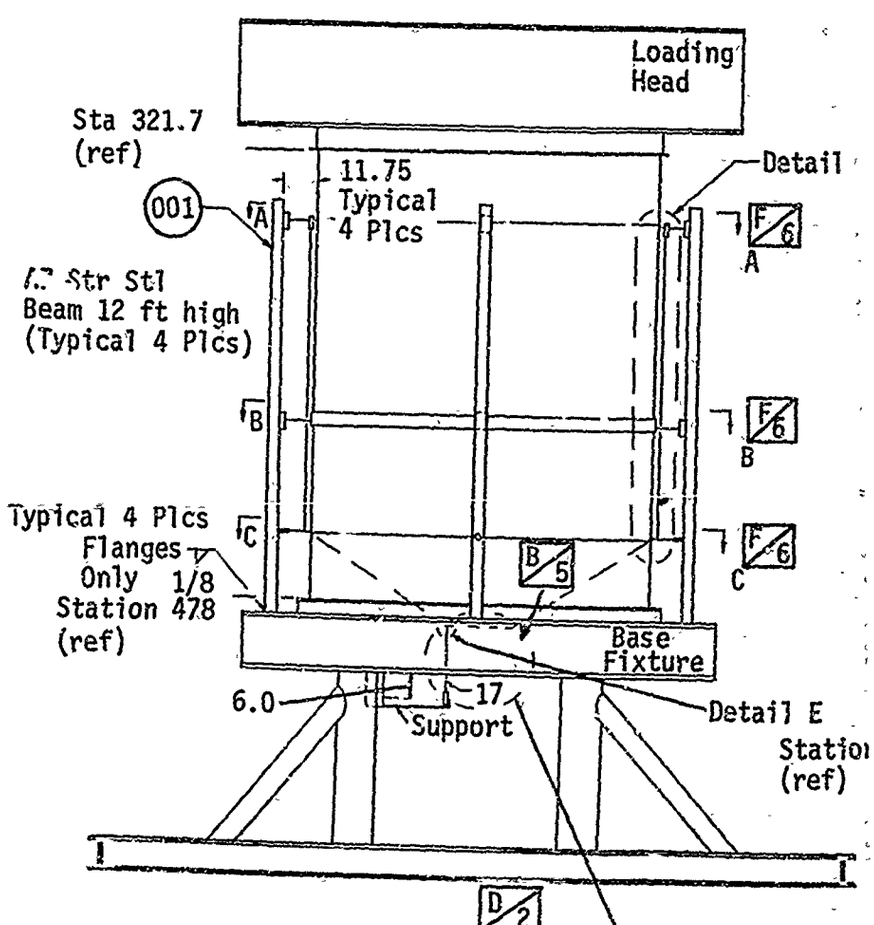
Section E-E

2-1A
2-2A
2-1B
2-2B

Figure 5 Strain Gage Locations

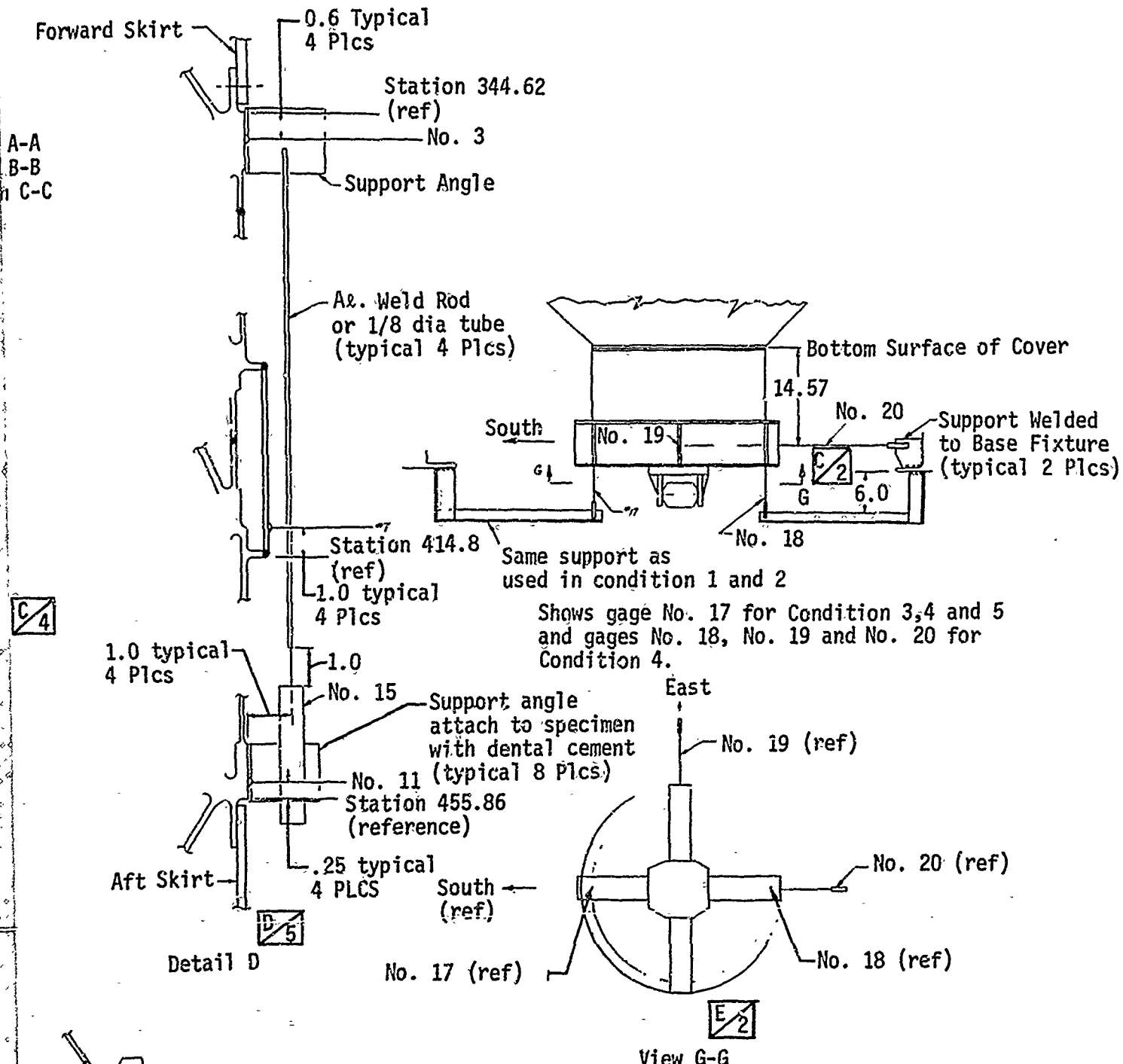


Section A-A, B-B and C-C



Detail F
For test Condition 3,4 and 5

A



Notes:
1. Deflection gages numbered 1 thru 8 are boxes.
2. Deflection gages numbered 9 thru 20 are transducers.
3. Hook up gages 1 thru 17 for test conditions 1,2,3 and 5.
4. Hook up gages 1 thru 21 for test condition 4.
5. All measurements in inches.

Figure 6 Deflection Gage Locations

B

c. Pressure Transducers. The upper dome pressure in each tank was measured by two pressure transducers and a Bourdon gage. There were a total of six pressure readouts for the conjugate structure, three for each tank. One transducer from each upper dome was electrically connected to a Bristol Indicator located in the test control room. These were the primary pressure readouts during the tests. The Bourdon gage pressure readouts, also located in the test control room, were back up measurements to that registered by the pressure transducer. The other pressure transducer, measuring top dome pressure, was electrically connected to a millivolt data logger that recorded indicated values for conversion into true pressure values. The recorded pressure-values data can be found in the stress tabulations presented in the Condition-1 section of the appendix.

5. TEST DATA

Test data (i.e., stress levels, pressure readings and deflection readings) were recorded at 5 psig and 10 psig top dome pressure. Loads were applied with the tank pressure at 10 psig. Test data were recorded at load increments of 20, 40, 60, 80, 90, and 100% of the maximum load for this test condition.

A copy of the complete stress tabulation for the Condition-1 test is presented in Appendix II. Raw deflections are shown in Table I.

Table I Deflections Recorded During Condition-1 Test

Deflection gage number	Tanks full	Test increments								
		5 psig	10 psig	20%	40%	60%	80%	90%	95%	100%
1	-0.03	-0.03	-0.03	-0.05	-0.08	-0.10	-0.13	-0.13	-0.13	-0.15
2	-0.02	-0.02	-0.02	-0.02	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03
3	-0.03	-0.03	-0.03	-0.03	-0.02	-0.01	0.00	0.00	0.00	0.00
4	-0.04	-0.05	-0.04	-0.04	-0.04	-0.04	-0.02	-0.02	-0.02	-0.03
5	-0.03	-0.04	-0.04	-0.06	-0.06	-0.08	-0.10	-0.09	-0.12	-0.11
6	-0.04	-0.05	-0.08	-0.06	-0.07	-0.06	-0.06	-0.05	-0.05	-0.06
7	-0.03	-0.04	-0.05	-0.05	-0.05	-0.04	-0.04	-0.04	-0.04	-0.04
8	-0.04	-0.05	-0.05	-0.05	-0.06	-0.07	-0.07	-0.06	-0.06	-0.07
9	+0.011	+0.017	+0.023	+0.019	+0.016	+0.011	+0.008	+0.005	+0.005	+0.003
10	+0.010	+0.016	+0.022	+0.023	+0.024	+0.024	+0.025	+0.025	+0.026	+0.025
11	+0.010	+0.011	+0.017	+0.018	+0.020	+0.021	+0.023	+0.023	+0.024	+0.024
12	+0.007	+0.015	+0.021	+0.021	+0.023	+0.023	+0.023	+0.023	+0.024	+0.024
13	-0.009	-0.003	-0.001	-0.012	-0.024	-0.037	-0.049	-0.055	-0.059	-0.061
14	-0.077	-0.005	-0.003	-0.006	-0.009	-0.012	-0.018	-0.020	-0.022	-0.023
15	-0.005	-0.009	-0.006	-0.010	-0.012	-0.013	-0.017	-0.019	-0.020	-0.021
16	-0.009	-0.009	-0.005	-0.011	-0.017	-0.021	-0.026	-0.030	-0.032	-0.033
17	-0.010	-0.040	-0.058	-0.060	-0.064	-0.065	-0.069	-0.067	-0.070	-0.069

NOTE: 1. Accuracy: ±0.01 on 0.00 readings and ±0.001 on 0.000 readings.

2. Minus sign indicates specimen deflection is toward the gage. Plus sign indicates specimen deflection is away from the gage. (Refer to Fig. 6 for deflection gage locations.)

An example of how to read the stress tabulation is as follows:

Assume one wants to know the stresses recorded by strain gage P0-13-1A. (Computer tabulation runs show gage numbers without hyphens; Appendix II.) This strain gage registers longitudinal strain, and is located at approximately Sta 453 on the aft end of the aft barrel on the exterior of the specimen. (Figure 5 presents strain gage locations and numbers.) Using the strain gage number P0-13-1A, enter the tabulation and find P0-13-1A. The left-hand column labeled TEST identifies 0000, which is instrumentation zero, 1000 is tanks full of water, 1005 is 5 psig, 1010 is 10 psig. Next column labeled COND identifies 0020, 0040, 0060, 0080, 0090, 0095 and 0100, which are percents of applied loads. The number 0021 identifies a set reading at 20% after being at the 100% level. The HR/MN/SEC column identifies the time of recording. Notice that each gage is scanned approximately five times at each data recording. If one is interested in P0-13-1A at 20% load, the reading would be approximately 5550 psi compression (minus sign after numerals indicates compression). The tabulation also contains P1 and P2, which are pressure recordings taken at the apex of the common dome (P1) and at the apex of the forward dome (P2). Under the column labeled P2, a tabulation reading of 1018.00 means the top dome pressure was 10.18 psig less instrumentation zero when the recording was made.

6. TEST RESULTS

Data on the behavior of the roll-diffusion-bonded-truss-core structure of the tank barrel were recorded from the individual legs of rosette strain gages. The rosette strain gages are identified as: R0-4-1A, 2A and 3A; R0-4-1B, 2B and 3B; R90-4-1A, 2A and 3A; R90-4-1B, 2B and 3B; R0-11-1A, 2A and 3A; R0-11-1B, 2B and 3B; R90-11-1A, 2A and 3A; and R90-11-1B, 2B and 3B. The R0-4 and R90-4 gages were located at Sta 378.22, which is the center of the upper tank barrel panel. R0-11 and R90-11 gages were located at Sta 444.67, which is approximately 10 in. forward of the aft end of the aft barrel panel. R0 gages were located on the maximum compression axis and the R90 gages were 90 deg off from the maximum compression axis. Plots of the test stresses recorded from gages R0-4-1A and 3A, R0-4-1B and 3B, R90-4-1A and 3A, R90-4-1B and 3B, R0-11-1A and 3A, R0-11-1B and 3B, R90-11-1A and 3A, and R90-11-1B and 3B are shown in Fig. 7 through 14. Also shown in these figures are plots of predicted analytical stresses for the gages.

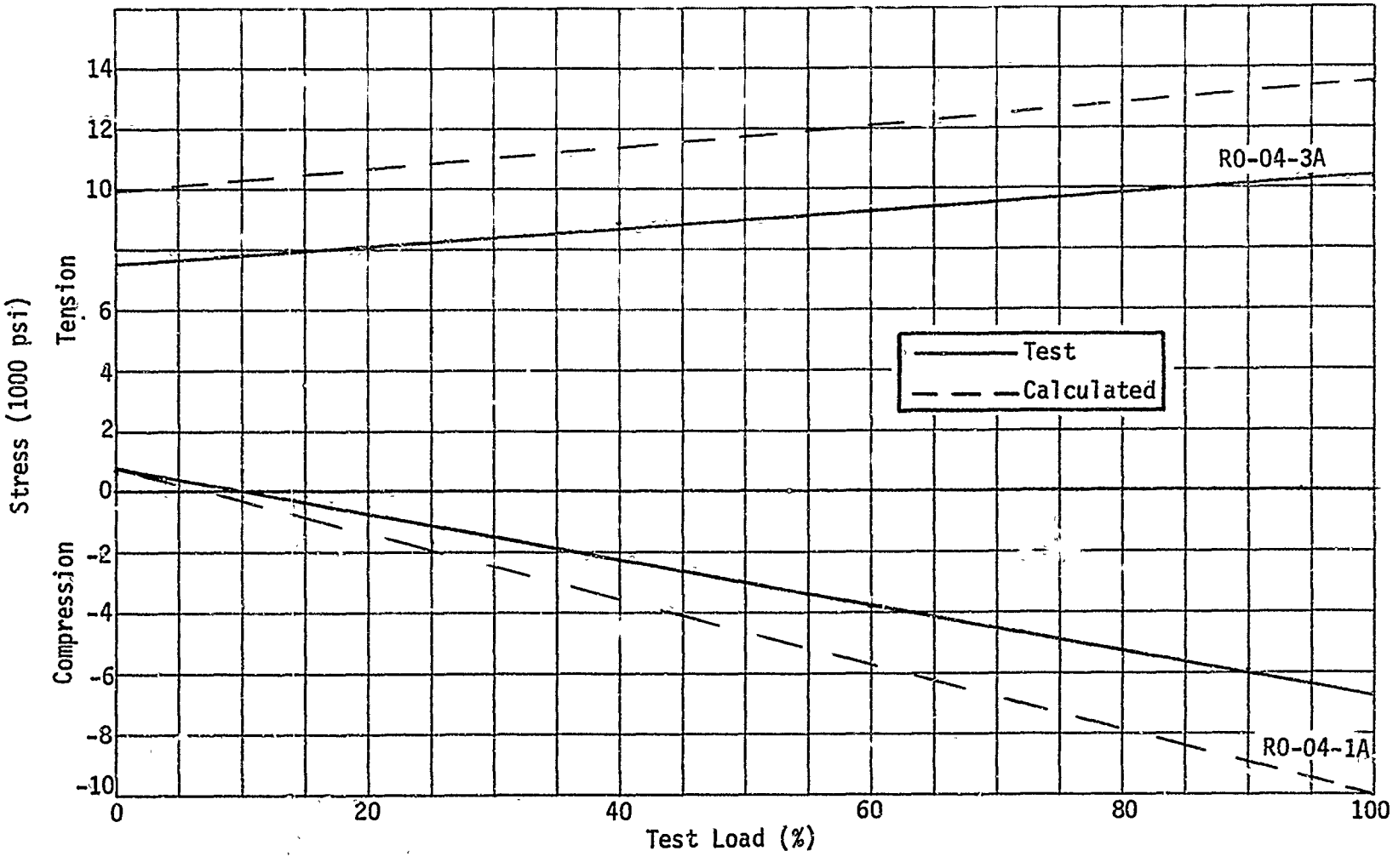


Figure 7 Condition 1 - Stress Plots of RO-04-1A and 3A

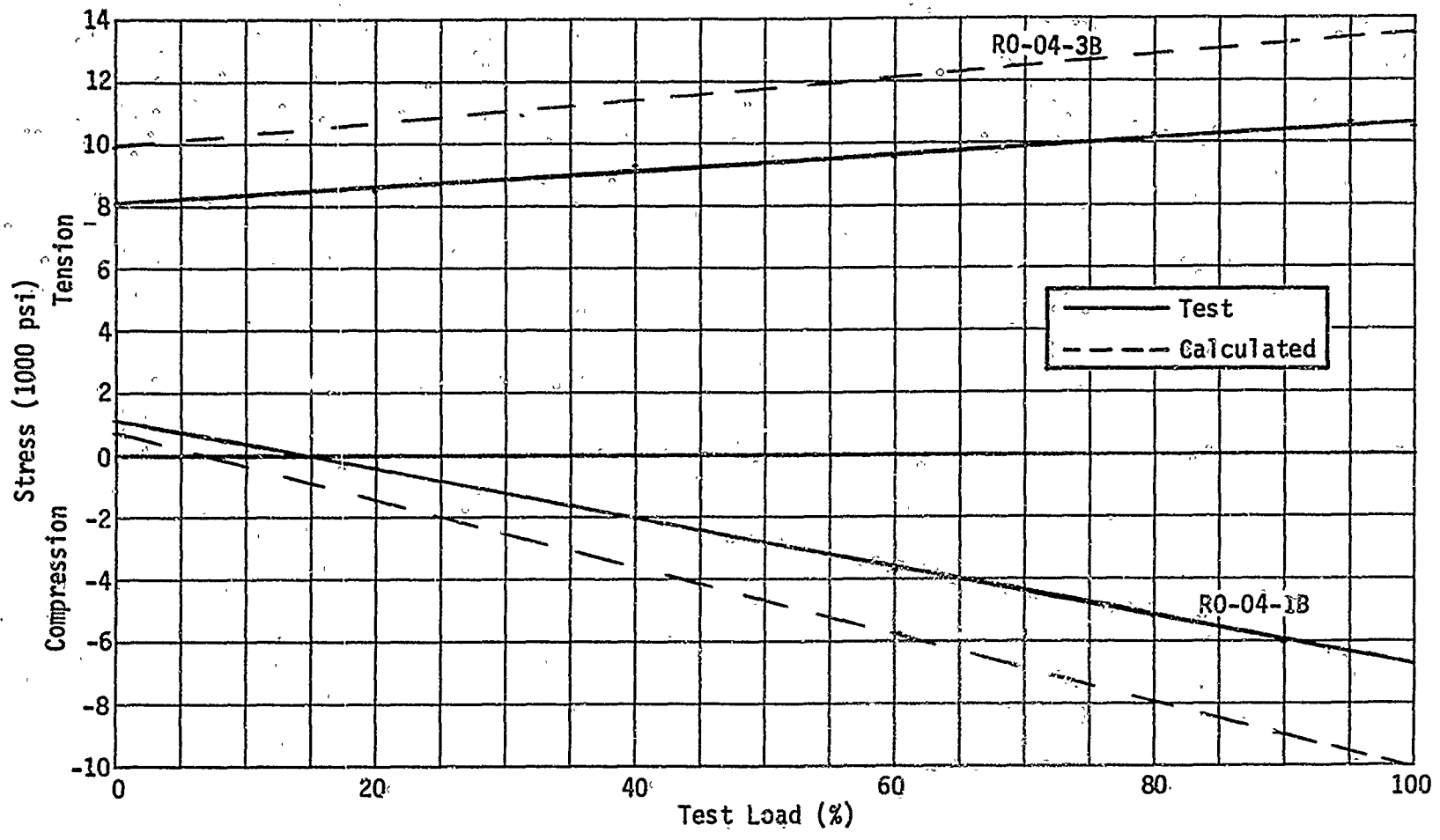


Figure 8 Condition 1 - Stress Plots of RO-04-1B and 3B

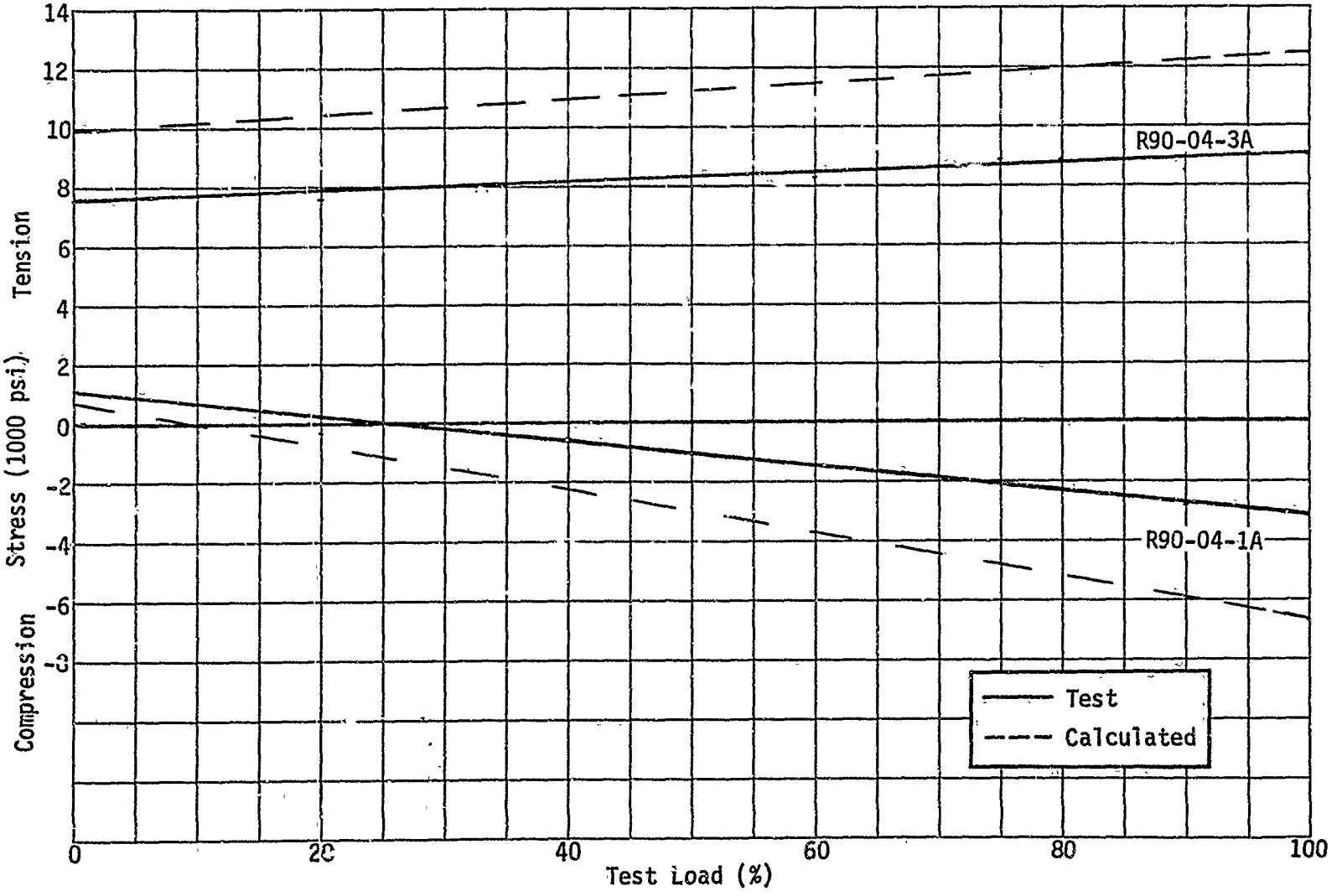


Figure 9 Condition 1 - Stress Plots of R90-04-1A and 3A

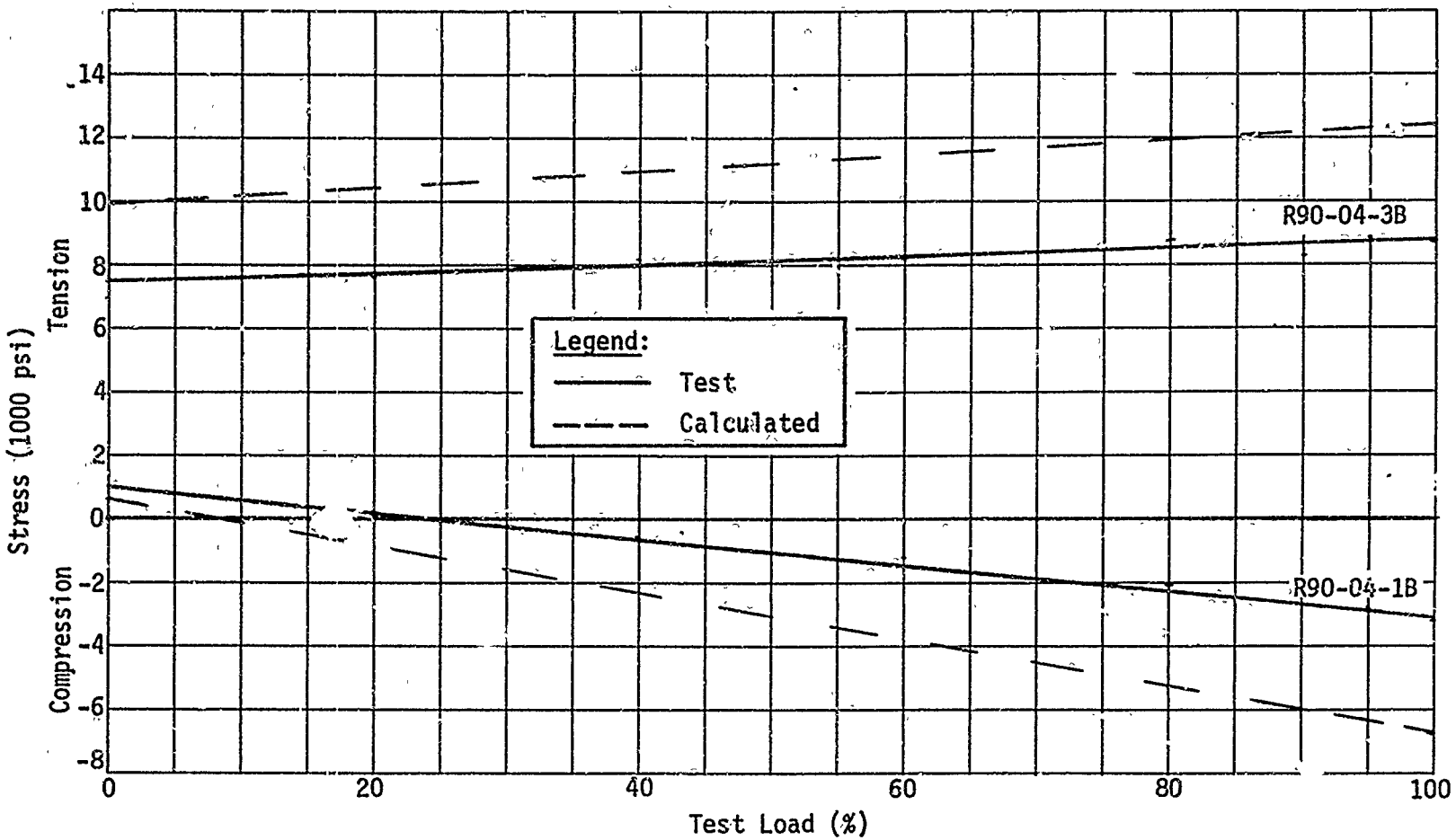


Figure 10 Condition 1 - Stress Plots of R90-04-1B and 3B

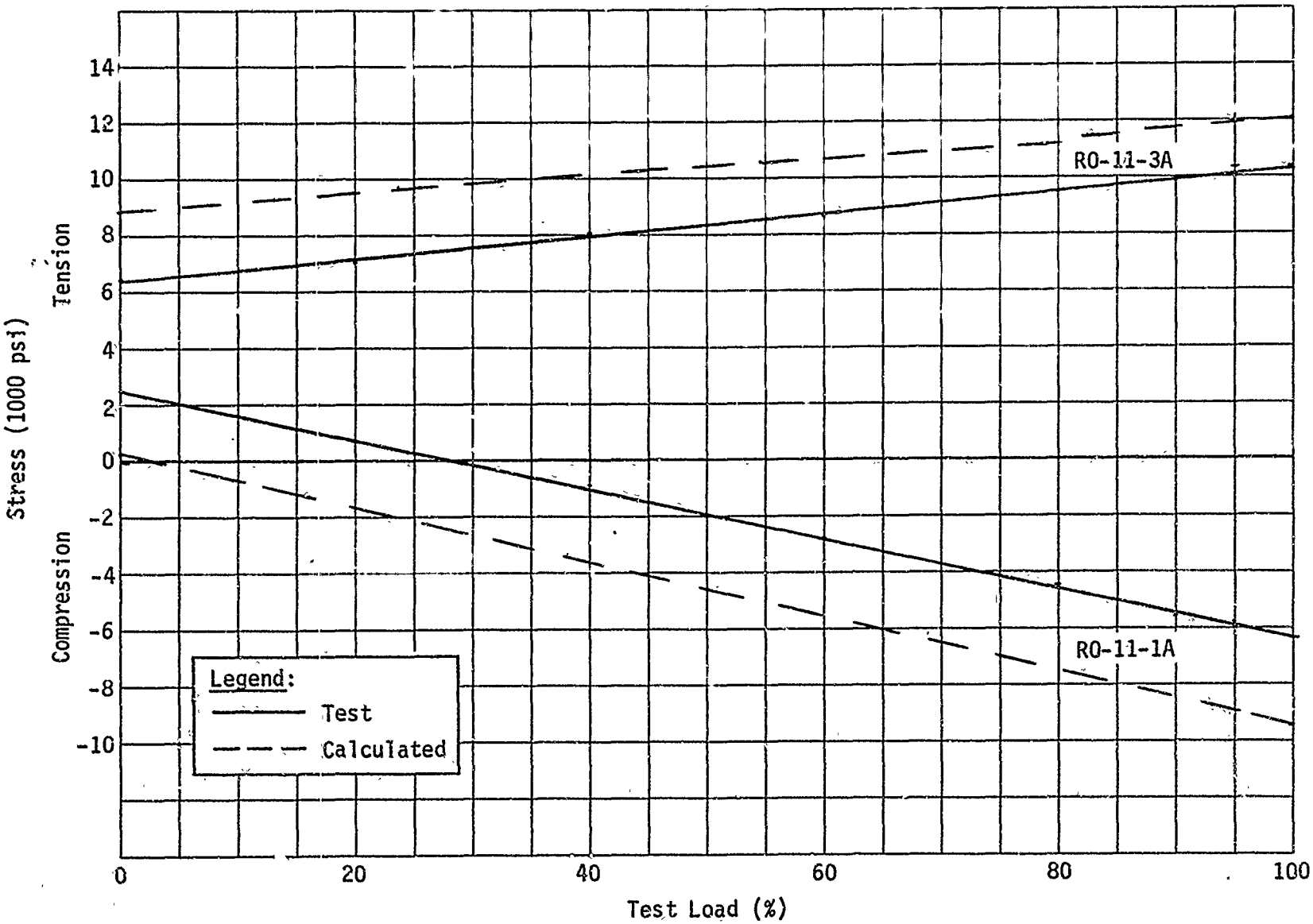


Figure 11 Condition 1 - Stress Plots of RO-11-1A and 3A

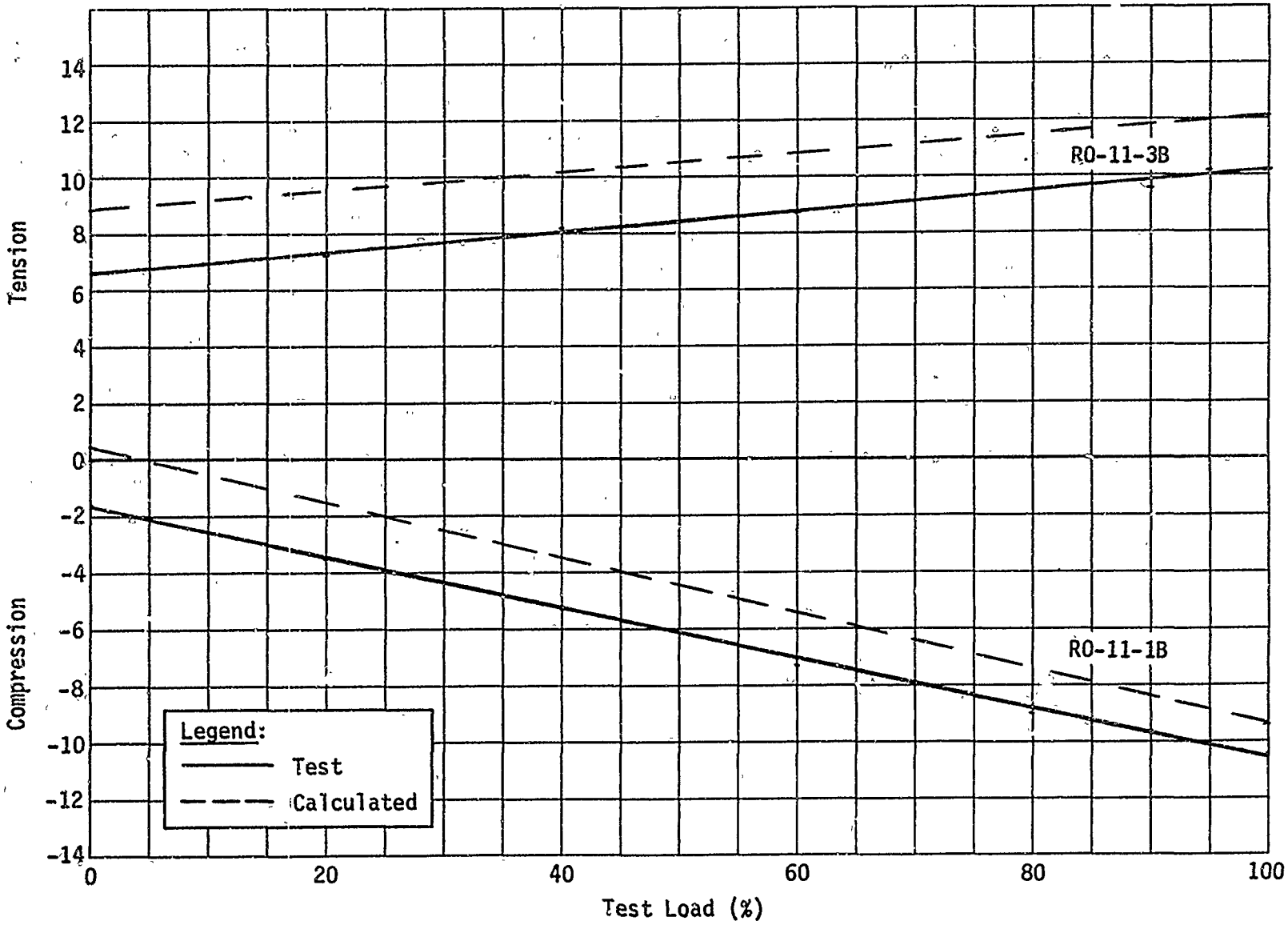


Figure 12 Condition 1 - Stress Plots of RO-11-1B and 3B

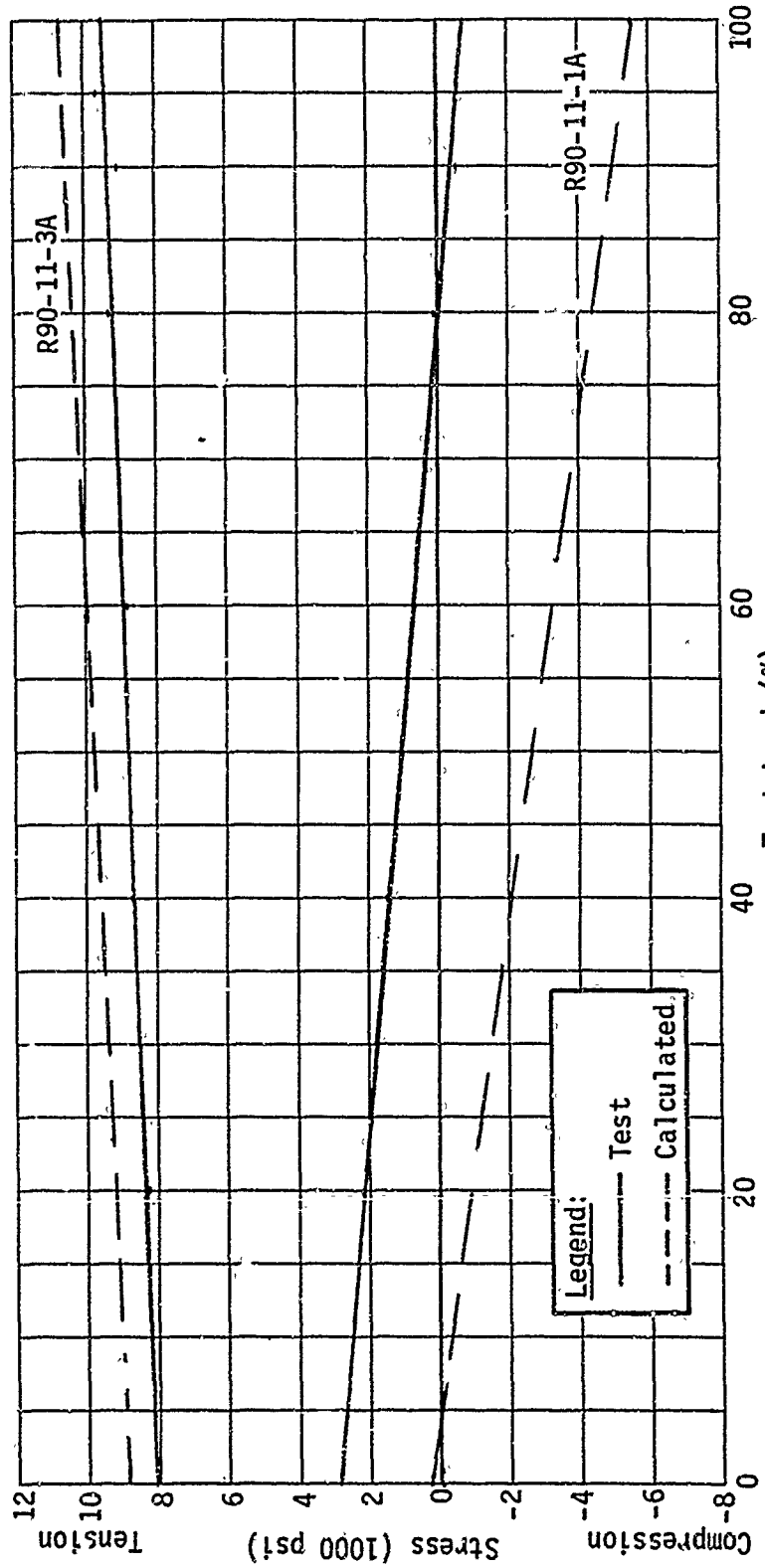


Figure 13 Condition 1 - Stress Plots of R90-11-1A and 3A

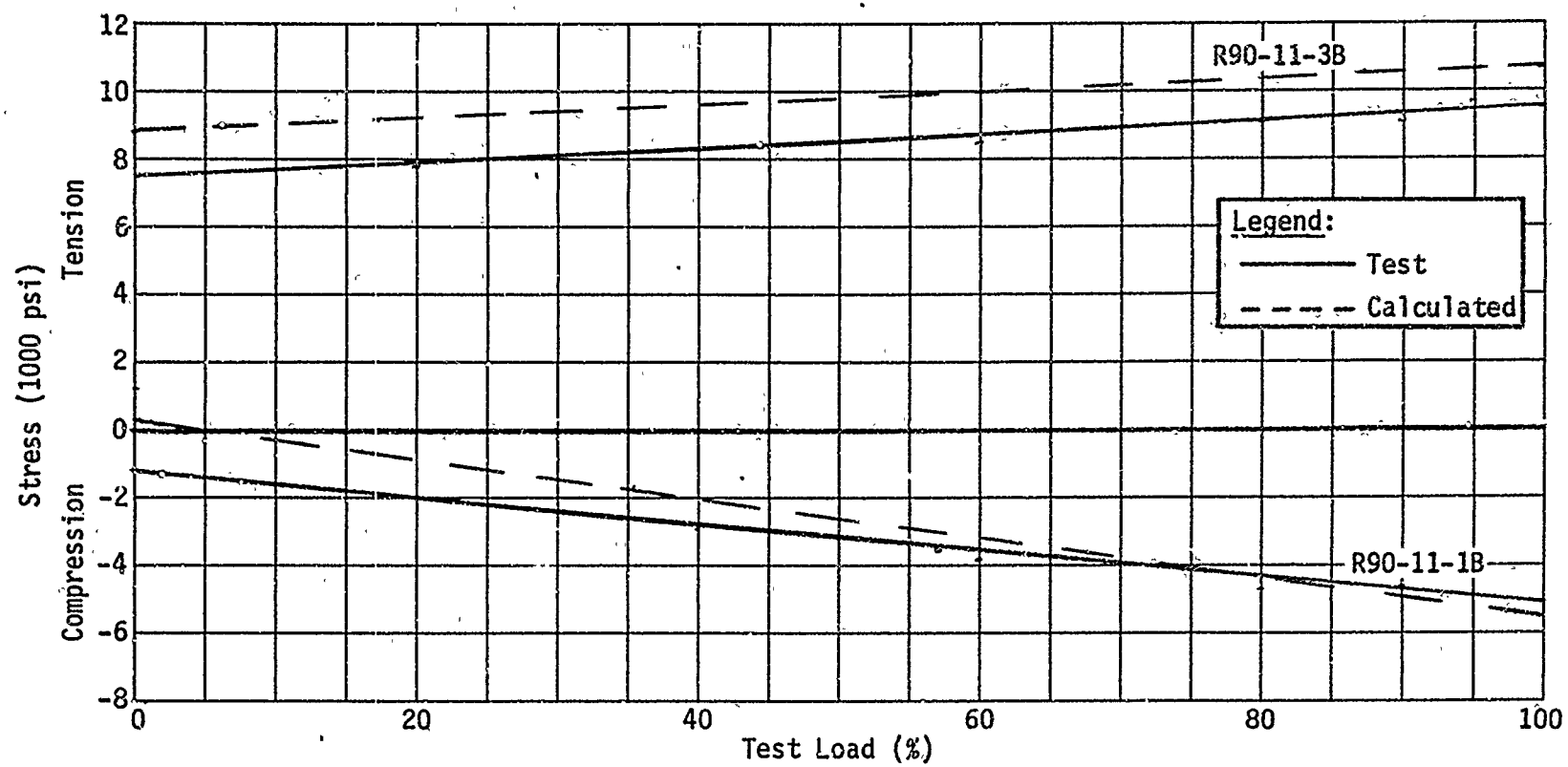
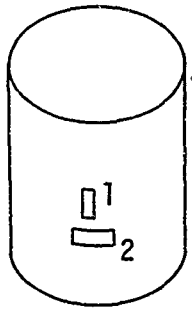


Figure 14 Condition 1 - Stress Plots of R90-11-1B and 3B

Analytical predicted values compare well with the actual test values on the truss-core structure. Both longitudinal (-1 gages) and hoop (-3 gages) read generally lower than the predicted stresses due to the fact that predicted stresses are based on the assumption that barrel skins are design-nominal in thickness. At Sta 378.22 design nominal is 0.032 in.; actual skin thickness is 0.040 in. for the inside skin and 0.041 in. for the outside skin. At Sta 444.67 design nominal is 0.044 in.; actual skin thickness is 0.045 in. for the inside skin and 0.048 in. for the outside skin. To be compatible with the test stresses which include the Poisson effect, the analytical predicted stresses also account for Poisson's effect. The analytical stresses for these areas are determined as follows:



$$f_1 = \frac{pR}{2t} - \frac{\mu pR}{t} - \frac{P}{A} \pm \frac{Mc}{I};$$

$$f_2 = \frac{pR}{t} - \frac{\mu pR}{2t} + \frac{\mu P}{A} \pm \frac{\mu Mc}{I}.$$

where:

f_1 = Longitudinal Stress

f_2 = Hoop Stress

p = Pressure (different for longitudinal and hoop analysis)

P = Load

t = Thickness (different for longitudinal and hoop analysis, but assumed equal when calculating Poisson's effect)

R = Radius

A = Area

M = Moment

I = Moment of Inertia

c = Distance from the Neutral Axis

d = Effective Thickness

μ = Poisson's Ratio

Thickness, area, and moment of inertia at Sta 378.22 and 444.67 are determined according to Fig. 15.

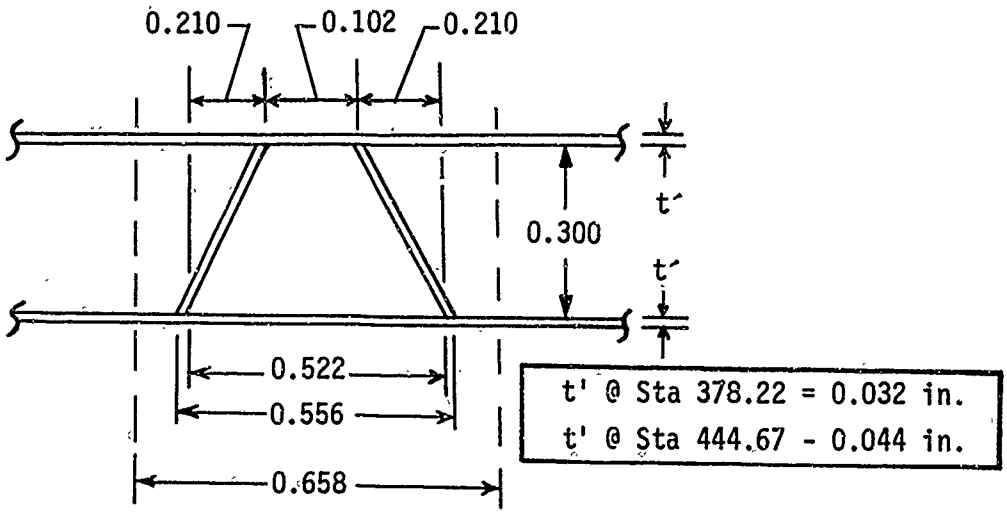


Figure 15 Typical Truss Core Structure Cross Section

$$\text{Area/in.} = d = 2t' + F$$

$$\text{Where } F = \frac{\text{Cross Bar Area}}{\text{in.}}$$

At Sta 378.22:

$$F = \frac{1}{.658}\,(0.300 \times 0.658 - 0.204 \times 0.300 - 4 \times 0.5 \times 0.300 \times 0.210)$$

$$F = 0.300 - \frac{0.1872}{0.658} = 0.0155 \text{ in.}^2/\text{in.}$$

$$d = 0.064 + 0.0155 = 0.0795 \text{ in.}^2/\text{in.}$$

$$A = 2\,\pi\,Rd = 2 \times \pi \times 60 \times 0.0795 = 29.97 \text{ in.}^2$$

$$I = \pi\,R^3 d = \pi\,60^3 \times 0.0795 = 53{,}950 \text{ in.}^4.$$

At Sta 444.67:

$$d = 2t' + F$$

$$d = 0.088 + 0.0155 = 0.1035 \text{ in.}^2/\text{in.}$$

$A = 2\ \pi\ Rd = 2\ \pi\ 60 \times 0.1035 = 39.02\ in.^2$

$I = \pi\ R^3 d = \pi\ 60^3 \times 0.1035 = 70{,}230\ in.^4.$

Longitudinal and Hoop stresses at Sta 378.22 are:

$$f_1 = \frac{pR}{2t} - \frac{\mu pR}{t} - P/A \pm \frac{Mc}{I};$$

$$f_2 = \frac{pR}{t} - \frac{\mu pR}{2t} + \frac{\mu P}{A} \pm \frac{\mu Mc}{I}$$

Where $\mu = 0.33$. t for longitudinal calculations is 0.0795 in. and t for hoop calculation is 2 x 0.032 in. = 0.064 in., since the cross bars do not resist hoop load. Pressure in longitudinal calculation is 10 psig while pressure in hoop calculation is 12.24 psig.

At 10 psig topping pressure and zero external loads:

$$f_1 = \frac{10 \times 60}{2 \times 0.0795} - \frac{0.33 \times 12.24 \times 60}{0.0795}$$

$f_1 = 3775 - 3050 = 725$ psi tension

$$f_2 = \frac{12.24 \times 60}{0.064} - \frac{0.33 \times 10 \times 60}{2 \times 0.064}$$

$f_2 = 11{,}500 - 1{,}545 = 9{,}955$ psi tension

with 10 psig topping pressure and 100% Condition-1 Loads

$P = 222{,}700$ lb

$M = 1{,}589{,}000$ in.-lb + 24,450 lb x 56.52 in. = 2,970,000 in.-lb

$$f_1 = 725 - \frac{222{,}700}{29.97} \pm \frac{2{,}970{,}000}{53{,}950}\ c$$

$f_1 = 725 - 7450 \pm 55.2\ c.$

Strain gages RO-04-1A and 1B, with c = 60 in., should register

$f_1 = 10{,}040$ psi compression.

Strain gages R90-04-1A and 1B, with c = 0, should register

$f_1 = 725 - 7450 = 6725$ psi compression

$$f_2 = 9955 + \frac{\mu P}{A} \pm \frac{\mu Mc}{I}$$

$$f_2 = 9955 + \frac{0.33 \times 222,700}{29.97} \pm \frac{0.33 \times 2,970,000 \times c}{5?,950}$$

$f_2 = 9955 + 2460 \pm 18.2\ c.$

Strain gages R0-04-3A and 3B, with c = 60 in., should register

$f_2 = 13,505$ psi tension.

Strain gages R90-04-3A and 3B, with c = 0 in., should register

$f_2 = 12,415$ psi tension.

Longitudinal and hoop stresses at Sta 444.67 are as follows: $\mu = 0.33$. t for longitudinal calculations is 0.1035 in., and t for hoop calculations is 2 x 0.044 = 0.088 in., since the cross bars do not resist hoop load. Pressure in longitudinal calculations is 10 psig while pressure in hoop calculations is 14.64 psig.

At 10 psig topping pressure and zero external loads:

$$f_1 = \frac{10 \times 60}{2 \times 0.1035} - \frac{0.33 \times 14.64 \times 60}{0.1035}$$

$f_1 = 2900 - 2600 = 300$ psi tension

$$f_2 = \frac{14.64 \times 60}{0.088} - \frac{0.33 \times 10 \times 60}{2 \times 0.088}$$

$f_2 = 10,000 - 1,125 = 8,875$ psi tension

with 10 psig topping pressure and 100% Condition-1 loads

$P = 222,700$ lb

$M = 1,589,000 + 24,450 \times 122.97 = 4,589,000$ in.-lb

$$f_1 = 300 - \frac{222,700}{39.02} \pm \frac{4,589,000 \times c}{70,230}$$

$$f_1 = 300 - 5810 \pm 65.2\ c.$$

Strain gages RO-11-1A and 1B, with c = 60 in., should register

$$f_1 = 300 - 5810 - 3910$$

f_1 = 9420 psi compression.

Strain gages RO-11-1A and 1B, with c = 0 in., should register

f_1 = 5510 psi compression.

Hoop gages

$$f_2 = 8875 + \frac{0.33 \times 222,700}{39.02} + \frac{0.33 \times 4,589,000 \times c}{70,230}$$

$$f_2 = 8875 + 1885 \pm 21.5\ c.$$

Strain gages RO-11-3A and 3B, where c = 60 in., should register

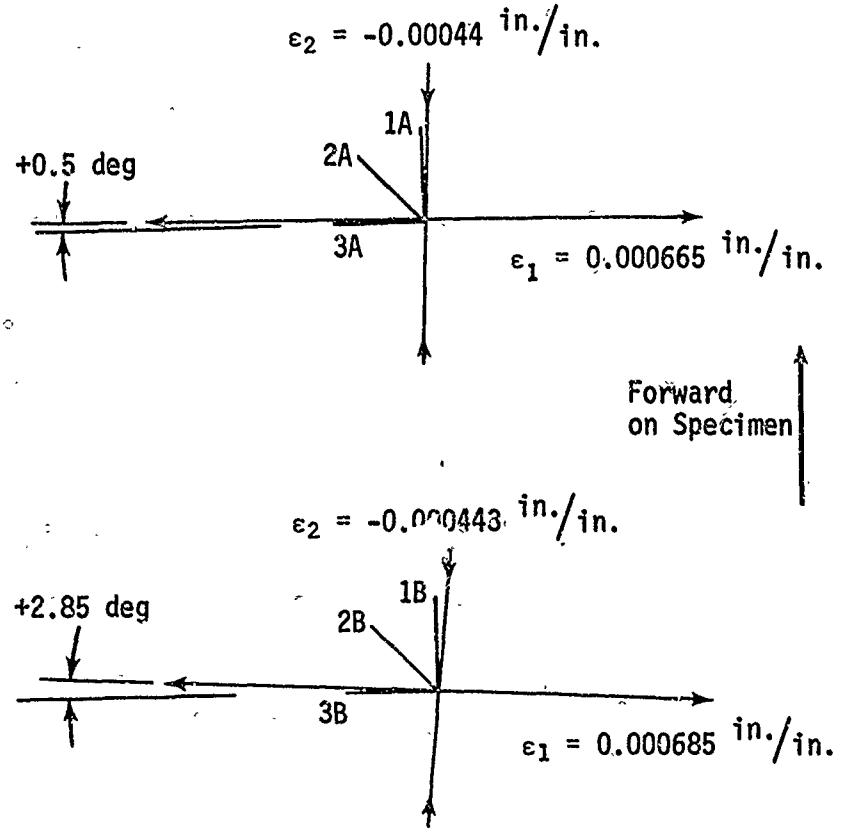
f_2 = 12,050 psi tension.

Strain gages R90-11-3A and 3B, where c = 0 in., should register

f_2 = 10,760 psi tension.

A rosette analysis was performed on the strains registered by each of the eight rectangular rosette gages located on the test article tank wall. These gages are identified as RO-04A, RO-04B, R90-04A, R90-04B, RO-11A, RO-11B, R90-11A and R90-11B. The principal strains and their directions are shown for each rosette gage in Fig. 16 through 19. The principal strains shown occurred when the test article was pressurized to 10 psig under 100% Condition-1 test loads.

Principal Strains and Directions While at 100% Load

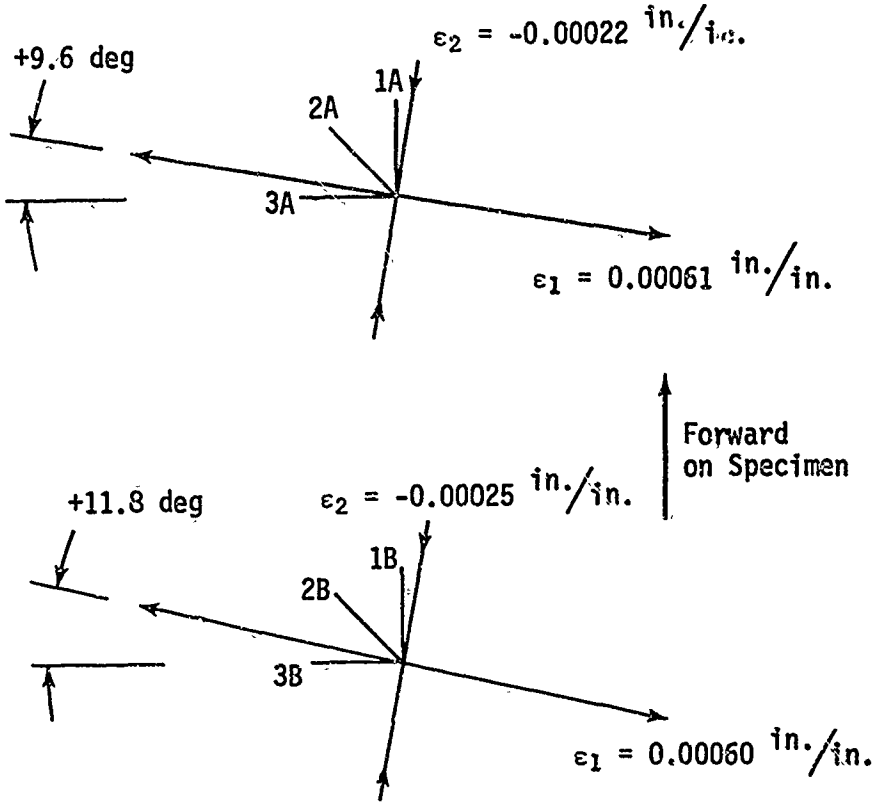


View Looking at Gage Areas from Outside the Test Specimen.

No. 1 Gages Measure Longitudinal Strain.
No. 3 Gages Measure Hoop Strain.

Figure 16 Condition 1 - Principal Strains at RO-04 Rosette Gages

Principal Strains and Directions While at 100% Load

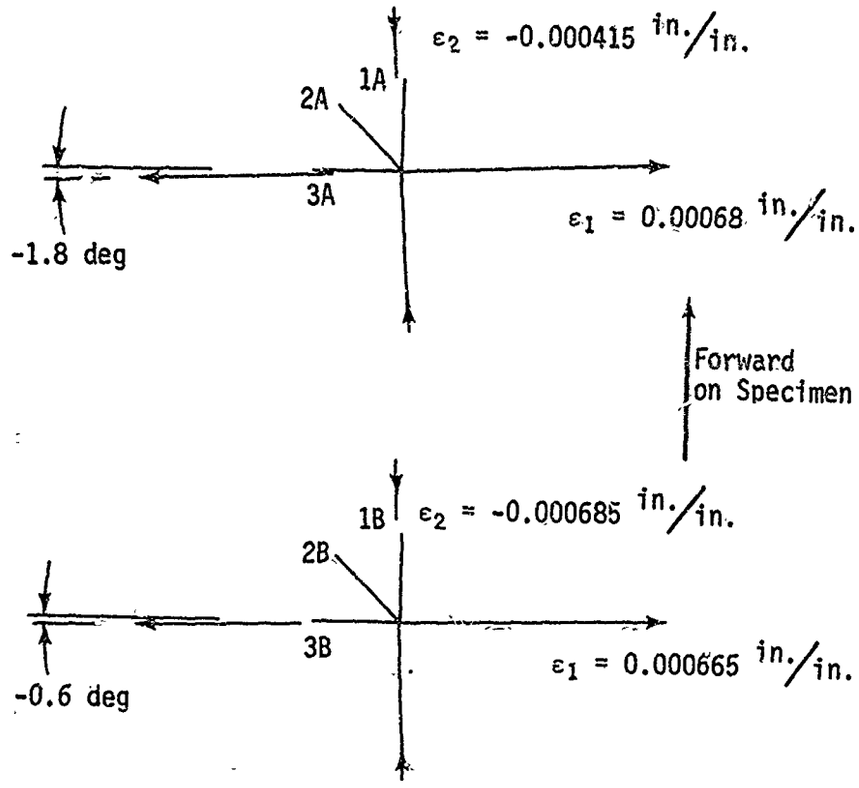


View Looking at Gage Areas from Outside the Test Specimen.

No. 1 Gages Measure Longitudinal Strain.
No. 3 Gages Measure Hoop Strain.

Figure 17 Condition 1 - Principal Strains at R90-04 Rosette Gages

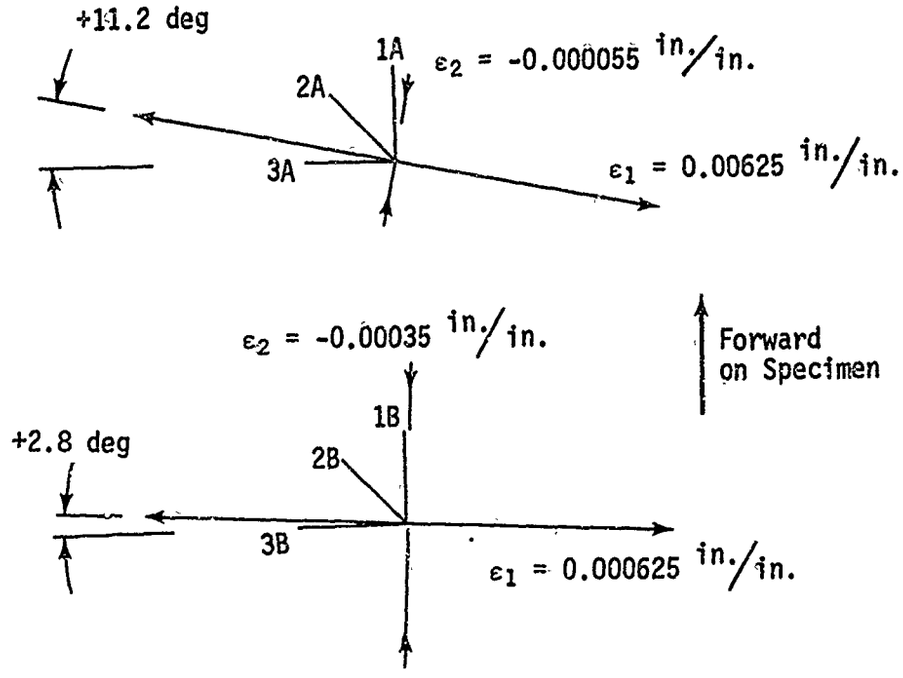
Principal Strains and Directions While at 100% Load



View Looking at Gage Areas from Outside the Test Specimen.
No. 1 Gages Measure Longitudinal Strain.
No. 3 Gages Measure Hoop Strain

Figure 18 Condition 1 - Principal Strains at RO-11 Rosette Gages

Principal Strains and Directions While at 100% Load



View Looking at Gage Areas from Outside the Test Specimen.

No. 1 Gages Measure Longitudinal Strain.
No. 3 Gages Measure Hoop Strain

Figure 19 Condition 1 - Principal Strains at R90-11 Rosette Gages

After the Condition-1 test was completed, a visual inspection of the test specimen was performed. A water leak was found in the outside circumferential weld of the aft barrel to the Y-ring joint. X-rays were taken of the leaking area, and the cause of the leak was found to be a 3/8-in.-long crack in the weld. Pretest x-rays show a weld defect at this same location. The leak resulted because the weld, at the point of the defect, became structurally incapable of carrying the load caused by internally pressurizing the tank to 10 psig.

The crack was stop-drilled, and a small aluminum patch was epoxy bonded over the crack to stop the leak. This repair did not alter the strength of the test article in the area of the leak, and allowed the test program to be continued. A photograph of the crack repair is shown in Fig. 20. This defect will be identified and described in Section V of this report.

7. CONCLUSIONS

The conjugate structure sustained the test loads and internal tank pressure applied during the Condition-1 test. Test data indicates that the roll-diffusion-bonded-truss-core-barrel panels carried the compressive loads and tank internal pressure as designed.

Analytical and test values compare quite well with each other (Fig. 7 through 14). Major cause of the difference seen in the analytical and test values is that, in the areas where gages RO-04-1A, 3A, 1B and 3B; R90-04-1A, 3A, 1B and 3B; RO-11-3A and 3B; and R90-11-3A and 3B were installed, the test article barrel panel face sheets are thicker than the assumed design-nominal thickness. Gages RO-11-1A and 1B, and R90-11-1A and 1B, differed from the analytical value because of localized tank wall bending caused by the nearness of the aft barrel to cone junction.

Figure 21 shows a plot of deflection recordings made at Sta 413.8 and 455.61. The average of the four deflection gages located at Sta 413.8 indicates that the barrel increased in radius 0.050 in. while being pressurized to 10 psig. The average of the four deflection gages located at Sta 455.61 indicates that the barrel-to-cone junction decreased in radius an average of 0.021 in. while the tank was pressurized to 10 psig. This bending at Sta 444.67 caused the longitudinal gages located on the tank inner skin face sheets to register more compressive stress than analytically determined, and the longitudinal gages located on the outer face sheet to register more tension stress than analytically determined. The difference in the RO-11-1A and RO-11-1B recorded value from the analytical valves indicates a bending stress of approximately 2,000 psi in the tank barrel face sheets at this location.

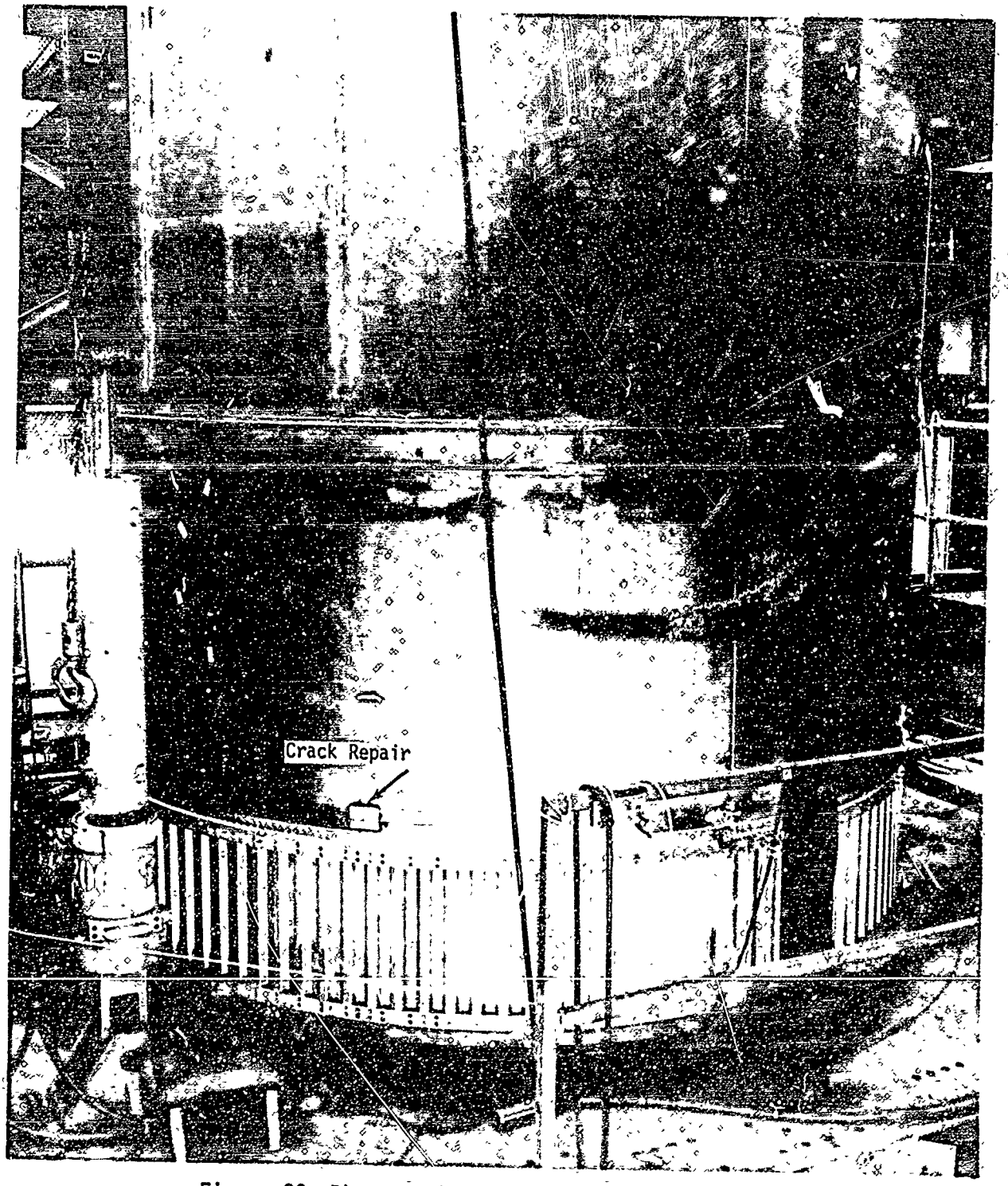


Figure 20 Photograph of Condition-1 Crack Repair

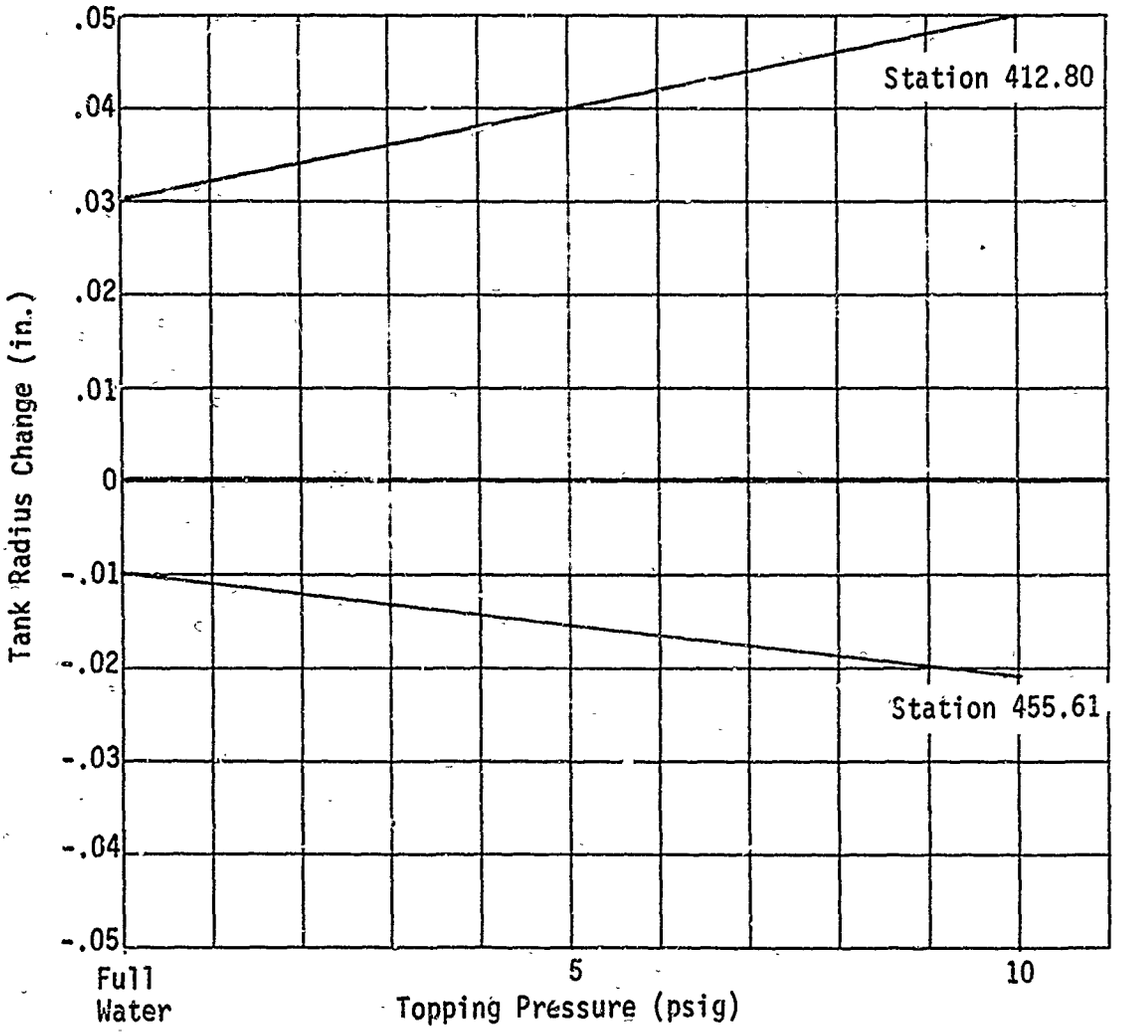


Figure 21 Tank Wall Deflection vs Pressure

SECTION IV

CONDITION 2 - HYDROSTATIC TEST, 65 psig (TOP DOME PRESSURE)

1. TEST OBJECTIVE

This test subjected the specimen to limit hydrostatic pressure in a one-tank configuration to demonstrate the specimen's worthiness as a pressure vessel, and to provide data to indicate the ultimate pressure capability.

2. TEST SETUP

The test setup was the same as that used in the Condition-1 portion of the test. The loading head remained attached to the forward skirt of the specimen; however, no external loads were applied except for the loading head counterbalance load.

The plumbing system used in the Condition-1 portion of the test was again used to fill and drain the specimen with water and to pressurize the specimen with compressed air. (The plumbing was shown in Fig. 4.)

3. TEST PRESSURE

The test specimen was filled with 62,000 lb of water and pressurized to 65 psig (top dome pressure). The pressure was applied in increments, and test data were recorded while holding the top dome pressure at levels of 10, 20, 30, 40, 50, 55, 60 and 65 psig.

4. INSTRUMENTATION

a. Strain Gages. The output of the 138 strain gages used in the Condition-1 test were again recorded, and were recorded in the same manner as during the Condition-1 test. Strain gage locations are shown in Fig. 5. Strain gage outputs were recorded at 10, 20, 30, 40, 50, 55, 60 and 65 psig. The rosette data were reduced to principal strains and directions after the test completion.

b. Deflection Transducers. The displacements of the same seventeen deflection transducers used in the Condition-1 test were recorded during this test. (Deflection gage locations were shown in Fig. 6.)

c. Pressure Transducers. The upper dome pressure in each tank was measured through the use of two pressure transducers and a Bourdon gage. Internal tank pressure measurement and display was accomplished in exactly the same manner as it was in the Condition-1 test.

5. TEST DATA

Test data (i.e., stress levels, pressure readings, and deflection readings) were recorded at top dome pressure levels of 10, 20, 30, 40, 50, 55, 60 and 65 psig. As the pressure increments were being applied, cracking sounds were heard emanating from the test specimen. Most sounds were in the range that is normally heard when a pressure vessel of this size is first pressurized. However, while pressurizing from 40 to 50 psig, a loud, muffled crack was heard at 42.5 psig, suggesting that a serious structural failure might have occurred. The pressure was dropped to zero, stopping at 30 psig for a data recording. After visually examining the specimen and observing no external defects, the test was resumed and strain gage data were again recorded at 10, 20, 30, and 40 psi.

A copy of the complete stress and pressure tabulation for the Condition-2 test is shown in Appendix III. Deflections are shown in Table II.

Table II Deflection Recorded During Condition-2 Test (in.)

Deflection gage number	Tanks full	Test increments									
		10 psi	20 psi	30 psi	40 psi	30 psi	50 psi	55 psi	60 psi	65 psi	10 psi SET
1	-0.03	-0.03	-0.04	-0.03	-0.03	-0.04	-0.04	-0.04	-0.04	-0.03	-0.04
2	-0.02	-0.04	-0.04	-0.04	-0.04	-0.04	-0.05	-0.05	-0.04	-0.04	-0.04
3	-0.01	-0.03	-0.03	-0.03	-0.03	-0.05	-0.05	-0.04	-0.04	-0.04	-0.04
4	-0.02	-0.02	-0.02	-0.02	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.02
5	0.00	-0.03	-0.05	-0.06	-0.07	-0.08	-0.10	-0.10	-0.12	-0.10	-0.04
6	-0.02	-0.05	-0.09	-0.09	-0.12	-0.12	-0.14	-0.14	-0.15	-0.16	-0.08
7	-0.01	-0.04	-0.06	-0.07	-0.08	-0.09	-0.12	-0.12	-0.12	-0.13	-0.06
8	-0.01	-0.04	-0.05	-0.07	-0.09	-0.07	-0.10	-0.11	-0.10	-0.12	-0.04
9	0.00	0.026	0.039	0.050	0.062	0.052	0.080	0.089	0.096	0.103	0.028
10	0.00	0.027	0.039	0.051	0.064	0.053	0.080	0.089	0.094	0.101	0.029
11	-0.001	0.021	0.033	0.043	0.055	0.041	0.066	0.073	0.079	0.085	0.022
12	0.002	0.025	0.039	0.050	0.063	0.052	0.077	0.086	0.092	0.099	0.029
13	0.000	-0.005	0.001	0.006	0.014	0.001	0.010	0.013	0.017	0.019	-0.003
14	0.001	-0.004	0.002	0.010	0.018	0.017	0.030	0.034	0.040	0.046	0.001
15	0.00	-0.006	-0.002	0.002	0.006	0.002	0.011	0.013	0.019	0.021	-0.005
16	0.00	-0.007	-0.001	0.007	0.009	0.002	0.015	0.016	0.020	0.023	-0.005
17	0.00	-0.042	-0.074	-0.102	-0.130	-0.106	-0.165	-0.181	-0.195	-0.210	-0.047

Note: 1. Accuracy: ±0.01 on 0.00 readings and ±0.001 on 0.000 readings.

2. Minus sign indicates specimen deflection is toward the gage. Plus sign indicates specimen deflection is away from the gage. (Refer to Fig. 8 for deflection gage locations.)

An example of how to read the stress tabulation is as follows:

Assume one wants to determine the stresses recorded by strain gage P180-13-1B. (Computer tabulation runs show gage numbers without hyphens; Appendix III.) This gage is located approximately mately at Sta 453 on the aft end of the aft barrel on the interior of the specimen, and registers longitudinal strain. Figure 5 is a guide used to determine strain gage locations and numbers. Using the strain gage number P180-13-1B, enter the tabulation and find P180-13-1B. The left-hand column labeled TEST identifies 2100, which represents tanks full of water with counterbalance applied. 2110, 2120, 2130, 2140, 2150, 2155, 2160 and 2165 represent 10, 20, 30, 40, 50, 55, 60 and 65 psig top dome pressure, respectively. 2131 in the TEST column identifies the reading taken at 30 psig after the suspected failure occurred at 42.5 psig.

The second column from the left labeled COND identifies recordings made while returning to the 50 psig level. 0010, 0020, 0030 and 0040 indicate pressure levels of 10, 20, 30 and 40 psig. The 2111 under the TEST column indicates a set recording made after the test specimen was at 65 psig. Notice that each gage was scanned five times at each reading except for the 10, 20, 30 and 40 psig recordings made while returning to 50 psig after the suspected failure. These were recorded twice. If one were interested in P180-13-1B at 55 psig, the reading would be approximately 36,340 psi tension.

The tabulation also contains P1 and P2, which are pressure recordings taken at the apex of the common dome (P1) and at the apex of the forward dome (P2). Under the column labeled P2 a tabulation reading of 1047.00 indicates the top dome pressure was at 10.47 psig, less instrumentation zero, when the recording was made.

6. TEST RESULTS

The test specimen did sustain 65 psig. The TV monitors showed a water leak just as the test data was recorded at 65 psig. This leak was from the top dome to upper tank Y-ring circumferential weld. After the pressure was reduced to zero and the water removed from the tanks, the access covers were removed and a visual examination revealed three cracks in the tankage portion of the test specimen. One was a 2-in. long crack in the forward dome to Y-ring circumferential weld. This crack opened up while the test specimen was carrying between 60 and 65 psig pressure. The two other visual cracks were in the aft tank barrel to lower Y-ring inner circumferential weld, one 42.5 in. long and the other 10 in. long. These two cracks were approximately 90 deg apart.

After completing the visual examination, the test specimen was removed from the test cell. The forward and aft skirts were removed and the conjugate tankage was taken to the radiographic building where all welds were x-rayed. Examination of the weld x-rays showed that the test specimen welds cracked in seven areas during the two test conditions of the conjugate tank test; the three visually found areas are included among the seven. The aft tank barrel to lower Y-ring circumferential welds contained four cracked areas. The aft circumferential weld joining the forward barrel to the upper-tank-attach-ring cracked at one location. A parent metal crack located in the forward barrel, which had been weld repaired, cracked. The forward dome to Y-ring circumferential weld cracked at one location. All of these cracks were either not completely through the materials, or were located in the inner wall of a double wall joint. When the inner weld cracked, the pressure load redistributed and was carried by the surrounding structure. The only external weld that cracked and leaked water was the one located in the forward dome to Y-ring weld. Water leakage at this location was noticed while the test pressure was at 65 psig. This crack was short enough to allow load redistribution around it. Figures 22 through 26 are photographs which show the location of cutouts that removed these seven cracked areas from the test specimen. These cracked areas were cut out of the test specimen so that a thorough failure analysis could be performed on each area. This failure analysis is presented in Section V of this report.

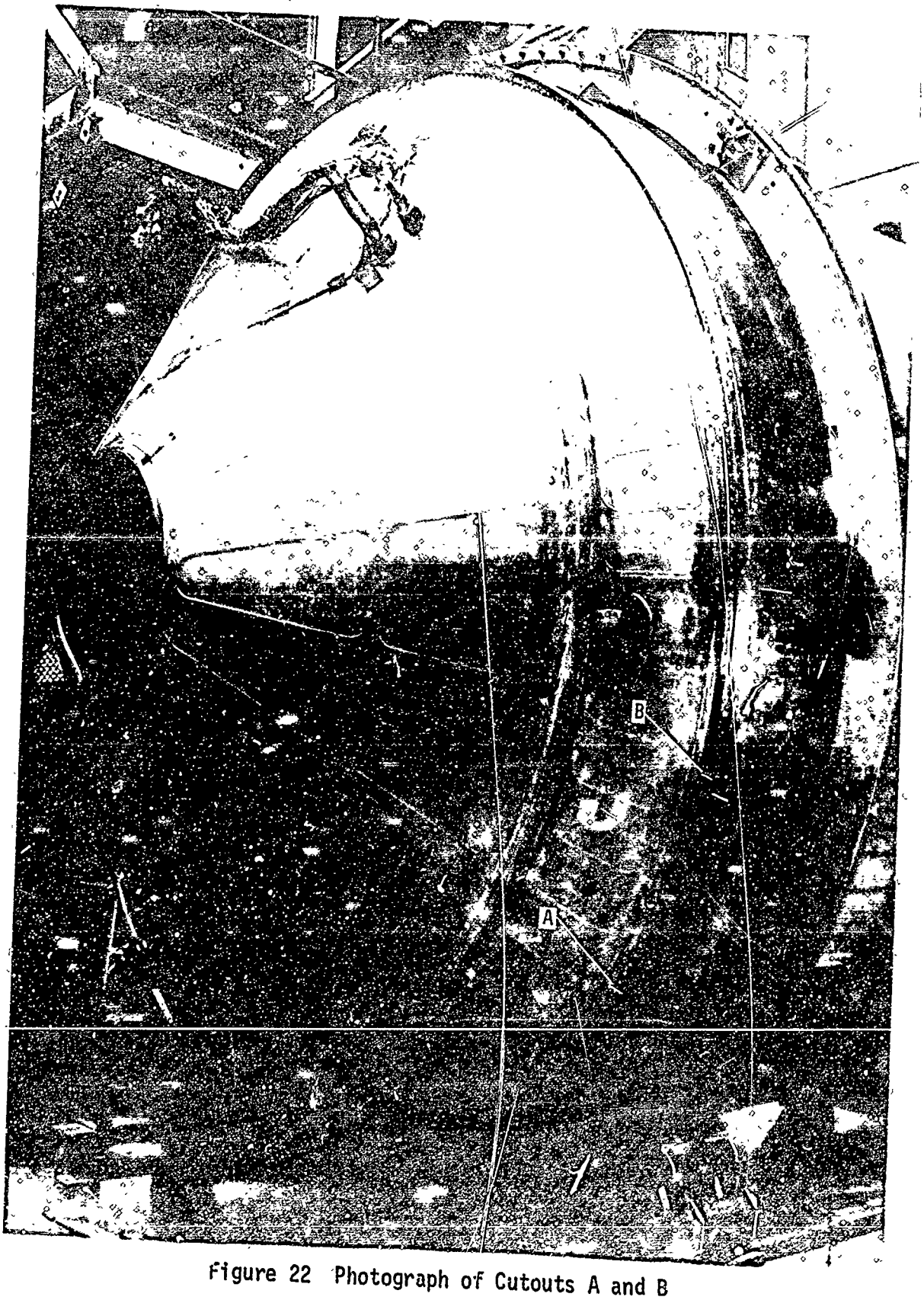


Figure 22 Photograph of Cutouts A and B

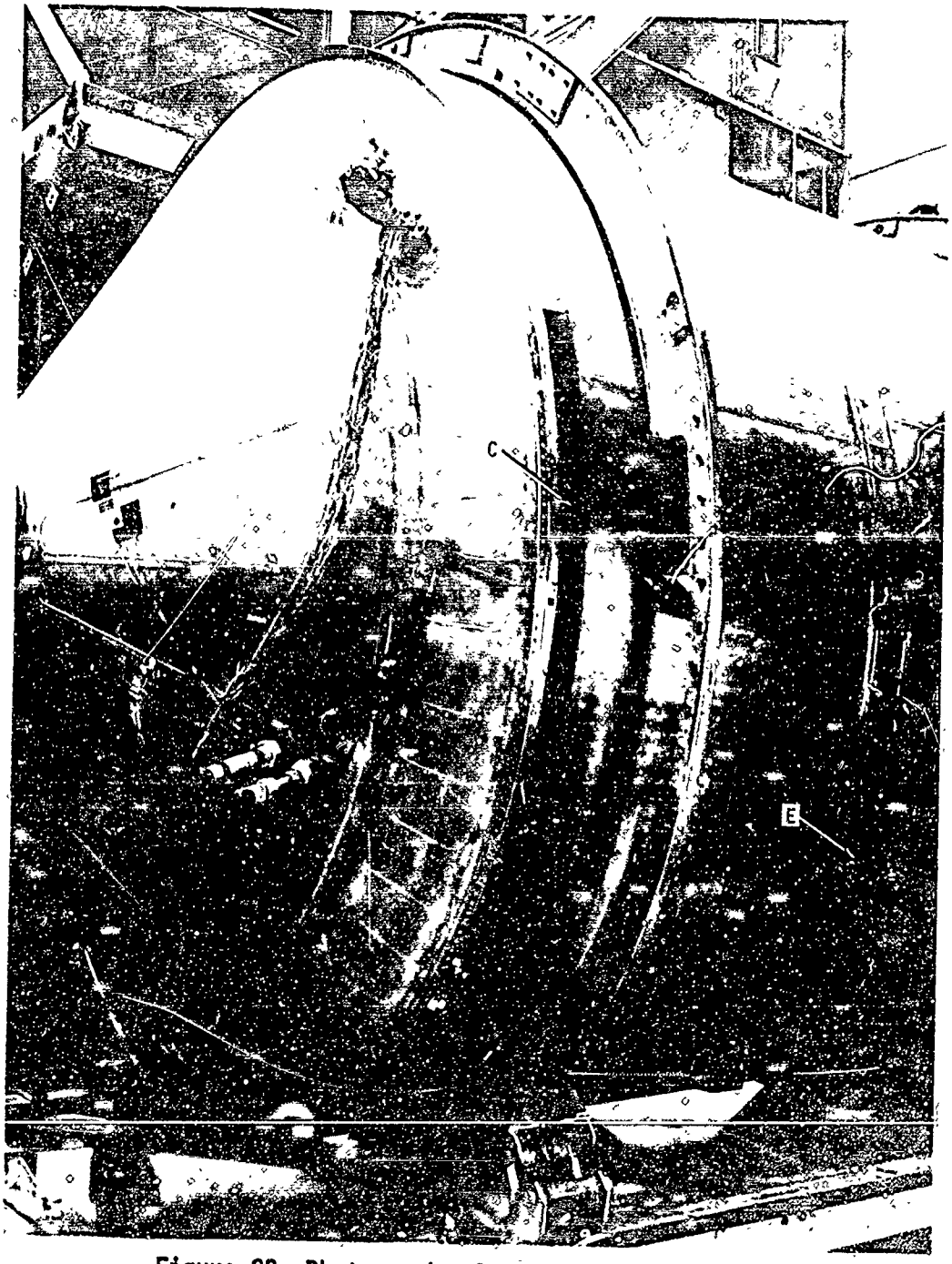


Figure 23 Photograph of Cutouts C and E

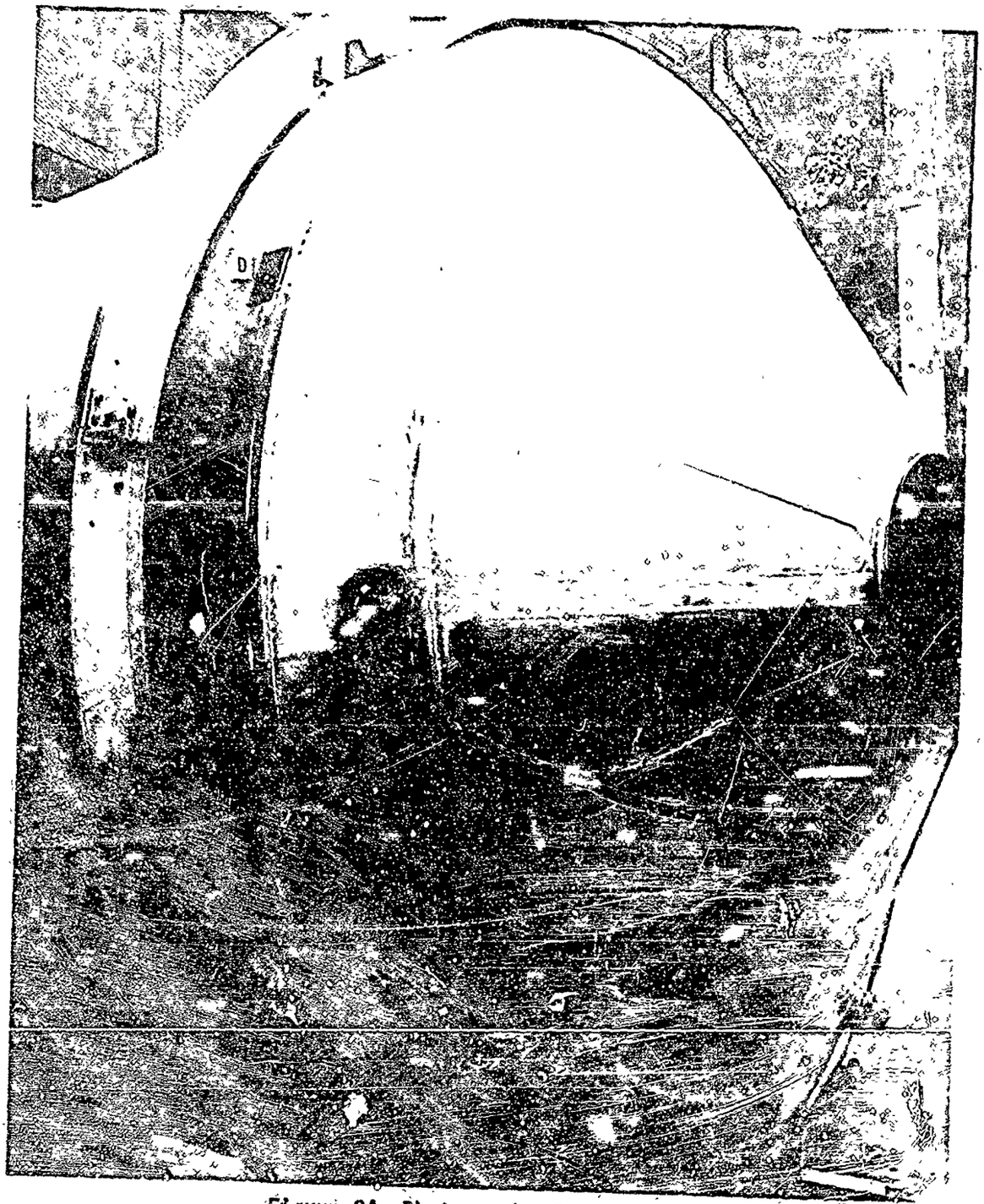


Figure 24 Photograph of Cutout D

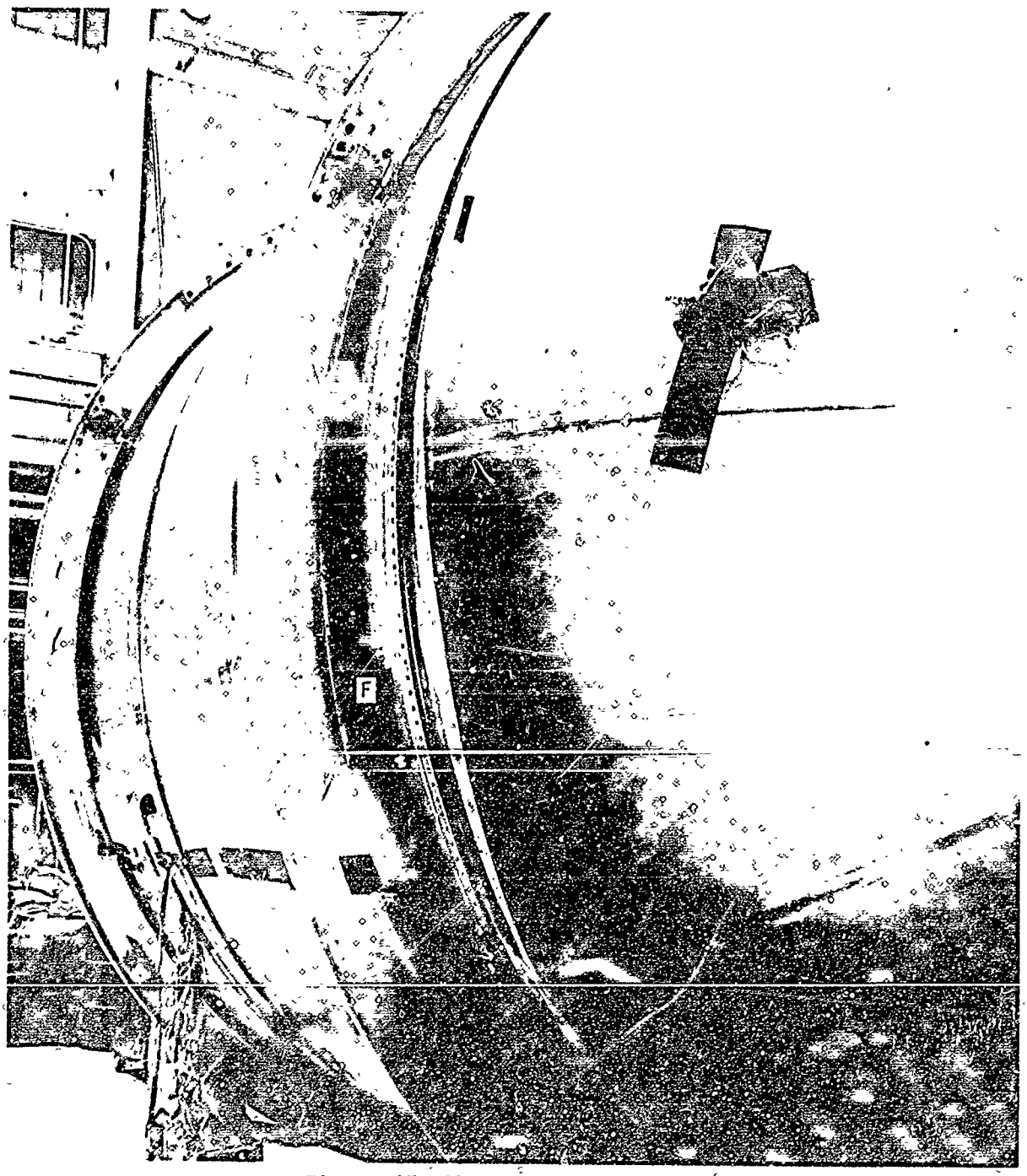


Figure 25 Photograph of Cutout F

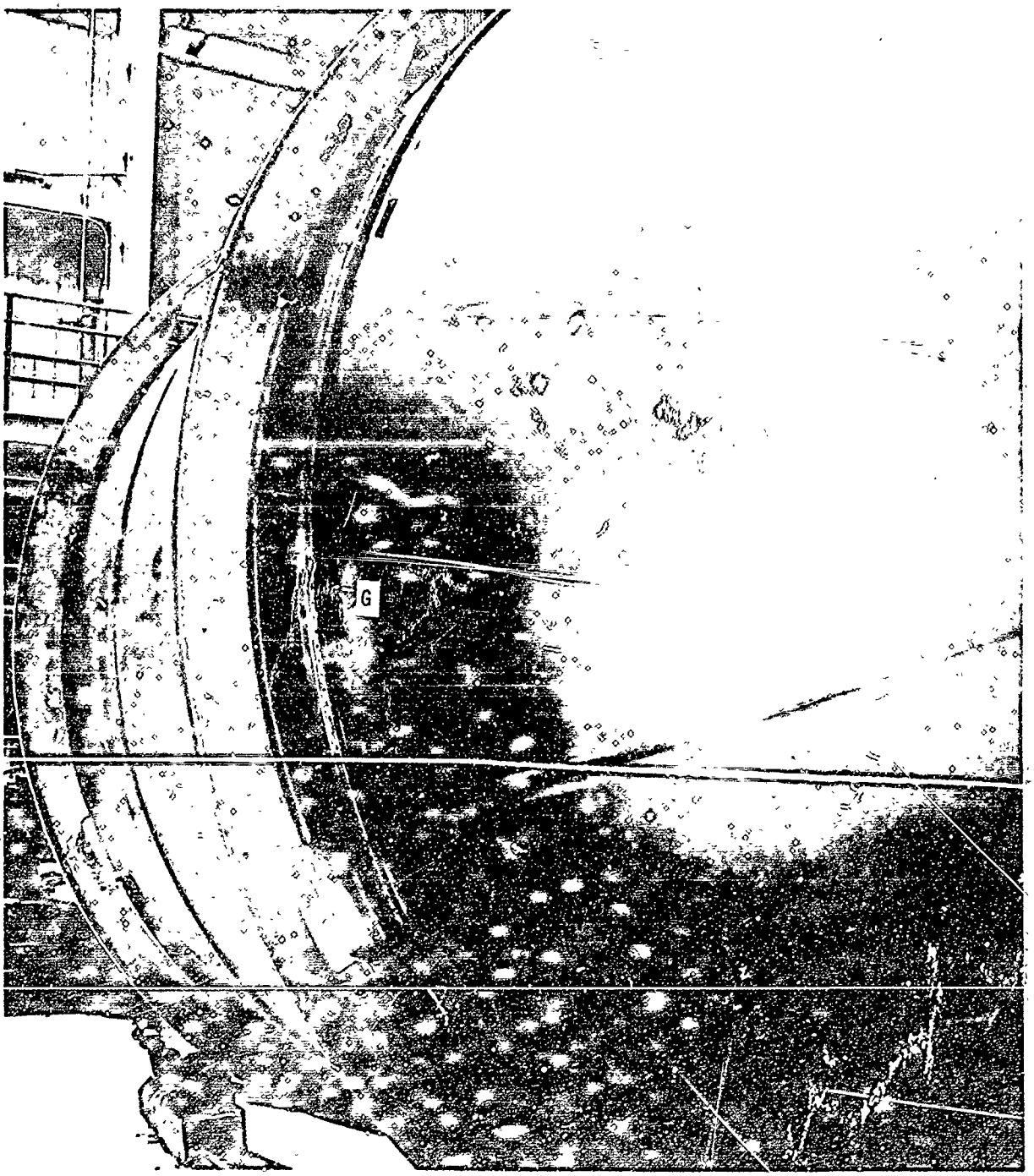


Figure 26 Photograph of Cutout G

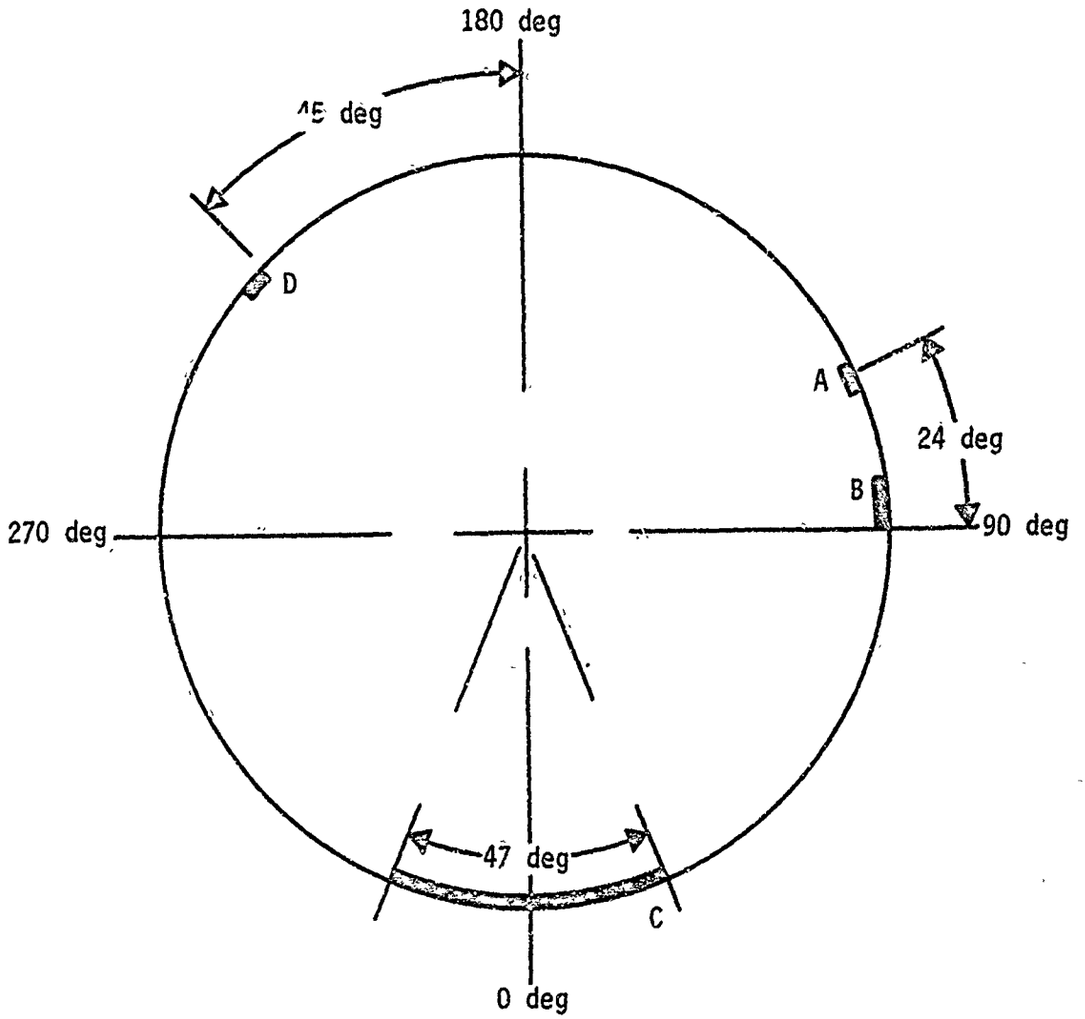
Cutouts A, B, C, and D in Fig. 22, 23 and 24 identify the four crack areas found in the aft tank barrel to lower Y-ring welds. Cutout D identifies the crack that was stop-drilled and patched after the Condition-1 test. Figure 23 (cutout E) identifies the crack area found in the outer weld of the forward barrel to the upper-tank-attach-ring. Figure 25 (cutout F) identifies the cutout made to remove the forward barrel parent metal weld repair crack. Figure 26 (Cutout G) identifies the cutout made to remove the forward dome to Y-ring weld crack. Figures 27 through 30 show the circumferential location of these cutouts.

Strain gages identified as PO-13-1B and 2B were located approximately 0.5 in. above the aft tank barrel to lower Y-ring inside circumferential weld, and were approximately in the center of the 42.5-in. crack area. Stress plots of PO-13-1B and 2B are shown in Fig. 31. PO-13-1A and 2A were located in the same area of the test specimen but on the outside skin line of the tank. Stress plots of PO-13-1A and 2A are shown in Fig. 32. Similar strain gage locations to the aft barrel to lower Y-ring weld were those identified as P180-13-1B and 2B, and P180-13-1A and 2A. The P180-13s were located 180 deg away from the PO-13s. Stress plots of P180-13-1B and 2B are shown in Fig. 33, and P180-13-1A and 2A are shown in Fig. 34.

If the test specimen had not had a structural failure in the area of the PO-13 gages the stress plots shown in Fig. 31 would agree with those in Fig. 34. The stress plots shown in Fig. 31 and 32 indicate that the inside weld of the aft barrel to lower Y-ring started cracking after the 20-psig data were recorded. At 42.5 psig, a loud report was heard and the PO-13-1B and 2B gages were no longer capable of recording strain. For these reasons, it is assumed that at 42.5 psig the crack propagated to its full length.

Strain gages RO-11-1A and 3A, and RO-11-1B and 3B were legs of a rosette gage located approximately 10 in. forward of the 42.5-in. crack, and centered on it; 1A and 3A were outside skin line gages, and 1B and 3B were inside skin line gages. Stress plots of RO-11-1A and 3A are shown in Fig. 35. Stress plots of RO-11-1B and 3B are shown in Fig. 36; 1A and 1B registered longitudinal strain, and 3A and 3B registered hoop strain. Another set of rosette gages was located in equal distance away from the aft barrel to lower Y-ring weld as the RO gages were, these are identifies as the R90-11s. The R90-11s were 90 deg from the RO-11 gages. Stress plots of the R90-11-1A and 3A gages, and R90-11-1B and 3B gages are shown in Fig. 37 and 38. Stress plots shown in Fig. 35 should agree with these shown in Fig. 37, and those shown in Fig. 36 should agree with those shown in Fig. 34. However, the structure failure caused a redistribution of load, and Fig. 35 and 36 indicate this change as the test specimen was pressurized from 40 to 50 psig.

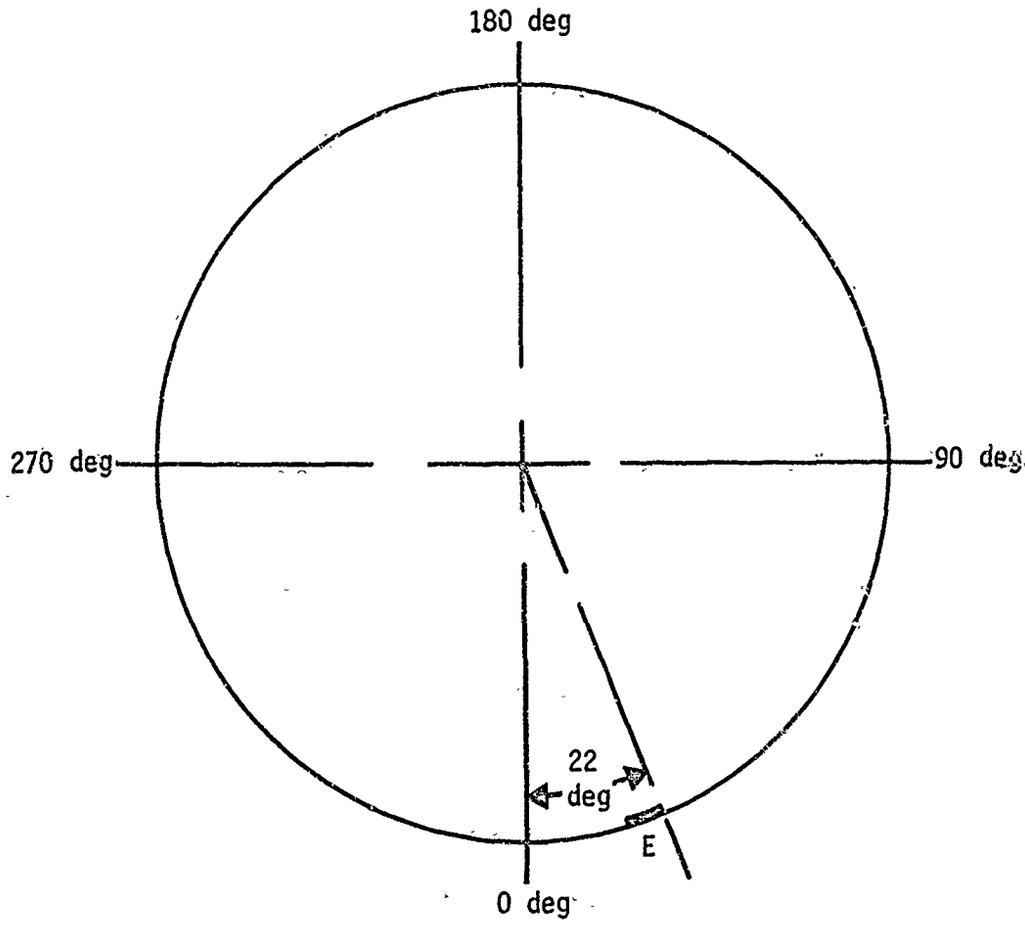
Looking Aft on Weld at Station 454.5



Note: For location of 0 deg on test specimen see Figure 1.

Figure 27 Circumferential Location of Cutouts in the Station 454.5 Weld

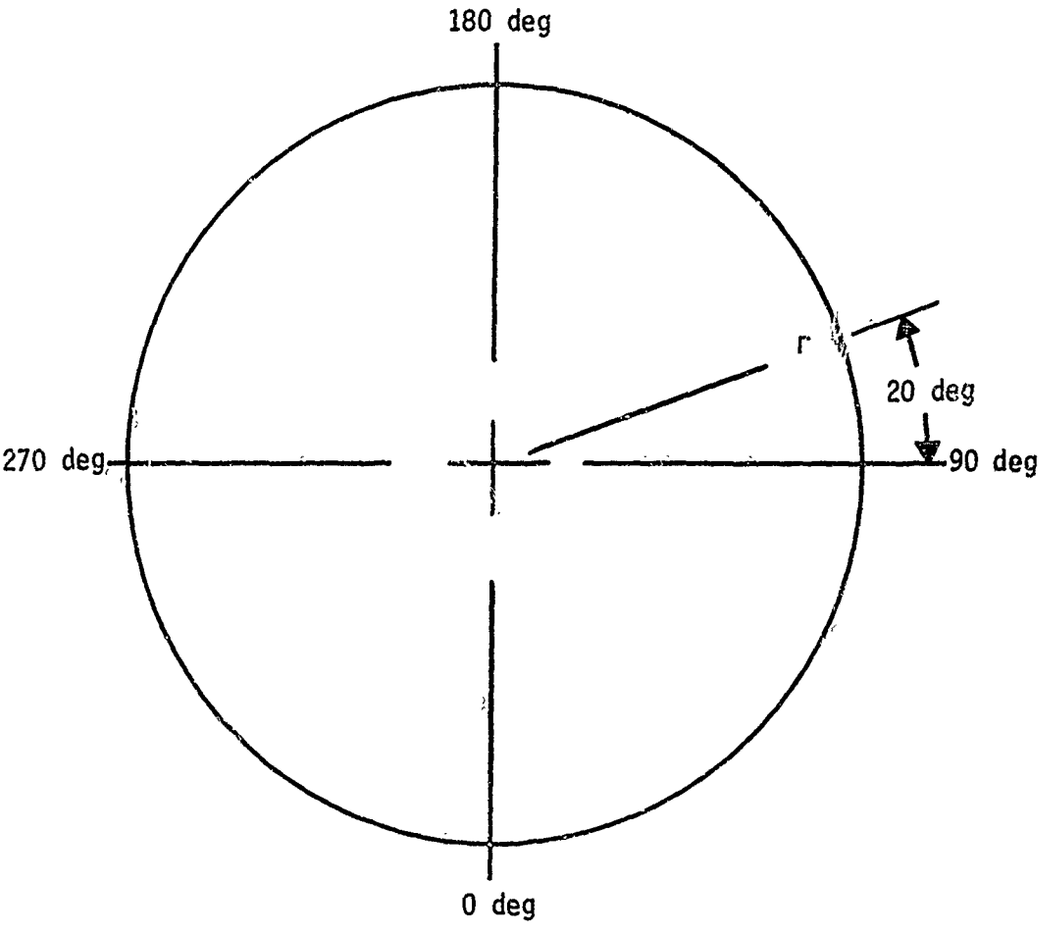
Looking Aft on Weld at Station 410.2



Note: For location of 0 deg c . test specimen see Figure 1.

Figure 28 Circumferential Location of Cutout in the Station 410.2 Weld

Looking Aft on Weld at Station 347.5



Note: For location of 0 deg on test specimen see Figure 1.

Figure 29 Circumferential Location of Cutout at Station 347.5

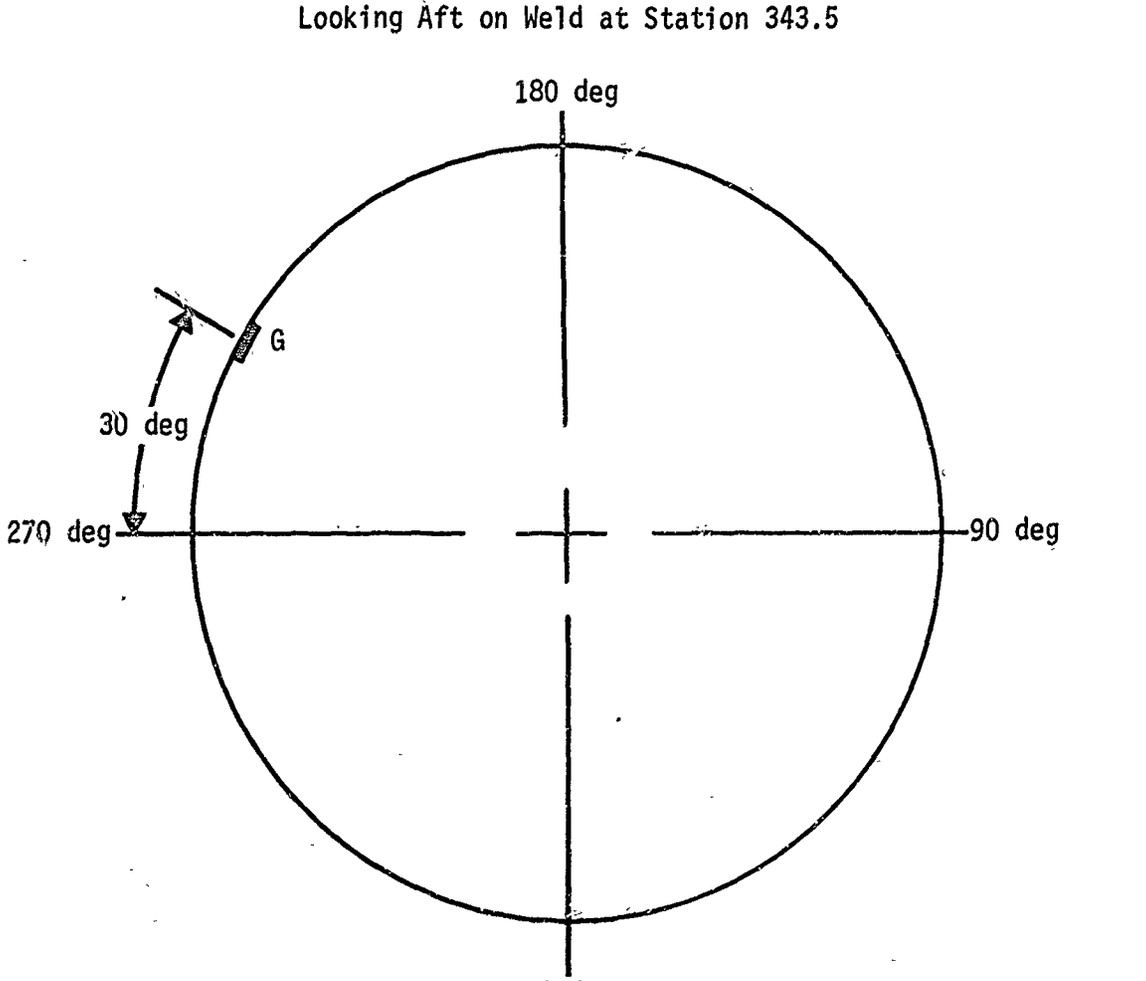


Figure 30 Circumferential Location of Cutout at Station 343.5

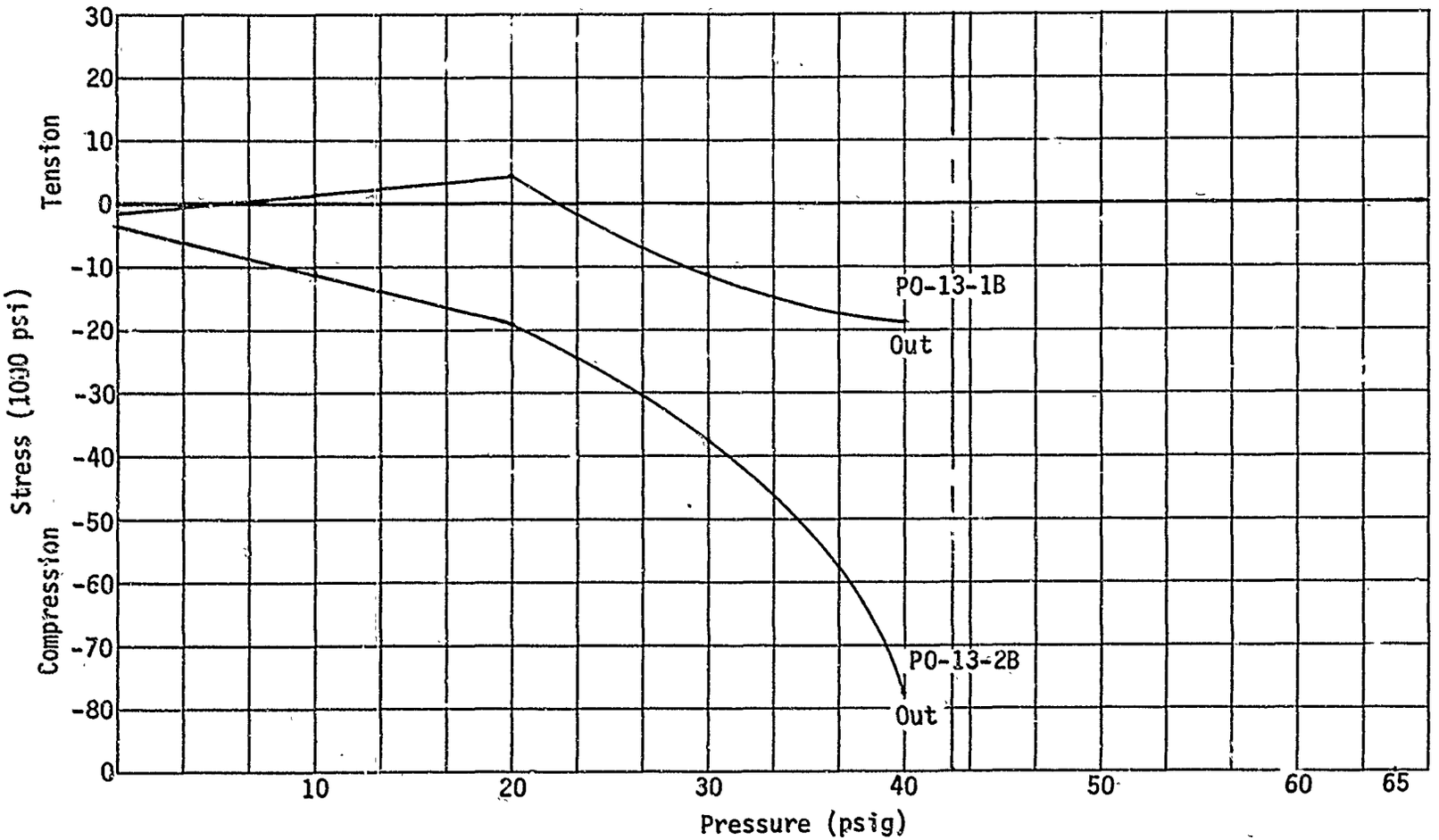


Figure 31 Condition 2 - Stress Plots of PO-13-1B and 2B

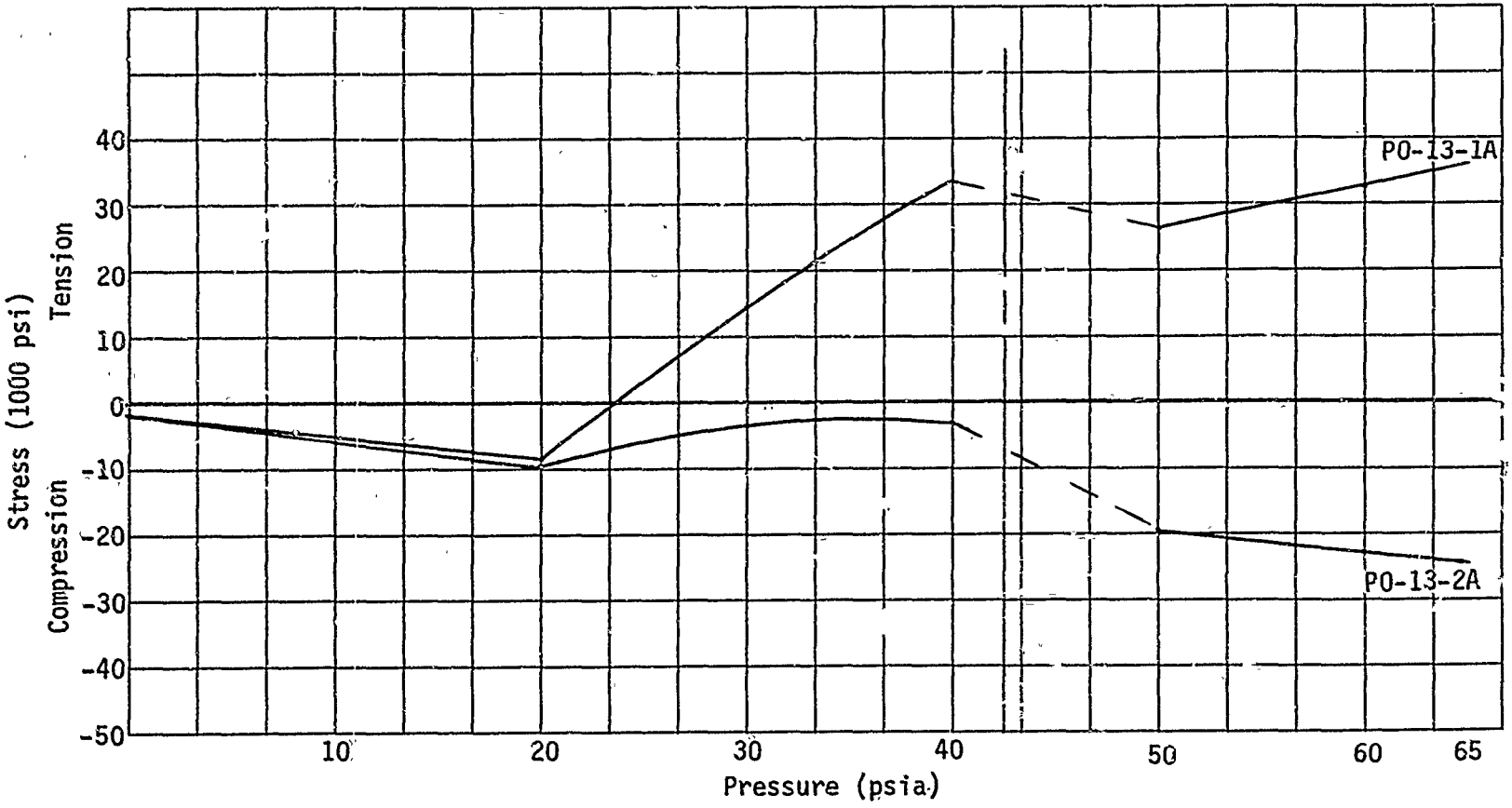


Figure 32 Condition 2 - Stress Plots of PO-13-1A and 2A

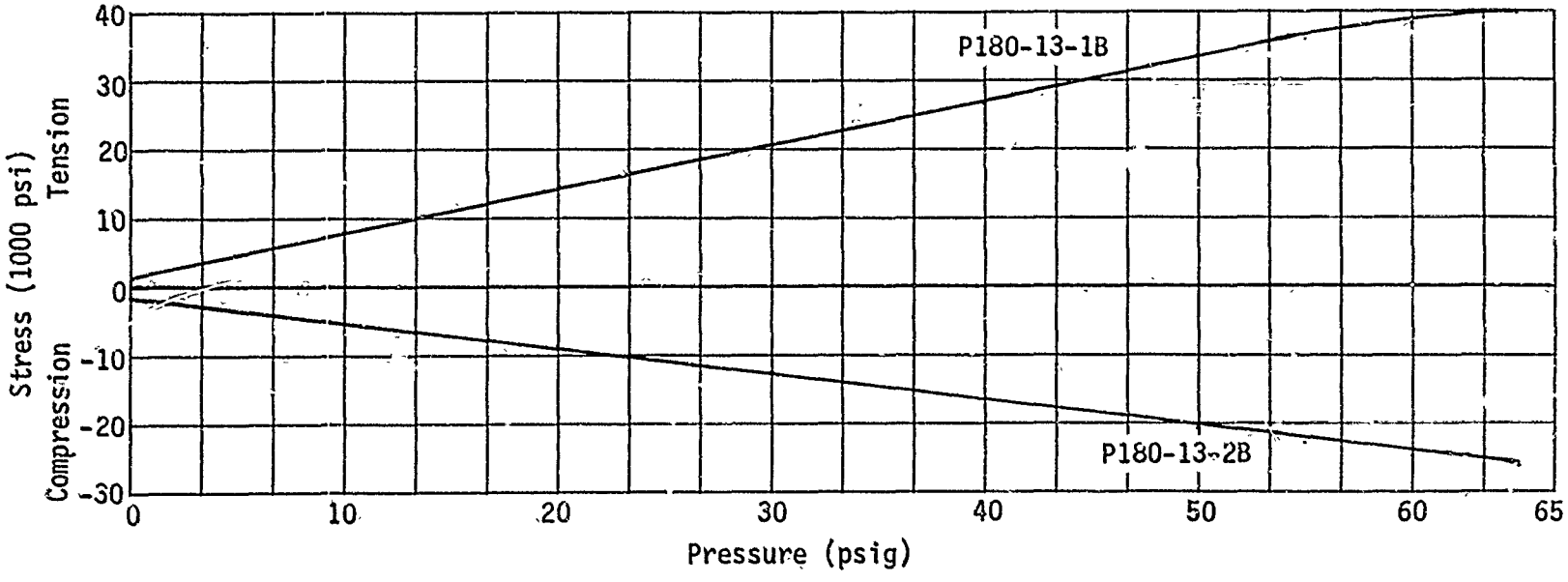


Figure 33 Condition 2 - Stress Plots of P180-13-1B and 2B

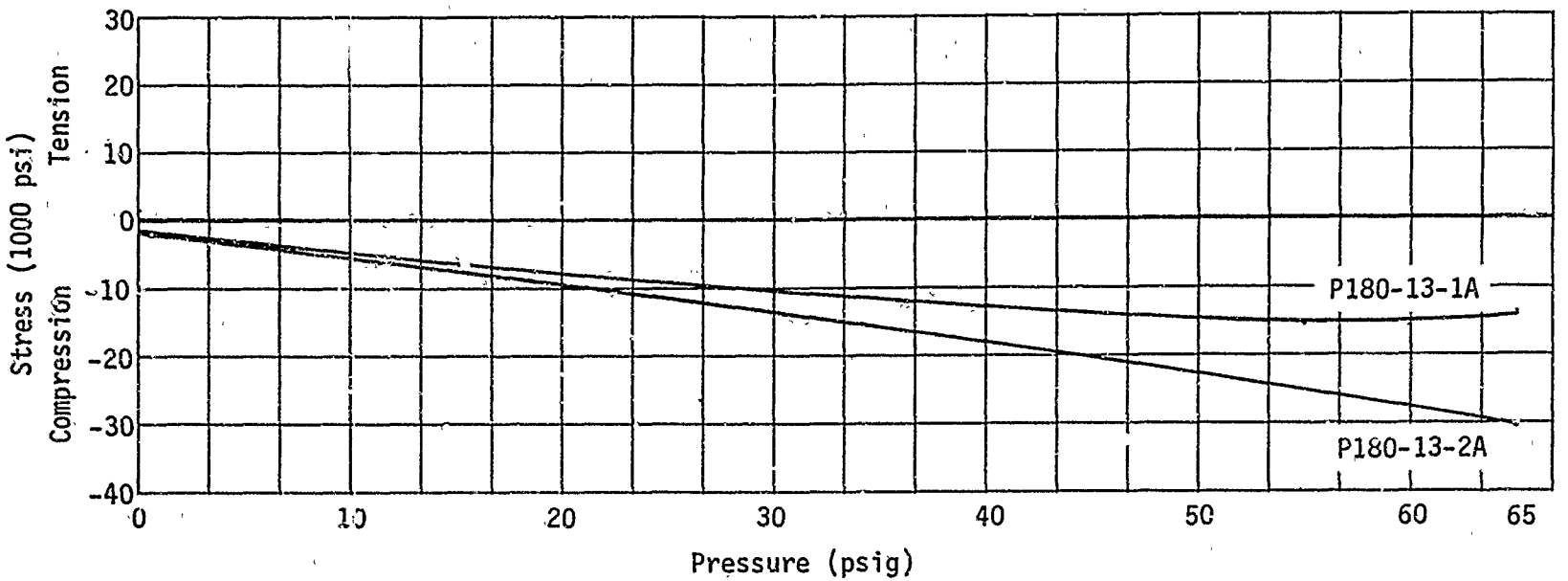


Figure 34 Condition 2 - Stress Plots of P180-13-1A and 2A

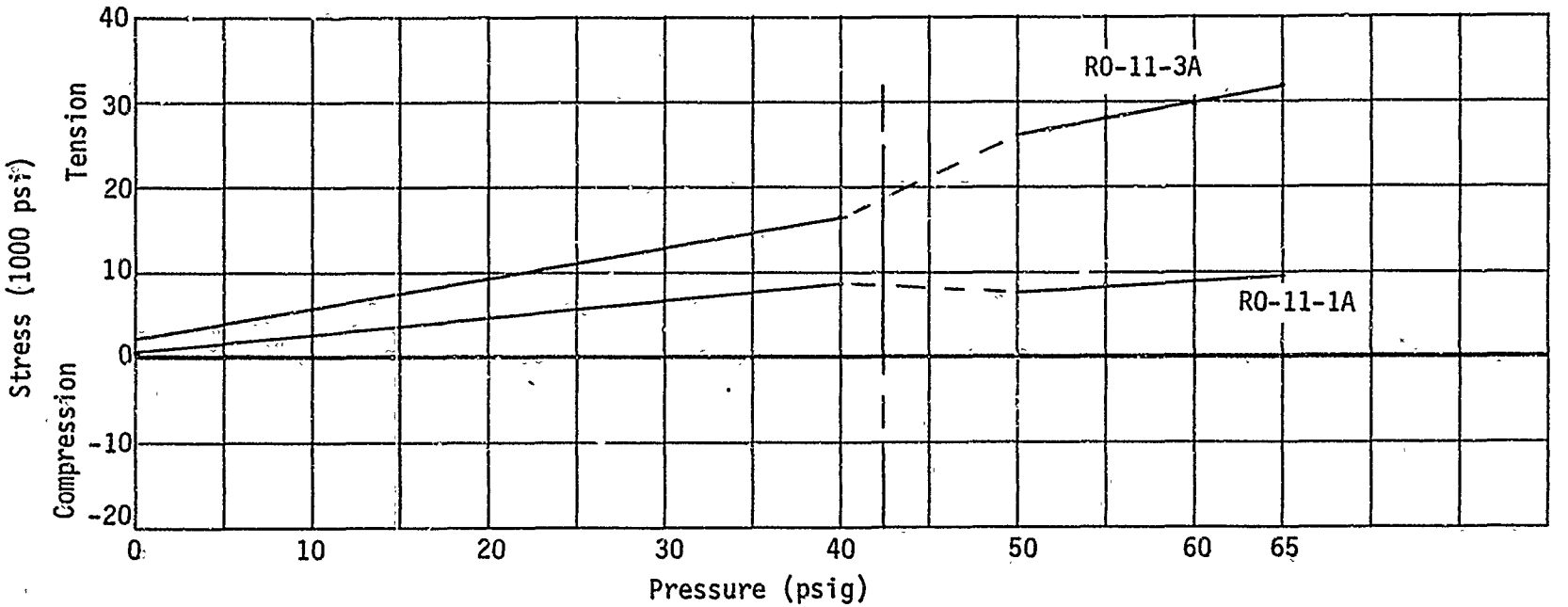


Figure 35 Condition 2 - Stress Plots of RO-11-1A and 3A

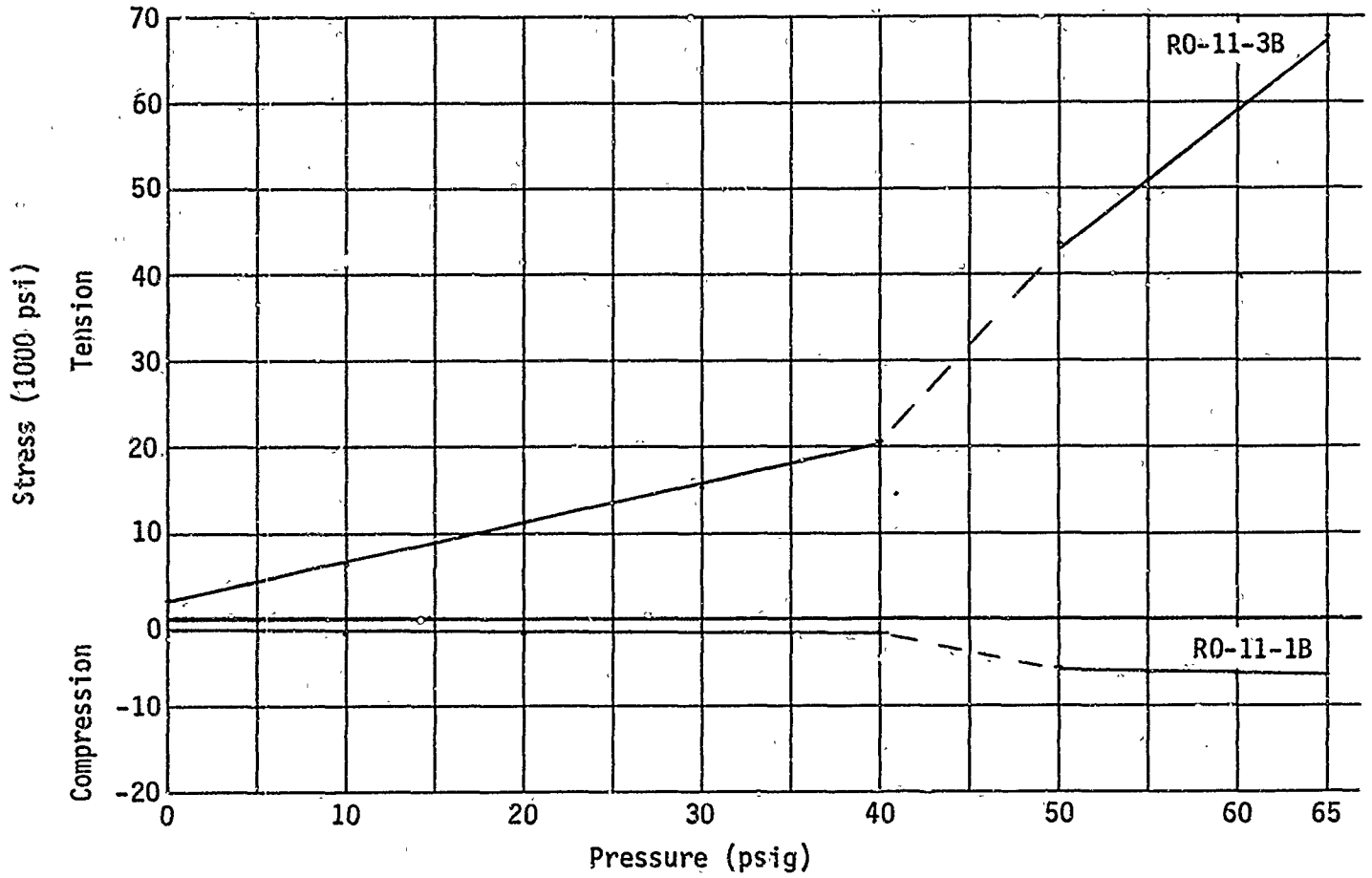


Figure 36 Condition 2 - Stress Plots of RO-11-1B and 3B

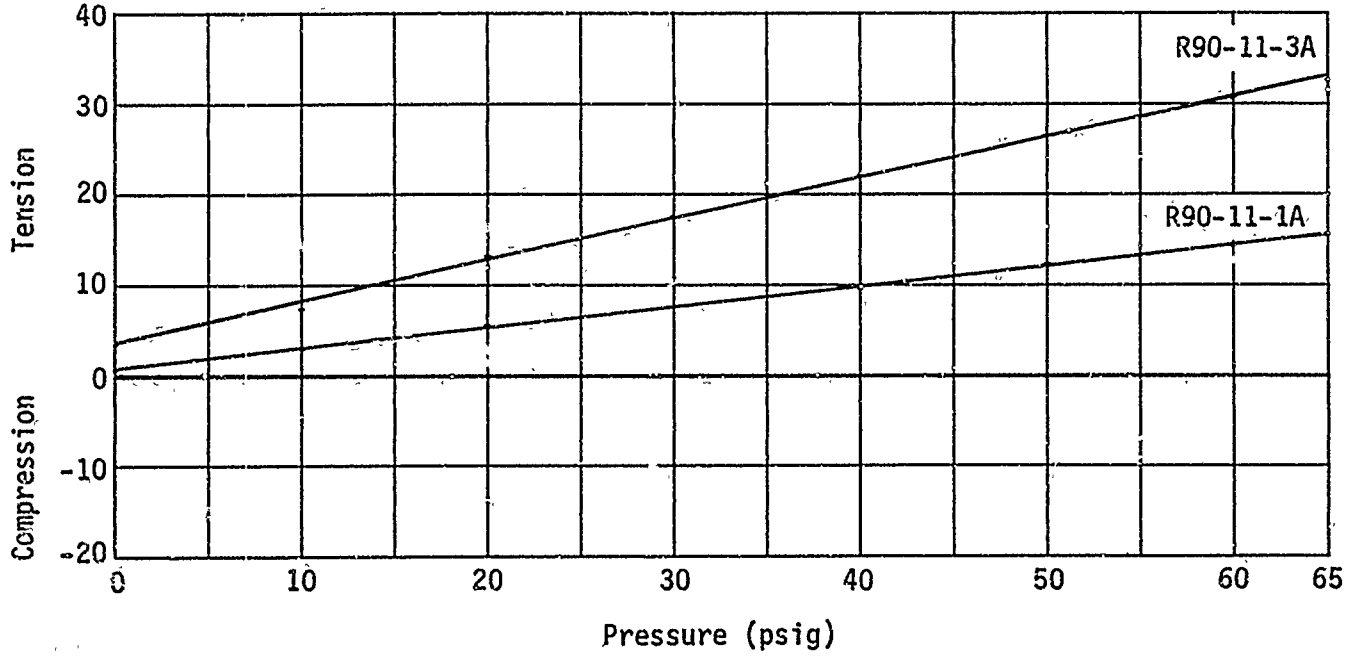


Figure 37 Condition 2 - Stress Plots of R90-11-1A and 3A

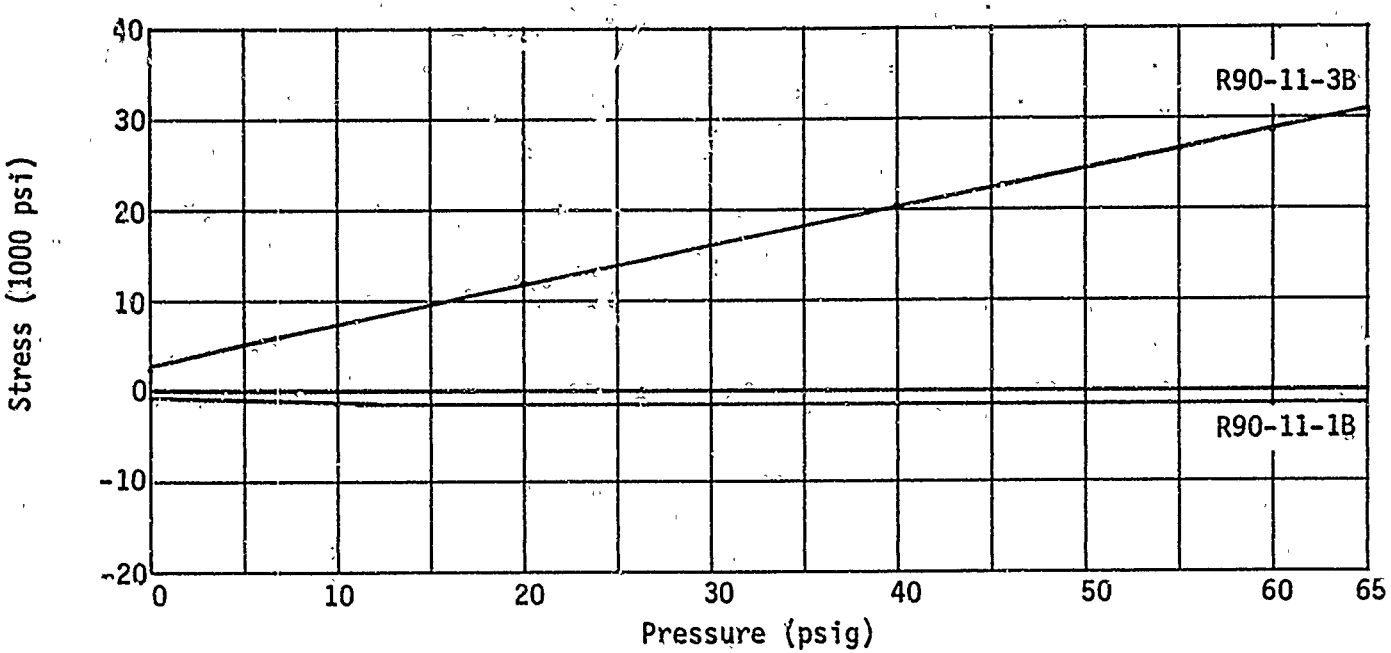


Figure 38 Condition 2 - Stress Plots of R90-11-1B and 3B

There were no strain gages in the immediate area of the Sta 343.5 weld crack; however, strain gages identified as PO-03-1B, PO-03-2B, P90-03-1B, P90-03-2B, P180-03-1B, P180-03-2B, L162-28A and L162-28B should have recorded strains comparable to those found at the defect. These gages are plotted in Fig. 39 through 42. All of these gages were located approximately 0.5 in. above the weld. All gages except L162-28A were located on the inside skin. PO-03-1B, P90-03-1B, P180-03-1B,L162-28A and L162-28B all measured longitudinal strain. The stress level recorded from all inside skin line gages in the longitudinal direction was around 80,000 psi tension. Theoretically, the stress level across this weld while the tank was at 65 psig should have been approximately 32,500 psi. A visual examination of the weld indicates that the dome was welded to the Y-ring with approximately 300 percent mismatch, causing severe local bending. The back-to-back gages, L162-28A and L162-28B, identified this bending, it can be seen in the stress plots for these gages in Fig. 42. The 162-28A gage located on the outside skin line registered 78,400 psi *compression*, while the 162-28B gage located on the inside skin line registered 84,200 psi *tension*.

Figures 43 and 44 show deflection plots of the radial change in the test specimen at Sta 413.8 and 455.61 respectively. While pressurizing to 65 psig, the test specimen radius increased an average of approximately 0.13 in. at Sta 413.8. The radius at Sta 455.61 decreased 0.103 in. while pressurizing to 65 psig. The cone apex dropped 0.210 in. while pressurizing to 65 psig. Figure 45 shows the deflection of the cone apex.

Test specimen barrel panel principal strains and directions are shown in Fig. 46 through 49. These strains were recorded at rosette gage locations while the test specimen was at 65 psig top dome pressure.

7. CONCLUSIONS

The test article was not structurally capable of withstanding limit hydrostatic pressure (65 psig top dome pressure). Data indicates that discontinuity bending stresses occurred at most circumferential weld joints in the test specimen. These bending stresses exceeded the weld capability in some areas, and these areas cracked. Test stresses recorded at other areas on the conjugate structure, not effected by discontinuities, were relatively low. A visual examination revealed no structural degradation of any other areas except those identified in this report.

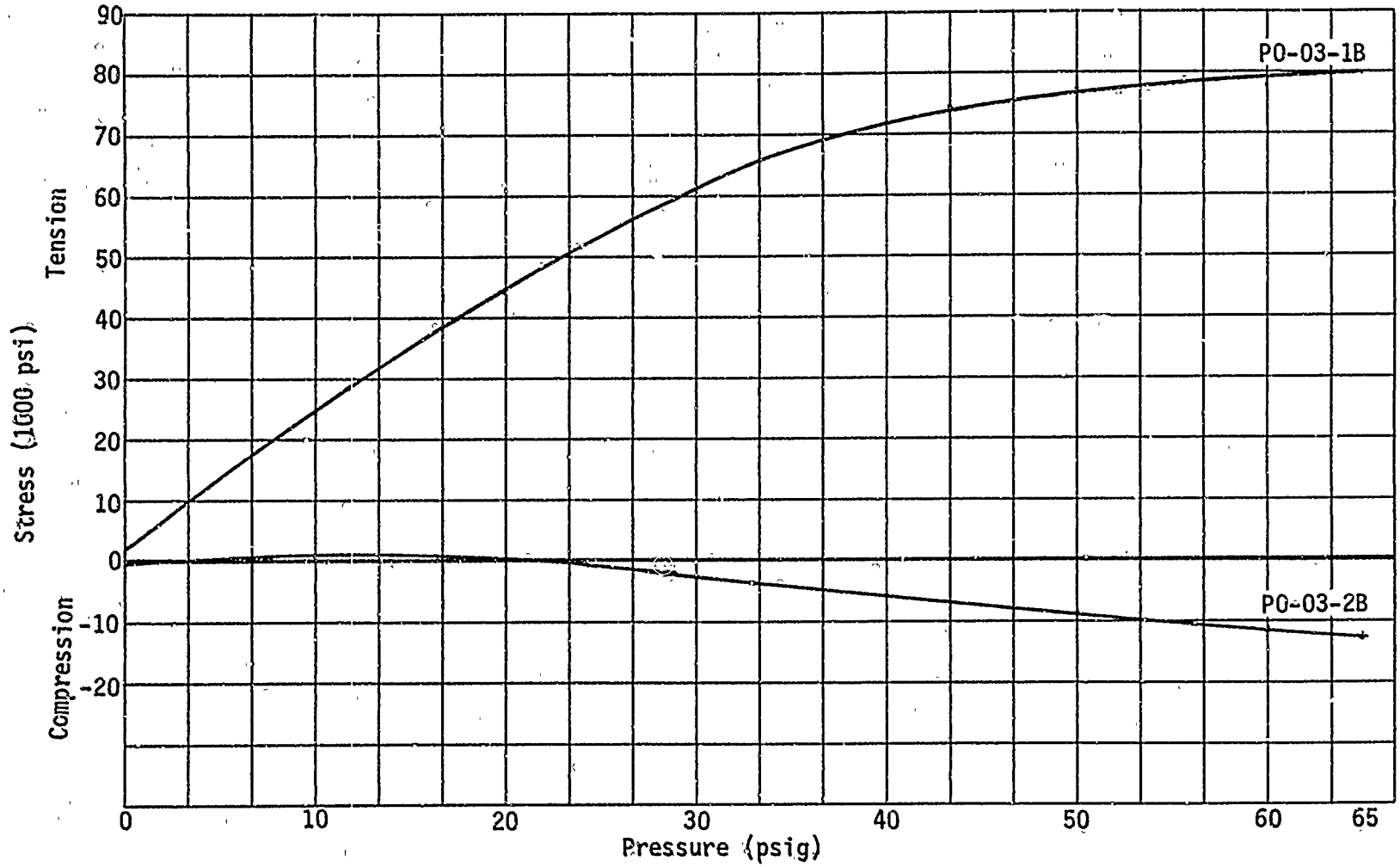


Figure 39 Condition 2 - Stress Plots of PO-03-1B and 2B

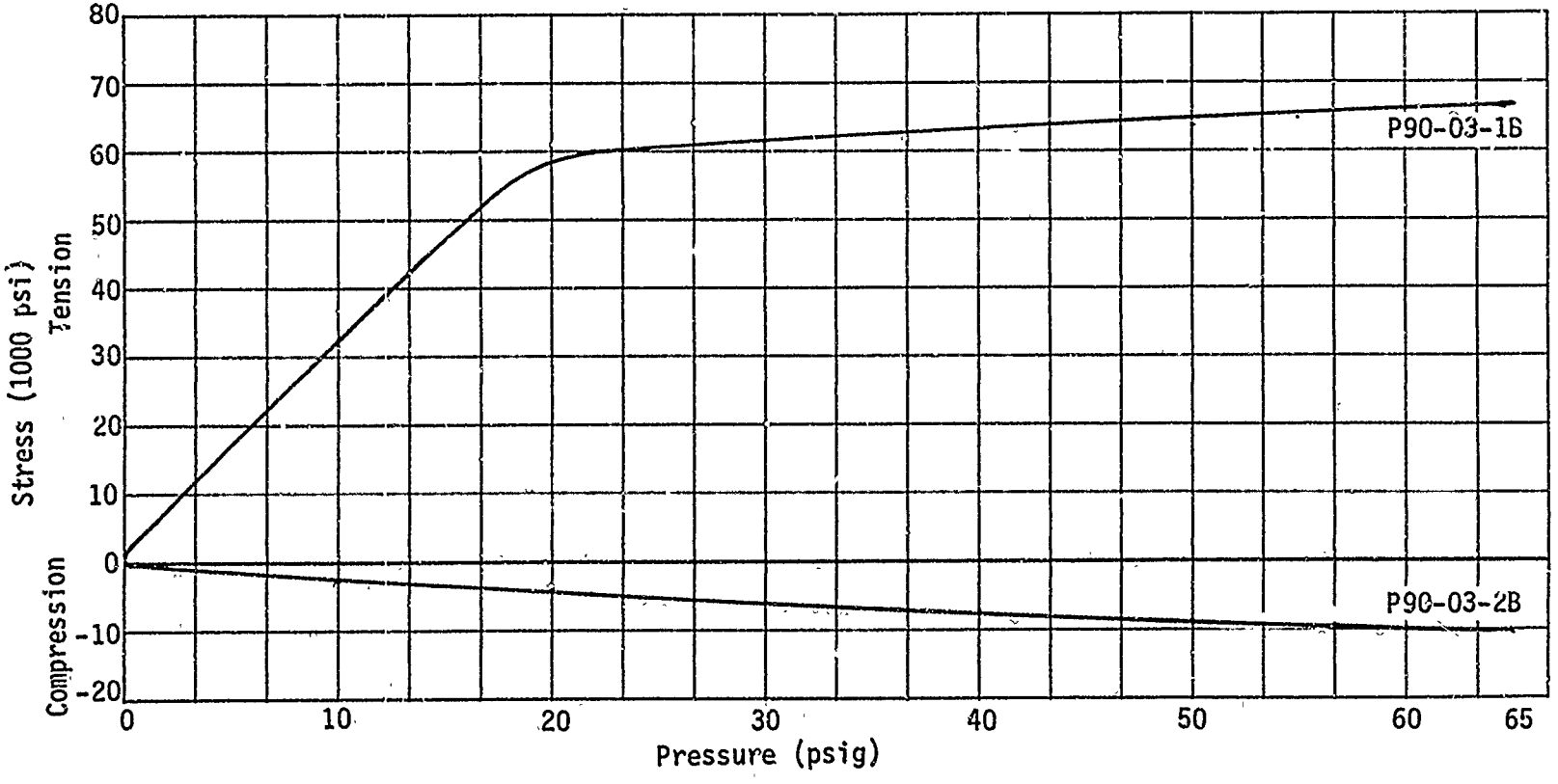


Figure 40 Condition 2 - Stress Plots of P90-03-1B and 2B

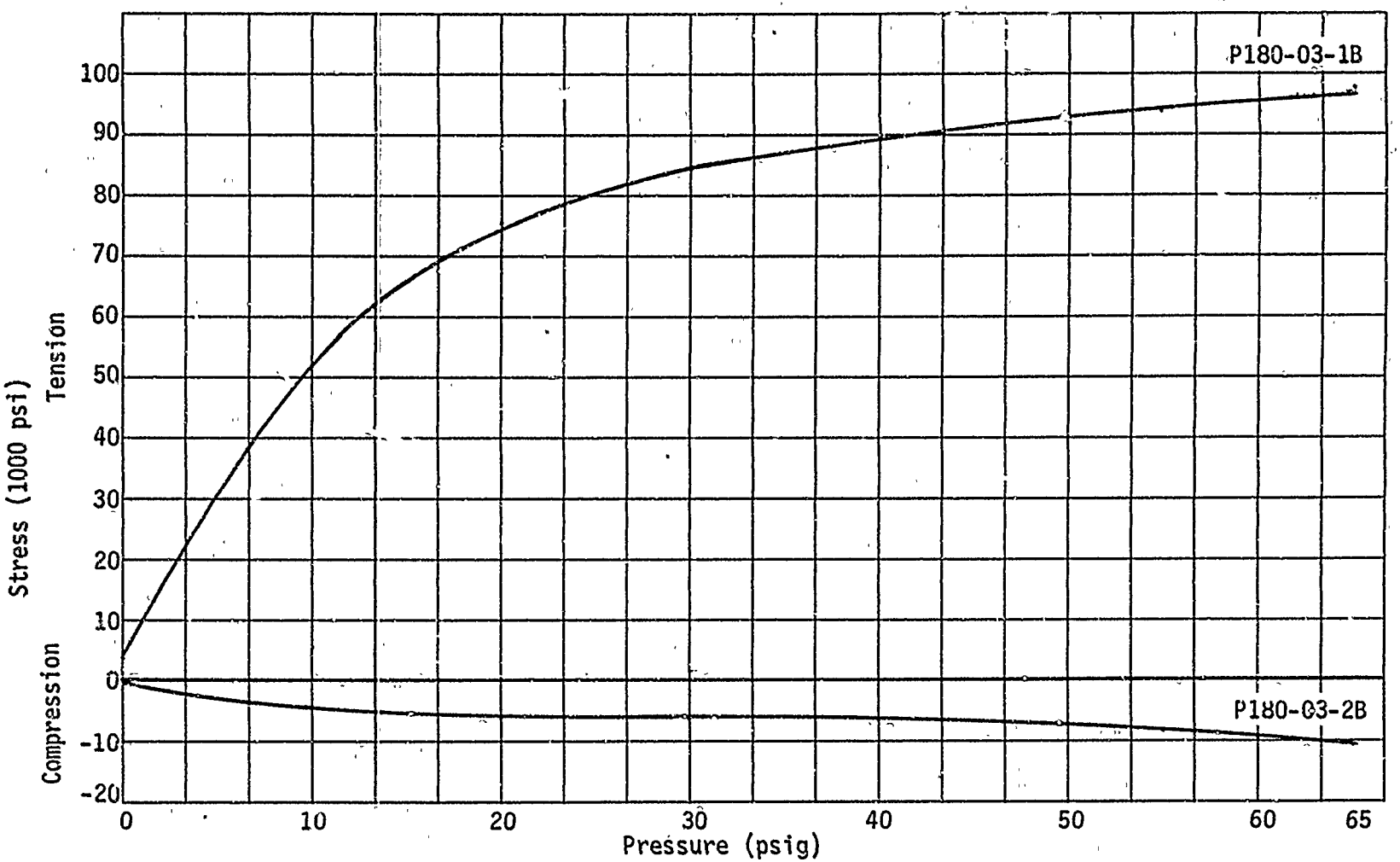


Figure 41 Condition 2 - Stress Plots of P180-03-1B and 2B

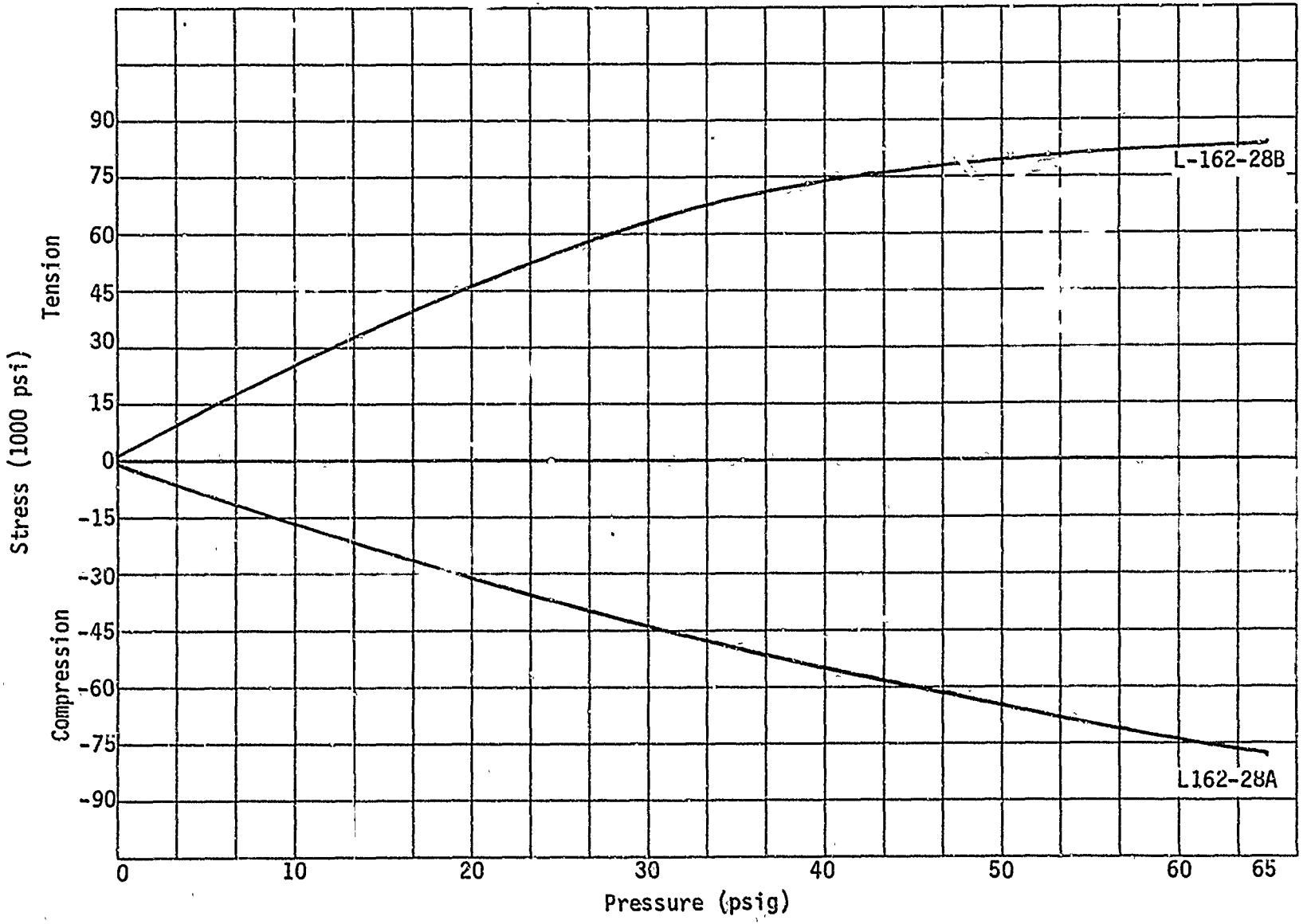


Figure 42 Condition 2 - Stress Plots of L162-28A and 28B

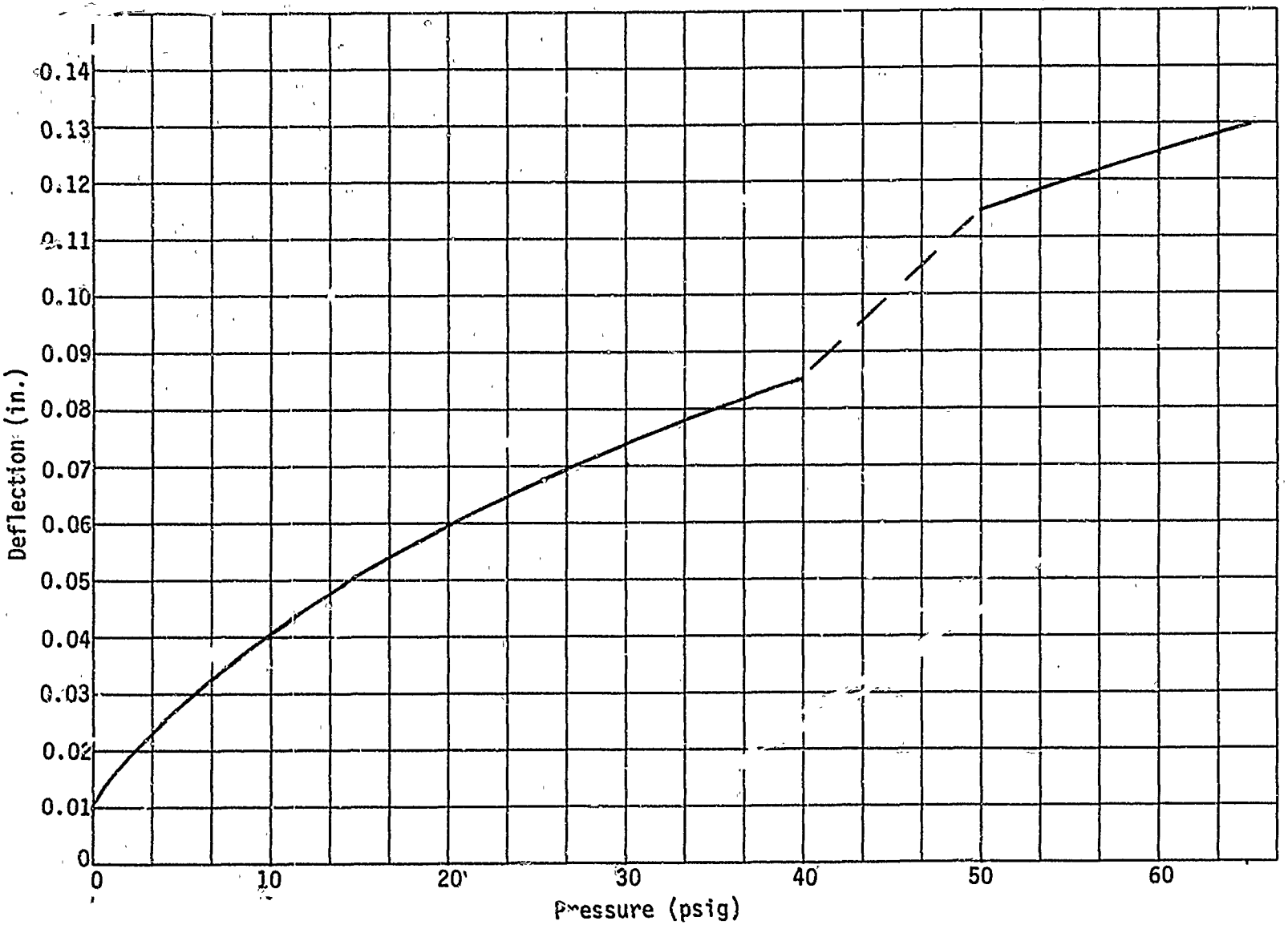


Figure 43 Condition 2 - Radial Deflection at Station 413.8

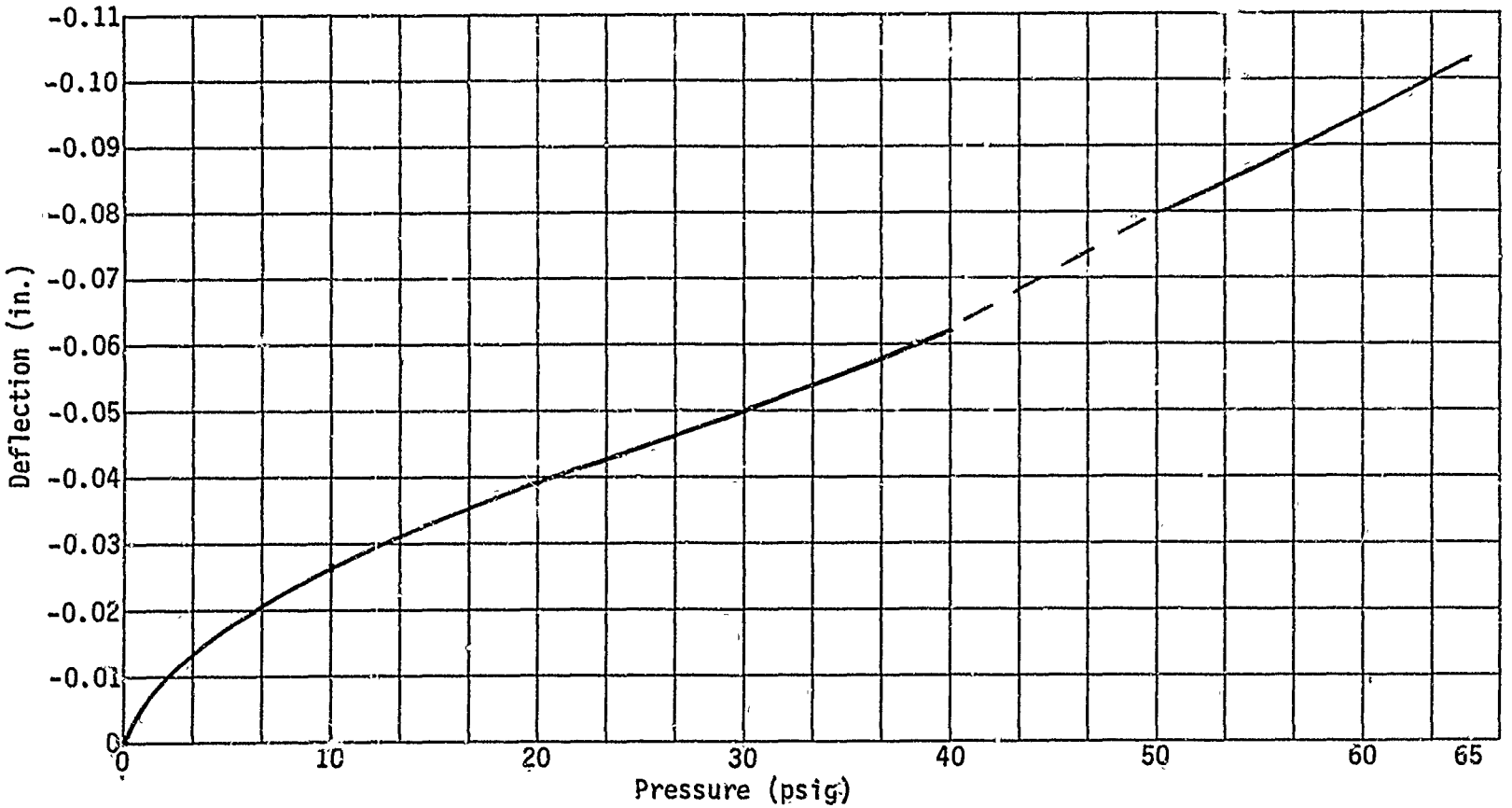


Figure 44 Condition 2 - Radial Deflection at Station 455.61

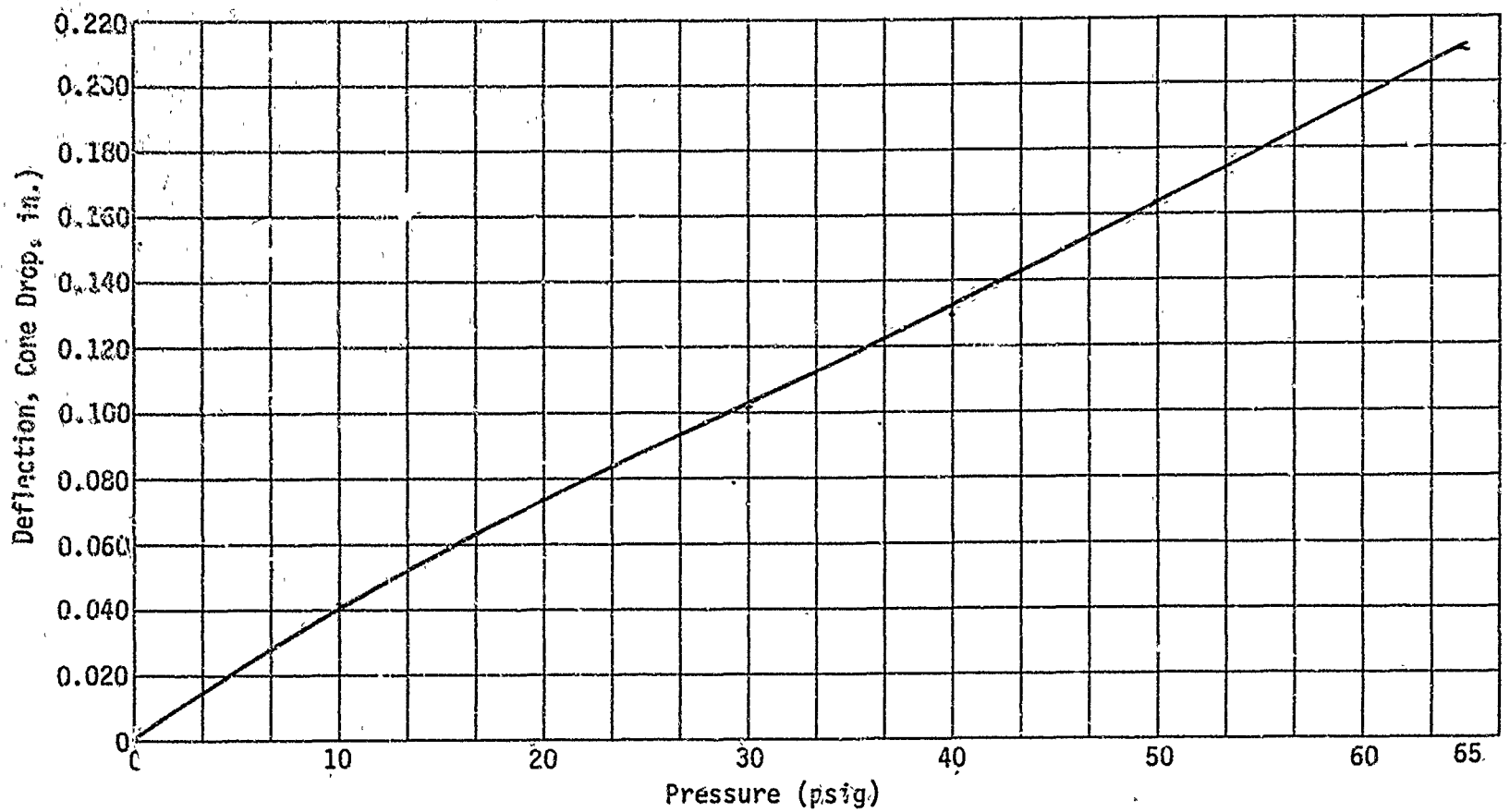
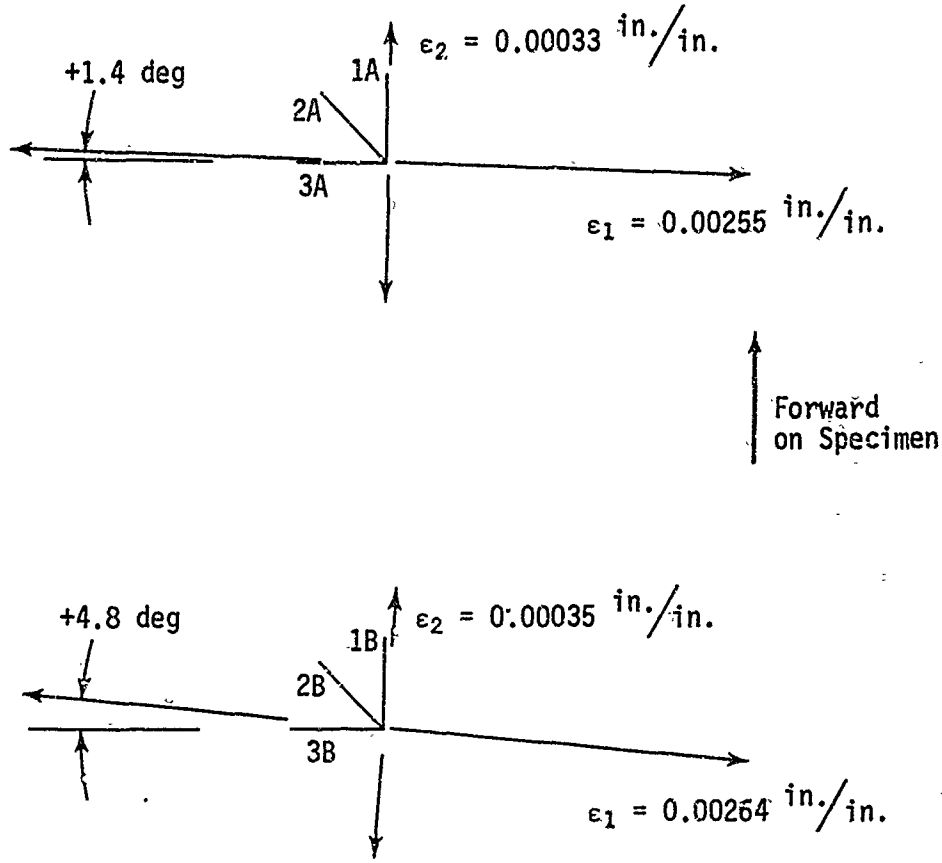


Figure 45 Condition 2 - Deflection of Cone Apex

Principal Strains and Directions Shown are at a Test Level of 65 psig.

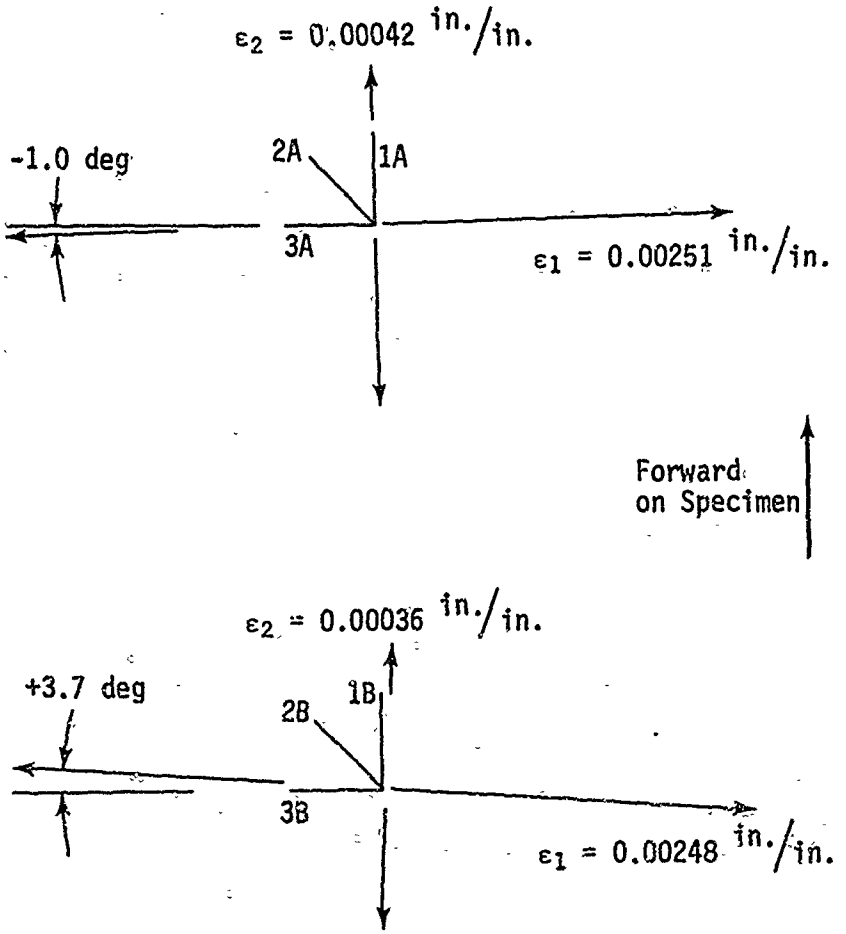


View Looking at Gage Areas from Outside the Test Specimen.

No. 1 Gages Measure Longitudinal Strain.
No. 3 Gages Measure Hoop Strain.

Figure 46 Condition 2 - Principal Strains at RO-04 Rosette Gages

Principal Strains and Directions Shown are at a Test Level of 65 psig.

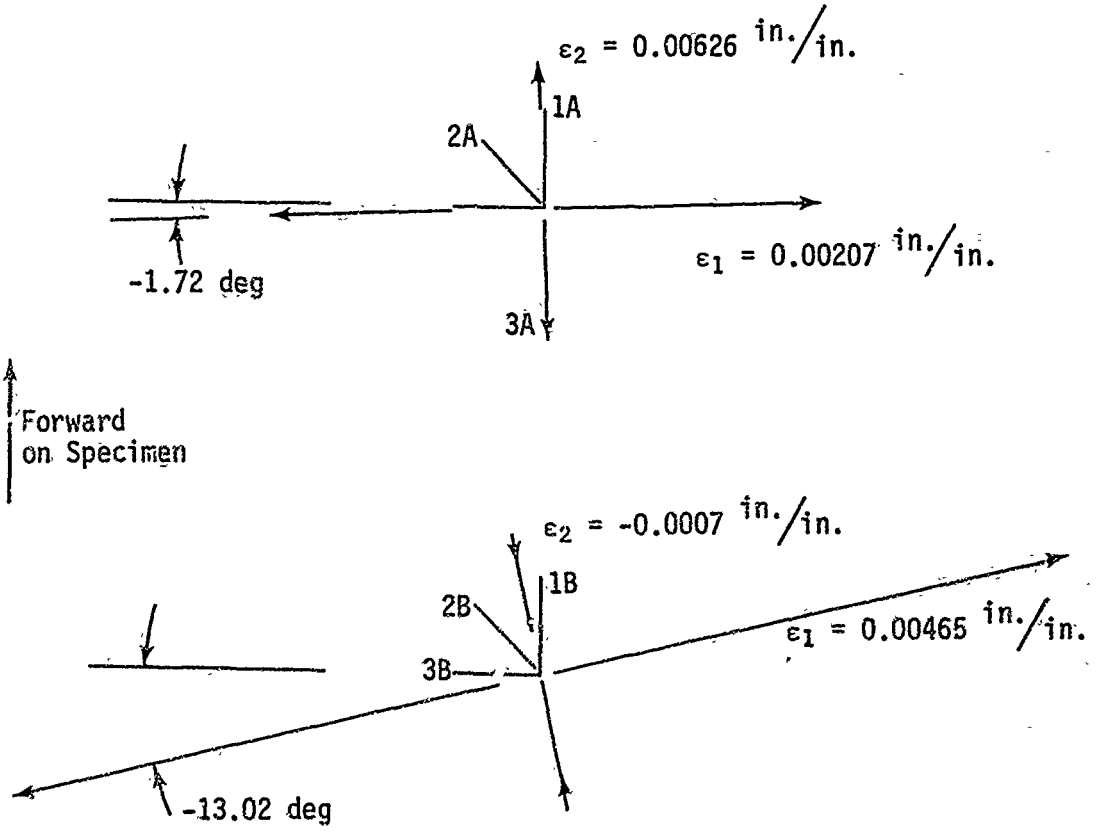


View Looking at Gage Areas from Outside the Test Specimen.

No. 1 Gages Measure Longitudinal Strain.
No. 3 Gages Measure Hoop Strain.

Figure 47 Condition 2 - Principal Strains at R90-04 Rosette Gages

Principal Strains and Directions Shown are at a Test Level of 65 psig.

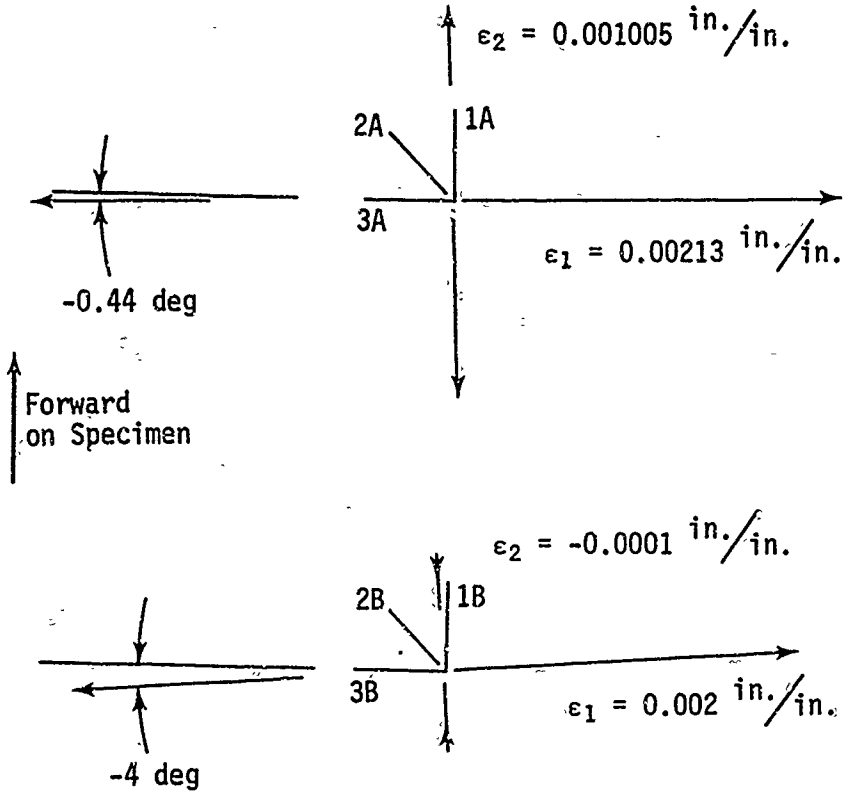


View Looking at Gage Areas from Outside the Test Specimen.

No. 1 Gages Measure Longitudinal Strain.
No. 3 Gages Measure Hoop Strain.

Figure 48 Condition 2 - Principal Strains at RO-11 Rosette Gages

Principal Strains and Directions Shown are at a Test Level of 65 psig.



View Looking at Gage Areas from Outside the Test Specimen.

No. 1 Gages Measure Longitudinal Strain.
No. 3 Gages Measure Hoop Strain.

Figure 49 Condition 2 - Principal Strains at R90-11 Rosette Gages

SECTION V

FAILURE ANALYSIS

As previously discussed, failure of the conjugate tankage during the test resulted in a 42.5-in. crack on the inside aft tank barrel to lower Y-ring circumferential weld. After the tank failure, the tank was visually inspected, the structural welds (including all repair welds) were radiographically inspected, and the tank and radiographs were submitted for failure analysis.

Several areas of the tank were selected, based on the visual inspection and radiographs, for extensive investigation. These areas, designated by specimen numbers 1 to 10, are listed in Table III with their corresponding cutout identification, location degree, weld designation, and x-ray footage location.

1. OBJECT

The object of the failure analysis was to determine the cause of failure of the aft tank barrel to lower Y-ring circumferential weld. It was also the purpose of this investigation to evaluate other areas of the conjugate structure for weld integrity and quality.

2. CONCLUSIONS

It was concluded that the point of failure of the aft tank barrel to lower Y-ring circumferential weld began in approximately a 6-in. span in the center of the 42.5 in. crack at the edge of the weld. It was also concluded that failure was caused by the following conditions, listed according to importance:

1) Stabilized alpha surface layer on the parent metal adjacent to the weld;

2) Residual restraint in the area of failure;

3) Mismatch in the area of failure.

It appears that the bulk of the stabilized alpha layer was present prior to any welding, as evidenced by its prominence on the truss core approximately 3 in. away from any weld.

3. RESULTS

a. Visual and Radiographic Investigation. Visual and radiographic examination of the tank revealed 10 specific areas of major concern. These areas showed cracks or metal separation and were cut out of the tank for further investigation. Specific location of these areas can be correlated from Table III, and are described next.

(1) Cutout A. Cutout A revealed cracks alongside the aft tank barrel to lower Y-ring circumferential weld next to a weld junction in a repair weld area (Fig. 50). The backside of the crack area (Fig. 51) showed a discoloration on and around the weld, and a substance appearing like scale was found on the truss core and face sheet; mismatch was apparent.

(2) Cutout B. Cutout B revealed an open crack alongside the edge of a repair, and designated Specimen 3 (Fig. 52 and 53). Other cracks, designated Specimens 2, 4, and 5, were discovered alongside the aft tank barrel to lower Y-ring circumferential weld. Again, mismatch was apparent. The backside of the cutout showed discoloration and a scaly substance on the surface (see Fig. 54 and 55). Figure 56 is a magnification of the weld bead front side in the Specimen-5 area showing the crack alongside the weld edge.

(3) Cutout C. Cutout C was a complete cutout of the 42.5-in. crack alongside the aft tank barrel to Y-ring weld that resulted in test failure. Figure 57 shows the overall cutout, and Fig. 58 and 59 show the terminations at each end of the crack area, both of which terminate at weld junctures. One actually crossed over the juncture a slight distance (Fig. 59). The fracture surface appeared to be a brittle failure starting in the area of Specimen 6 with a tearing action evident on both extremities of the crack. In the process of cutting out the section, the bead portion of the specimen distorted when relieved, and mismatch was evident all along the cutout.

(4) Cutout D. Figure 60 shows an overall view of Cutout D with the aluminum patch still in place on the aft tank to lower Y-ring weld. Figures 61 and 62 are a magnification of the backside surface of the patched area showing the two repairs, discoloration, and bent truss core. The leaking area was visible (Fig. 62) on the right side of the repair area at the crack stop-drilled holes.

TABLE III Specimen Designation

Specimen number	Cutout identification	Location (deg)	Weld designation*	X-ray footage	Description of defect
1	A Ref Fig. 22	114 Ref Fig. 27	T6 (aft tank barrel to lower lower Y-ring circumferential weld)	8 ft	Crack repair at crossover weld cracked during test.
2	B Ref Fig. 22	96 Ref Fig. 27		9 ft 6.5 in.	Crack extension of Specimen 3 area.
3	B Ref Fig. 22	95 Ref Fig. 27		9 ft 7.5 in.	Crack wide open around edge of repair weld.
4	B Ref Fig. 22	92 Ref Fig. 27		9 ft 10.5 in.	Crack extension of Specimen 3.
5	B Ref Fig. 22	91 Ref Fig. 27		9 ft 11.5 in.	Crack extension of Specimen 3.
6	C Ref Fig. 23	336.5 to 23.5 Ref Fig. 27		15 ft 9 in. to 20 ft	Weld split open for 42.5 in. between two crossover welds.
7	D Ref Fig. 24	226.5		29 ft 8 in.	Crack propagated during Condition-1 test.
8	E Ref Fig. 23	20.5 to 22 Ref Fig. 28	T2 (aft circumferential weld of forward barrel to upper tank attachment ring weld)	15 ft 10 1/4 in. to 15 ft 11 3/4 in.	Crack propagated during test in repair area.
9	F Ref Fig. 25	110 Ref Fig. 29	Parent metal		Crack in parent metal repair weld.
10	G Ref Fig. 26	239 to 241 Ref Fig. 30	F13 (forward dome to Y-ring circumferential weld)	28 ft 2 in. to 28 ft 4 in.	Cracked during test.

*T6, T2 and F13 are Martin Marietta designations for these welds

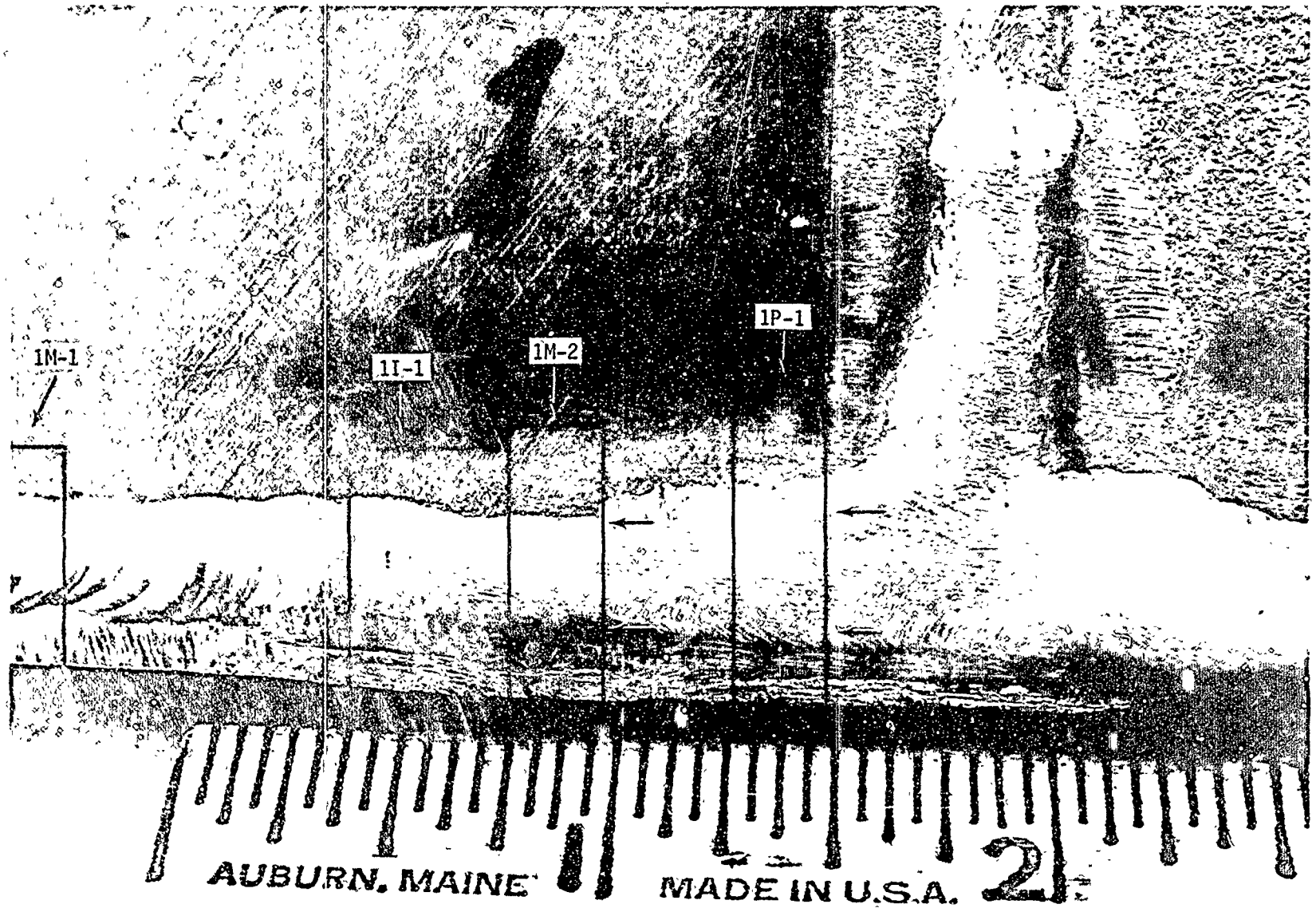


Figure 50 Specimen No. 1 (Cutout A) Showing Cracks Alongside Repair Weld at Junction

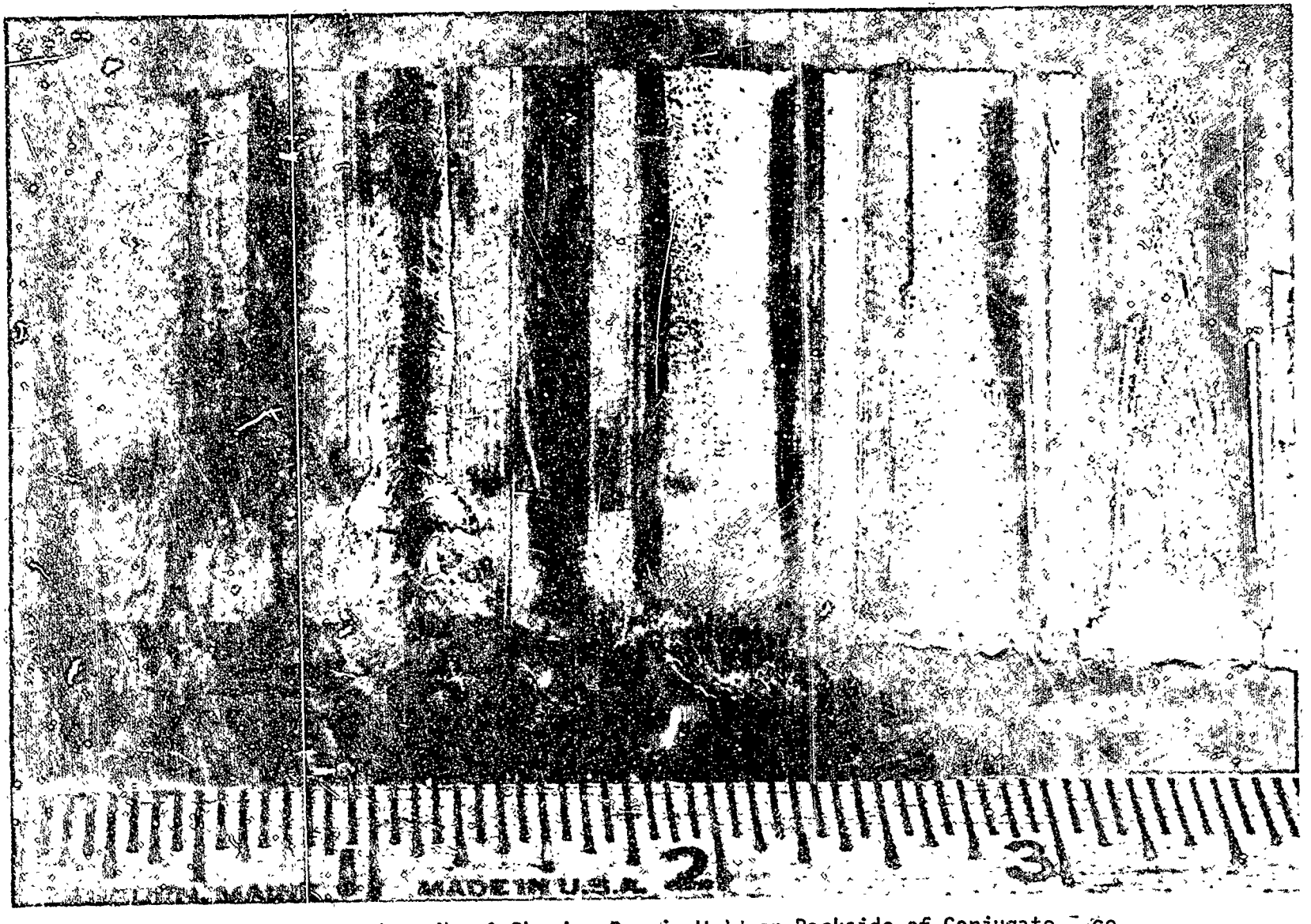


Figure 51 Specimen No. 1 Showing Repair Weld on Backside of Conjugate Face Sheet with Surface of Material which Appears to be Scaled

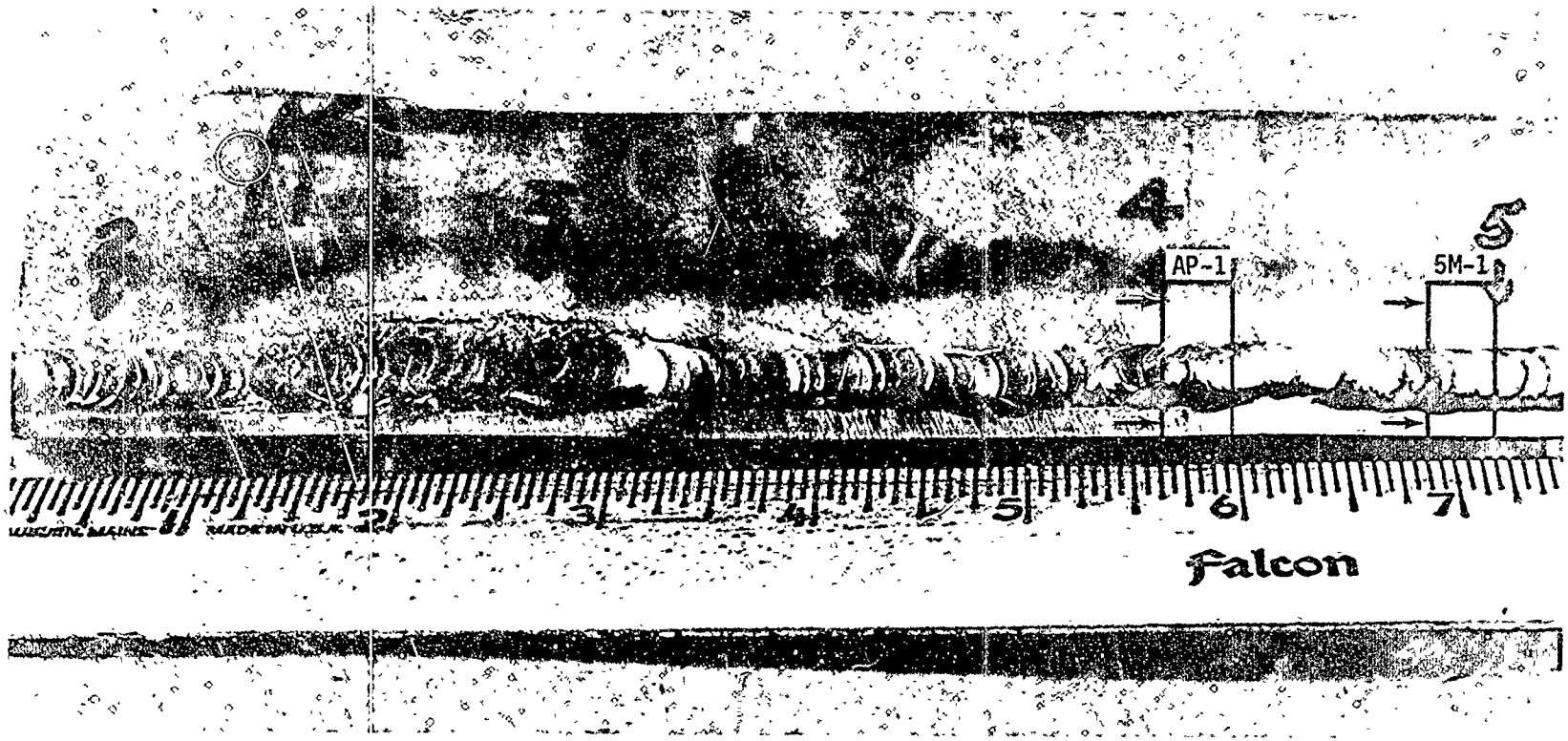


Figure 52 Overall View of Specimen No. 2, 3, 4 and 5 (Cutout B) Showing Location of Specimens to Wide Repair Weld

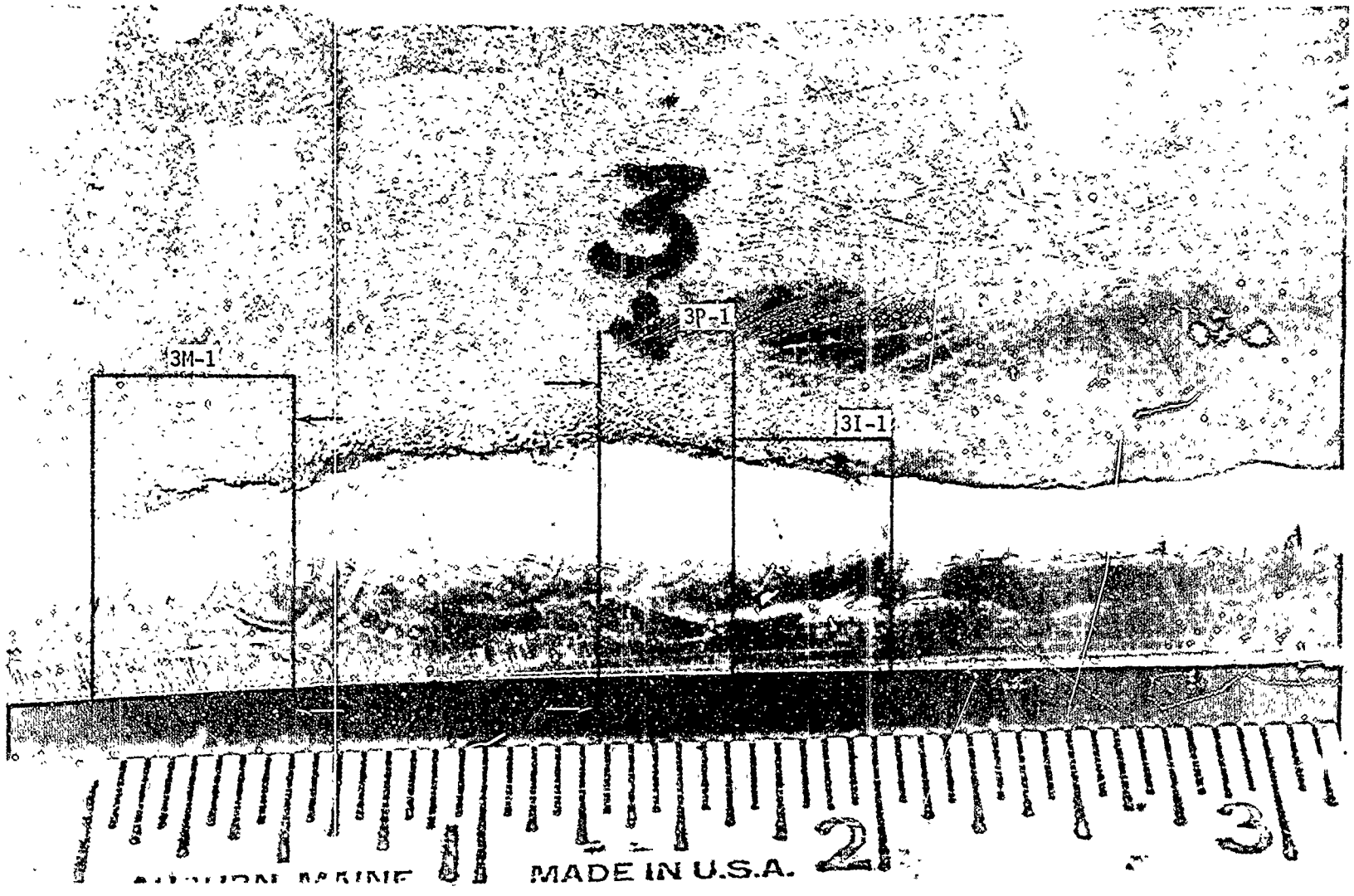


Figure 53 Specimen No. 3 Showing Crack Alongside Repair Weld on Face Sheet of Conjugate

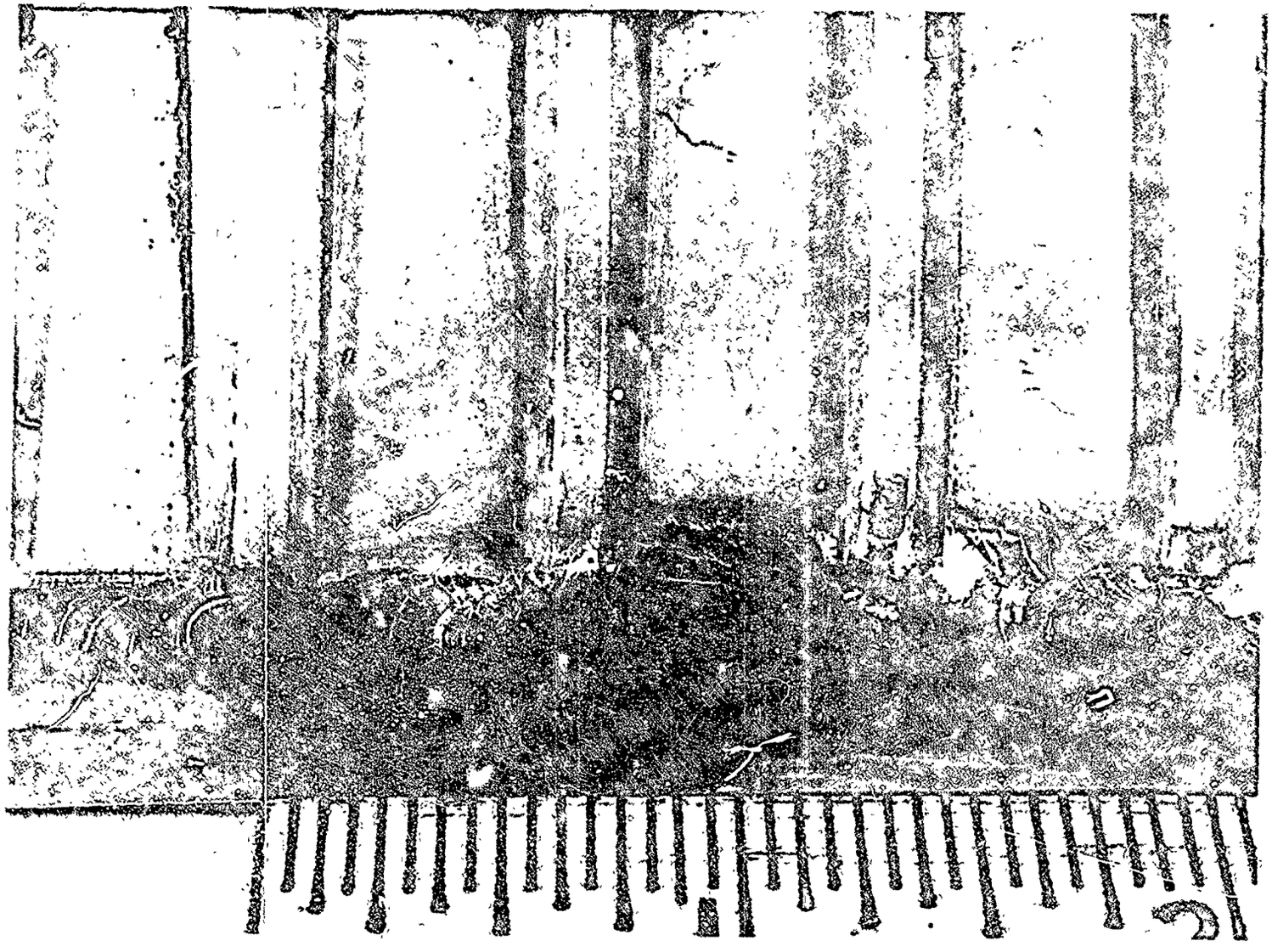


Figure 54 Specimen No. 3 Showing Backside of Crack Alongside Repair Weld with Discoloration, and Particles on Conjugate Structure which Appear Scaled

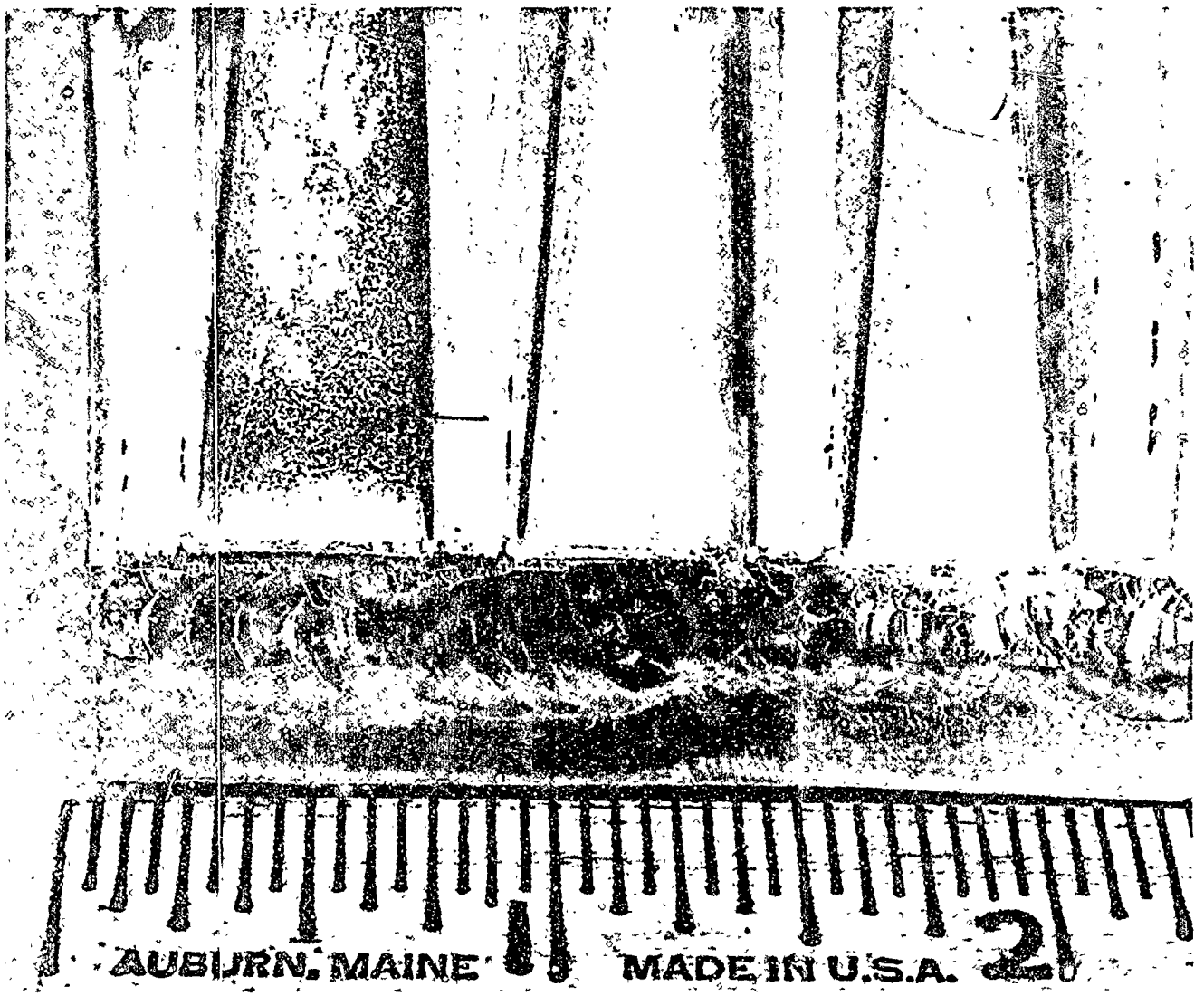


Figure 55 Specimen No. 4 and 5 Showing Backside of Weld with Scale Remains on Backside Conjugate Face Sheet (arrow)

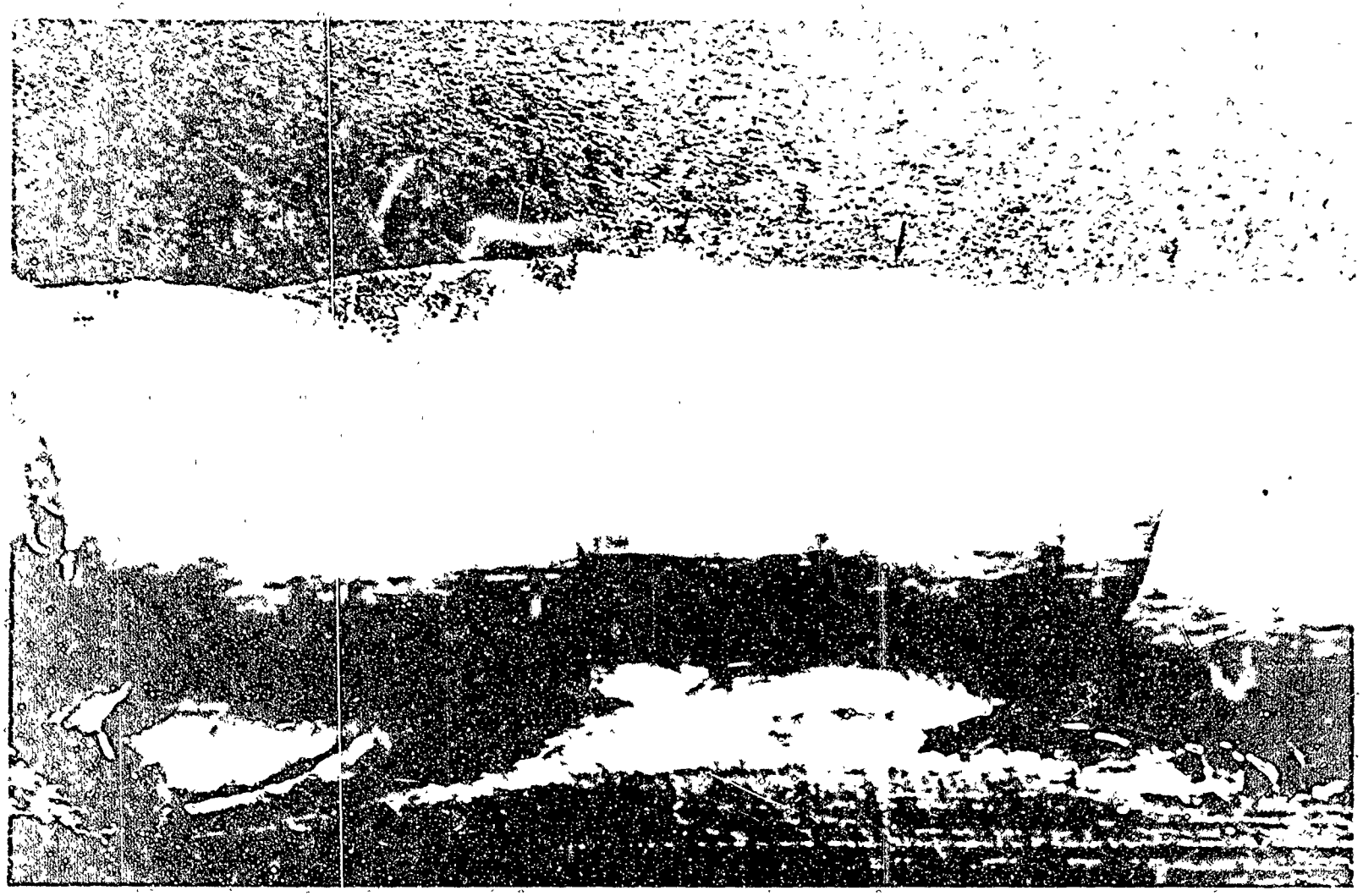


Figure 56 Photomacrograph (10X) of Weld Bead in Area of Specimen No. 5 Showing Cracks at Edge of Bead (arrows)

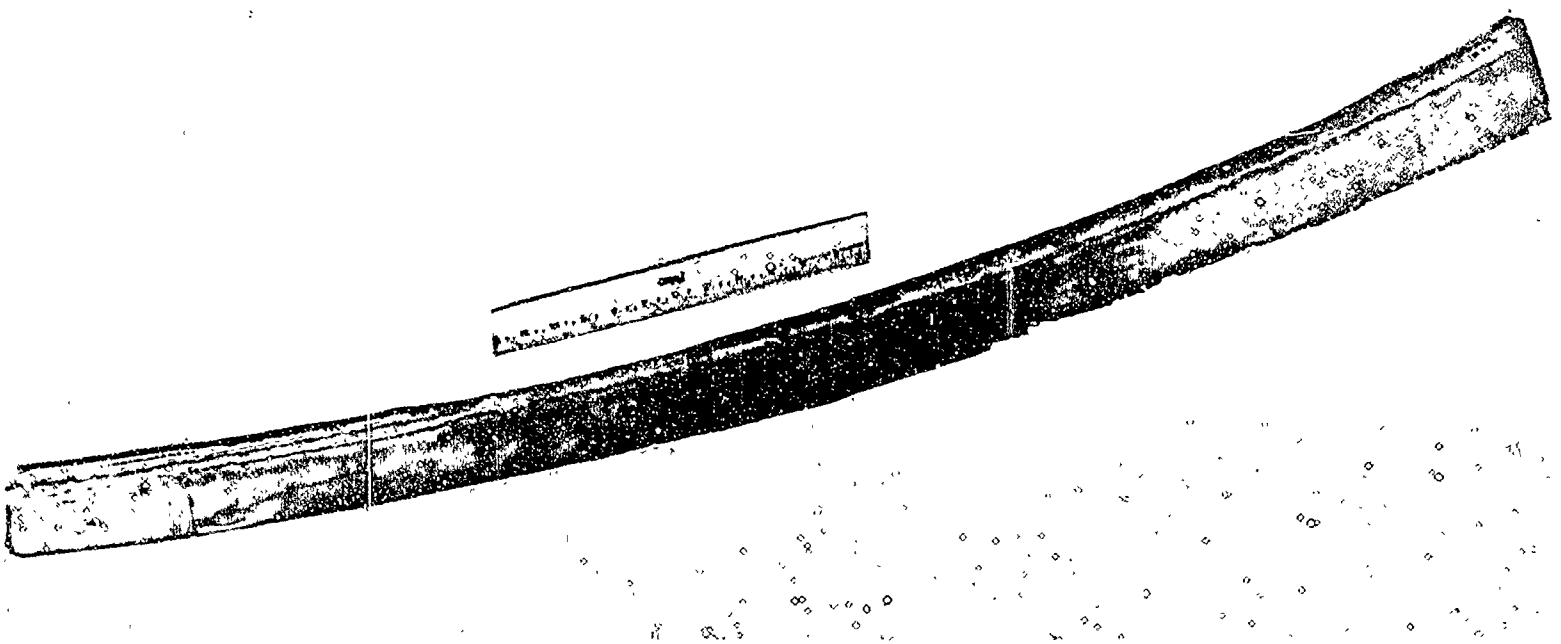


Figure 57 Specimen No. 6 (Cutout C) Showing Overall Extent of Crack 42.5 in. Long

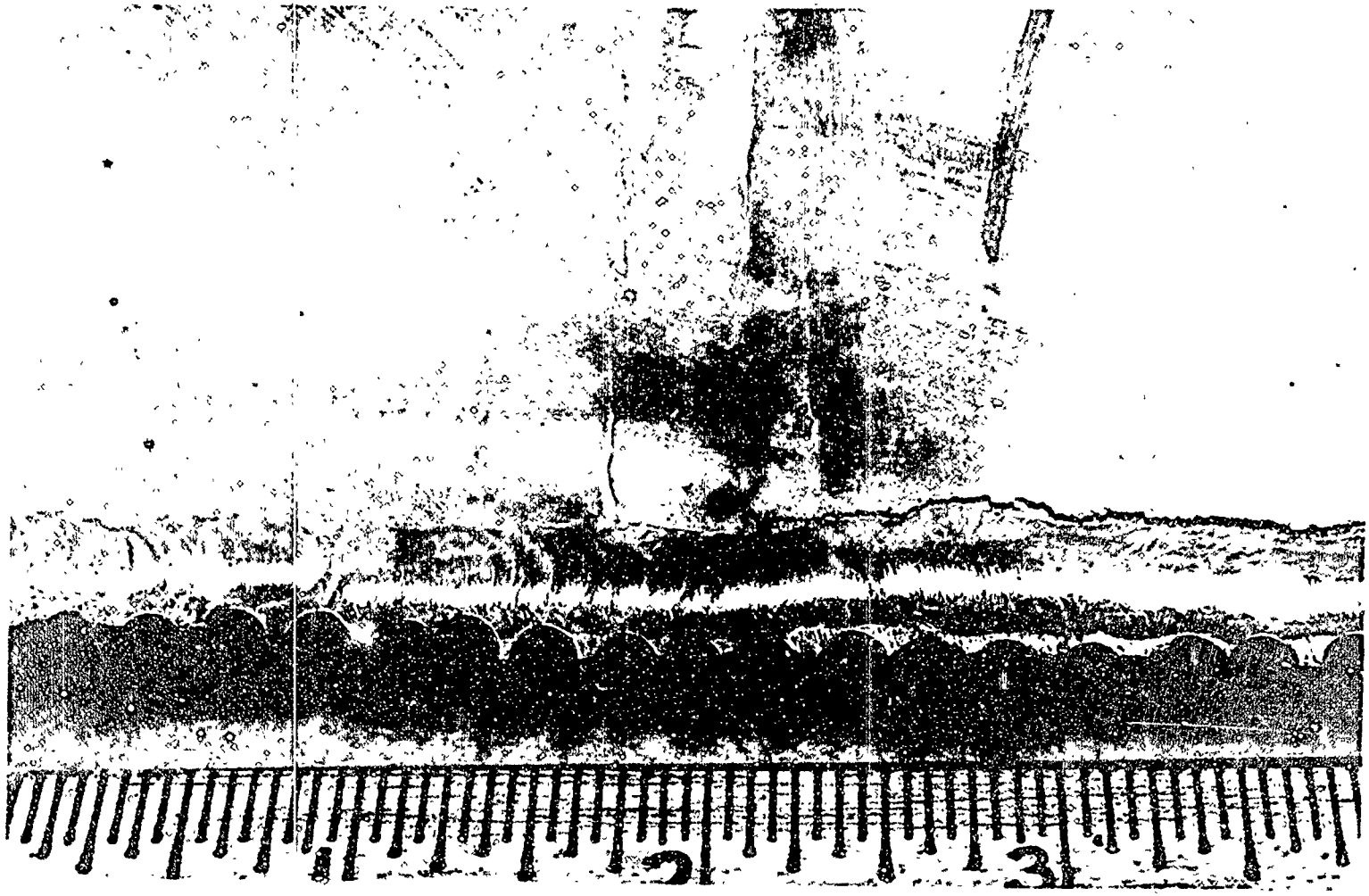


Figure 58 Termination of Crack at Crossover Weld at One End of Cutout C

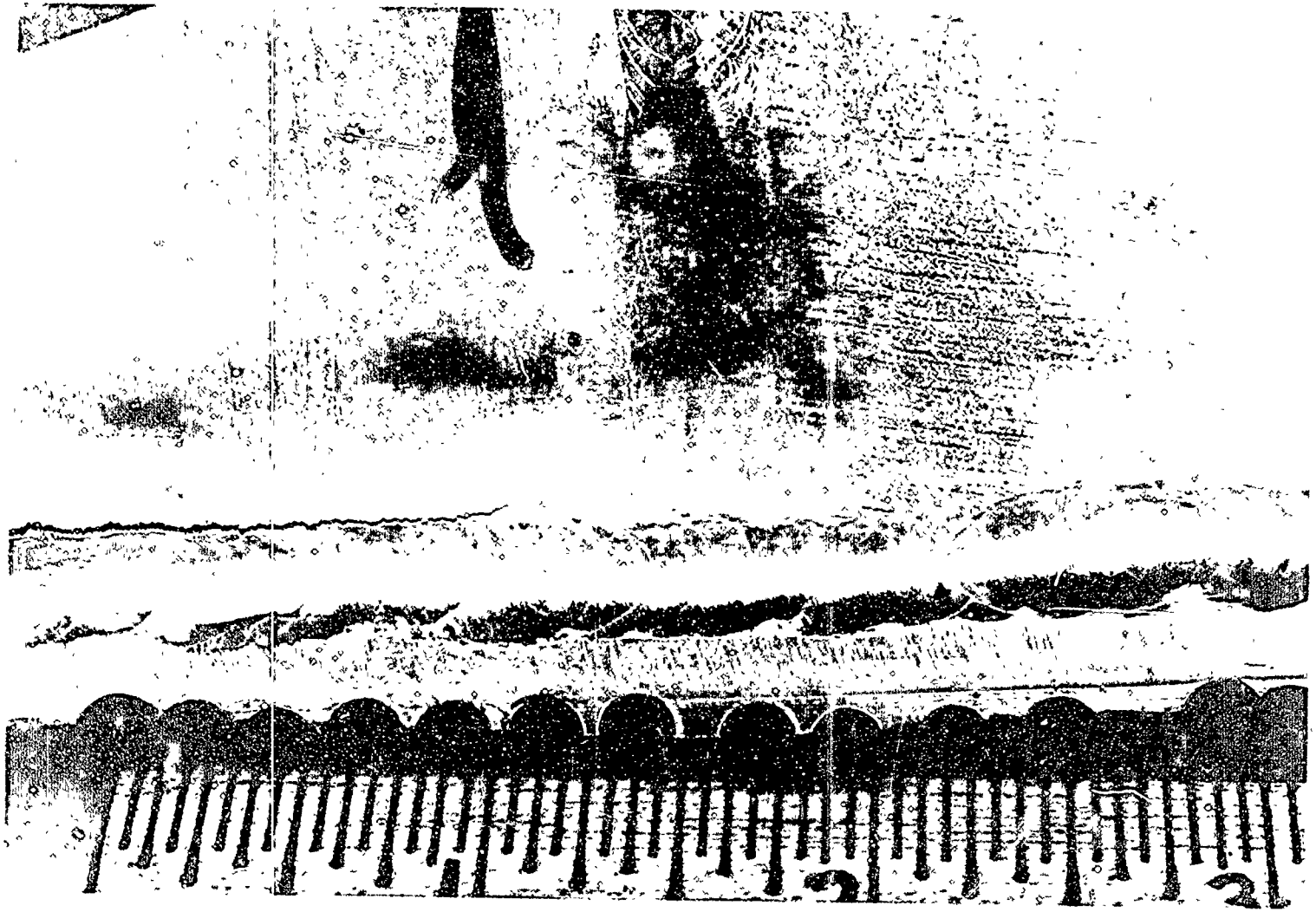


Figure 59 Termination of Crack Slightly Beyond Crossover Weld at Other End of Cutout C

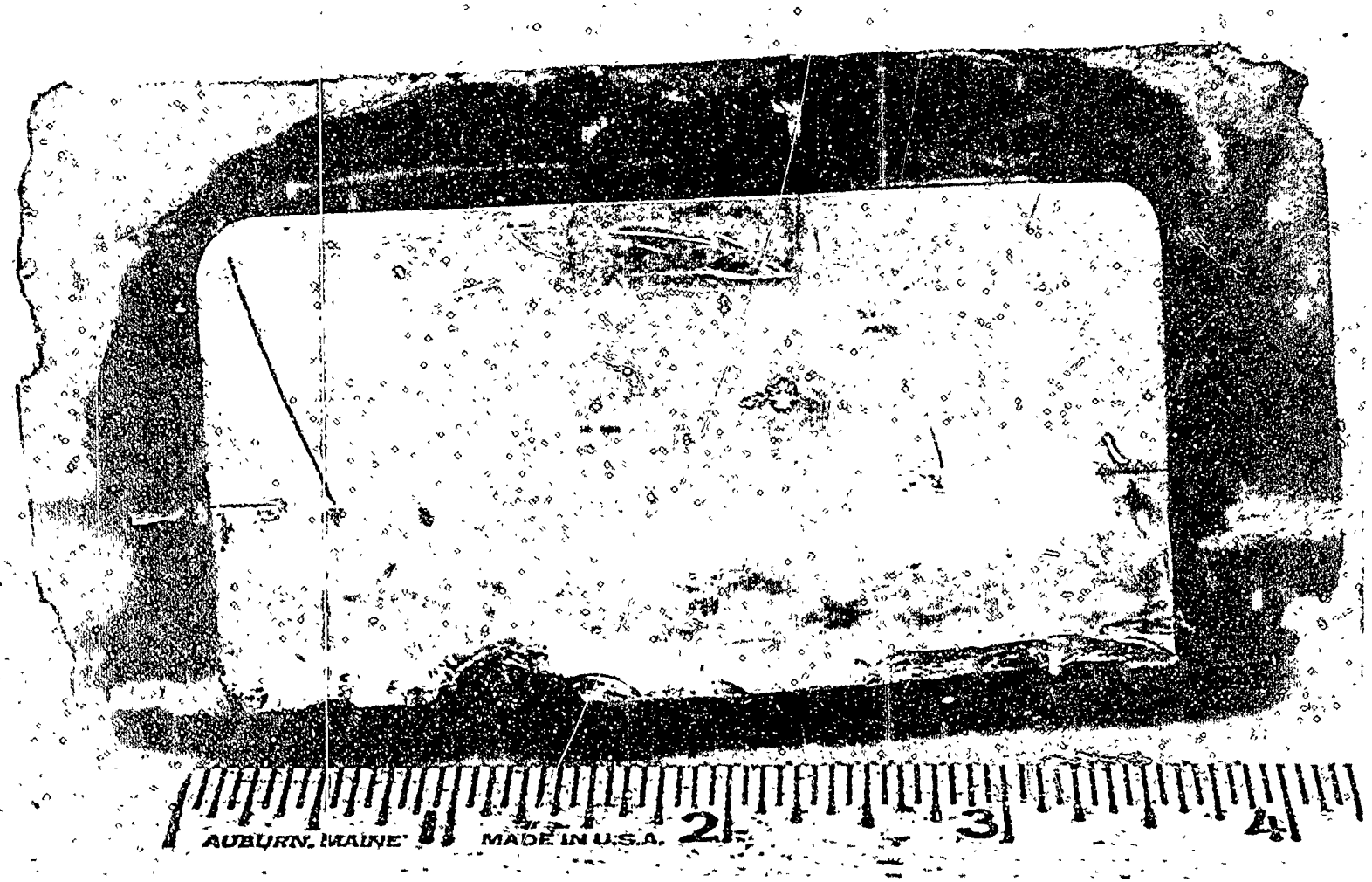


Figure 60 Specimen No. 7 (Cutout D) Showing Adhesively Bonded Aluminum Patch on Front Side of Repair Areas

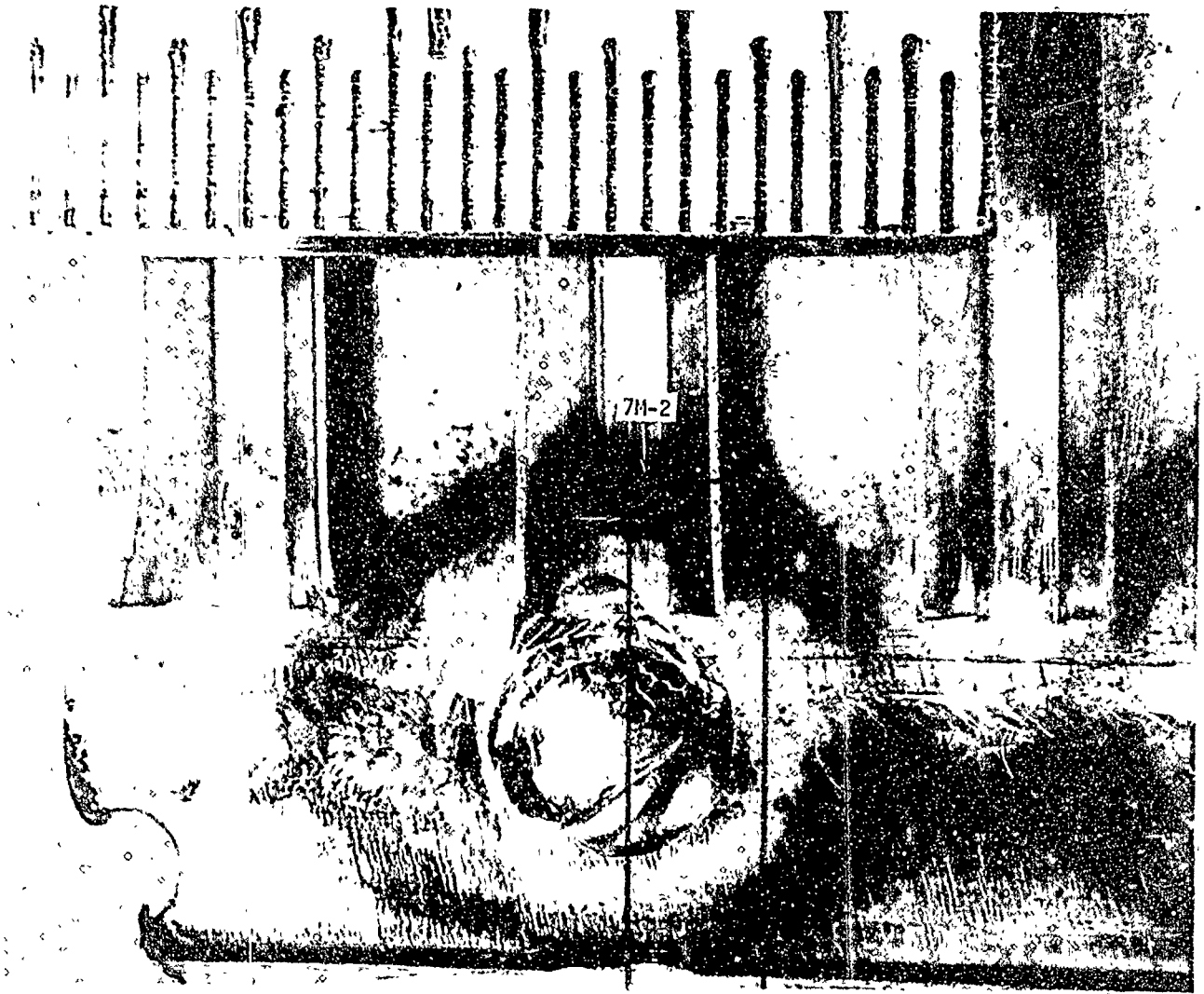


Figure 61 Specimen No. 7 Showing Discoloration on Backside of Conjugate Face Sheet and One Repair Area

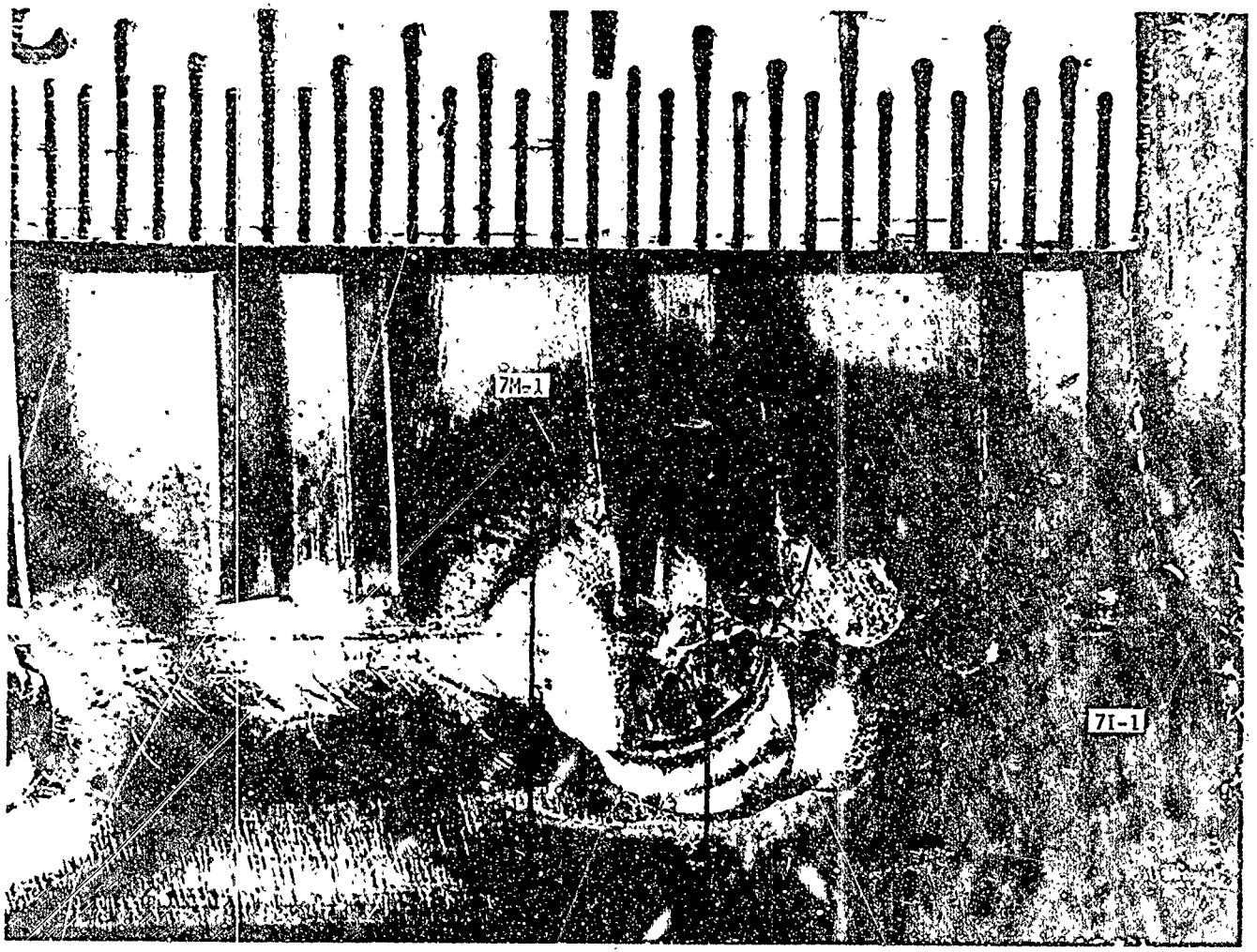


Figure 62 Specimen No. 7 Showing Discoloration and Truss Core Deformation on the Backside of Conjugate Face Sheet and the Other Repair Area

(5) Cutout E. Cutout E (Fig. 63) revealed a repair weld on the forward barrel to upper tank attachment ring weld at a weld junction. The cracks shown on x-ray were not evident visually on the front side of the specimen. However, they were visually found on the backside of the face sheet, along with extreme discoloration and heat checking (Fig. 64). The cracks were generally located around the foot of the truss core where the repair weld ran into the truss core (Fig. 65). Figure 66 shows lack of fusion in the centerline of the weld.

(6) Cutout F. Cutout F (Fig. 67) revealed cracks around the stop end of a repair weld in the parent metal. These are shown on the front side of the face sheet in Fig. 67, and on the backside in Fig. 68. The backside of the repair area was extremely discolored, and the truss core members were severely bent. A scaly substance was evident on the inside surface of the face sheet and the truss core.

(7) A 2-in. crack was observed on Cutout G (Fig. 69) running alongside the dome to Y-ring weld. This area had been built up with weld bead to compensate for mismatch in the area. The crack is actually at the fusion zone of the weld as observed on the reverse side (Fig. 70).

(8) Mismatch was prominent in crack areas, and percent approximations were taken from the mounted specimens where possible. Discoloration was prominent in crack areas and severe in repair areas, up to a whitish grey color. This indicates poor cover during repair welding or a contaminated surface with a resultant high oxygen pick-up. The original welds were generally made within an area where the surface of the face sheet had been milled clean during the milling of the truss core in the weld areas. The repair welds were generally too wide to stay within this milled area, making an effective repair even more difficult. The inside surface of the face sheets and the more prominent truss core surfaces had an adhered substance which looked like metallic scale. The scale was probably a combination of iron, iron oxide, and stabilized alpha.

b. Mismatch Determination. The weld joint mismatch was calculated as the total offset measured x 100, divided by the thickness of the thinnest joining member. Three calculations were made from data taken from that presented in Fig. 71, 72, and 73.

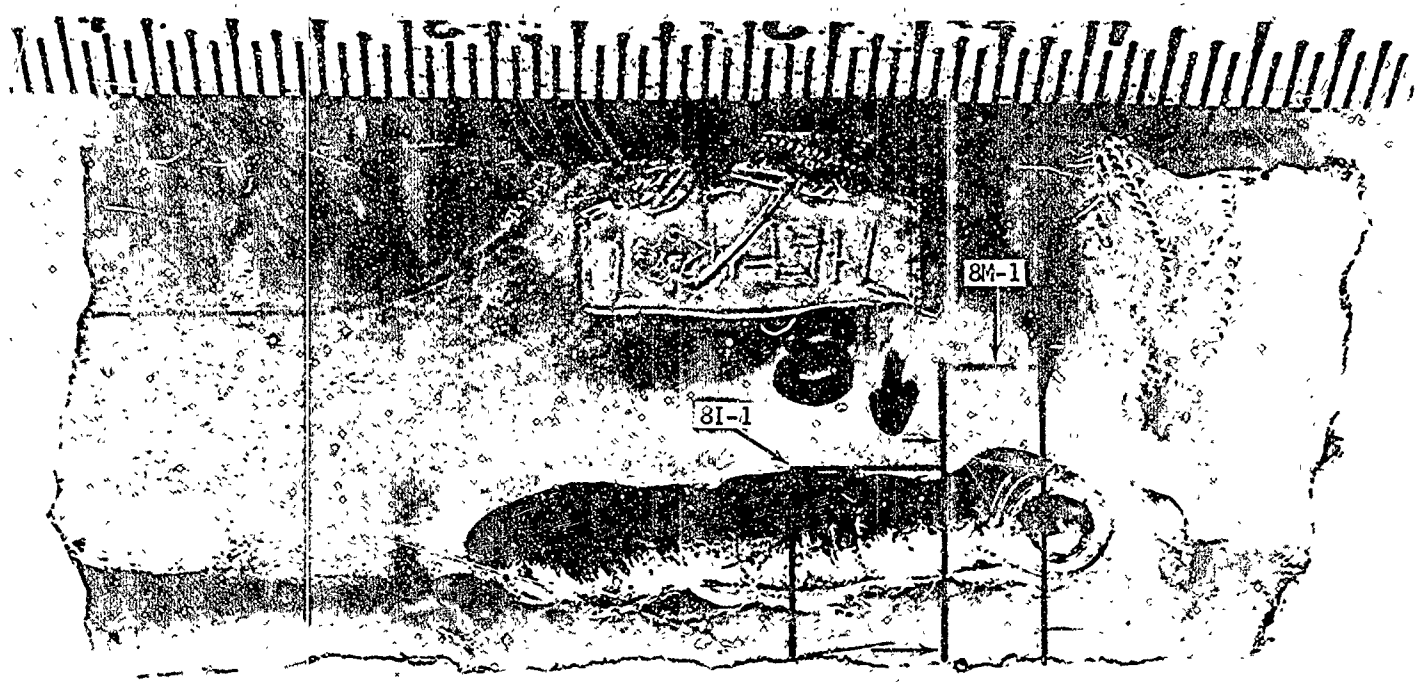


Figure 63 Specimen No. 8 (Cutout E) Showing Repair Area on Front Side of Conjugate Face Sheet

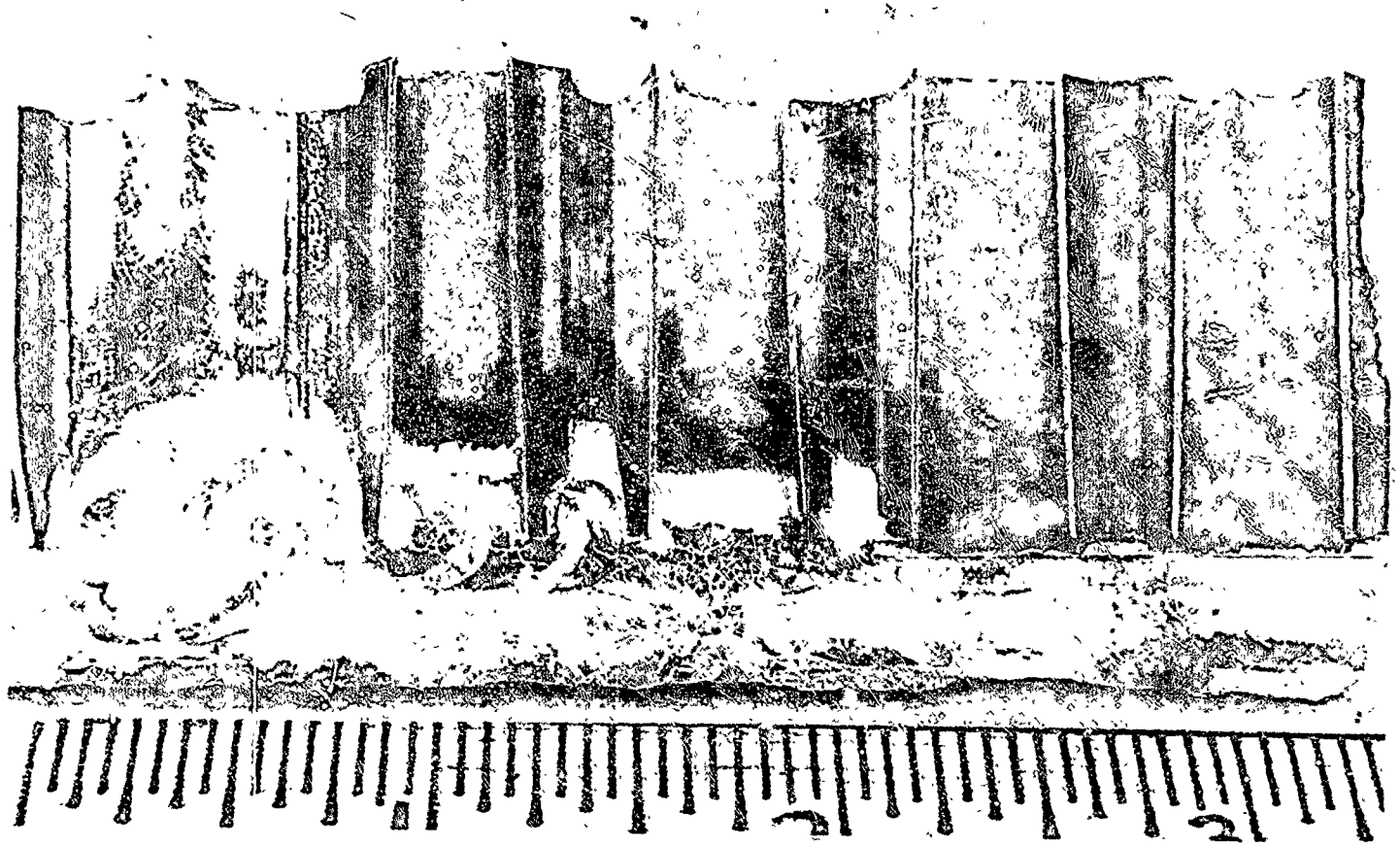


Figure 64 Specimen No. 8 Showing Discoloration and Heat Checking on Backside of Repair Area of Conjugate Face Sheet

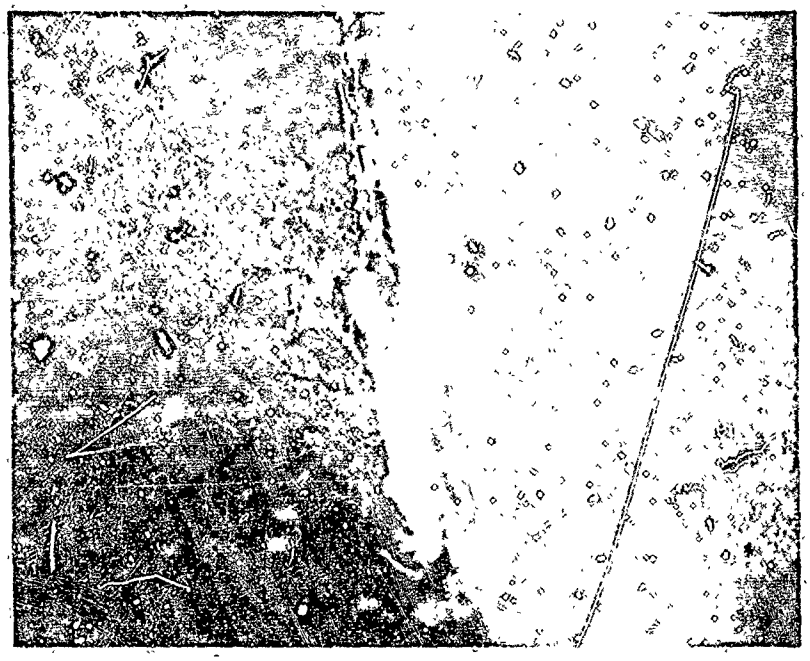


Figure 65 Photomacrograph (10X) Showing Surface Crack in Parent Metal at Base of Truss Core Next to Repair Weld of Specimen No. 8

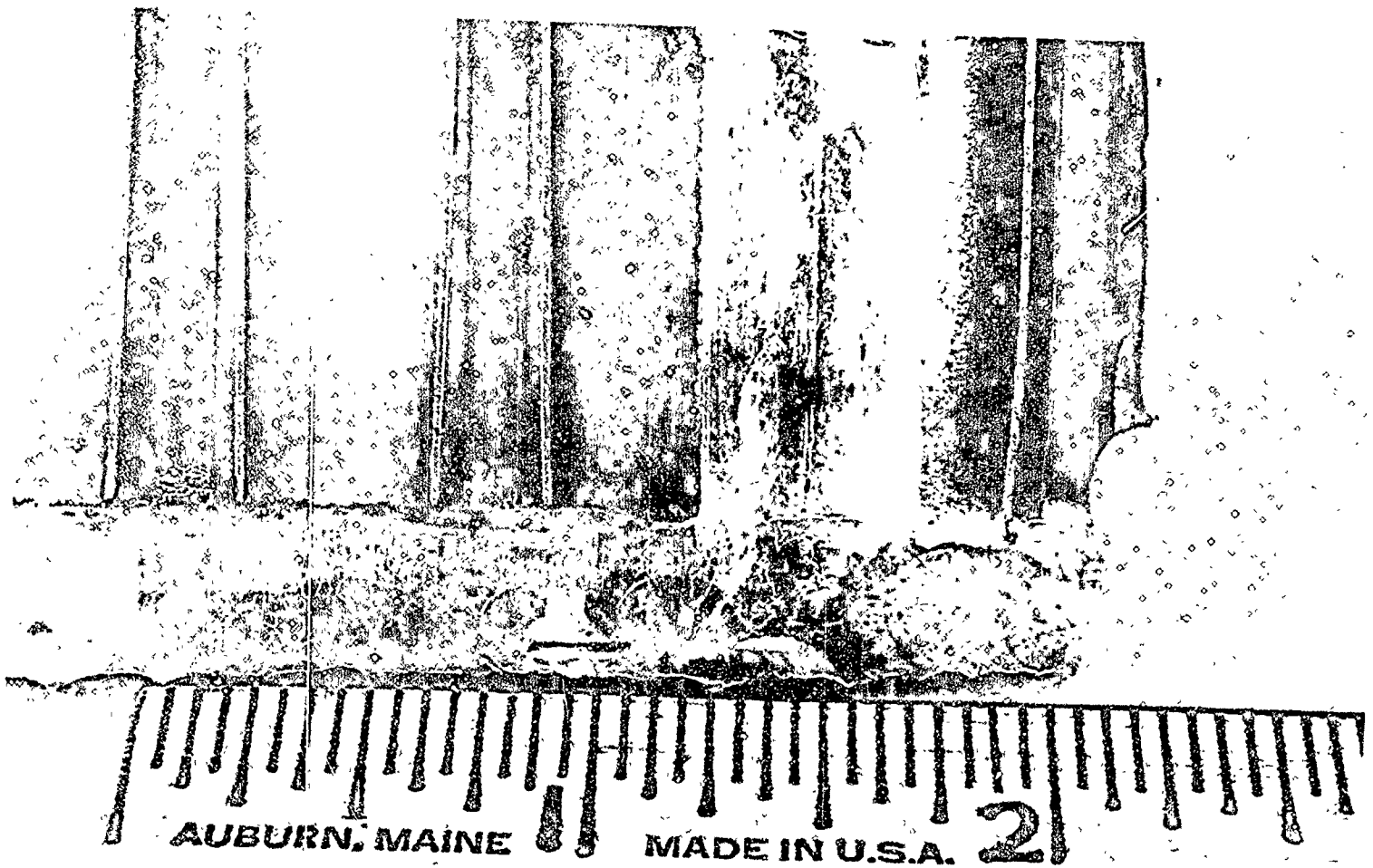


Figure 66 Specimen No. 8 Showing Lack of Fusion in Center of Weld on Backside of Other Conjugate Face Sheet

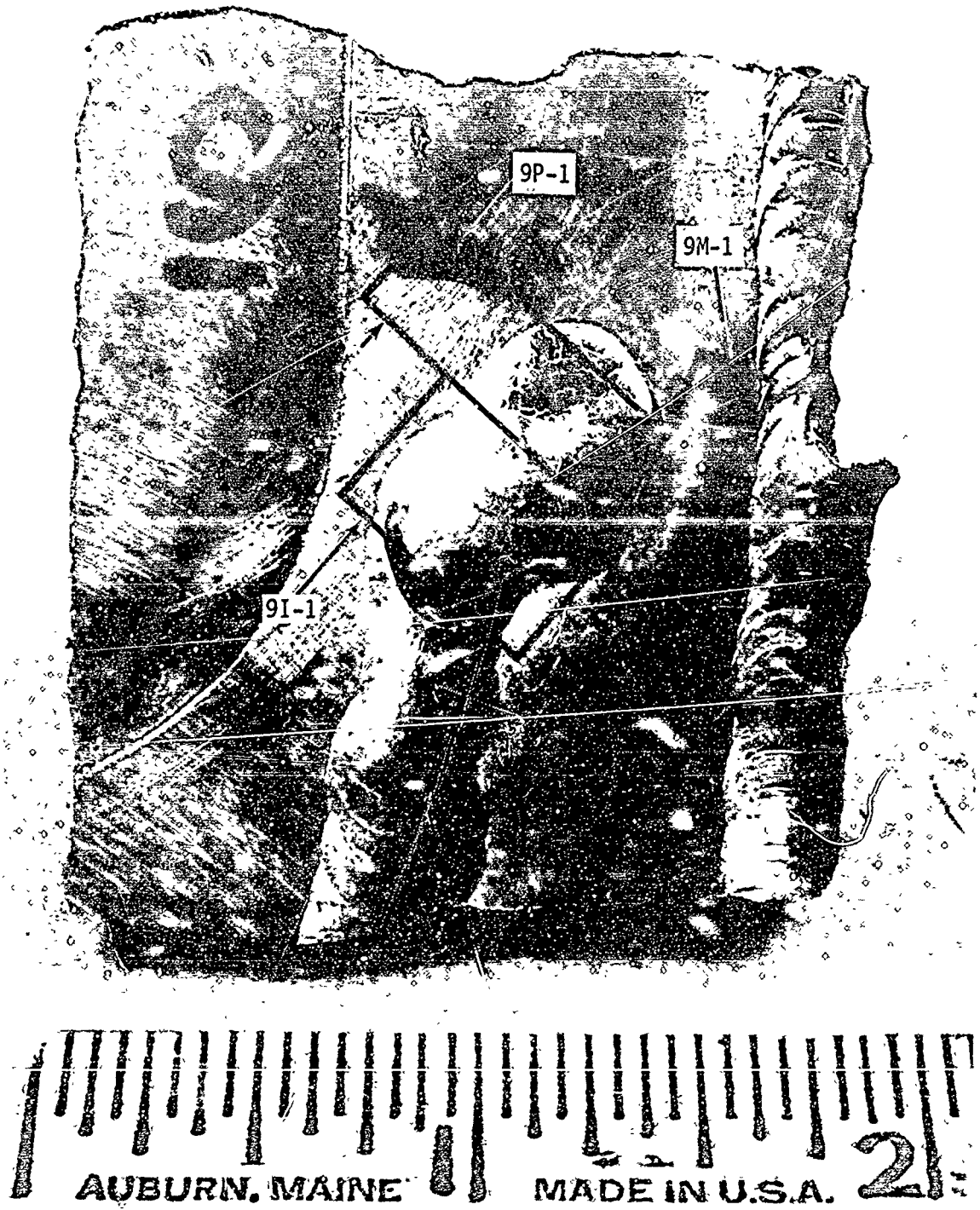


Figure 67 Specimen No. 9 (Cutout F) Showing Repair on Face Sheet of Conjugate Structure

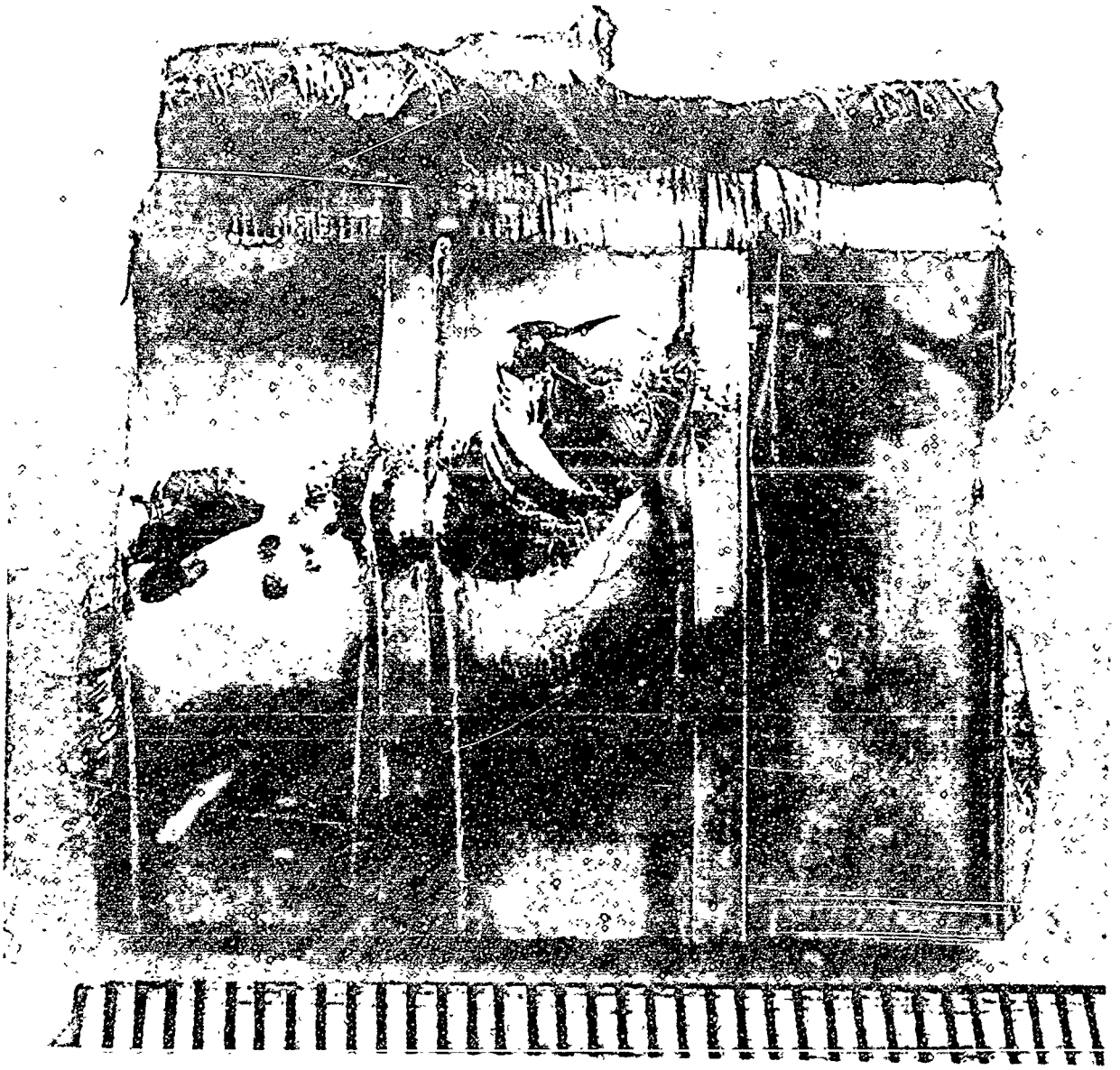


Figure 68 Backside of Specimen No. 9 Repair Showing Cracks Alongside Repair, Deformed Truss Core, and Discoloration

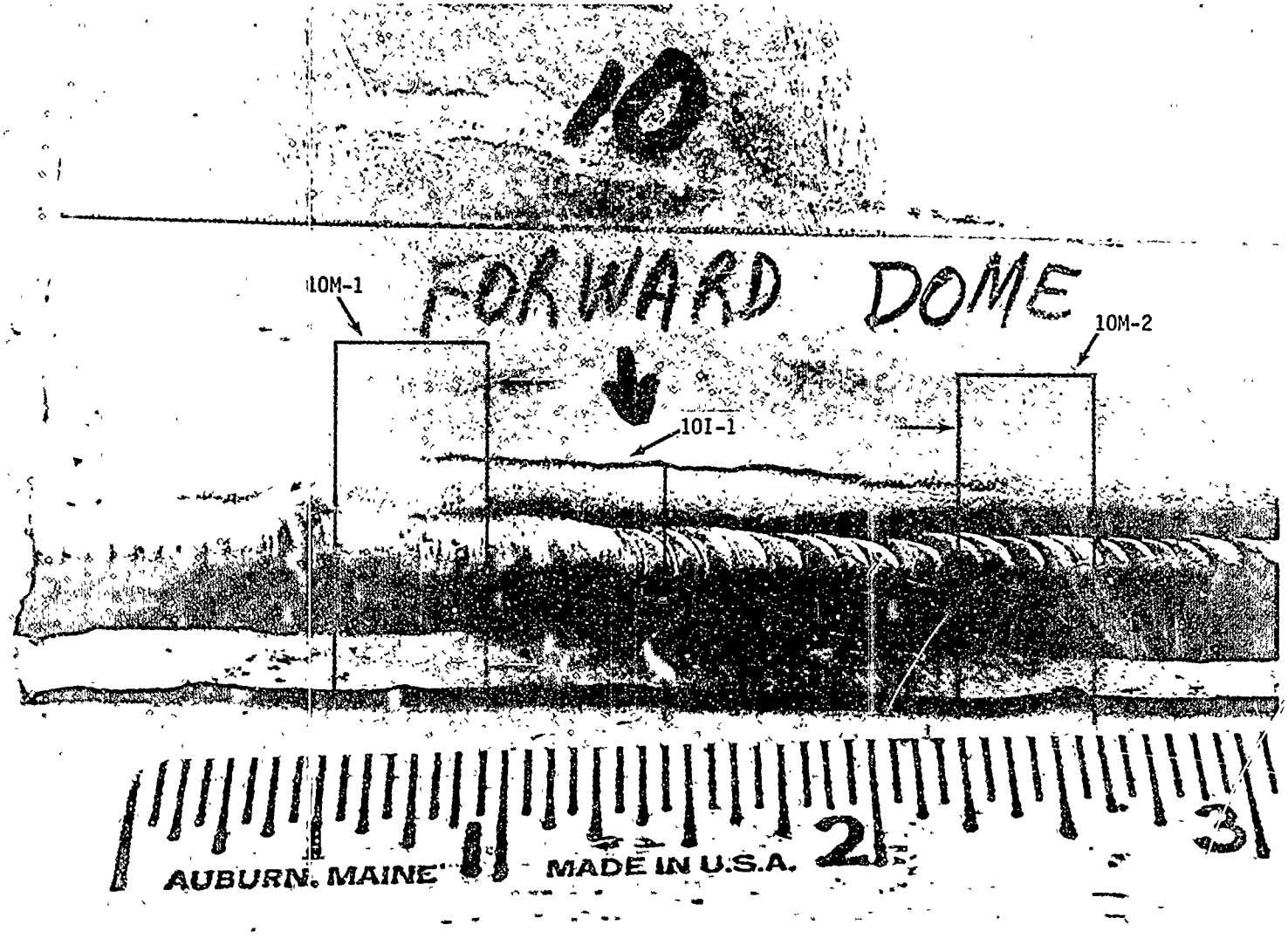


Figure 69 Specimen No. 10 (Cutout G) Showing Crack in Forward Dome

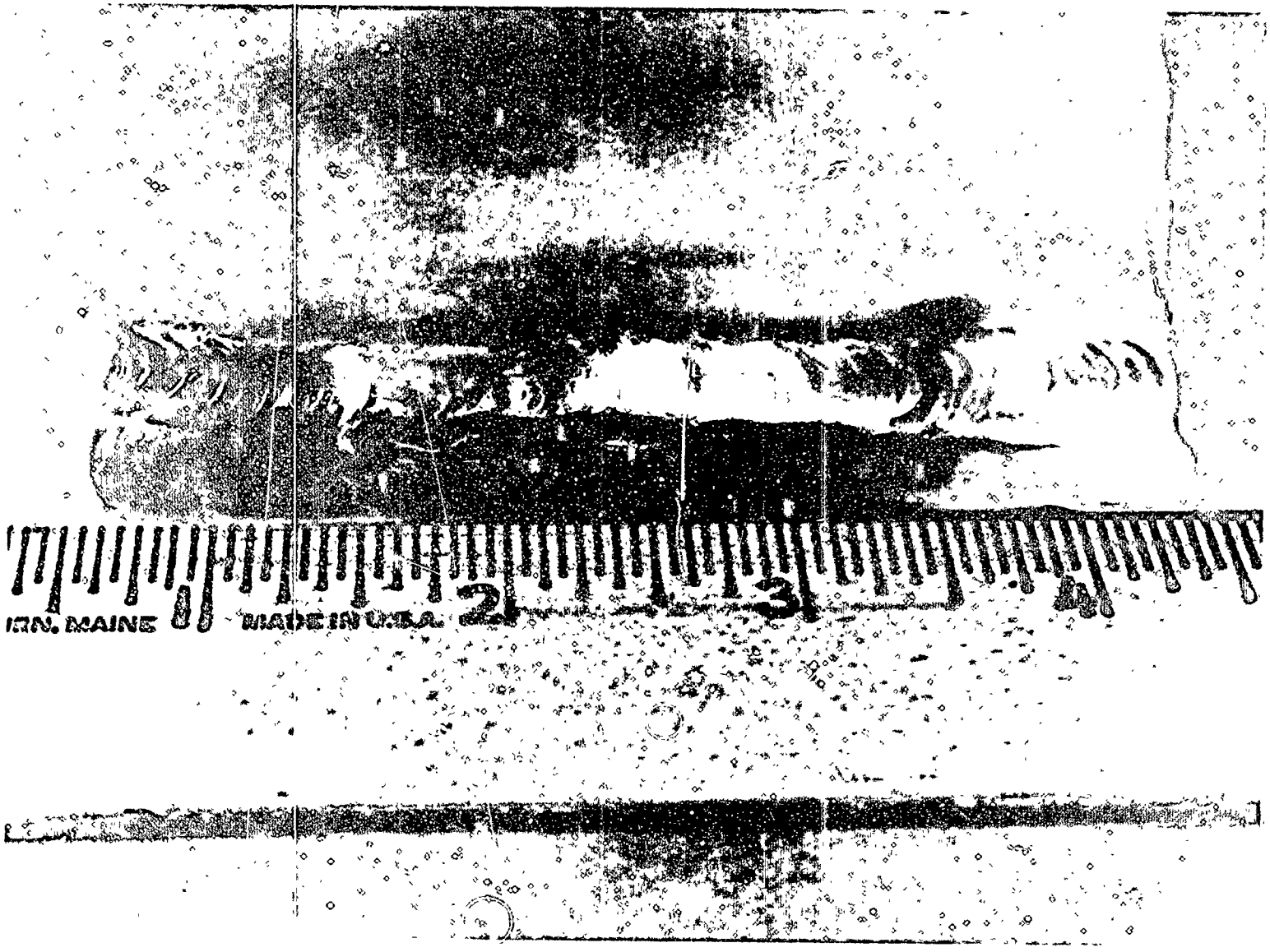


Figure 70 Backside of Specimen No. 10

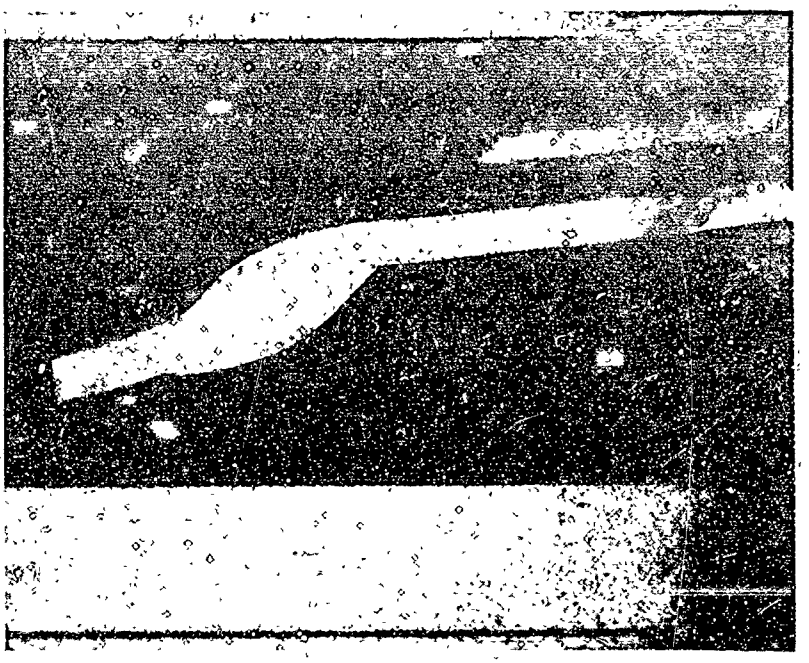


Figure 71 Photomacrograph (5X) of Cross Section of Conjugate Face Sheet Weld Area of Specimen No. 1 Showing Approximately 150% Mismatch of Weld Joint

Figure 72 Photomacrograph (5X) of Cross Section of Forward Dome Weld Area of Specimen No. 10 Showing Approximately 300% Mismatch of Weld Joint

Figure 73 Photomacrograph (5X) of Cross Section of Specimen No. 6 Showing Approximately 50% Mismatch of Weld, Just Outside of Fracture Area

Following are the results of those calculations:

1) Specimen 1 mismatch is 150%;

2) Specimen 10 mismatch is 300%;

3) Specimen 6 mismatch is 50% (Data for this mismatch was taken from a cross section at one extreme end of Cutout C, since none could be taken in the center of the cutout, and the measurement of 50% was less than that observed in the middle of Cutout C).

c. Metallurgical Investigation. Microstructural and microprobe examination of cross sections of the cracked areas revealed, in most cases, an oxygen enriched stabilized alpha layer on the inside surface of the conjugate face sheet, and on the truss core as far as 3 in. away from any weld. (The length of the specimen measured parallel to the truss core). The stabilized alpha layer appeared very brittle as evidenced by crack starters in the layer, with some extending below the layer. This condition is clearly shown in Fig. 74 through 80. The condition appeared most prominent around the area of initial failure in Specimen 6. Microprobe analysis (Table IV) showed a very high oxygen content in these specimens, even in the truss core at the opposite end of the specimen. Weld dilution did not appear to be significant in contributing to the failure.

If this oxygen rich stabilized alpha layer is removed from the surface by milling in sufficient width, welding would present few problems. However, if the weld bead becomes wide enough, as in the case of repair welds, welding will occur over this layer and would have no ductility around the weld. With the addition of discontinuities such as mismatch, plus resultant locked in stresses, premature brittle failure will occur.

4. PROCEDURES

The failed tank was examined visually and radiographically to determine the extent of failure and cracks that were of major concern. Seven areas were cut out of the tank for further examinations previously described. Approximately 20 cross sections were taken out of these seven areas. The cross sections were mounted and polished for macro and micro examination of the weld and parent metal condition around the areas of concern, including both the conjugate face sheet and the truss core. In addition, six of these cross sections were sent to Rocky Mountain Technology in Golden, Colorado for extensive electron microprobe analysis of weld dilution (iron and oxygen content within several areas of the cross sections).

Table IV Microprobe Analysis Results from Rocky Mountain Technology, Golden, Colorado

Specimen	Point	Percent				Remarks
		V	Az	Fe	O	
1 P-1	1	4.45		0.217	7.00	Near one end of weld
	2	2.40		0.271		
	3	2.37		0.234		
	4	2.49		1.63		
	5	2.28		0.242		
	6	1.97		0.208	7.00	
	7	1.26	1.67	0.176	5.00	Center of weld
	8	1.39	1.84	0.826		
	9	1.55	1.79	0.225		
	10	7.00	1.32	0.223		
	11	4.98	3.39	0.212	5.00	Base metal
	12	4.37	3.26	0.131	11.00	
	13	4.08	3.47	0.145		
	14	4.0	3.54	0.137		
	15	4.0	3.80	0.131	5.00	
4 P-1	1	2.17	7.12	0.24		Upper end of bead
	2	1.28	3.10	0.06		
	3	1.68		0.27		
	4	1.67		0.25		
	5	4.72	5.2	0.35		Base metal
	6	4.24		0.34		
9 P-1	1	4.82		0.48	3.16	α case
	2	5.96		0.48	3.13	Base metal
3 P-1	1		1.80			
	2	2.04	1.83	0.22		Weld
	3	2.02	2.17	0.18		
	4	4.22	5.84	0.17		
	5	4.78	1.12	0.19		Base metal
	6		6.27			
	7		5.90			
		3.92	1.43	0.18	9.00	α case
		4.11	1.55	0.19	6.00	Base metal
6 M-3 (Truss core)		2.44	3.7	0.24	29.10	α case
		3.74	3.3	0.12	12.00	Base metal
6 M-1		4.93	3.02	0.22	11.00	Fracture edge
		5.12	4.17	0.19	11.00	Base metal

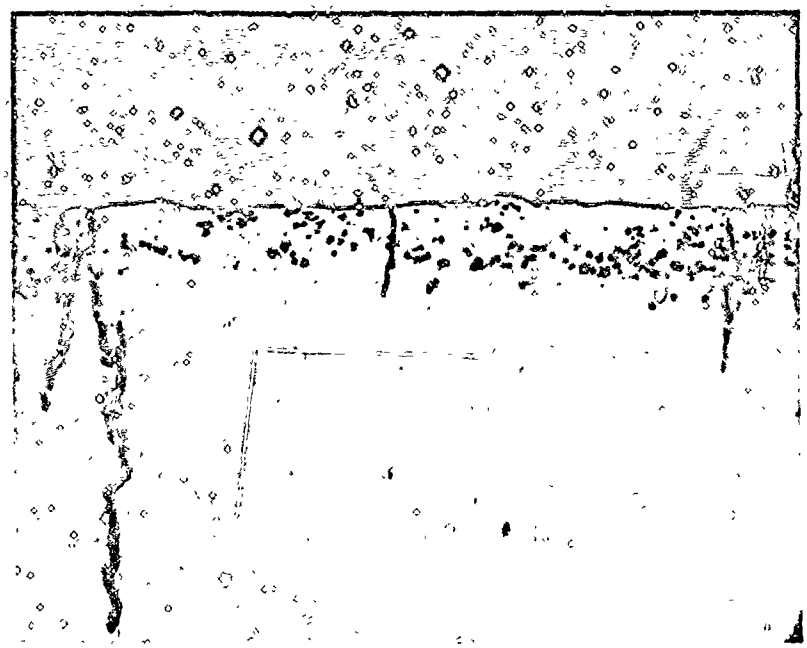


Figure 74 Photomicrograph (175X) of a Cross Section of Specimen No. 5, Unetched, Showing Cracks Extending from a Stabilized Alpha Surface Layer into the Base Metal, Adjacent to the Weld Bead

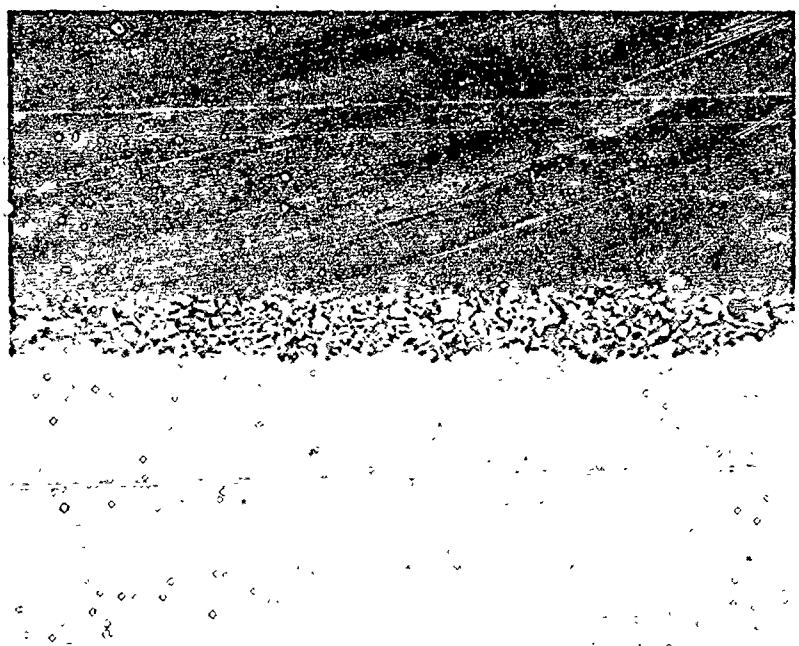


Figure 75 Photomicrograph (200X) of an Area from the Same Specimen No. 5 Mount, Slightly Etched, Taken Farther Away from the Weld Bead Showing the Same Stabilized Alpha Layer with Crack Starters

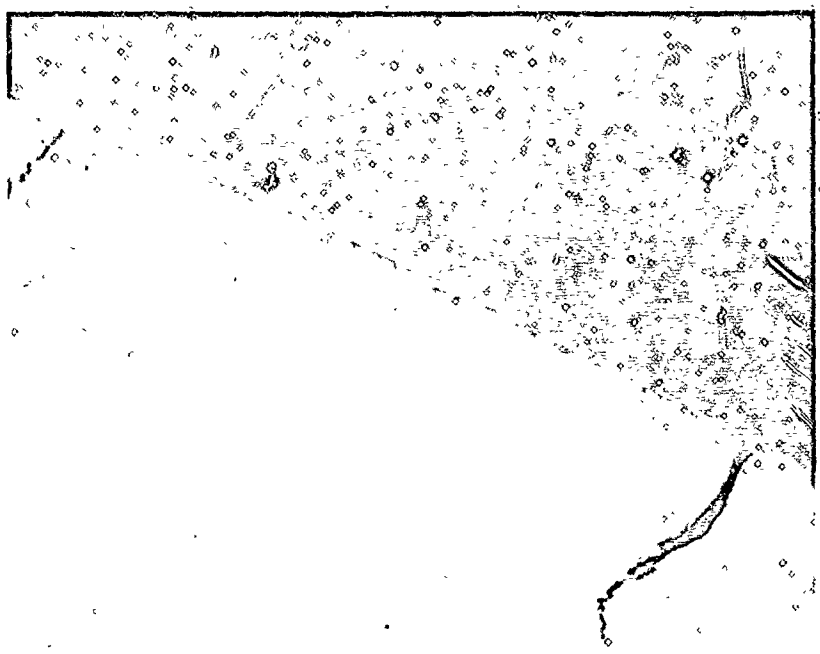


Figure 76 Photomicrograph (200X) of Parent Metal Cross Section of Specimen No. 6 Fracture Area Near Weld Bead, Showing Cracks Extending from Stabilized Alpha Layer into the Parent Metal of Conjugate Structure Face Sheet (Sample Slightly Etched)

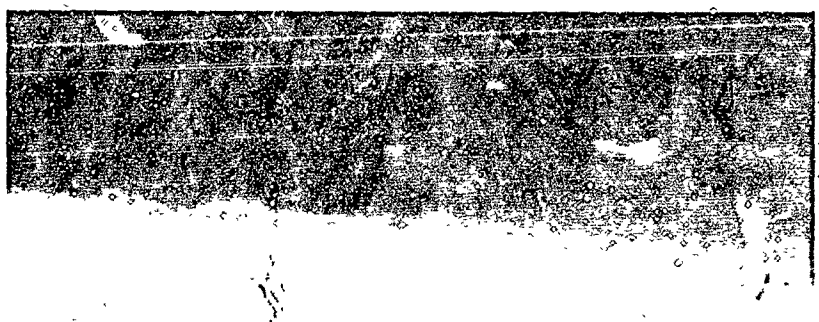


Figure 77 Photomicrograph (300X) of Parent Metal Cross Section of Another Specimen No. 6 Sample (Same Condition as in Figure 63; Sample Slightly Etched)

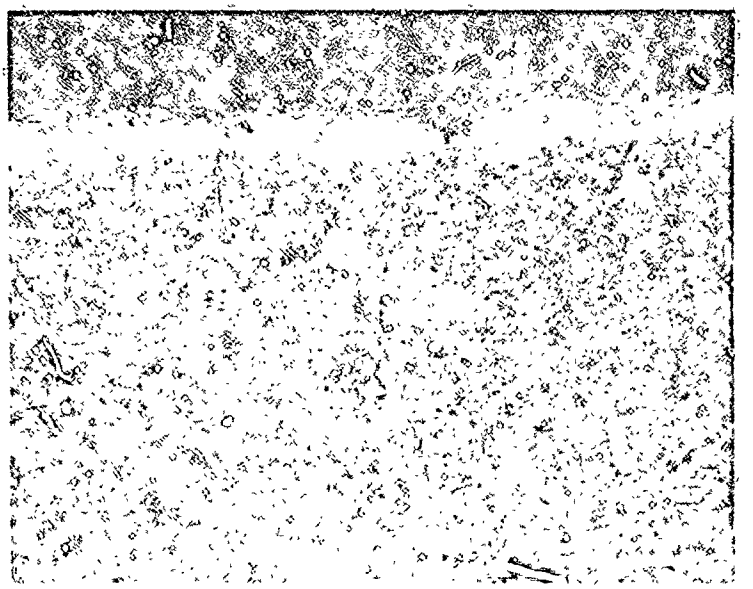


Figure 78 Photomicrograph (250X) of Parent Metal Cross Section Away from Weld Bead and Fracture Area of Specimen No. 6 Showing Crack Starters in Stabilized Alpha Layer of Conjugate Structure Face Sheet (Sample Slightly Etched)

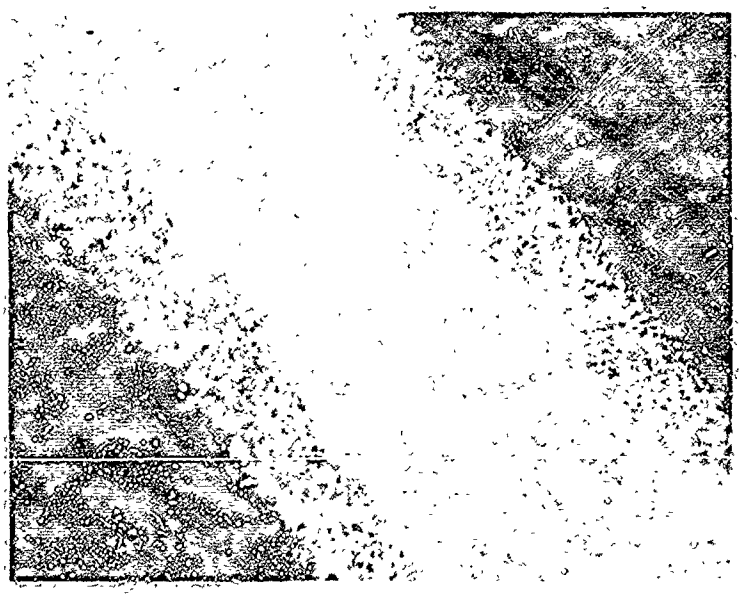


Figure 79 Photomicrograph (200X) of Truss Core Section 3 in. Away from Weld Bead and Fracture of Specimen No. 6 Showing Deep Stabilized Alpha Layer on Both Sides of Truss Core (Sample Etched)

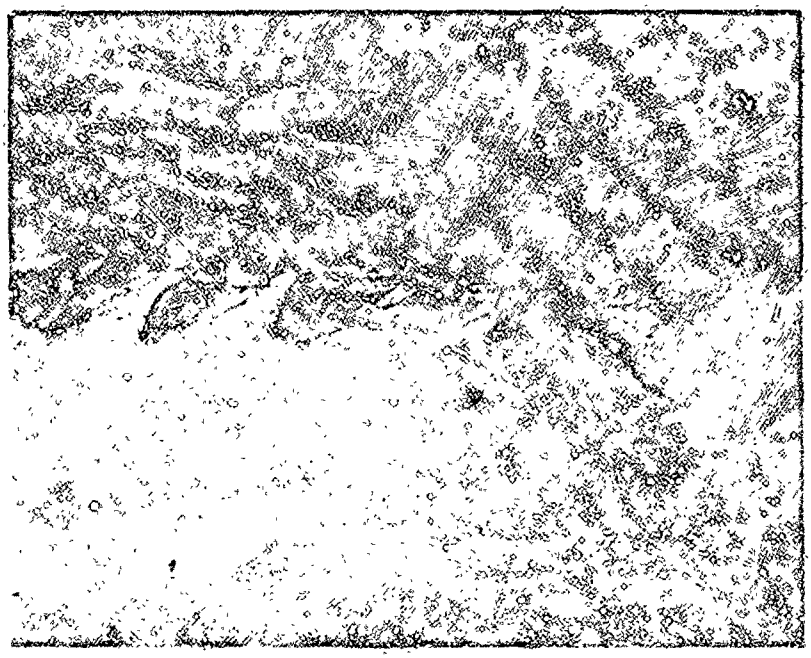


Figure 80 Photomicrograph (200X) of Cross Section of Crack Area of Parent Metal of Unetched Specimen No. 9 Showing Cracks Extending from Fragmented, Stabilized Alpha Layer into Parent Metal

APPENDIX I

Results of Inspection of Conjugate Tankage

Repair Proposal (Final)

This appendix is a reprint of Martin Marietta Technical Report FRPL-TR-160.

ABSTRACT

A number of significant discrepancies have been identified in the pressure vessel and skirts of the conjugate tankage assembly, as a result of the detailed inspection specified by our amended contract with the Air Force.

It is recommended that the structure should not be subjected to the loads and pressures specified in Appendix I to the contract "Verification Testing of Conjugate Tankage" without substantial rework and/or replacement of components.

Three repair plan alternatives are offered along with attendant modifications to the original test program, to provide the Air Force with the information necessary to select a plan that will satisfy the intent of the contract.

Plan I involves maximum repair and no changes to the original test program. Plan II results in fewer repairs and a modification to the test program to maintain the same level of confidence for successful completion. Plan III involves minimum repairs and one additional minor change to the test program to minimize the increase in the probability of a premature failure.

The first repair plan requires replacement of both the common and forward domes; the repair of local weld discrepancies, holes resulting from sample plugs taken for examinations, and the crack in the inside skin of forward barrel; the modification of a structural shim at the aft skirt attachment station; and an increase in the size of skirt hi-shear rivets. The original test conditions may be implemented following successful completion of these repairs.

The second plan is the same as the first except the common dome, instead of being replaced, would be effectively removed by cutting a large hole in it. Some modification to the test program is implied in this case because structure essentially becomes one tank rather than two.

The third plan is the same as the second except the forward dome will not be replaced and local weld discrepancies will not be repaired. This plan results in further modification to the test program because of the reduced confidence in structure capability.

The Martin Marietta Corporation recommends that Plan III be implemented along with two additional test conditions. This course of action will provide a maximum amount of data on the structural capability of roll diffusion bonded structure, while minimizing the cost and risk involved.

The proposed additional test conditions are explained in this report to show that the original intent of the conjugate tankage test program will not be compromised by this approach.

CONTENTS

SECTION I

LIST OF DEFECTS AND THEIR EFFECT

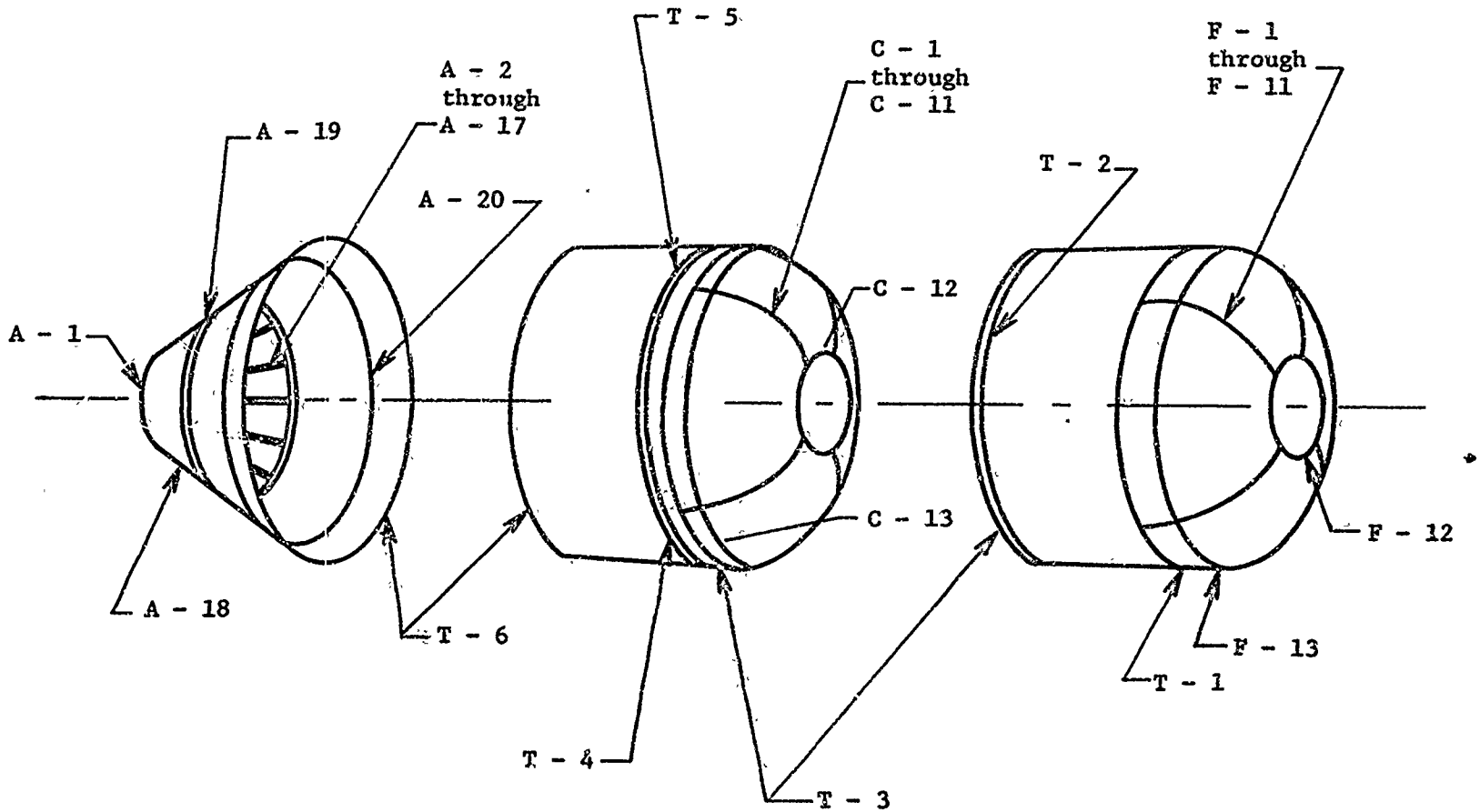
1. SKIRT AREAS

On both forward and aft skirts there are 1/8-in. hi-shear rivets attaching the longitudinal corrugated sheet to the circular channel extrusions on both ends of each skirt. The joint is shown on Fig. 1. To attain sufficient strength required to sustain a load compatible with the test requirements, 1/4-in. hi-shear rivets must be installed. On the aft row of the forward skirt, the attachments must be countersunk to avoid impingement on the dome as shown in Fig. 2.

When the aft skirt was removed, a 0.10-in.-thick peripheral shim was found between the tankage and the tang of the aft skirt. The shim is shown in Fig. 3. The shim is not shown on the drawings we have received. To reduce the bending in the attachment at the joint, the shim will be fastened to the skirt tang by bonding and mechanical attachments.

2. FORWARD DOME

Radiographic inspection of forward dome welds revealed potential problems in several areas. The manhole ring-to-dome weld (F12) has porosity throughout and a questionable sharp image for the entire length on the manhole ring side of the weld. Interstitial analysis and micro examination were run on plugs taken from the manhole ring-to-dome weld (F12) and from one dome segment weld (F5). The results of these tests can be seen in Table I and Table II. A plug from the manhole ring-to-dome weld (F12I) showed 3105 ppm O_2, which is in excess of 2000 ppm (maximum acceptable). The same plug showed excess H_2 (206 ppm) and bordered on the high side of N_2 (479 ppm). The high interstitial content is to be expected in spots, considering the excess porosity revealed by the radiographic inspection of this weld. Two additional plug samples have been taken to be run by Titanium Metal Corporation of America (TMCA). Micro examination of this weld showed very large grain sizes. A typically large grain structure is shown in the photomicrograph of Fig. 4. The interstitial analysis of the plug from the dome segment weld showed a normal and acceptable interstitial content. (The sketch on the following page shows weld nomenclature.)



Weld Location Schematic

Figure 1 Skirt Fasteners

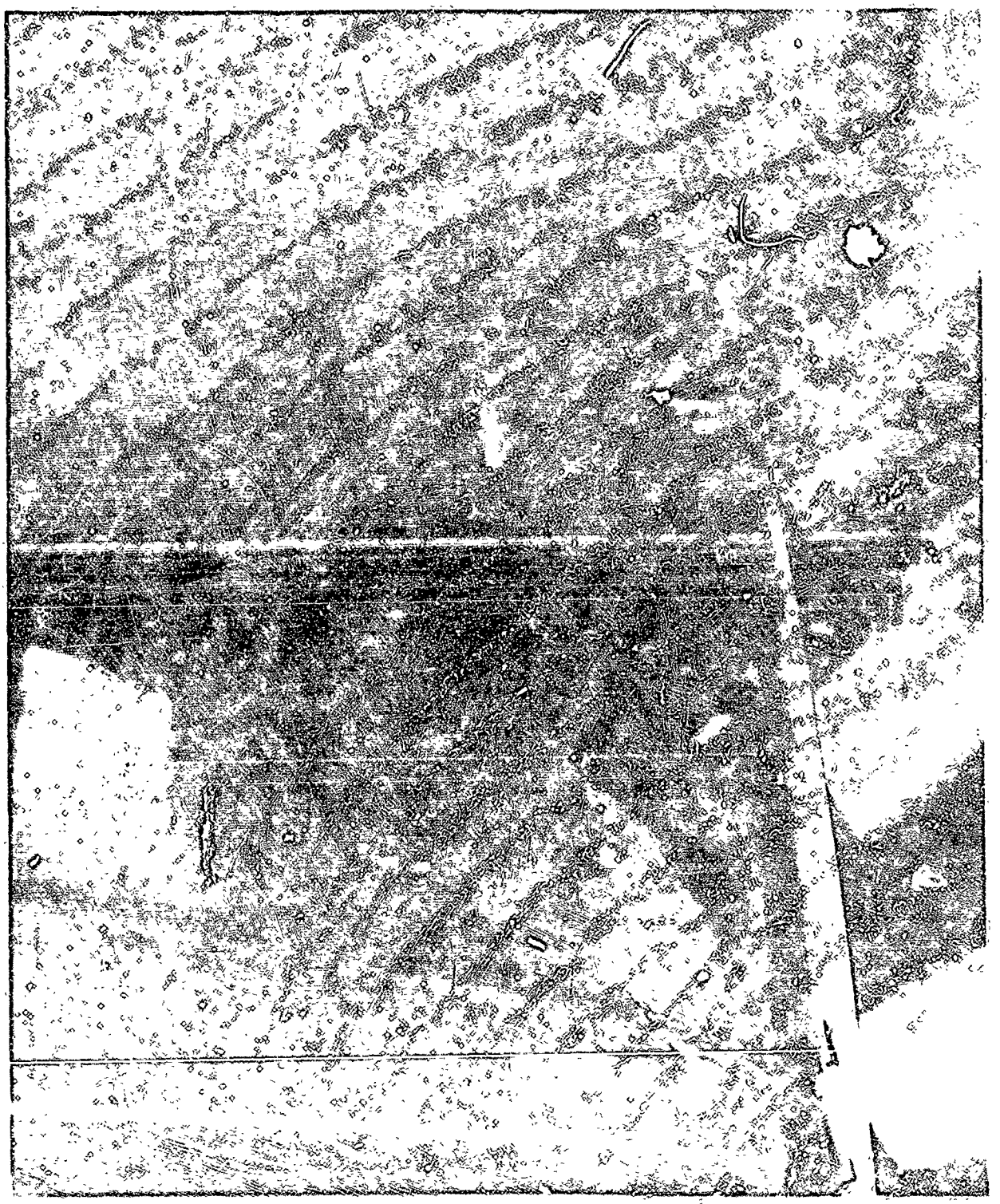


Figure 2 Skirt Fastener Interference with Upper Dome

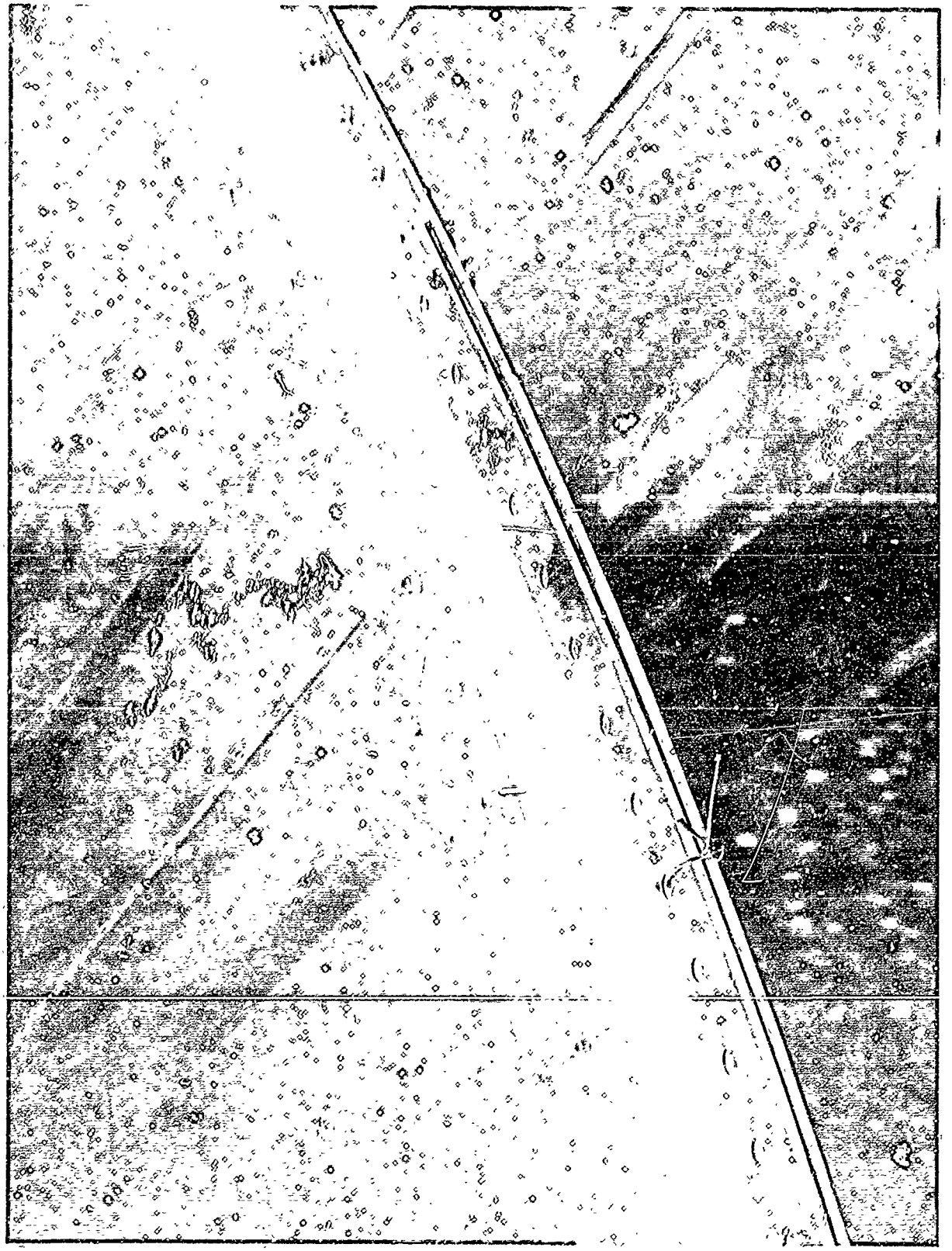


Figure 3 Aft Skirt and Partial Shim

Table I Test Results of Interstitial Analysis

(Reference Section on "Effect of Oxygen and Nitrogen")

Sample No.	Location	H_2 (ppm)	O_2 (ppm)	N_2 (ppm)
A. Forward Dome				
1. Manhole Ring Weld				
F12M	4 ft 1/4 in.	109	1754	292
F12I	3 ft 9 7/8 in.	206*	3105*	479
F12IA	3 ft 9 1/2 in. (Repeat)	68	1660	275
F12IB	3 ft 10 1/8 in (TMCA)		1900	
F12IC	4 ft 4 3/4 in. (TMCA)		1700	
2. Gore Weld				
F5I	2 in. from F12 Weld	49	1045	321
3. Dome-to-Y-Frame Weld				
F13I1	24 ft 4 in.	72	1778	331
F13I2	26 ft 6 in.	32	1376	209
B. Forward Tank				
1. Longitudinal Weld				
FB5M	5 ft 3 in.	67	1019	199
C. Common Dome				
1. Gore Weld				
C6IA	1 3/4 in. from C12 Weld	93	1148	1247*
C6IB	2 in. from C12 Weld (Repeat)	69	1190	528*
C6IC	1 1/2 in. from C12 Weld (TMCA)			390†
C6ID	1 1/4 in. from C12 Weld (TMCA)			900*
2. Dome to-Y-Frame Weld				
C13I1	8 ft 8 in.	39	1358	144
C13I2	3 ft 8 in.	50	2884*	1339*
C13I2A	3 ft 10 1/2 in. (Repeat)	71	1349	553*
C13I2B	3 ft 8 1/4 in. (TMCA)			760*
D. Aft Tank				
1. Aft Barrel to Cone Weld				
T6M2	29 ft 6 5/8 in.	77	1305	164
E. Aft Cone				
1. Stringer to Cone Weld				
A15M	1 ft	49	983	127
2. Cone to Lower Manifold Weld				
A18M1	15 ft 8 in.	63	1157	186
A18M2	15 ft 8 1/2 in.	69	1122	152
A18I1	18 ft 11 in.	40	1460	211
A18I2	22 ft 4 in.	50	1326	215
F. Test Panel				
1. Test Panel Butt Weld				
T3M		55	1619	164
		Acceptable Weld Limits (Martin Marietta Corporation)		
		180	2000	500

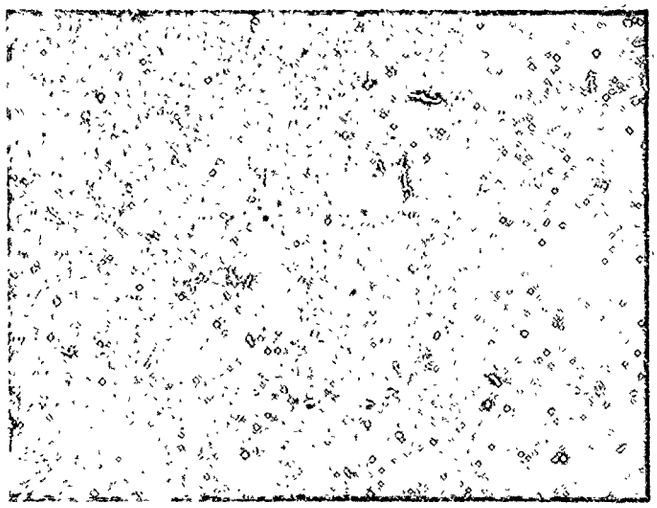
*These values above Martin Marietta Corporation acceptable weld limits.

†This sample run on both parent material and weld.

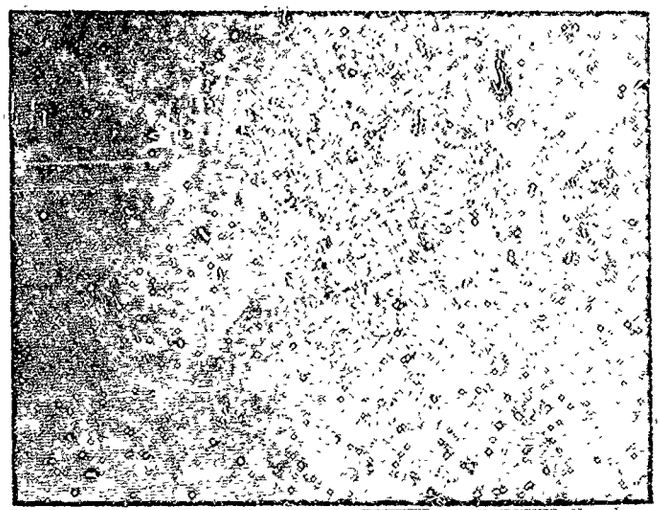
Table II Results of Micro Examination of Weld Plugs

(Reference Section on "Platelet and Grain Growth")

FB5M	Very large grains.
A18M1	Very large grain boundaries similar to A18M2. Continuous platelets in grain boundaries would yield welds with low ductility.
A18M2	Worked surfaces on the weld. Very large grains.
F12M	Very large grains.
T6M1	Very large grains.
FB4M	A cross section of a diffusion bonded area. Bond appears good, but there is stabilized case to a depth of one to two grains. Also intergranular attack on inside surface to a depth of 0.0016 in.
A15M1	Reasonable grain size, good weld.
C13M2	Same as A15M1 except on the penetration side of the bead there is a layer of worked metal to a depth of 0.003 in.
C13M1	Large amounts of scattered fine porosity, indicating high gas (interstitial content). Heavy platelets in grain boundaries. Crack apparently along a grain boundary, hot short.
F13M1	Large grain size. Otherwise acceptable.
Mount from Panel	Large inclusion 0.005 in. across. Large grains. Otherwise acceptable.



(a) Photomicrograph at 50X Showing a Typically Large Grain Structure, Ti-6Aℓ-4V Weldment (Sample A182M).



(b) Photomicrograph at 50X Showing a Typically Average Grain Structure, Ti-6Aℓ-4V Weldment (Sample C13M2)

Figure 4 Photographs Comparing Average and Large Grain Structure

The radiographs of two dome segment welds (F6 and F7) indicate an appreciable thickness variation between one panel and the other. Vidigage measurements indicated the panels to be with the drawing tolerances on thickness.

An indication of pitting along the land/membrane step adjacent to weld F3 was detected on the radiographs and then visually verified. The pits go into the thin membrane area, and in addition there is a bleed out of the pits by dye penetrant inspection. A contour casting was taken of the pit area and the pit was found to be approximately 0.015-in. deep. Vidigage measurements were taken around the pit area. The thickness remaining does not indicate by analysis that a potential problem exists for the pressure requirements of this dome. Further evaluation by nondestructive testing did not indicate a crack problem.

When the forward skirt was removed, a visual examination of the dome-to-Y frame weld revealed excessive mismatch (Fig. 5 and 6). A contour casting of this area was taken and the amount of misalignment was measured as approximately 0.200 in. (300% of welded material thickness). The weld was made with what appears to be four manual passes, two inside and two outside. Interstitial analysis was run on plugs taken from the weld (F13). The results of this analysis are within the acceptable limits (Table I). Micro-examination of a plug from weld (F-13) showed large grain size but no detrimental platelets exist in the grain boundaries (Table II). Therefore normal weld ductility is highly probable. The radiographic inspection of this weld with the skirt removed did not reveal any rejectable flaws. Data do not exist for determining the capability of a joint with this amount of misalignment. Therefore, the value of pressure established as a safe level for the tank containing this discrepancy is based on judgment alone.

3. FORWARD TANK BARREL

A large visual crack exists on the barrel IS' skin. Water from the truss core structure drained through this fracture when the tank was rotated. Visually, and on the radiograph, this crack measures 2 in. in length. This crack is shown in Fig. 7.

The radiograph of the longitudinal barrel weld FB4 indicates a 1-in. gouge or part-through crack perpendicular to the weld in the parent material. A plug was taken from the area and examination showed no detrimental defect in the area. Interstitial analysis of the plug also indicated no high interstitials.

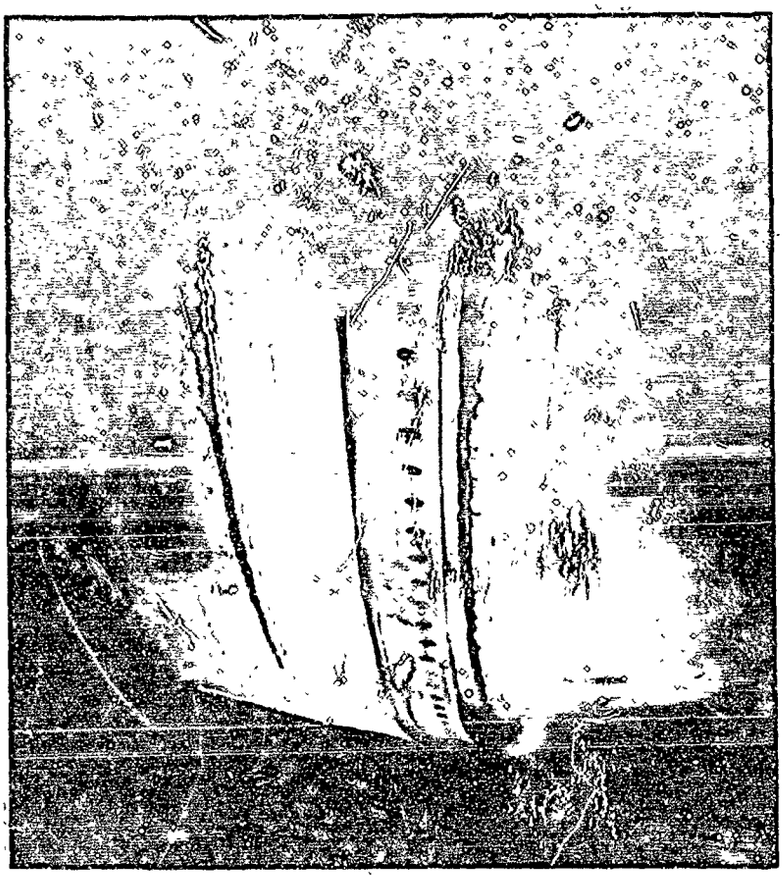


Figure 5 Forward Dome Joint Weld Mismatch

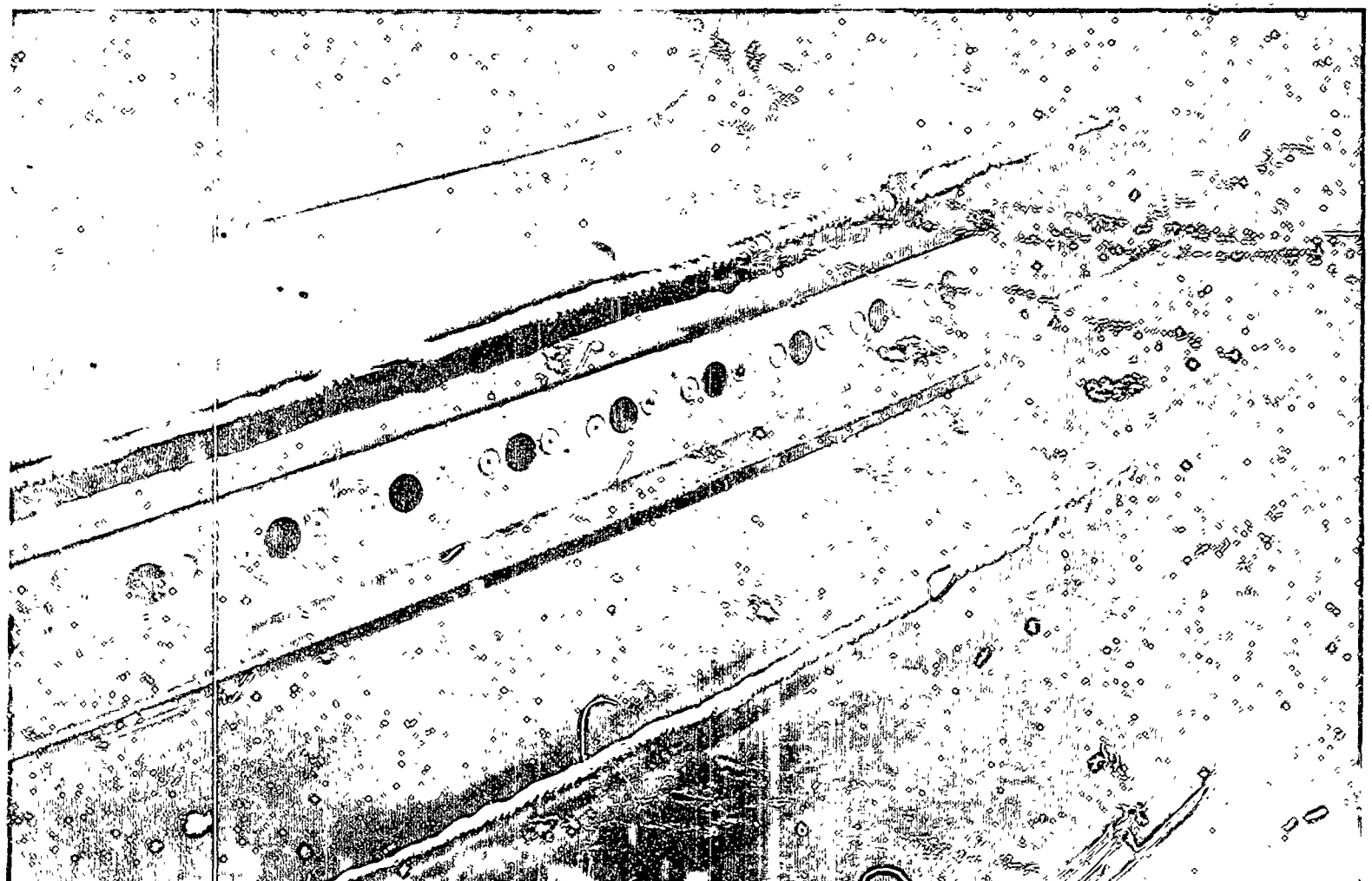


Figure 6 Forward Dome Joint Showing Multiple Weld Passes

Figure 7 Crack On Parent Metal, Fuel Tank, Inboard Skin

On barrel weld FB7, heavy porosity is indicated on the radiograph for 2 in. near the fusion line of the weld. Disposition of this porosity depends on the repair plan selected. The radiograph on the forward circumferential weld (T1) indicates a questionable sharp image at a weld lap location. Angle radiographs indicate no detrimental defect in the area.

The radiograph on the aft circumferential barrel weld (T2) has a dense inclusion. Disposition of this inclusion depends on the repair plan selected.

The radiographs of the barrel welds indicate areas of gouged or cracked corrugation, possible corrosion and corrugations not parallel to the longitudinal weld in the conjugate structure. Micro examination of a plug taken from the area showed no significant corrosion that would affect the integrity of the structure. Localized damaged corrugations should have no affect on the integrity of the structures for tests proposed. There are additional sharp radiograph images on FB2 and FB5 that are acceptable for the intended use of this structure.

4. COMMON DOME

The dome-to-barrel frame weld (C13) has numerous areas of multiple repairs. There are large cracks along the fusion line on the frame side of the weld in ten of these areas. These cracks are evident on the radiograph and one crack can be seen visually from the aft tank side of the weld. Visual inspection of the dome contour indicates a rippled condition (Fig. 8) exists around the entire circumference of the dome to frame weld (C13). In addition to the rippled condition, three dome segments have bulges in several areas approximately 8 in. long by 2 in. wide by 1/16 in. deep.

The radiographs of the dome segment welds indicate a sharp image 2 in. in length at the land/membrane step adjacent to weld C11, a dense sharp image 1/4 in. in length at the edge of weld C10, and scratches or gouges adjacent to weld C7. Dome segment weld (C6) contains porosity of an acceptable level.

Figure 8 Common Dome-to-Y-Frame Weld Showing Multiple Passes

Interstitial analysis results of plugs from the dome-to-frame circumferential weld can be seen in Table I (C13 weld). One plug (C13I2) showed high O_2 (2884 ppm) and high N_2 (1339 ppm), both of which are above the maximum acceptable limits. Micro examination of plugs from the dome-to-frame weld showed average size grains; however, one plug showed heavy α platelets in the grain boundary, porosity, and indications of cracking.

Interstitial analysis results (Table I) of plugs from a dome segment weld (C6) both showed high N_2 content (1247 ppm and 528 ppm). Two additional plug samples have been taken to be run by MCA. All of the specimens were taken from a weld repair area associated with discoloration.

The most extensive repair would require complete replacement of the common dome. On the other repair plans, however, these areas are not included in the repair.

5. CENTER BARREL

The center barrel section is joined to the common dome frame by fillet welds, sometimes referred to as corner butt welds, both forward and aft ends. Both welds (T3 and T4) contain several areas indicated on the radiographs as cracks. Disposition of these cracks depends on the repair plan selected. On weld T3 the radiograph indicates a root lack of fusion image on approximately 75% of the weld. It is our judgment that the lack of fusion image on weld T3 is not detrimental.

6. AFT TANK BARREL

The radiographs of the barrel welds indicate porosity for 1 in. on longitudinal weld AB3 and lack of fusion on weld AB1 and the circumferential weld T6. Visual inspection also revealed flaws on AB1. Disposition of the porosity on weld AB3 and lack of fusion of AB1 will depend on the repair plan selected. By examining the plug, the lack of fusion image on weld T6 was confirmed to be acceptable.

The truss core structure has the same discrepancies previously discussed on the forward barrel. In addition, the aft barrel has three areas where the corrugation is missing or there is an excessively wide flat on the truss core construction. It is our judgment that this condition would not be detrimental for the proposed tests.

The visual check of the aft tank barrel revealed several areas of contamination, corrosion, and variation from specified contour. Internal and external surface contamination (both black and white deposits) was found on the barrel panels. The only problem this contamination may cause is in the area of weld repairs, and there it will have to be removed. The corrosion was discovered on the tank pressurization line and attaching hardware. The severity of the corrosion does not now warrant any concern. The junction of the longitudinal and circumferential barrel welds had been locally indented apparently during a crude sizing operation before making the circumferential weld. This local distortion will not cause any problem during testing, therefore, no further evaluation will be performed.

Dye penetrant inspection of the barrel welds revealed flaws on AB2, AB8, and T5 which were not verified by radiographs. Disposition of these areas will depend on repair plan selected.

7. AFT CONE

The aft cone stringers are all bowed inboard. The web on one stringer is bent on the aft end where the web is tapered, however, it can be easily repaired (Fig. 9). There is corrosion on the aft cone ring stiffeners, which does not present a problem at this time.

The circumferential cone weld (A18) on the forward edge of the stringers has generally an overall poor appearance on the radiograph. There are areas of multiple repairs resulting in excessive wide weld beads, and a sharp image or gouge going into the parent material. Interstitial analysis results (Table I) of plugs from the cone weld (A18) showed no excessive interstitial content. Micro examination of plugs from the cone weld showed generally large grains and some platelets in the grain boundaries. However, there was no evidence of the sharp image observed on the radiograph. There are areas of voids where the disposition will depend on repair plan selected.

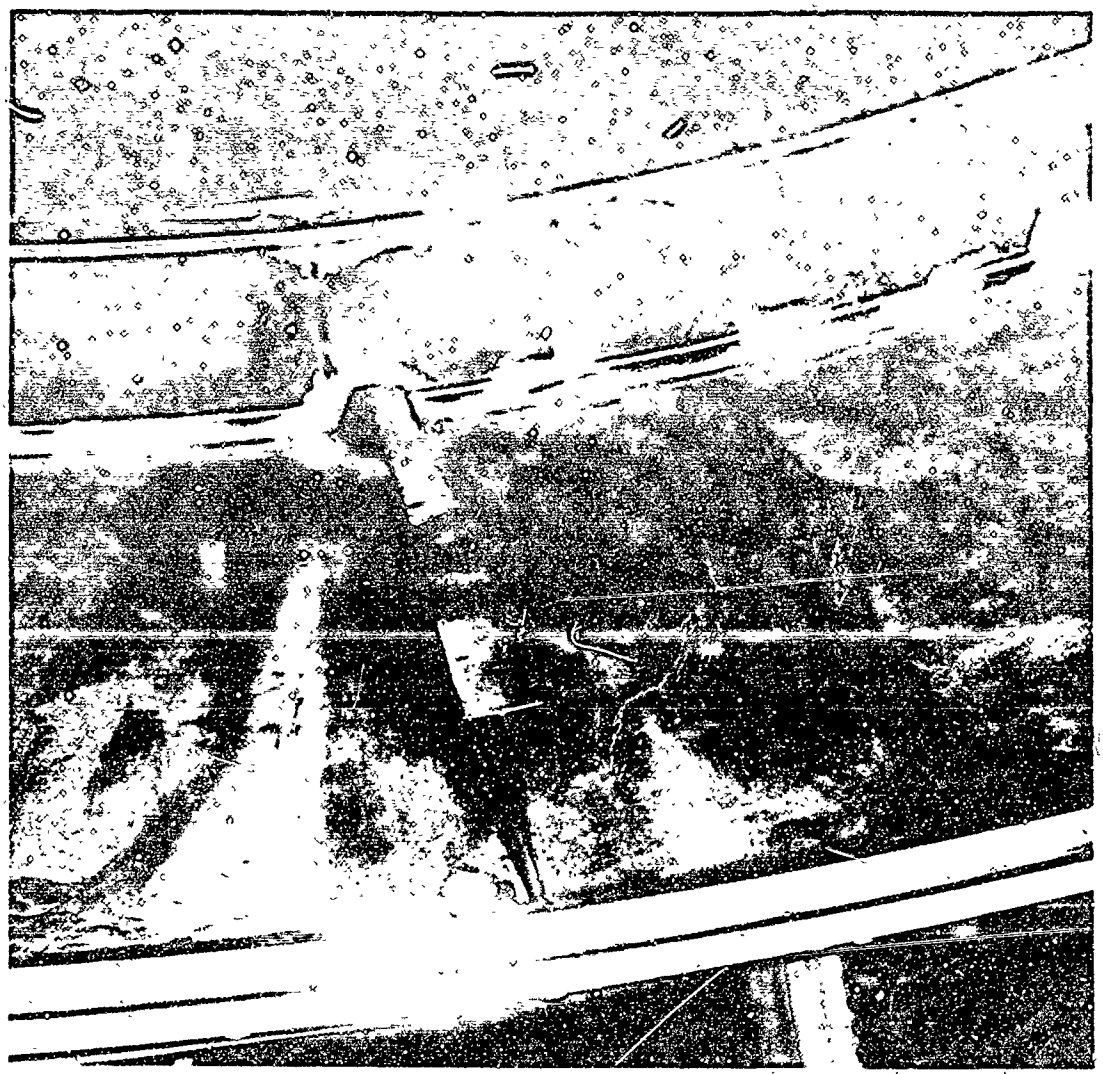


Figure 9 Bent Web Aft Cone Stiffener at Manhole

The cone segment welds (A2 thru A17) are excessively wide. On segment weld A15 there are other segment welds with similar images, but not as severe as A15. Micro examination of a plug from the A15 weld showed no defects that would affect the structural capability of the weld. Interstitial analysis results were also acceptable.

Dye penetrant inspection of the welds revealed a flaw on weld A9. The disposition of this area will depend on the repair plan selected.

Radiographic inspection on the aft cone welds A19 thru A42 revealed no defects that would cause rejection.

8. CONJUGATE STRUCTURE PANEL SPECIMEN

An 8-in. strip was cut from the panel specimen. Visual examination of the strip revealed areas on the surface of the inner corrugations that appear to be intermetallic scale. Etch pitting was also evident around the scale-appearing deposite. Micro examination showed no deleterious effects from the scale. Interstitial analysis results showed an acceptable interstitial content in the weld adjacent to this scale and pits, indicating no effect on the welds.

9. EFFECT OF OXYGEN AND NITROGEN

Weld color is usually a good indication of the quality of welding. The following color gradients show the quality of the welds:

Silver - generally a good weld;

Straw - normally acceptable;

Blue - not usable in pressure application;

Purple - not for structural use;

Loose, powdery substance - unacceptable.

Cracking during welding* occurs in such alpha-beta alloys as Ti-6Al-4V alloys when the oxygen content approaches 0.3% (3000 ppm) or the nitrogen approaches 0.13% (1300 ppm). Greater than 2500 ppm O_2 and greater than 700 ppm N_2 is not considered weldable because cracks may occur and ductility in the weldment will be lowered.

Normally, as the O_2 and N_2 content increase, the strength increases and the ductility decreases.† From 2000 ppm to 3000 ppm the strength increases by 50% and the ductility decreases by 500%. Similarly the fracture toughness of titanium alloys will be reduced by high oxygen content. A significant program would need to be performed to correlate the allowable weld mismatch with respect to absolute O_2 and N_2 content since mismatch tolerance is a function of ductility. Plasticity is decreased with increasing O_2 and N_2 contents.

10. PLATELETS AND GRAIN GROWTH

Grain growth occurs readily when heat is reapplied to a weld area, as would be the case in repair welding or multiple pass welding, particularly without filler additions. In addition alpha platelets coagulate and grow in the prior beta grain boundaries. As the platelets grow and the grains grow to approximately the thickness of the material, ductility is drastically reduced and cracking may occur, either on cooling from welding temperatures or from bending stresses imposed in service.

Since several of these welds on the conjugate tank have shown excessive mismatch, various degrees of discoloration, and high interstitial contents, brittle behavior can be expected during structural test of the tank.

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*H. K. Adenstedt: Handbook on Titanium. WADC Technical Report 54-305 Part A, September 1955.

†B. K. Yil'f and S. A. Yudina: "Effect of Oxygen on the Mechanical Properties of Heat Treated Alloys AT3 and AT8." NASA TT-F-338.

SECTION II

REPAIR PLANS

The intent of these plans to present three separate repair approaches to correct the discrepancies found during the inspection cycle. The test plan loads and testing sequence will be changed to be consistent with the level of repair for each plan.

Plan I consists primarily of replacement of both the forward and common domes and repair of all weld discrepancies, including plug holes on the barrels and aft cone. Plan II is limited to the forward dome replacement, repair of weld discrepancies including plug holes and cutting a hole in the common dome to eliminate the possibility of a pressure differential across the dome. Plan III consists only of repairing the plug holes located on the forward dome, aft cone and barrel, and cutting a hole in the common dome. The rework of the skirt attachments, repairing the bent aft cone stringer web, and repair welding the crack on the forward barrel inside skin is common to all plans.

The repair plans are outlined in the following Primary Data Sheets (Repair Process Plans).

DATE 2/10/60	TITLE: REPAIR PROPOSAL CONJUGATE TANK	PAGE	
CONTROL POINT		PART NO.	2615-930004
		CUSTOMER	
REV. B	SHEET NO. 1 OF 5	TOOLS EFFECTIVE SHIP NO.	

PLAN NO. I - Replacement of Fwd and Common Domes and Weld Repair

1. Place tank assembly in cut-off fixture T5-400000. Locate center of cutter at Sta. 343.28 and remove Fwd Dome. Deburr.

Note: Tooling to set-up Bridgeport head on T5-400000 fixture.

2. Set-up and locate edge of cutter at Sta. 410.76 and cut out Fwd. manifold weld. Deburr.

3. Locate edge of cutter at Sta. 414.81 and cut-out Aft manifold weld. Deburr.

4. Locate and center cutter at Sta. 412.02. Cut out Fwd. fuel tank. Deburr.

5. Locate center of cutter at Sta. 411.52 and remove common bulkhead. Deburr Remove sections from fixture.

6. Weld repair Fwd Barrel on FB7 at 0"-1", T-2 at 16'3", Plug repair on FB-5 at 5'3", FB-4 at 2'7", FB-1 at 0".

Material .050 6AL-4V Titanium

a. Purge Jaffee Metal section under repair area with argon for 24 hours. Purge through plug holes.

b. Clean surface of repair area per MRR-PR-211.

c. Set up torch and trailing gas shoe (existing)

d. Manual weld repair per MRR-PR-211.

e. Grind weld as required - do not grind parent metal.

f. X-Ray

g. Repair per MRR-PR-211 as necessary.

7. Fwd Barrel open crack repair. (Parent material) Work with Item 6.

Material .045 6AL-4V Titanium.

a. Drill 1/8" hole at each end of crack.

b. Repeat Item 6 Operations a through g.

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	DES. ENGR.		APPROVED	
	PROJ. ENGR.		APPROVED	

DATE 2/10/57	TITLE: REPAIR PROPOSAL CONJUGATE TANK		PAGE	
CONTROL POINT			PART NO.	2615-930004
			CUSTOMER	
REV.	SHEET NO. 2 OF 5	TOOLS EFFECTIVE SHIP NO.		

8. Weld repair Aft Barrel on locations AB-1 at 0"-1", 17½", 21½", 29", 38", AB-2 at 11", AB-3 at 2'11", AB-8 at 30", T5 at 10'10", plug repair on T-6 at 29'4 7/8", and 29' 6 5/8".

Material .050 6AL-4V Titanium

a. Clean weld areas per MRR-PR-211

b. Close off and purge barrel with argon for 24 hours.

c. Set up torch and trailing gas shoe (existing).

d. Manual weld repair per MRR-PR-211. Maintain gas flow through Jaffee Metal section.

e. Grind welds as required - do not grind parent metal.

f. X-Ray

g. Repair per MRR-PR-211 as necessary.

9. Weld repair Aft Cone at locations A9 at 13" and A18 at 9". Plug repair on A15 at 1'2", and A18 at 15'8", 15'8½", 18'11", and 22'4".

Material .150 6AL-4V Titanium

a. Grind weld area - do not grind parent metal.

b. Clean for weld per MRR-PR-211.

c. Install back-up shield on inside of cone (special) with vacuum holding fixture (existing).

d. Set-up torch and trailing gas shoe (existing).

e. Purge with argon for 15 minutes.

f. Manual weld repair per MRR-PR-211.

g. Grind weld as required - do not grind parent metal.

h. X-Ray

i. Repair per MRR-PR-211 as necessary

10. Weld of Common Bulkhead to Aft Barrel.

PRIMARY MANUFACTURING DATA MARTIN MARIETTA CORPORATION DENVER DIVISION	WRITER	L. Gordon	MANUF. REP.	
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	PROJ. ENGR.		APPROVED	

DATE 10/1/.	TITLE:	PAGE	
CONTROL POINT	REPAIR PROPOSAL CONJUGATE TANK	PART NO.	2615-930004
		CUSTOMER	
REV. B	SHEET NO. 3 OF 5	TOOLS EFFECTIVE SHIP NO.	

PLAN NO. I No. 10 (continued)

Material .140 6AL-4V Titanium

a. Load in fixture

(1) 2615-930006 Tank Section - Aft

(1) 2615-930010 Dome - Common (GFP)

b. Mill joining surfaces to match 125 or better.

c. Clean weld area per MPP 55026.

d. Install back up bar.

e. Set up weld torch and trailing shoe.

f. Weld sample

g. Purge with argon 2 hours min.

h. Automatic weld per MPP 55026.

i. Clean weld area

j. X-Ray

k. Repair per MRR-PR-211 as required.

11. Weld of upper tank assembly to lower tank assembly

Material .140 6AL-4V Titanium

a. Load 2615-93006, 2615-93005 in fixture.

b. Mill joining surfaces to match 125 or better.

c. Clean weld area per MPP 55026

d. Install back-up

e. Set-up weld torch and trailing shoe.

f. Weld sample

g. Purge with argon for 2 hours.

h. Automatic weld per MPP 55026.

i. Clean weld area

PRIMARY MANUFACTURING DATA MARTIN MARIETTA CORPORATION DENVER DIVISION	WRITER		MANUF. ENG.	
	DES. ENGR.		APPROVED	
	PROJ. ENGR.		APPROVED	

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DATE 10/7/63	TITLE:	PAGE	
CONTROL POINT	REPAIR PROPOSAL CONJUGATE TANK	PART NO.	2615-930004
		CUSTOMER	
REV.	SHEET NO. 4 OF 5	TOOLS EFFECTIVE SHIP NO.	

PLAN NO. I No. 11 (continued)

j. X-Ray

k. Repair per MRR-PR-211 as required.

12. Weld of Fwd Dome to Fwd Tank

Material .060 6AL-4V Titanium

a. Load in fixture

(1) 2615-930009 Fwd Dome (GFP)

(1) 2615-930004 Partial tank assembly

b. Follow Operations 10.b through 10.k. Use same back-up bar.

13. Weld of Manifold Cover

Material .062 6AL-4V Titanium

a. Machine mating surface at Sta. 410.76 and 414.81 125

b. Clean per MPP 55026

c. Fit and install shroud to tank and strap in place.

d. Produce (2) 1/2" holes in shroud at 90 and 180°.

e. Purge through 1/2" holes 4 hours min. with argon.

f. Fusion weld, manual per MPP 55026. Start weld in splice.

Maintain purge gas top and bottom of ring.

g. Grind as required - do not grind parent metal

h. X-Ray

i. Repair per MRR-PR-211 as necessary

j. Plug 1/2" holes. Use back pressure of gas for last weld.

k. Grind weld as required

l. X-Ray

m. Repair as necessary

PRIMARY MANUFACTURING DATA MARTIN MARIETTA CORPORATION DENVER DIVISION	WRITER		MANUF. REP.	
	DES. ENGR.		APPROVED	
	PROJ. ENGR.		APPROVED	

DATE 2/07/64	TITLE: REPAIR PROPOSAL CONJUGATE TANK	PAGE	
CONTROL POINT		PART NO.	2615-930004
		CUSTOMER	
REV. B	SHEET NO. 5 OF 5	TOOLS EFFECTIVE SHIP NO.	

PLAN NO. I

14. Skirt Rework

1. Remove all 1/8" HS48 High Shear Rivets on Fwd and Aft Skirts (1440 total), with 1/4" HS48 High Shear Rivets.

2. Replace 3/16" HS48 High Shear rivets on splice straps (720 places) with 1/4" HS48 High Shear rivets.

3. Replace aft inside row of attachments (144 places) on fwd skirt with NAS1670 1/4" flush jo-bolt.

15. Aft Cone Repair

1. Repair 2615-930008-5 stiffner on damaged aft cone.

16. Skirt Installation

1. Install Fwd skirt using existing bolts.

2. Install Aft skirt by bonding existing shims with Aerobond #2119 and (2) flush rivets (5/32") between each splice bolt location.

3. Install skirt using existing bolts.

PRIMARY MANUFACTURING DATA MARTIN MARIETTA CORPORATION DENVER DIVISION	WRITER	L LEONARD	MANUF. REP.	
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	PROJ. ENGR.		APPROVED	

MT-100 (5-57)

DATE 2/07/69	TITLE:	PAGE	
CONTROL POINT	REPAIR PROPOSAL CONJUGATE TANK	PART NO.	2615-93000
		CUSTOMER	
REV. B	SHEET NO. 1 OF 3	TOOLS EFFECTIVE SHIP NO.	

PLAN NO. II

1. Place Tank Assembly in cut-off fixture locate center of cutter at Sta. 343.23 and remove forward dome.

2. Aft Cone - Repair 5/16" plug holes on A15 @ 1'2"; A18 @ 3'8", 15'8½", 18'11" & 22'4"; repair weld defects on A9 @ 13"; and A18 @ 9"

Material .045 6AL-4V Titanium

a. Clean and grind weld area per MRR-PR-211.

b. Install new back-up shield on inside of cone with vacuum holding fixture (existing).

c. Set-up torch and trailing gas shoe.

d. Purge with argon for 15 minutes.

e. Manual fusion weld per MRR-PR-211.

f. Grind weld as required - do not grind parent metal.

g. X-ray

3. Fwd Barrel - Repair plug area on FB4 @ 2'7", FB5 @ 5'3", and FB1 @ 0". Repair weld defects on FB7 @ 0"-1", T2 @ 16'3", T3 @ 6", 4'4" & 25'10", and T4 @ 4'6".

Material .045 6AL-4V Titanium

a. Set up and purge tank with argon 30 cu. ft. hr. for 24 hours. Purge through plug holes.

b. Keeping argon flow through Jaffee Metal area, clean weld area per MRR-PR-211.

c. Set-up torch and trailing gas shoe.

d. Manual fusion weld repair per MRR-PR-211.

e. Grind weld as required I.D. of tank - do not grind parent metal.

f. X-ray

PRIMARY MANUFACTURING DATA MARTIN MARIETTA CORPORATION DENVER DIVISION	WRITE		MANUF. REP.	
	DES. ENGR.		APPROVED	
	PROJ. ENGR.		APPROVED	

DATE 2/07/69	TITLE: REPAIR PROPOSAL CONJUGATE TANK	PAGE	
CONTROL POINT		PART NO.	2615-930004
		CUSTOMER	
REV.	SHEET NO. 2 OF 3	TOOLS EFFECTIVE SHIP NO.	

PLAN NO. II (continued)

4. Fwd barrel open crack repair (parent metal)

Material .045 6AL-4V Titanium

a. Drill 1/8" hole at each end of crack.

b. Repeat Item 3 Operations a through f.

5. Produce 12" hole in center of common bulkhead. Saw out and break sharp edges.

6. Aft Barrel - Weld repair on T5 @ 10'10"; AB-3 @ 2'11"; AB-8 @ 30"; weld repair on AB-1 @ 1", 17½", 21½", 29" & 38", AB-2 @ 11"; repair plugs on T-6 @ 29'4 7/8" & 29'6 5/8".

Material .045 6AL-4V Titanium.

a. Repeat Item 3 Operations a through f.

7. Weld of Fwd dome to Fwd tank

Material .060 6AL-4V Titanium

a. Load in Fixture

(1) 2615-930009 Fwd Dome (GFD)

(1) 2615-930004 Partial Tank Assembly

b. Route joining surfaces to match 125 or better.

c. Clean weld area per MPP 55026.

d. Install back-up bar.

e. Set-up weld torch and trailing shoe.

f. Weld sample.

g. Purge with argon 2 hours min.

h. Automatic weld per MPP 55026.

i. Clean weld area.

j. X-ray

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	MFG. ENGR.		APPROVED	
	PROJ. ENGR.		APPROVED	

MT-190 (3-58)

DATE 2/07/69	TITLE: REPAIR PROPOSAL CONJUGATE TANK	PAGE	
CONTROL POINT		PART NO.	2615-930004
		CUSTOMER	
REV.	SHEET NO. 3 OF 3	TOOLS EFFECTIVE SHIP NO.	

PLAN NO. II (continued)

7.

k. Weld repair per MRR-PR-211 as required.

8. Skirt Rework

a. Replace all 1/8" HS48 hi-shear rivets on fwd and aft skirts (1440 total), with 1/4" HS48 hi-shear rivets.

b. Replace 3/16" HS48 hi-shear rivets on splice straps (720 places) with 1/4" HS48 hi-shear rivets.

c. Replace aft inside row of attachments (144 places) on fwd skirt with NAS1670 1/4" flush jo-bolt.

9. Aft Cone Repair

a. Repair 2615-930008-5 stiffener on damaged aft cone.

10. Skirt Installation

a. Install fwd skirt using existing bolts.

b. Install aft skirt by bonding existing shims with Aerobond #2119 and (2) flush 5/32" rivets between each splice bolt location.

c. Install skirt using existing bolts.

PRIMARY MANUFACTURING DATA MARTIN MARIETTA CORPORATION DENVER DIVISION	WRITER		MANUF. ENG.	
	DES. ENGR.		APPROVED	
	PROJ. ENGR.		APPROVED	

DATE 2/07/69	TITLE:	PAGE	
CONTROL POINT		PART NO.	2615-93000
		CUSTOMER	
REV. B	SHEET NO. 1 OF 2	TOOLS EFFECTIVE SHIP NO.	

PLAN NO. III

1. Forward Dome - Repair Plug Holes On F13 Weld @ 10'5", 24'4" & 26'6", F5@ 2", F12@ 3'9½", 3'9 7/8", 3'10½", 4'⅛", 4'4¾".

   Material .060 6AL-4V Titanium.

   a. Grind away weld to parent metal.

   b. Clean weld area per MRR-PR-211.

   c. Install back up shield on inside of dome (special) with vacuum holding fixture (existing).

   d. Set-up torch and trailing gas shoe (existing).

   e. Purge with argon for 15 minutes.

   f. Manual fusion weld repair per MRR-PR-211.

   g. Grind welds as required - Do not grind parent metal.

   h. X-Ray

2. Aft Cone - Rapair Plug Holes on Welds A18 @ 15'8", 15'8½", 18'11", & 22'4" and A15 @ 1'2".

   Material .150 6AL-4V Titanium.

   a. Repeat Item 1. Operations a through h.

3. Aft Barrel - Repair Plug Holes on Weld T6 @ 29'4 7/8" & 29'6 5/8".

   Material .150 6AL-4V Titanium

   a. Set up and purge tank with argon 30 cu. ft. hr. for 24 hours.

   b. Keeping argon flow through Jaffee Metal area, clean weld area per MRR-PR-211.

   c. Manual fusion weld repair per MRR-PR-211.

   d. Grind weld as required I.D. of tank - Do not grind parent metal.

   e. X-Ray

PRIMARY MANUFACTURING DATA MARTIN MARIETTA CORPORATION DENVER DIVISION	WRITER		MANUF. REP.	
	DES. ENGR.		APPROVED	
	PROJ. ENGR.		APPROVED	

DATE 2/07/69	TITLE:	PAGE	
CONTROL POINT		PART NO.	2615-930004
		CUSTOMER	
REV.	SHEET NO. 2 OF 2	TOOLS EFFECTIVE SHIP NO.	

4. Fwd. Barrel - Repair Plug Holes on Welds FB-4 @ 2'7", FB-5 @ 5'3" and FB-1 @ 0".

Material .045 6AL-4V Titanium

a. Repeat Item 3 Operations a through e.

5. Fwd Barrel Open Crack repair (parent metal)

Material .045 6AL-4V Titanium

a. Drill 1/8" hole at each end of crack.

b. Repeat Item 3 Operations a through e.

6. Skirt Rework

a. Replace all 1/8" HS48 hi-shear rivets on fwd and aft skirts (1440 total), with 1/4" HS48 hi-shear rivets.

b. Replace 3/16" HS48 hi-shear rivets on splice straps (720 places) with 1/4" HS48 hi-shear rivets.

c. Replace aft inside row of attachments (144 places) on fwd skirt with NAS1670 1/4" flush jo-bolts.

7. Aft Cone Repair

a. Repair 2615-930008-5 stiffner on damaged aft cone.

8. Skirt Installation

a. Install Fwd skirt using existing bolts.

b. Install Aft skirt by bonding existing shims with Aerobond #2119 and (2) flush 5/32 rivets between each splice bolt location.

c. Install skirt using existing bolts.

PRIMARY MANUFACTURING DATA MARTIN MARIETTA CORPORATION DENVER DIVISION	WRITER		MANUF. REP.	
	DES. ENGR.		APPROVED	
	PROJ. ENGR.		APPROVED	

SECTION III

TEST PLAN CHANGES

The following five tests will be performed.

Condition 1 - Tank Barrel Compression Test - This test will subject the tank barrel to the design compression load. The test will provide data on the behavior of the roll diffusion bonded truss core structure of the tank barrel under load. The tank pressure will be 10 psig top dome pressure, which minimizes the possibility of a pressure failure of the pressure vessel. A comparison of the original P_{eq} curves (Fig. 10) with those for this new condition (Fig. 11) shows that the tank barrel will be subjected to the same maximum net compression stress although the location of the maximum load point has shifted from the aft end of the forward tank to the aft end of the aft tank. The selection of 10 psig internal pressure for this condition is intended to provide the minimum acceptable pressure required for barrel stabilization and also will result in a low probability of failure of the forward dome.

Condition 2 - Hydrostatic Test, 65 psig (top dome pressure) - This test will subject the specimen to limit hydrostatic pressure as a single tank structure. The test will be followed by a complete radiographic inspection. The test has been designed to demonstrate the specimen's worthiness as a pressure vessel and to provide data to indicate its ultimate pressure capability.

Condition 3 - Stage 0 Boost Test - The Stage 0 boost design condition produces a combination of structural loads that represent the critical design condition for the major part of the tankage structure except the engine thrust cone. With the exception that the specimen will be acting as a single tank structure, this test will be the same as the Test Condition III of the originally contracted Test Plan.

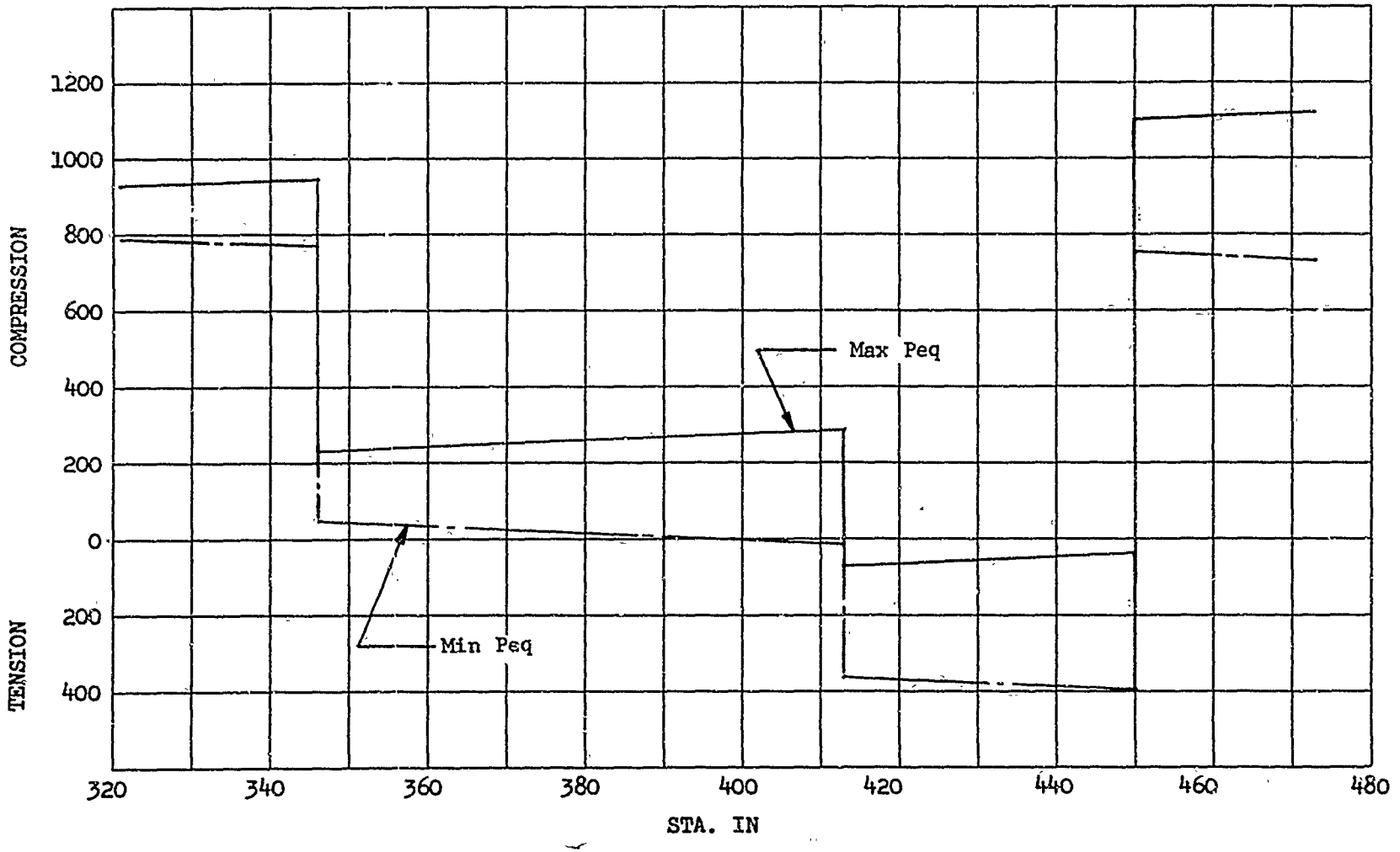


Figure 10 Load Condition 3 (Original Contract) Conjugate Structure

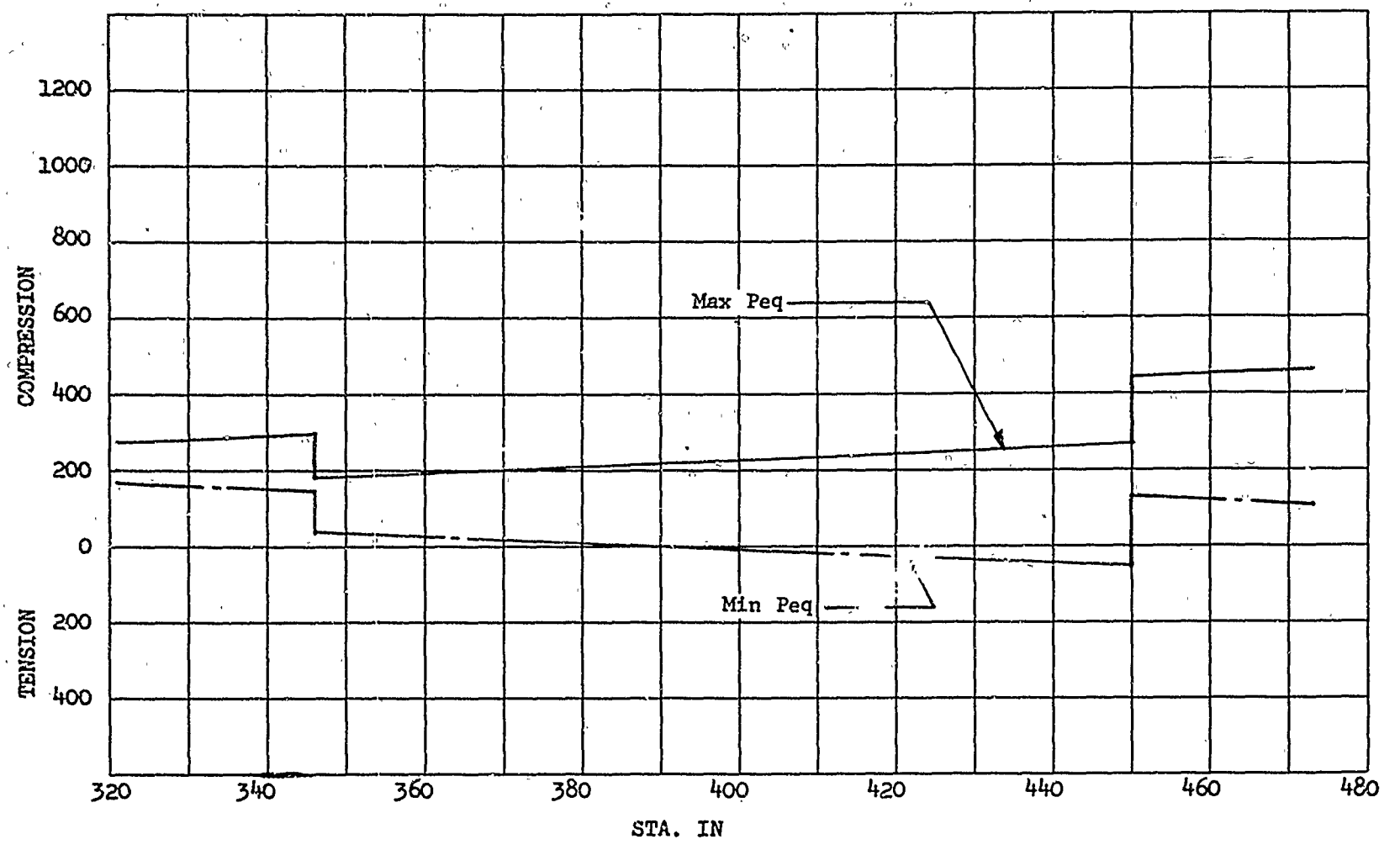


Figure 11 Load Condition 3 Conjugate Structure

Condition 4 - Stage III Boost Test - During the Stage II boost test, engine thrust loads will be introduced through the thrust cone. A fitting will be fabricated to mate with the aft manhole cover and the loads simulating gimbaled engine loads will be applied. The specimen will be filled with treated water (as a single tank structure) and pressurized to limit pressure specified for the forward tank. Load reaction shall be accomplished at the aft skirt.

Condition 5 - Hydrostatic Test of Two Tank Configuration - After the completion of the previous four test conditions, the holes in the common dome (plugs taken for examination) will be closed. The specimen will then be subjected to limit hydrostatic pressures in both tanks as specified in the original contract.

SECTION IV

RESULTS OF FLUSHING OF FORWARD FUEL TANK BARREL

During the receiving inspection, water was found in the fuel tank. The water had bled through a crack in the inside skin of the truss core tank barrel. The water was removed from the truss core barrel wall by flushing with acetone. Appendix II is a report of the flushing procedure.

SECTION V

REVISED TEST

1. TEST DESCRIPTION AND LOADS

Five tests will be performed to adequately test the structure. The first two tests have been added and are intended to provide test data on the behavior of the roll diffusion bonded truss core structure with minimum risk. The last three tests are essentially those of the original contract but in a revised order. The following is a brief description of the tests. All test loads are shown on Fig. 12.

a. Condition 1 - Tank Barrel Compression Test

This test will subject the tank barrel to the design compression load. The test will provide data on the behavior of the roll diffusion bonded truss core structure of the tank barrel under load. The tank pressure will be 10 psig top dome pressure, which minimizes the possibility of a pressure failure of the pressure vessel. A comparison of the original P_{eq} curves (Fig. 10) with those for this new condition (Fig. 11) shows that the tank barrel will be subjected to the same maximum net compression stress although the location of the maximum load point has shifted from the aft end of the forward tank to the aft end of the aft tank. The selection of 10 psig internal pressure for this condition is intended to provide the minimum acceptable pressure required for barrel stabilization and also will result in a low probability of failure of the forward dome.

b. Condition 2 - Hydrostatic Test, 65 psig (top dome pressure)

This test will subject the specimen to limit hydrostatic pressure as a single tank structure. The test will be followed by a complete radiographic inspection. The test has been designed to demonstrate the specimen's worthiness as a pressure vessel and to provide data to indicate its ultimate pressure capability.

c. Condition 3 - Stage 0 Boost Test

The Stage 0 boost design condition produces a combination of structural loads that represent the critical design condition for the major part of the tankage structure except the engine thrust cone portion. The specimen shall be functioning as a single tank structure and, with that exception, the structure test will be the same as the Test Condition III of the originally contracted Test Plan.

Loads	Conditions				
	1	2	3	4	5
F (kip)	222.7	0	861	0	0
G (kip)	24.45	0	24.45	0	0
H (kip reaction)	284.7	0	923	-54	0
J (kip reaction)	24.45	0	24.45	5.48	0
K (kip)	0	0	0	116	0
L (kip)	0	0	0	5.48	0
M (in.-kip)	1589	0	2138	0	0
N (in.-kip reaction)	5305	0	5960	116	0
P (psi)	10	65	65	50	0
P_f (psi)	0	0	0	0	65
P_{ox} (psi)	0	0	0	0	99.7

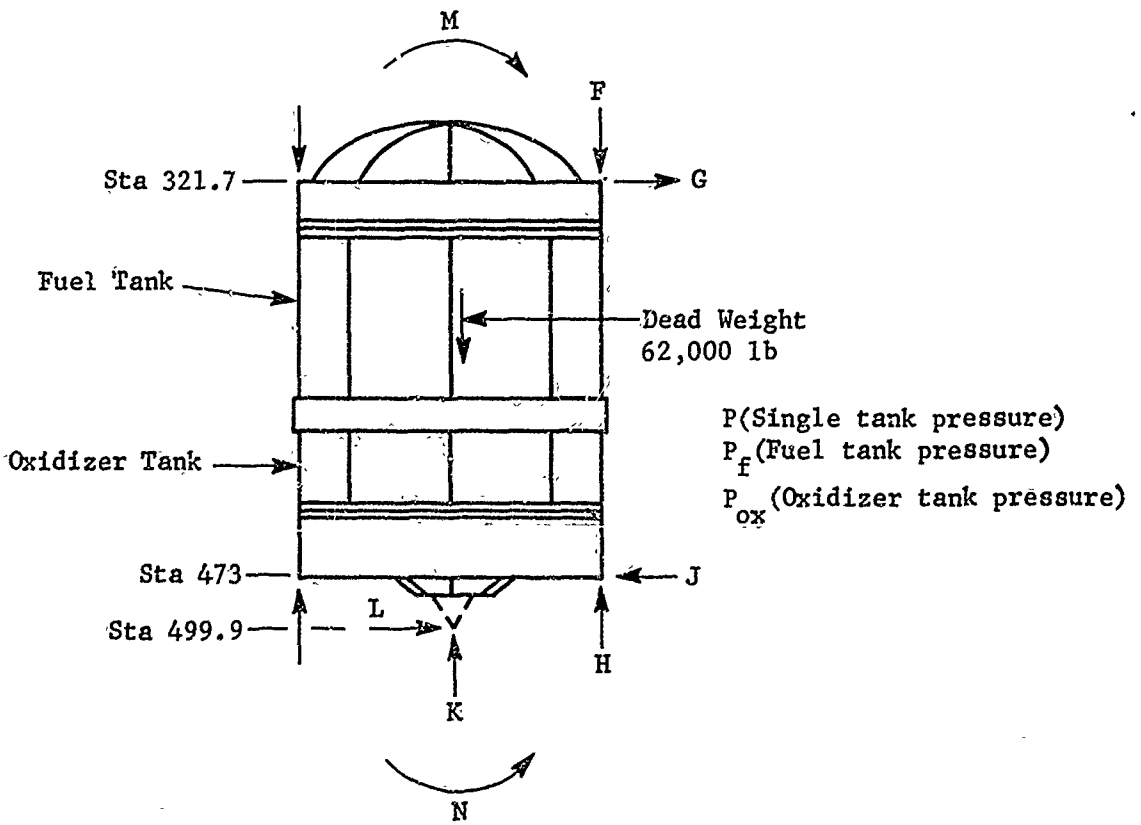


Figure 12 Test Load Summary

d. Condition 4 - Stage II Boost Test

During the Stage II boost test, engine thrust loads will be introduced through the thrust cone. A fitting will be fabricated to mate with the aft manhole cover and the loads simulating gimbaled engine loads will be applied. The specimen will be filled with treated water (as a single tank structure) and pressurized to limit pressure specified for the forward tank. Load reaction shall be accomplished at the aft skirt.

e. Condition 5 - Hydrostatic Test of Two Tank Configuration

After the completion of the previous four test conditions, the holes in the common dome (plugs taken for examination) will be closed. The specimen will then be subjected to limit hydrostatic pressures in both tanks as specified in the original contract.

The plan requires static testing at room temperature, which necessitates an adjustment of the static loadings to compensate for the decrease in material properties at elevated temperatures. Material properties at 270°F were used for the design and analysis of the tankage structure. The ambient-temperature test loads must, therefore, be increased by the ratio of test temperature to design temperature material allowables. This relationship may be expressed as

$$\frac{\text{Load}_{\text{test}}}{\text{Load}_{\text{design}}} = \frac{F_{tu}\ RT}{F_{tu}\ 270°F} = \frac{111{,}000}{96{,}000} = 1.16$$

The equation has also been used to determine the ultimate test loads of Table III for the two critical, complete tankage assembly test conditions.

After each test is completed, test data (strain gage and deflection) will be evaluated to determine if any yielding has occurred. The test specimens will also be visually inspected for evidence of buckling and the domes and cone will be visually inspected for any irregularities not existing before the test.

The manhole covers will be removed and the fuel tank ring frame and the manifold ring structure will be inspected for indications of instability. The results of the data evaluation and inspection, in conjunction with the fact that the specimen successfully sustained the test loads, will provide a basis for determining the success of the test. A basic success criterion is that the specisustain ultimate load without failure. The strain gage data shall be extrapolated to an ultimate value to evaluate success.

2. TEST SETUP, HYDROSTATIC TEST CONDITIONS 2 AND 5

The test specimen will have the specified strain gages installed. The specimen will then be attached to a base fixture (see Fig. 13). The joint will be made at the aft skirt frame by using NAS1004 bolts through the frame and base fixture. The test plumbing system will be installed to fill and drain the test specimen with treated water (it is planned that all risks concerning stress corrosion of the titanium tanks be avoided) and to pressurize the tanks. The reagent water is prepared according to government specification STM Y802, which assures no chlorine content. Intergranular corrosion is thereby avoided. Electrical transducers will be used for pressure readouts. A Bourdon gage will be used as a backup pressure readout device. Pressure will be increased in the tankage by regulating a compressed air supply to the desired levels. The tank will be filled to a level that will leave some air remaining in the tank. A sketch of the plumbing system is shown in Fig. 14.

After the Hydrostatic Test Condition 2 is completed, the specimen will be removed from the fixture, taken to the radiographic inspection building, and completely inspected.

Deflection instrumentation will be installed to determine the behavior of the specimen during pressurization. Electrical transducers will be affixed to a rigid frame adjacent to the specimen and their probes will follow and indicate the specimen's movement.

3. TEST SETUP, TEST CONDITIONS 1, 3 AND 4

The test setup for each test is essentially the same as descirbed for test Conditions 2 and 5. All deviations will be noted. All strain gage and deflection instrumentation will be monitored for each test condition. All test loads will be applied with hydraulic jacks and measured with electrical load cells. The pressure in the jacks will be monitored to provide backup load data. The dead weight of water in the tank will be considered as a portion of the test load. The water level in the tank will be measured with a manometer. The pressurization system and the water fill and drain system will be the same as that used for the hydrostatic test.

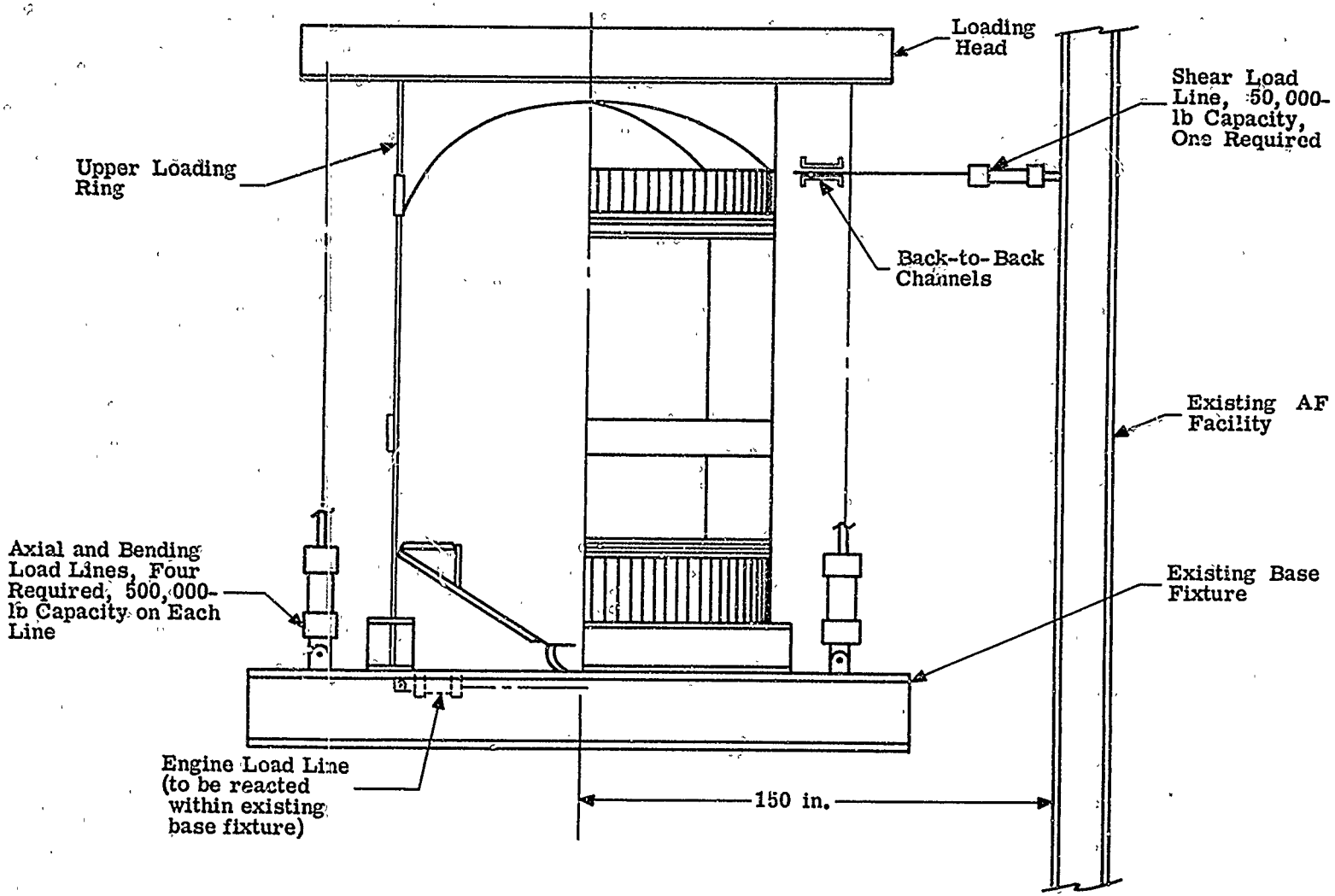


Figure 13 Test Setup Schematic

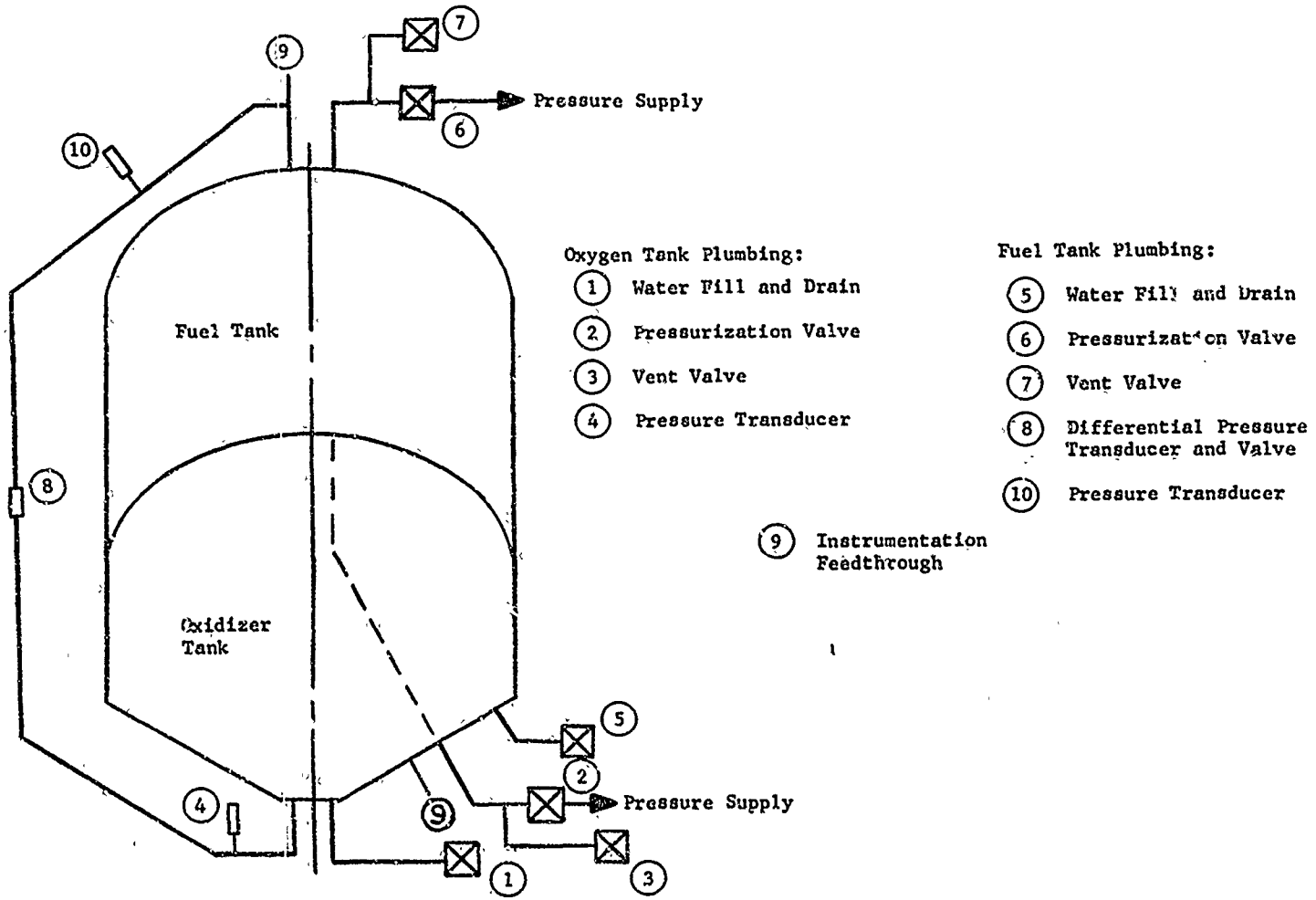
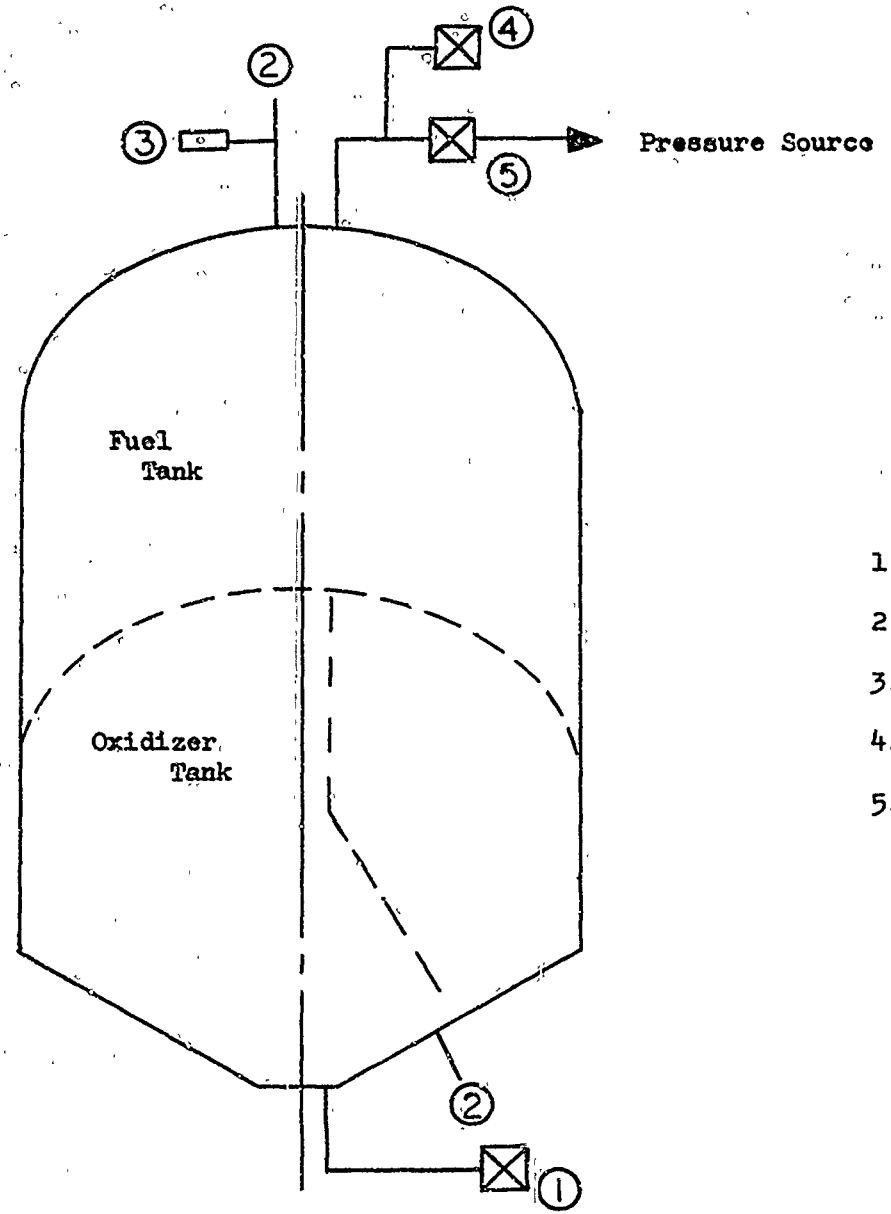


Figure 14 Plumbing Schematic (a) Condition 5



1. Water Fill and Drain
2. Instrumentation Feedthru
3. Pressure Transducer
4. Vent Valve
5. Pressurization Valve

Figure 14 Plumbing Schematic (b) , Conditions 1 thru 4

The test specimen will be attached to the base fixture as previously discussed for the hydrostatic test. A loading head (a structural steel fixture providing a means of introducing load to the forward skirt of the specimen) will be attached to the forward skirt in the same manner as the joint at the base fixture. The loading head is a structural steel welded assembly. It is an octogonal wheel in planform. A leveling ring of 10-ft nominal diameter is affixed to the bottom side of the structure. It is locally stiffened to ensure proper load distribution. The corners of the octogonal structure have universal assemblies attached to accept the hydraulic jack and load cell assemblies.

During the Condition 1 and 3 tests, axial load and moment will be applied to the loading head by four axial load lines (arrangement of hydraulic jack, load cell, and suitable steel linkage), deriving moment by differential axial loads. The required shear load will also be applied to the loading head.

The loading head will be weighed so its dead weight can be counterbalanced during instrumentation zero and test loading. The counterbalancing will be accomplished by attaching a hydraulic jack, load cell, and structural steel straps to the loading head and a fixed overhead beam arrangement. The load in the hydraulic jack will be maintained at the prescribed constant load during the specified times. The loading head will be counterbalanced during instrumentation zero and test load by load lines attached to an overhead beam structure. The overhead beams and counterbalance load lines also serve as a catch structure to prevent the loading head from falling if a failure occurs.

A fixture that will attach to the manhole cover of the tank thrust cone will be fabricated to provide a way to apply the loads for the appropriate test condition.

The test specimen will be watched from the control room and on closed-circuit television (four channels available). The closed-circuit television is of particular advantage during the Condition C test in which the critical structure will be obscured from direct view of observers.

4. INSTRUMENTATION

a. Strain Gages

Approximately 120 resistance strain gages will be used for monitoring tankage specimen testing. The gages will be located as specified in the currently contracted test plan to monitor areas of known or anticipated maximum stresses, as well as areas of uniform average stresses for comparison, including:

1) Circumferential welds;
2) Y-rings;
3) Forward dome skin (outside);
4) Common bulkhead (oxidizer side);
5) Thrust cone accumulator frame;
6) Thrust cone skin;
7) Thrust cone engine mount.

Preplots of anticipated stresses shall be prepared by the contractor to expedite the testing operations.

b. Deflection Transducers

Structural deflections of the tankage specimen will be monitored during each test condition by electrical deflection transducers. The following locations have been selected to register deflections in the directions noted:

1) Forward Y-ring, approximately Station 345, four points approximately 90-deg apart around tank circumference, reading radially outward;
2) Intermediate Y-ring, approximately Station 416, four points approximately 90-deg apart around tank circumference, reading radially outward;
3) Aft Y-ring, approximately Station 454, four points approximately 90-deg apart around tank circumference, reading radially outward;

4) Forward Y-ring, approximately Station 345, four points approximately 90-deg apart around tank circumference, reading axially relative to the aft Y-ring;

5) Engine mounting ring, approximately Station 485, two points approximately in plane with engine side load components, reading axially;

6) Engine load fixture at gimbal centerline, approximately Station 499, three deflections, one in each coordinate direction.

c. Pressure Transducers

Pressure gages and transducers are required to monitor and display internal tank pressurization. Calibrated pressure switches will be used to activate relief valves for a pressure condition potentially incompatible with safety.

d. Photostress

Transparent, birefringent elastic coatings will be bonded to the external surface only of the tankage specimen for more detailed evaluation of the stress and strain distribution in the following five areas:

1) Unpressurized passage tank walls;

2) Pressurized passage tank walls;

3) Longitudinal weld;

4) Circumferential weld;

5) Weld intersection.

The photostress sheets should be photographed in color to illustrate stress distributions and magnitudes in the following order in the Condition E test:

1) Tank empty, no pressure, no load;

2) Tank full, no pressure, no load;

3) Tank full, 25% limit pressure, no load;

4) Tank full, 50% limit pressure, no load;

5) Tank full, 75% limit pressure, no load;

6) Tank full, 100% limit pressure, no load;

7) Tank full, 100% limit pressure, 60% limit Condition 3 load;

8) Tank full, 100% limit pressure, 80% limit Condition 3 load;

9) Tank full, 100% limit pressure, 100% limit Condition 3 load;

10) Tank empty, no load, no pressure;

11) A list of the photostress tasks follows -

a) Install five photoelastic panels. The panel sizes and locations are -

12x12-in. panel on unpressurized tank wall,

12x12-in. panel on pressurized tank wall,

12x12-in. panel slit over longitudinal weld,

12x12-in. panel split over circumferential weld,

12x12-in. panel over intersection of longitudinal and circumferential weld;

b) Install all specimens on the same tankage assembly;

c) Gather stress distribution and magnitude data;

d) Read data on nine different occasions, four of which will have four increments of load;

e) Produce color photographs and reduced data;

f) Publish a minimum of five reports.

e. Data Acquisition

The individual strain gage outputs will be recorded on tape by a low-level analog-to-digital data logging device. The tape will then be used with an IBM 360/30 computer to provide a stress tabulation. During the test, the data from each strain gage (a single electrical channel) will be calculated independent of other gages. After the test is complete, the rosette and shear gage data will be reduced to usable data. It is anticipated that tabulations of stress data will be available approximately 15 minutes after data recording during a test operation.

Data recording will include:

1) Laboratory log books to record deflections, temperatures, and other pertinent test information;

2) Color still photographs of the photostress patterns, identified to correlate with associated test loadings;

3) Black and white still photographs of the overall test setup, test facility details, and special test equipment.

f. Data Reduction

Data reduction will include:

1) All strain gage data recorded on magnetic tape, processed by a digital computer, to convert indicated strain values to corresponding stress values;

2) Strain gage rosette data, reduced by the computer to present values of maximum and minimum principal stresses and their directions for each data point;

3) Pressure transducer data recorded on magnetic tape, processed by a digital computer, to convert indicated values to corresponding true pressure values;

4) Deflection data, hand-tabulated from the log books.

5. TEST PROCEDURE

The process for conducting the test has been structured to provide a method of collecting meaningful data and a means of monitoring the behavior of the test specimen. The contractor will attempt to avert test specimen failures by reviewing strain gage and deflection data as the test progresses. The contractor shall coordinate the test data (strain and deflection) with the Air Force representative as the test progresses to determine that the specimen's behavior is satisfactory. The goal is to eliminate the possibility of a failure. Coordination with the Air Force representative will be necessary before each test load is increased. The time required to review the test data should not exceed 1/2 hr. The times at which the data are to be reviewed will be established by the test conductor and the Air Force representative. A hold time in excess of 2 hr caused by the Air Force representative during data review shall be cause for test shutdown and termination of testing.

Tables III thru VII show the steps of each test operation. Before following the steps listed in the tables, the test area will be secured to prevent unauthorized personnel from entering the area. All test instrumentation, load cells, strain gages, and deflection probes will be zeroed and recorded.

6. HAZARDS AND EMERGENCY SHUTDOWN PROCEDURES

a. Tank Failure

Structural failure within the primary tankage structure would almost certainly result in catastrophic failure of the specimen and a sudden release of 62,000 lb of water. In case of catastrophic failure, shutdown will be automatic. For noncatastrophic tank failure, the following procedure will be followed:

1) All flight loads, if any, will be reduced to zero as quickly as possible, using the "dump" function of the hydraulic system;

2) Specimen pressure will not be dumped, but reduced rapidly until 5 psi is reached with the tankage. After verifying that flight loads have been reduced to zero, the tank pressure will be reduced to zero;

3) The tank will then be drained per Tank Drain Procedure.

b. Fill Procedure

The fill procedure is as follows:

1) With manual and remote controlled vent valves open, open water fill valve, filling tank to desired level;

2) Close water fill valve;

3) Close manometer and vent valves;

4) Pressurize tank to desired pressure.

Table III Test Procedure Steps, Condition 1

Step	Applied Load (%)	Tank Pressure (psi)	Stablize Load	Record Data	Remarks
1	0	0		X	Tank empty, unpressurized
2	0	0		X	Tank loaded with water, unpressurized, (Ref Tank Fill Procedure)
3	0	5	X	X	
4	0	10	X	X	
5	20	10	X	X	
6	40	10	X	X	
7	60	10	X	X	
8	80	10	X	X	
9	90	10	X	X	
10	95	10	X	X	
11	100	10	X	X	
12	20	10	X	X	Set data recording
13	0	10			
14	0	0			

Table IV Test Procedure Steps, Condition 2
(65 psi Hydro)

Step	Applied Load (%)	Tank Pressure (psi)	Stablize Load	Record Data	Remarks
1	0	0		X	Tank empty, unpressurized
2	0	0		X	Tank loaded with water, unpressurized, (Ref Tank Fill Procedure)
3	0	10	X	X	
4	0	20	X	X	
5	0	30	X	X	
6	0	40	X	X	
7	0	50	X	X	
8	0	55	X	X	
9	0	60	X	X	
10	0	65	X	X	
11	0	10	X	X	Set data recording
12	0	0			Ref Tank Drain Procedure

Table V Test Procedure Steps, Condition 3
(Step 0 Burnout)

Step	Applied Load (%)	Tank Pressure (psi)	Stablize Load	Record Data	Remarks
1	0	0		X	Tank empty, unpressurized
2	0	0		X	Tank loaded with water, unpressurized, (Ref Tank Fill Procedure)
3	0	16.25	X	X	Photograph photostress panels
4	0	32.5	X	X	
5	0	48.75	X	X	
6	0	65	X	X	
7	25	65	X	X	
8	50	65	X	X	
9	75	65	X	X	
10	100	65	X	X	Photograph photostress
11	25	65	X	X	Set data recording
12	0	65			
13	0	0			Ref Tank Drain Procedure

Table VI Test Procedure Steps, Condition 4
(Stage II Boost)

Step	Applied Load (%)	Tank Pressure (psi)	Stablize Load	Record Data	Remarks
1	0	0		X	Tank empty, unpressurized
2	0	0		X	Tank loaded with water, unpressurized (Ref Tank Fill Procedure)
3	0	20	X	X	
4	0	45	X	X	
5	0	65	X	X	
6	20	65	X	X	
7	40	65	X	X	
8	60	65	X	X	
9	80	65	X	X	
10	90	65	X	X	
11	95	65	X	X	
12	100	65	X	X	
13	20	65	X	X	Set data recording
14	0	65			
15	0	0			(Ref. Tank Drain Procedure)

Table VII Test Procedure Steps, Condition 5 Hydrostatic Test

Step	Load Steps*			Stabilize Load	Record Strains	Remarks
	Applied Load‡	Tank Pressure†				
		Fuel	Oxidizer			
1	0.0	0	0		X	Tanks empty
2		10	20	X	--	Ref tank filling procedure
3		20	20	X	X	
4		20	40	X	--	
5		40	40	X	X	
6		40	60	X	--	
7		60	60	X	X	
8		60	80	X	--	
9		80	80	X	X	
10		80	90	X	--	
11		90	90	X	X	
12		90	100	X	--	
13		100	100	X	X	Limit pressure has been demonstrated
14		80	100	--	--	
15		80	80	--	--	
16		60	80	--	--	
17		60	60	X	X	
18		40	60	--	--	
19		40	40	--	--	
20		20	40	--	--	
21		20	20	--	--	
22		0	20	--	--	
23	0.0	0	0	X	X	

*Indicated loads are in % of limit loads.
†Pressure safety factor = 1.25.
‡Applied load safety factor = 1.40.

c. Drain Procedure

For a single tank configuration the drain procedure is as follows:

1) Pressurize tank to 15 psi (except for Condition 1 when 8 to 10 psi shall be used);

2) Open water drain valve; maintaining tank pressure at 8 to 10 psi minimum. If this pressure cannot be maintained, close drain valve and increase tank pressure to 15 psi (8 to 10 psi for Condition 1 only);

3) Continue water drain until pressurized air from the tank blows through the drain line, thus assuring that the tank is empty;

4) Reduce tank pressure supply to zero, open manual and remote controlled vents, permitting pressure to decay to zero. Close water drain valve.

For a two-tank configuration - (same as originally contracted).

d. Test Procedures

The detailed test procedures for the tankage assembly are presented in Tables III thru VII.

SECTION VI

CONJUGATE STRUCTURE

FUEL TANK WALL

FLUSH TEST REPORT

Test Conductor: P. L. Hanson

February 1969

Approved:

R. L. Lyon
Unit Head
Structures Laboratory

R. A. Brown
Structures Laboratory

Purpose

This test resulted from an observation of water leaking from a crack in the parent metal of the fuel tank interior. The purpose of the test was to remove any water and/or foreign particles lodged in the conjugate structure fuel tank wall.

Test Setup

The conjugate structure was mounted horizontally on transportation dollies with the oxidizer tank elevated five inches above the fuel tank. The fill and drain outlet was placed down and the vent was at the top. The acetone barrel was elevated above the conjugate structure tank and poly-flo tubing was used as plumbing between the two. Hand valves were used to regulate the flow. After the fill and drain procedure was completed, the tank fill outlet was plumbed to the factory nitrogen gas system. A pressure gage was used to monitor nitrogen pressure (i.e., less than 8 psig) in the purge line. The fumes were piped outdoors from the vent outlet. No other instrumentation was used.

Safety Procedure

The tank was flushed outdoors to reduce the chance of explosion. The test area was roped off and no smoking-danger signs were displayed. The fill and drain was accomplished by gravity flow. The tank outlets were closed off each time it was stored in a building, while fumes were present.

Test Procedure

1. Filled fuel tank wall as shown in Figure 15 from elevated acetone barrel until acetone overflowed from vent outlet.

2. Drained tank from fill outlet.

3. Repeated Steps 1 and 2 two additional times with clean acetone.

4. Purged tank wall structure with gaseous nitrogen until no acetone odor was detectable.

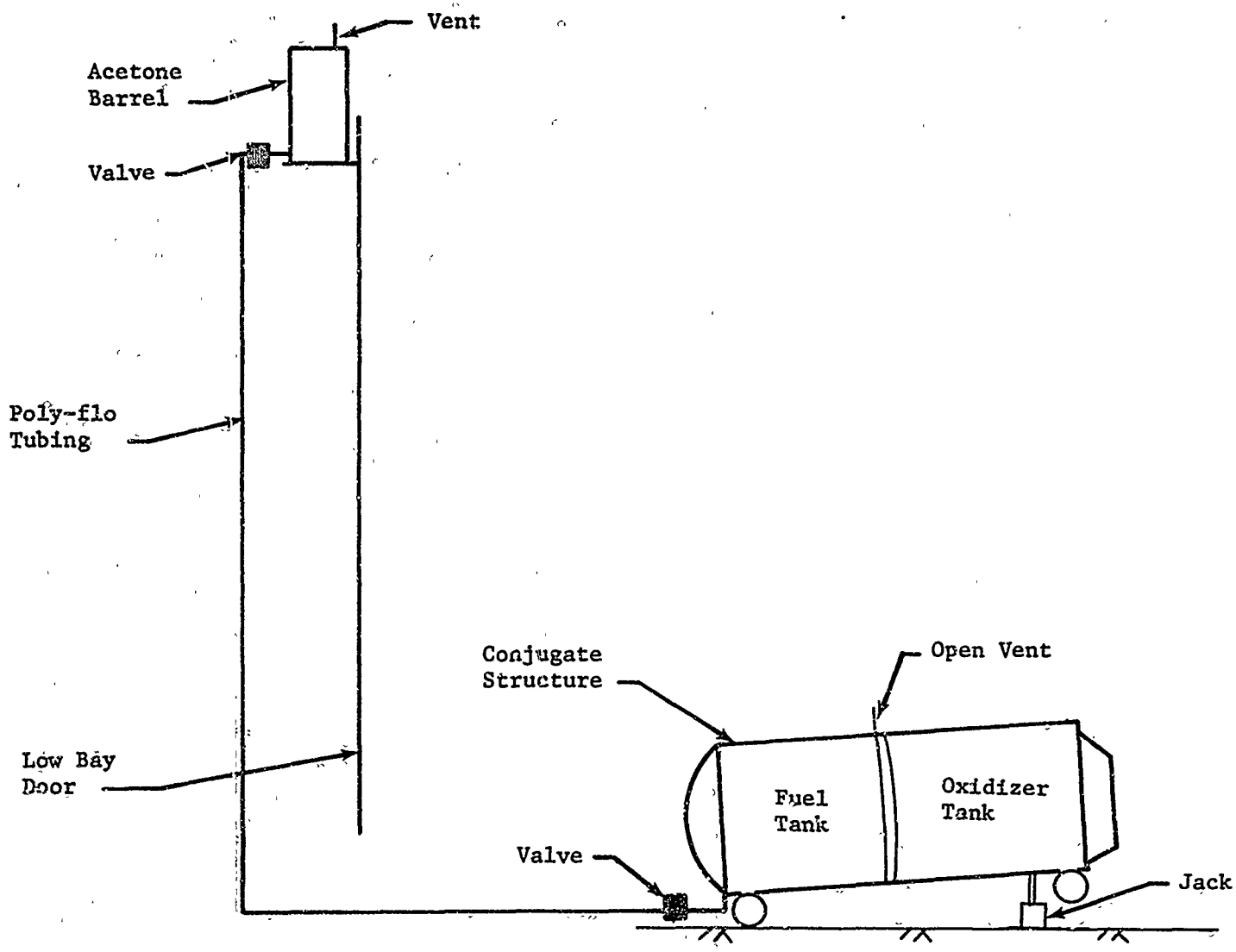


Figure 15 Flush Test Setup Schematic

Results

The acetone drained from the conjugate structure tank wall was very clean, no foreign particles were observed in the outflow. It was impossible to determine the amount of water in the acetone as they are both colorless and soluble in one another. The tank was purged with gaseous nitrogen for ten (10) hours and no acetone odor was discernable.

APPENDIX II

Conjugate Structure Test
Condition 1

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	N/A	L001A	L001B	P0021A	P0022A	GP
0000 0000 08 47 18.26	0000000.00	0000348.80-	0000024.05-	0000006.01	0000090.20-	01
1000 0000 12 58 53.77	0000000.00	0000493.15	0000120.28	0000006.01	0000294.69	01
1000 0000 12 58 54.77	0000000.00	0000541.26	0000096.22	0000102.24	0000246.57	01
1000 0000 12 58 55.77	0000000.00	0000324.76	0000144.34	0000090.20-	0000246.57	01
1000 0000 12 58 56.77	0000000.00	0000348.81	0000120.28	0000066.14-	0000222.52	01
1000 0000 12 58 57.77	0000000.00	0000324.76	0000096.22	0000042.09-	0000246.57	01
1005 0000 13 06 59.24	0000000.00	0005400.57	0003608.40	0000186.42-	0000030.07	01
1005 0000 13 07 00.24	0000000.00	0005737.36	0003656.51	0000162.37-	0000126.29	01
1005 0000 13 07 01.24	0000000.00	0005689.24	0003608.40	0000258.59-	0000150.35	01
1005 0000 13 07 02.24	0000000.00	0005641.13	0003560.29	0000234.54-	0000150.35	01
1005 0000 13 07 03.24	0000000.00	0005833.58	0003584.34	0000306.70-	0000102.24	01
1010 0000 13 08 54.04	0000000.00	0009417.92	0006038.06	0000475.10-	0000006.01	01
1010 0000 13 08 55.04	0000000.00	0009682.54	0006062.11	0000643.49-	0000078.18	01
1010 0000 13 08 56.04	0000000.00	0009634.43	0006062.11	0000643.49-	0000054.13	01
1010 0000 13 08 57.04	0000000.00	0009730.65	0006038.06	0000595.38-	0000030.07	01
1010 0000 13 08 58.04	0000000.00	0009730.65	0006062.11	0000715.66-	0000054.13	01
1010 0020 13 19 52.40	0000000.00	0008311.35	0005893.72	0000908.10-	0000006.01	01
1010 0020 13 19 53.40	0000000.00	0008984.92	0005893.72	0000932.16-	0000150.35	01
1010 0020 13 19 54.40	0000000.00	0008864.64	0005917.78	0000980.27-	0000126.29	01
1010 0020 13 19 55.40	0000000.00	0008816.52	0005917.78	0001004.33-	0000126.29	01
1010 0020 13 19 56.40	0000000.00	0008888.69	0005893.72	0001052.44-	0000126.29	01
1010 0040 13 24 23.72	0000000.00	0009153.31	0006134.28	0001413.28-	0000102.24	01
1010 0040 13 24 24.72	0000000.00	0009321.70	0006134.28	0001389.22-	0000198.46	01
1010 0040 13 24 25.72	0000000.00	0009393.87	0006014.00	0001509.50-	0000198.46	01
1010 0040 13 24 26.72	0000000.00	0009345.76	0006038.06	0001533.56-	0000222.52	01
1010 0040 13 24 27.72	0000000.00	0009393.87	0005989.94	0001509.50-	0000174.41	01
1010 0060 15 08 30.65	0000000.00	0008744.36	0005965.89	0001894.40-	0000198.46	01
1010 0060 15 08 31.65	0000000.00	0008960.86	0005965.89	0001870.34-	0000246.57	01
1010 0060 15 08 32.65	0000000.00	0008816.52	0005989.94	0001870.34-	0000246.57	01
1010 0060 15 08 33.65	0000000.00	0008792.47	0005941.83	0001918.46-	0000198.46	01
1010 0060 15 08 34.65	0000000.00	0008768.41	0005989.94	0001870.34-	0000174.41	01
1010 0080 15 16 27.09	0000000.00	0008864.64	0006014.00	0002327.41-	0000126.29	01
1010 0080 15 16 28.09	0000000.00	0009345.76	0006038.06	0002327.41-	0000174.41	01
1010 0080 15 16 29.09	0000000.00	0009297.64	0006086.17	0002327.41-	0000222.52	01
1010 0080 15 16 30.09	0000000.00	0009297.64	0006086.17	0002351.46-	0000174.41	01
1010 0080 15 16 31.09	0000000.00	0009321.70	0006062.11	0002351.46-	0000126.29	01
1010 0090 16 37 17.85	0000000.00	0007709.95	0005797.50	0002519.86-	0000174.41	01
1010 0090 16 37 18.85	0000000.00	0007709.95	0005821.55	0002543.91-	0000174.41	01
1010 0090 16 37 19.85	0000000.00	0007517.50	0005845.61	0002495.80-	0000222.52	01
1010 0090 16 37 20.85	0000000.00	0007541.56	0005845.61	0002519.86-	0000150.35	01
1010 0090 16 37 21.85	0000000.00	0007565.61	0005773.44	0002543.91-	0000150.35	01
1010 0095 16 40 49.63	0000000.00	0008720.30	0006158.34	0002664.19-	0000102.24	01
1010 0095 16 40 50.63	0000000.00	0009081.14	0006134.28	0002664.19-	0000222.52	01
1010 0095 16 40 51.63	0000000.00	0009008.97	0006110.22	0002664.19-	0000126.29	01
1010 0095 16 40 52.63	0000000.00	0008960.86	0006086.17	0002664.19-	0000126.29	01
1010 0095 16 40 53.63	0000000.00	0009057.08	0006062.11	0002712.30-	0000150.35	01
1010 0100 16 44 33.87	0000000.00	0008118.90	0005965.89	0002808.53-	0000150.35	01

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	N/A	L001A	L001B	P0021A	P0022A	GP
1010 0100 16 44 34.87	0000000.00	0008503.80	0006014.00	0002784.47-	0000198.46	01
1010 0100 16 44 35.87	0000000.00	0008503.80	0006062.11	0002736.36-	0000198.46	01
1010 0100 16 44 36.87	0000000.00	0008455.68	0006014.00	0002784.47-	0000150.35	01
1010 0100 16 44 37.87	0000000.00	0008527.85	0005989.94	0002760.42-	0000198.46	01
1010 0021 16 52 40.66	0000000.00	0008263.24	0005797.50	0001124.61-	0000114.26-	01
1010 0021 16 52 41.66	0000000.00	0008311.35	0005845.61	0001124.61-	0000030.07	01
1010 0021 16 52 42.66	0000000.00	0008239.18	0005821.55	0001148.66-	0000018.03-	01
1010 0021 16 52 43.66	0000000.00	0008167.01	0005845.61	0001172.72-	0000018.03-	01
1010 0021 16 52 44.66	0000000.00	0008191.07	0005821.55	0001148.66-	0000018.03-	01

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	P90022A	P90021A	P180021A	P180022A	P0091B	GP
0000	0000	08 47 18.26	0000024.06	0000048.11	0000024.05-	0000054.12-	0000080.13-	02
1000	0000	12 58 53.77	0000168.39	0000120.28	0000120.27-	0000306.71	0001407.28	02
1000	0000	12 58 54.77	0000144.34	0000096.22	0000096.21-	0000282.66	0001527.56	02
1000	0000	12 58 55.77	0000144.34	0000120.28	0000120.27-	0000282.66	0001527.56	02
1000	0000	12 58 56.77	0000144.34	0000120.28	0000048.10-	0000330.77	0001503.50	02
1000	0000	12 58 57.77	0000120.28	0000120.28	0000072.16-	0000330.77	0001527.56	02
1005	0000	13 06 59.24	0000048.11	0000216.49-	0000505.17-	0000667.55	0013194.72	02
1005	0000	13 07 00.24	0000144.34	0000240.55-	0000481.11-	0000643.50	0013146.60	02
1005	0000	13 07 01.24	0000072.17	0000192.44-	0000457.05-	0000667.55	0013170.66	02
1005	0000	13 07 02.24	0000120.28	0000216.49-	0000481.11-	0000739.72	0013266.88	02
1005	0000	13 07 03.24	0000120.27-	0000216.49-	0000457.05-	0000667.55	0013194.72	02
1010	0000	13 08 54.04	0000048.11	0000601.39-	0000793.84-	0000811.89	0024549.15	02
1010	0000	13 08 55.04	0000120.28	0000601.39-	0000890.06-	0000860.00	0024573.20	02
1010	0000	13 08 56.04	0000048.11	0000625.45-	0000866.01-	0000835.95	0024549.15	02
1010	0000	13 08 57.04	0000096.21-	0000601.39-	0000841.95-	0000884.06	0024501.04	02
1010	0000	13 08 58.04	0000024.06	0000577.33-	0000890.06-	0000835.95	0024525.09	02
1010	0020	13 19 52.40	0000000.00	0000769.78-	0001106.57-	0000956.23	0023971.80	02
1010	0020	13 19 53.40	0000144.34	0000793.84-	0001082.51-	0000908.11	0023971.80	02
1010	0020	13 19 54.40	0000096.22	0000793.84-	0001058.45-	0000908.11	0023971.80	02
1010	0020	13 19 55.40	0000024.06	0000769.78-	0001034.40-	0000932.17	0023971.80	02
1010	0020	13 19 56.40	0000048.11	0000817.89-	0001106.57-	0000908.11	0023947.75	02
1010	0040	13 24 23.72	0000024.05-	0001058.45-	0001202.79-	0000956.23	0024597.26	02
1010	0040	13 24 24.72	0000144.34	0001058.45-	0001202.79-	0000980.28	0024645.37	02
1010	0040	13 24 25.72	0000048.11	0001010.34-	0001274.96-	0000980.28	0024645.37	02
1010	0040	13 24 26.72	0000120.28	0001010.34-	0001274.96-	0001004.34	0024621.32	02
1010	0040	13 24 27.72	0000096.22	0001034.40-	0001226.85-	0000980.28	0024573.20	02
1010	0060	15 08 30.65	0000144.34	0001202.79-	0001395.24-	0000739.72	0023538.80	02
1010	0060	15 08 31.65	0000096.22	0001371.18-	0001371.18-	0001052.45	0023538.80	02
1010	0060	15 08 32.65	0000096.22	0001154.68-	0001419.29-	0000956.23	0023514.74	02
1010	0060	15 08 33.65	0000072.17	0001130.62-	0001419.29-	0000884.06	0023514.74	02
1010	0060	15 08 34.65	0000048.11	0001130.62-	0001443.35-	0000932.17	0023466.63	02
1010	0080	15 16 27.09	0000000.00	0001443.35-	0001611.74-	0001124.62	0024164.25	02
1010	0080	15 16 28.09	0000096.22	0001443.35-	0001587.69-	0001076.51	0024116.14	02
1010	0080	15 16 29.09	0000000.00	0001323.07-	0001587.69-	0001004.34	0024188.31	02
1010	0080	15 16 30.09	0000120.28	0001347.13-	0001635.80-	0000956.23	0024188.31	02
1010	0080	15 16 31.09	0000096.22	0001347.13-	0001587.69-	0001028.39	0024116.14	02
1010	0090	16 37 17.85	0000144.33-	0001371.18-	0001539.57-	0001124.62	0021975.16	02
1010	0090	16 37 18.85	0000096.22	0001611.74-	0001611.74-	0001124.62	0021999.21	02
1010	0090	16 37 19.85	0000096.22	0001587.69-	0001587.69-	0001076.51	0022023.27	02
1010	0090	16 37 20.85	0000096.22	0001467.41-	0001563.63-	0001076.51	0022047.32	02
1010	0090	16 37 21.85	0000144.34	0001419.29-	0001587.69-	0001100.56	0021999.21	02
1010	0095	16 40 49.63	0000024.06	0001419.29-	0001683.91-	0001148.67	0023923.69	02
1010	0095	16 40 50.63	0000072.17	0001732.02-	0001683.91-	0001172.73	0023899.64	02
1010	0095	16 40 51.63	0000096.22	0001683.91-	0001659.85-	0001124.62	0023899.64	02
1010	0095	16 40 52.63	0000096.22	0001611.74-	0001683.91-	0001100.56	0023947.75	02
1010	0095	16 40 53.63	0000048.11	0001515.52-	0001659.85-	0001100.56	0023923.69	02
1010	0100	16 44 33.87	0000000.00	0001563.63-	0001732.02-	0001172.73	0022889.28	02

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	P90022A	P90021A	P180021A	P180022A	P0091B	GP
1010	0100	16 44 34.87	0000120.28	0001732.02-	0001707.97-	0001148.67	0022961.45	02
1010	0100	16 44 35.87	0000120.28	0001756.08-	0001756.08-	0001148.67	0022985.51	02
1010	0100	16 44 36.87	0000120.28	0001587.69-	0001707.97-	0001148.67	0023057.68	02
1010	0100	16 44 37.87	0000096.22	0001563.63-	0001659.85-	0001100.56	0023081.73	02
1010	0021	16 52 40.66	0000120.28	0000817.89-	0001226.85-	0000932.17	0023755.30	02
1010	0021	16 52 41.66	0000168.39	0001010.34-	0001154.68-	0000932.17	0023827.42	02
1010	0021	16 52 42.66	0000144.34	0001010.34-	0001202.79-	0000932.17	0023803.41	02
1010	0021	16 52 43.66	0000120.28	0000841.95-	0001202.79-	0000884.06	0023755.30	02
1010	0021	16 52 44.66	0000144.34	0000817.89-	0001154.68-	0000932.17	0023779.36	02

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	P0032B	P900318	P900328	P1800318	P1800328	GP
0000 0000 08 47 18.26	0000042.09-	0000018.04	0000000.00	0000120.27-	0000090.20-	03
1000 0000 12 58 53.77	0000030.07	0001341.12	0000288.67	0003464.06	0000354.82-	03
1000 0000 12 58 54.77	0000006.01	0001389.23	0000264.62	0003415.95	0000282.65-	03
1000 0000 12 58 55.77	0000006.01	0001389.23	0000240.56	0003415.95	0000354.82-	03
1000 0000 12 58 56.77	0000018.03-	0001341.12	0000336.78	0003367.84	0000306.70-	03
1000 0000 12 58 57.77	0000030.07	0001389.23	0000336.78	0003440.01	0000330.76-	03
1005 0000 13 06 59.24	0000703.64	0016664.79	0000745.73-	0037022.18	0003000.98-	03
1005 0000 13 07 00.24	0000631.47	0016712.91	0000745.73-	0036925.96	0003000.98-	03
1005 0000 13 07 01.24	0000655.53	0016664.79	0000769.78-	0036925.96	0003025.03-	03
1005 0000 13 07 02.24	0000679.58	0016640.74	0000793.84-	0036925.96	0003025.03-	03
1005 0000 13 07 03.24	0000703.64	0016640.74	0000721.67-	0036974.07	0003025.03-	03
1010 0000 13 08 54.04	0000872.03	0032253.08	0001876.36-	0054023.62	0004372.17-	03
1010 0000 13 08 55.04	0000920.14	0032253.08	0001804.19-	0054127.40	0004372.17-	03
1010 0000 13 08 56.04	0000920.14	0032253.08	0001924.47-	0054127.40	0004227.83-	03
1010 0000 13 08 57.04	0000896.09	0032253.08	0001828.25-	0054023.62	0004396.22-	03
1010 0000 13 08 58.04	0000823.92	0032204.97	0001804.19-	0054023.62	0004348.11-	03
1010 0020 13 19 52.40	0001136.65	0032637.98	0001972.58-	0054534.95	0004468.39-	03
1010 0020 13 19 53.40	0001136.65	0032686.09	0001996.64-	0054438.73	0004420.28-	03
1010 0020 13 19 54.40	0001160.70	0032686.09	0001972.58-	0054438.73	0004372.17-	03
1010 0020 13 19 55.40	0001136.65	0032637.98	0001948.53-	0054438.73	0004420.28-	03
1010 0020 13 19 56.40	0001184.76	0032589.87	0001948.53-	0054438.73	0004444.34-	03
1010 0040 13 24 23.72	0001473.43	0034658.68	0002285.31-	0055689.64	0004516.50-	03
1010 0040 13 24 24.72	0001497.49	0034610.57	0002237.20-	0055785.86	0004492.45-	03
1010 0040 13 24 25.72	0001425.32	0034658.68	0002213.14-	0055689.64	0004420.28-	03
1010 0040 13 24 26.72	0001473.43	0034610.57	0002165.03-	0055689.64	0004468.39-	03
1010 0040 13 24 27.72	0001473.43	0034562.46	0002189.09-	0055689.64	0004468.39-	03
1010 0060 15 08 30.65	0001713.99	0034273.79	0002237.20-	0054919.85	0004468.39-	03
1010 0060 15 08 31.65	0001810.21	0034273.79	0002261.25-	0054631.18	0004492.45-	03
1010 0060 15 08 32.65	0001738.05	0034177.56	0002309.37-	0054727.40	0004492.45-	03
1010 0060 15 08 33.65	0001762.10	0034225.67	0002309.37-	0054727.40	0004492.45-	03
1010 0060 15 08 34.65	0001713.99	0034177.56	0002285.31-	0054823.62	0004492.45-	03
1010 0080 15 16 27.09	0001978.61	0036053.93	0002573.98-	0056266.98	0004636.78-	03
1010 0080 15 16 28.09	0002050.77	0036102.04	0002549.93-	0056074.54	0004588.67-	03
1010 0080 15 16 29.09	0002026.72	0036102.04	0002549.93-	0056266.98	0004588.67-	03
1010 0080 15 16 30.09	0002026.72	0036102.04	0002549.93-	0056266.98	0004612.73-	03
1010 0080 15 16 31.09	0002026.72	0036053.93	0002598.04-	0056266.98	0004588.67-	03
1010 0090 16 37 17.85	0002122.94	0033552.11	0002405.59-	0053668.94	0004468.39-	03
1010 0090 16 37 18.85	0002098.89	0033455.88	0002429.65-	0053668.94	0004468.39-	03
1010 0090 16 37 19.85	0002147.00	0033600.22	0002405.59-	0053765.16	0004444.34-	03
1010 0090 16 37 20.85	0002171.05	0033503.99	0002405.59-	0053668.94	0004420.28-	03
1010 0090 16 37 21.85	0002171.05	0033552.11	0002405.59-	0053668.94	0004420.28-	03
1010 0095 16 40 49.63	0002291.33	0036438.83	0002646.15-	0056363.21	0004660.84-	03
1010 0095 16 40 50.63	0002219.17	0036390.71	0002670.21-	0056459.43	0004636.78-	03
1010 0095 16 40 51.63	0002243.22	0036390.71	0002694.26-	0056363.21	0004612.73-	03
1010 0095 16 40 52.63	0002243.22	0036438.83	0002573.98-	0056266.98	0004660.84-	03
1010 0095 16 40 53.63	0002243.22	0036390.71	0002646.15-	0056363.21	0004636.78-	03
1010 0100 16 44 33.87	0002339.45	0035428.47	0002622.09-	0055304.74	0004612.73-	03

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	P0032B	P900318	P900328	P1800318	P1800328	GP
1010 0100 16 44 34.87	0002315.39	0035380.36	0002670.21-	0055304.74	0004588.67-	03
1010 0100 16 44 35.87	0002315.39	0035476.59	0002573.98-	0055304.74	0004588.67-	03
1010 0100 16 44 36.87	0002339.45	0035572.81	0002549.93-	0055400.97	0004588.67-	03
1010 0100 16 44 37.87	0002363.50	0035620.92	0002598.04-	0055497.19	0004588.67-	03
1010 0021 16 52 40.66	0001112.59	0031916.30	0001828.25-	0054150.06	0004564.62-	03
1010 0021 16 52 41.66	0001112.59	0031868.19	0001876.36-	0054150.06	0004540.56-	03
1010 0021 16 52 42.66	0001112.59	0031916.30	0001876.36-	0054150.06	0004492.45-	03
1010 0021 16 52 43.66	0001160.70	0031964.41	0001804.19-	0054150.06	0004516.50-	03
1010 0021 16 52 44.66	0001112.59	0031916.30	0001828.25-	0054053.83	0004492.45-	03

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	R0043A	R0042A	R0041A	R0041B	R0042B	GP
0000 0000 08 47 18.26	0000048.10-	0000054.12-	0000018.03-	0000078.17-	0000072.16-	04
1000 0000 12 58 53.77	0001707.98	0000787.83	0000090.20-	0000210.49	0001130.63	04
1000 0000 12 58 54.77	0001780.14	0000739.72	0000018.03-	0000186.43	0001154.69	04
1000 0000 12 58 55.77	0001707.98	0000715.67	0000066.14-	0000186.43	0001106.58	04
1000 0000 12 58 56.77	0001756.09	0000787.83	0000018.03-	0000162.38	0001106.58	04
1000 0000 12 58 57.77	0001683.92	0000739.72	0000066.14-	0000234.55	0001154.69	04
1005 0000 13 06 59.24	0004426.30	0002327.42	0000270.63	0000619.44	0003007.00	04
1005 0000 13 07 00.24	0004450.36	0002423.64	0000294.69	0000619.44	0003031.06	04
1005 0000 13 07 01.24	0004546.58	0002423.64	0000366.85	0000643.50	0002982.94	04
1005 0000 13 07 02.24	0004474.42	0002375.53	0000342.80	0000595.39	0003007.00	04
1005 0000 13 07 03.24	0004474.42	0002447.70	0000390.91	0000643.50	0003055.11	04
1010 0000 13 08 54.04	0007601.70	0004275.95	0000775.81	0001100.56	0005147.98	04
1010 0000 13 08 55.04	0007601.70	0004107.56	0000799.86	0001076.51	0005172.04	04
1010 0000 13 08 56.04	0007625.75	0004251.90	0000799.86	0001100.56	0005123.93	04
1010 0000 13 08 57.04	0007553.58	0004251.90	0000751.75	0001076.51	0005147.98	04
1010 0000 13 08 58.04	0007601.70	0004107.56	0000823.92	0001100.56	0005172.04	04
1010 0020 13 19 52.40	0007986.59	0003698.61	0000691.60-	0000463.07-	0004594.70	04
1010 0020 13 19 53.40	0007938.48	0003722.67	0000691.60-	0000390.90-	0004594.70	04
1010 0020 13 19 54.40	0007986.59	0003770.70	0000619.43-	0000366.84-	0004642.81	04
1010 0020 13 19 55.40	0007986.59	0003698.61	0000643.49-	0000439.01-	0004666.86	04
1010 0020 13 19 56.40	0008058.76	0003746.72	0000567.54-	0000390.90-	0004594.70	04
1010 0040 13 24 23.72	0008876.66	0003361.83	0002303.35-	0002074.82-	0004306.02	04
1010 0040 13 24 24.72	0008900.72	0003433.99	0002303.35-	0002074.82-	0004354.14	04
1010 0040 13 24 25.72	0008900.72	0003433.99	0002279.30-	0002074.82-	0004306.02	04
1010 0040 13 24 26.72	0008876.66	0003409.94	0002255.24-	0002050.76-	0004330.08	04
1010 0040 13 24 27.72	0008900.72	0003433.99	0002279.30-	0002074.82-	0004354.14	04
1010 0060 15 08 30.65	0009165.34	0002856.65	0003818.88-	0003734.68-	0003704.62	04
1010 0060 15 08 31.65	0009213.45	0002832.59	0003842.94-	0003734.68-	0003728.68	04
1010 0060 15 08 32.65	0009237.50	0002832.59	0003818.88-	0003734.68-	0003704.62	04
1010 0060 15 08 33.65	0009189.39	0002832.59	0003842.94-	0003806.85-	0003704.62	04
1010 0060 15 08 34.65	0009189.39	0002832.59	0003891.05-	0003782.80-	0003680.57	04
1010 0080 15 16 27.09	0010055.41	0002519.87	0005310.35-	0005274.27-	0003367.84	04
1010 0080 15 16 28.09	0009935.13	0002543.92	0005214.13-	0005250.21-	0003391.90	04
1010 0080 15 16 29.09	0010031.35	0002519.87	0005238.18-	0005202.10-	0003440.01	04
1010 0080 15 16 30.09	0010007.30	0002519.87	0005214.13-	0005202.10-	0003415.95	04
1010 0080 15 16 31.09	0009959.18	0002567.98	0005286.30-	0005202.10-	0003488.12	04
1010 0090 16 37 17.85	0009622.40	0002014.69	0005935.81-	0006068.12-	0002742.38	04
1010 0090 16 37 18.85	0009646.46	0002014.69	0005887.70-	0006044.06-	0002790.50	04
1010 0090 16 37 19.85	0009646.46	0001942.52	0005983.92-	0005947.84-	0002790.50	04
1010 0090 16 37 20.85	0009670.51	0001990.63	0005887.70-	0006044.06-	0002742.38	04
1010 0090 16 37 21.85	0009598.34	0001918.47	0005959.86-	0006020.00-	0002742.38	04
1010 0095 16 40 49.63	0010368.14	0002110.91	0006248.54-	0006380.84-	0003031.06	04
1010 0095 16 40 50.63	0010392.19	0002231.19	0006248.54-	0006332.73-	0003031.06	04
1010 0095 16 40 51.63	0010392.19	0002183.08	0006272.59-	0006332.73-	0003079.17	04
1010 0095 16 40 52.63	0010392.19	0002207.14	0006248.54-	0006380.84-	0003031.06	04
1010 0095 16 40 53.63	0010416.25	0002207.14	0006272.59-	0006356.79-	0003055.11	04
1010 0100 16 44 33.87	0010199.74	0001894.41	0006705.60-	0006765.74-	0002694.27	04

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	1043A	R0042A	R0041A	R0041B	R0042B	GP
1010 0100 16 44 34.87	0010223.80	0001918.47	0006681.54-	0006765.74-	0002718.33	04
1010 0100 16 44 35.87	0010271.91	0001942.52	0006633.43-	0006765.74-	0002766.44	04
1010 0100 16 44 36.87	0010271.91	0001942.52	0006633.43-	0006765.74-	0002742.38	04
1010 0100 16 44 37.87	0010271.91	0001990.63	0006681.54-	0006813.85-	0002790.50	04
1010 0021 16 52 40.66	0007818.20	0003530.22	0000715.66-	0000607.40-	0004522.53	04
1010 0021 16 52 41.66	0007842.26	0003626.44	0000739.71-	0000583.35-	0004474.42	04
1010 0021 16 52 42.66	0007818.20	0003578.33	0000691.60-	0000583.35-	0004498.47	04
1010 0021 16 52 43.66	0007866.31	0003578.33	0000715.66-	0000607.40-	0004498.47	04
1010 0021 16 52 44.66	0007866.31	0003602.39	0000691.60-	0000535.24-	0004522.53	04

ELEMENT STRESS

ID 1029 REC PT 400 RATE 01 10/29/69 CONJUGATE STRUCTURE TEST COND 1

TEST	COND	HR/MN/SEC	R00438	R90043A	R90042A	R90041A	R90042B	GP
0000	0000	08 47 18.26	0000024.06	0000048.10-	0000036.07-	0000096.21-	0000024.05-	05
1000	0000	12 58 53.77	0001900.42	0001635.81	0000733.71	0000096.21-	0000890.07	05
1000	0000	12 58 54.77	0001924.48	0001659.86	0000829.93	0000120.27-	0000938.18	05
1000	0000	12 58 55.77	0001852.31	0001611.75	0000805.88	0000072.16-	0000914.13	05
1000	0000	12 58 56.77	0001900.42	0001659.86	0000757.76	0000144.33-	0000938.18	05
1000	0000	12 58 57.77	0001876.37	0001635.31	0000781.82	0000120.27-	0000890.07	05
1005	0000	13 06 59.24	0004859.31	0004330.08	0002369.52	0000481.12	0002549.94	05
1005	0000	13 07 00.24	0004859.31	0004378.19	0002369.52	0000481.12	0002525.88	05
1005	0000	13 07 01.24	0004835.26	0004354.14	0002393.57	0000529.23	0002598.05	05
1005	0000	13 07 02.24	0004859.31	0004330.08	0002441.68	0000457.06	0002549.94	05
1005	0000	13 07 03.24	0004859.31	0004378.19	0002417.63	0000505.18	0002573.99	05
1010	0000	13 08 54.04	0008130.93	0007361.14	0004173.72	0001154.69	0004450.36	05
1010	0000	13 08 55.04	0008203.10	0007385.19	0004149.66	0001130.63	0004450.36	05
1010	0000	13 08 56.04	0008154.98	0007361.14	0004221.83	0001154.69	0004426.30	05
1010	0000	13 08 57.04	0008106.87	0007337.08	0004173.72	0001106.58	0004450.36	05
1010	0000	13 08 58.04	0008154.98	0007361.14	0004173.72	0001130.63	0004498.47	05
1010	0020	13 19 52.40	0008491.77	0007553.58	0004342.11	0000264.62	0004618.75	05
1010	0020	13 19 53.40	0008515.82	0007625.75	0004221.83	0000264.62	0004570.64	05
1010	0020	13 19 54.40	0008563.94	0007625.75	0004221.83	0000288.67	0004618.75	05
1010	0020	13 19 55.40	0008443.66	0007577.64	0004318.05	0000288.67	0004642.81	05
1010	0020	13 19 56.40	0008539.88	0007625.75	0004221.83	0000288.67	0004618.75	05
1010	0040	13 24 23.72	0009261.56	0008179.04	0004630.78	0000505.17-	0004931.48	05
1010	0040	13 24 24.72	0009309.67	0008203.10	0004582.67	0000529.22-	0004955.54	05
1010	0040	13 24 25.72	0009357.78	0008130.93	0004606.72	0000529.22-	0004955.54	05
1010	0040	13 24 26.72	0009309.67	0008154.98	0004606.72	0000457.05-	0004907.42	05
1010	0040	13 24 27.72	0009309.67	0008227.15	0004606.72	0000529.22-	0004955.54	05
1010	0060	15 08 30.65	0009550.23	0008323.38	0004606.72	0001491.46-	0005027.70	05
1010	0060	15 08 31.65	0009574.29	0008275.26	0004606.72	0001395.24-	0005051.76	05
1010	0060	15 08 32.65	0009526.18	0008251.21	0004654.84	0001491.46-	0005051.76	05
1010	0060	15 08 33.65	0009574.29	0008299.32	0004630.78	0001443.35-	0005051.76	05
1010	0060	15 08 34.65	0009550.23	0008299.32	0004582.67	0001491.46-	0005051.76	05
1010	0080	15 16 27.09	0010295.97	0008852.61	0004967.56	0002213.14-	0005412.60	05
1010	0080	15 16 28.09	0010344.08	0008876.66	0004991.62	0002189.09-	0005436.66	05
1010	0080	15 16 29.09	0010295.97	0008852.61	0004991.62	0002165.03-	0005412.60	05
1010	0080	15 16 30.09	0010344.08	0008852.61	0005015.68	0002165.03-	0005412.60	05
1010	0080	15 16 31.09	0010344.08	0008924.78	0004943.51	0002189.09-	0005436.66	05
1010	0090	16 37 17.85	0009887.02	0008443.66	0004702.95	0002790.49-	0005147.98	05
1010	0090	16 37 18.85	0009887.02	0008443.66	0004727.00	0002814.54-	0005099.87	05
1010	0090	16 37 19.85	0009862.96	0008491.77	0004751.06	0002838.60-	0005123.93	05
1010	0090	16 37 20.85	0009911.07	0008491.77	0004702.95	0002790.49-	0005147.98	05
1010	0090	16 37 21.85	0009911.07	0008515.82	0004751.06	0002838.60-	0005172.04	05
1010	0095	16 40 49.63	0010608.70	0009117.22	0005135.96	0002910.77-	0005556.94	05
1010	0095	16 40 50.63	0010608.70	0009117.22	0005087.84	0002910.77-	0005676.10	05
1010	0095	16 40 51.63	0010656.81	0009141.28	0005135.96	0002886.71-	0005605.05	05
1010	0095	16 40 52.63	0010656.81	0009189.39	0005111.90	0002910.77-	0005580.99	05
1010	0095	16 40 53.63	0010656.81	0009141.28	0005160.01	0002862.65-	0005605.05	05
1010	0100	16 44 33.87	0010440.30	0008972.89	0005015.68	0003247.55-	0005460.71	05

ELEMENT STRESS

ID 1029 REC PT 400 RATE 01 10/29/69 CONJUGATE STRUCTURE TEST COND 1

TEST	COND	HR/MN/SEC	R00438	R90043A	R90042A	R90041A	R90042B	GP
1010	0100	16 44 34.87	0010464.36	0008948.83	0004991.62	0003151.33-	0005436.66	05
1010	0100	16 44 35.87	0010512.47	0008996.94	0005063.79	0003175.38-	0005556.94	05
1010	0100	16 44 36.87	0010512.47	0008972.89	0005039.73	0003127.27-	0005484.77	05
1010	0100	16 44 37.87	0010488.42	0009021.00	0004991.62	0003127.27-	0005460.71	05
1010	0021	16 52 40.66	0008539.88	0007457.36	0004149.66	0000120.28	0004594.70	05
1010	0021	16 52 41.66	0008539.88	0007505.47	0004197.77	0000120.28	0004618.75	05
1010	0021	16 52 42.66	0008539.88	0007457.36	0004173.72	0000168.39	0004618.75	05
1010	0021	16 52 43.66	0008539.88	0007481.42	0004125.60	0000096.22	0004546.58	05
1010	0021	16 52 44.66	0008563.94	0007529.53	0004173.72	0000144.34	0004570.64	05

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	R900418	R900438	P0051A	P0052A	P180051A	GP
0000 0000 08 47 18.26	0000006.00-	0000030.07	0000024.05-	0000000.00	0000030.06-	06
1000 0000 12 58 53.77	0000114.27	0001762.10	0000505.18	0001058.46	0000186.43	06
1000 0000 12 58 54.77	0000114.27	0001762.10	0000505.18	0001010.35	0000186.43	06
1000 0000 12 58 55.77	0000042.10	0001713.99	0000481.12	0000938.18	0000186.43	06
1000 0000 12 58 56.77	0000090.21	0001786.16	0000505.18	0001010.35	0000234.55	06
1000 0000 12 58 57.77	0000066.15	0001762.10	0000481.12	0001010.35	0000138.32	06
1005 0000 13 06 59.24	0000571.33	0004648.82	0002525.88	0002020.70	0001557.63	06
1005 0000 13 07 00.24	0000619.44	0004600.71	0002622.10	0002020.70	0001557.63	06
1005 0000 13 07 01.24	0000595.39	0004600.71	0002598.05	0001996.65	0001581.68	06
1005 0000 13 07 02.24	0000571.33	0004600.71	0002598.05	0001972.59	0001581.68	06
1005 0000 13 07 03.24	0000547.27	0004600.71	0002549.94	0001972.59	0001581.68	06
1010 0000 13 08 54.04	0001124.62	0007559.60	0004931.48	0003151.34	0003121.27	06
1010 0000 13 08 55.04	0001124.62	0007583.65	0004931.48	0003175.39	0003145.32	06
1010 0000 13 08 56.04	0001124.62	0007607.71	0004907.42	0003175.39	0003169.38	06
1010 0000 13 08 57.04	0001148.67	0007607.71	0004907.42	0003223.50	0003121.27	06
1010 0000 13 08 58.04	0001148.67	0007607.71	0004907.42	0003223.50	0003145.32	06
1010 0020 13 19 52.40	0000258.60	0007727.99	0002646.16	0003488.12	0002495.81	06
1010 0020 13 19 53.40	0000306.71	0007752.05	0002646.16	0003512.18	0002423.64	06
1010 0020 13 19 54.40	0000258.60	0007727.99	0002622.10	0003536.23	0002495.81	06
1010 0020 13 19 55.40	0000282.66	0007679.88	0002646.16	0003512.18	0002495.81	06
1010 0020 13 19 56.40	0000306.71	0007752.05	0002694.27	0003512.18	0002423.64	06
1010 0040 13 24 23.72	0000487.12-	0008136.94	0000457.06	0003993.30	0002086.86	06
1010 0040 13 24 24.72	0000439.01-	0008185.05	0000433.01	0004017.35	0002183.08	06
1010 0040 13 24 25.72	0000439.01-	0008185.05	0000408.95	0003993.30	0002110.91	06
1010 0040 13 24 26.72	0000511.18-	0008185.05	0000408.95	0004017.35	0002062.80	06
1010 0040 13 24 27.72	0000439.01-	0008209.11	0000433.01	0004017.35	0002086.86	06
1010 0060 15 08 30.65	0001305.03-	0008281.28	0002068.81-	0004281.97	0001461.40	06
1010 0060 15 08 31.65	0001353.14-	0008305.33	0002020.69-	0004257.91	0001461.40	06
1010 0060 15 08 32.65	0001353.14-	0008233.17	0002092.86-	0004257.91	0001461.40	06
1010 0060 15 08 33.65	0001329.08-	0008257.22	0002020.69-	0004306.02	0001437.35	06
1010 0060 15 08 34.65	0001353.14-	0008281.28	0002044.75-	0004306.02	0001413.29	06
1010 0080 15 16 27.09	0002098.88-	0008810.51	0004065.45-	0004739.03	0000835.95	06
1010 0080 15 16 28.09	0002098.88-	0008834.57	0004041.40-	0004714.98	0000932.17	06
1010 0080 15 16 29.09	0002050.76-	0008834.57	0004017.34-	0004739.03	0000908.11	06
1010 0080 15 16 30.09	0002050.76-	0008834.57	0004017.34-	0004714.98	0000956.23	06
1010 0080 15 16 31.09	0002026.71-	0008858.62	0004041.40-	0004763.09	0000932.17	06
1010 0090 16 37 17.85	0002604.05-	0008305.33	0005556.93-	0004690.92	0000282.66	06
1010 0090 16 37 18.85	0002555.94-	0008377.50	0005556.93-	0004666.86	0000306.71	06
1010 0090 16 37 19.85	0002628.11-	0008329.39	0005556.93-	0004690.92	0000234.55	06
1010 0090 16 37 20.85	0002604.05-	0008329.39	0005556.93-	0004763.09	0000282.66	06
1010 0090 16 37 21.85	0002628.11-	0008329.39	0005532.87-	0004714.98	0000258.60	06
1010 0095 16 40 49.63	0002700.28-	0008978.90	0005773.43-	0004979.59	0000402.94	06
1010 0095 16 40 50.63	0002700.28-	0008978.90	0005749.37-	0005003.65	0000402.94	06
1010 0095 16 40 51.63	0002748.39-	0008954.85	0005773.43-	0005027.70	0000426.99	06
1010 0095 16 40 52.63	0002676.22-	0008930.79	0005725.32-	0005003.65	0000451.05	06
1010 0095 16 40 53.63	0002700.28-	0008954.85	0005773.43-	0004979.59	0000426.99	06
1010 0100 16 44 33.87	0003013.00-	0008786.45	0006471.05-	0005003.65	0000006.00-	06

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	R900418	R900438	P00514	P0052A	P180051A	GP
1010 0100 16 44 34.87	0002916.78-	0008762.40	0006567.28-	0005003.65	0000090.21	06
1010 0100 16 44 35.87	0002964.89-	0008810.51	0006495.11-	0005027.70	0000138.32	06
1010 0100 16 44 36.87	0002964.89-	0008786.45	0006671.05-	0005027.70	0000018.04	06
1010 0100 16 44 37.87	0002940.84-	0008834.57	0006447.00-	0005051.76	0000114.27	06
1010 0021 16 52 40.66	0000186.43	0007487.43	0002622.10	0003440.01	0002423.64	06
1010 0021 16 52 41.66	0000210.49	0007487.43	0002622.10	0003488.12	0002447.70	06
1010 0021 16 52 42.66	0000162.38	0007511.49	0002622.10	0003512.18	0002471.75	06
1010 0021 16 52 43.66	0000258.60	0007511.49	0002646.16	0003488.12	0002423.64	06
1010 0021 16 52 44.66	0000234.55	0007511.49	0002646.16	0003512.18	0002447.70	06

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	P180052A	P0071A	P0072A	P180071A	P180072A	GP
0000	0000	08 47 18.26	0000006.00-	0000012.03	0000036.07-	0000006.01	0000048.10-	07
1000	0000	12 58 53.77	0001509.51	0000998.32	0002104.90	0000390.91	0001611.75	07
1000	0000	12 58 54.77	0001461.40	0000998.32	0002056.79	0000366.85	0001659.86	07
1000	0000	12 58 55.77	0001461.40	0000974.27	0002080.84	0000318.74	0001587.70	07
1000	0000	12 58 56.77	0001461.40	0000974.27	0002056.79	0000342.80	0001611.75	07
1000	0000	12 58 57.77	0001485.46	0000950.21	0002032.73	0000366.85	0001539.58	07
1005	0000	13 06 59.24	0003073.15	0002586.02	0004414.28	0001184.76	0003680.57	07
1005	0000	13 07 00.24	0003049.10	0002561.96	0004438.33	0001184.76	0003632.46	07
1005	0000	13 07 01.24	0003073.15	0002561.96	0004510.50	0001184.76	0003704.62	07
1005	0000	13 07 02.24	0003073.15	0002537.91	0004510.50	0001184.76	0003584.34	07
1005	0000	13 07 03.24	0003097.21	0002537.91	0004462.39	0001208.81	0003656.51	07
1010	0000	13 08 54.04	0004901.41	0004294.00	0007108.55	0002243.22	0006086.17	07
1010	0000	13 08 55.04	0004853.30	0004318.05	0007084.49	0002195.11	0006134.28	07
1010	0000	13 08 56.04	0004901.41	0004318.05	0007132.60	0002219.17	0005965.89	07
1010	0000	13 08 57.04	0004877.35	0004269.94	0007108.55	0002243.22	0005989.94	07
1010	0000	13 08 58.04	0004877.35	0004342.11	0007108.55	0002219.17	0006038.06	07
1010	0020	13 19 52.40	0004949.52	0003860.99	0007349.11	0002074.83	0006014.00	07
1010	0020	13 19 53.40	0004901.41	0003812.88	0007349.11	0002098.89	0006158.34	07
1010	0020	13 19 54.40	0004949.52	0003860.99	0007325.05	0002098.89	0006014.00	07
1010	0020	13 19 55.40	0004901.41	0003836.93	0007373.16	0002147.00	0006014.00	07
1010	0020	13 19 56.40	0004973.58	0003836.93	0007421.28	0002122.94	0006038.06	07
1010	0040	13 24 23.72	0005117.91	0003548.26	0007926.45	0002026.72	0006278.62	07
1010	0040	13 24 24.72	0005166.03	0003644.48	0007974.56	0002026.72	0006374.84	07
1010	0040	13 24 25.72	0005166.03	0003596.37	0007998.62	0002050.77	0006326.73	07
1010	0040	13 24 26.72	0005117.91	0003596.37	0007950.51	0002098.89	0006374.84	07
1010	0040	13 24 27.72	0005117.91	0003620.43	0007974.56	0002098.89	0006422.95	07
1010	0060	15 08 30.65	0005117.91	0003067.14	0008094.84	0001858.33	0006254.56	07
1010	0060	15 08 31.65	0005069.80	0003067.14	0008142.96	0001882.38	0006278.62	07
1010	0060	15 08 32.65	0005093.86	0003091.20	0008094.84	0001930.49	0006302.67	07
1010	0060	15 08 33.65	0005117.91	0003043.08	0008142.96	0001930.49	0006447.01	07
1010	0060	15 08 34.65	0005117.91	0003043.08	0008118.90	0001882.38	0006254.56	07
1010	0080	15 16 27.09	0005334.42	0002850.64	0008696.24	0001810.21	0006687.57	07
1010	0080	15 16 28.09	0005358.47	0002850.64	0008696.24	0001786.16	0006687.57	07
1010	0080	15 16 29.09	0005358.47	0002874.69	0008744.36	0001834.27	0006567.29	07
1010	0080	15 16 30.09	0005382.53	0002850.64	0008672.19	0001810.21	0006567.29	07
1010	0080	15 16 31.09	0005358.47	0002898.75	0008696.24	0001858.33	0006615.40	07
1010	0090	16 37 17.85	0005069.80	0002297.35	0008335.40	0001521.54	0006254.56	07
1010	0090	16 37 18.85	0005093.86	0002249.24	0008287.29	0001545.60	0006278.62	07
1010	0090	16 37 19.85	0004997.63	0002249.24	0008335.40	0001545.60	0006158.34	07
1010	0090	16 37 20.85	0005069.80	0002297.35	0008311.35	0001593.71	0006302.67	07
1010	0090	16 37 21.85	0005117.91	0002273.29	0008335.40	0001497.49	0006278.62	07
1010	0095	16 40 49.63	0005478.75	0002537.91	0008960.86	0001713.99	0006735.68	07
1010	0095	16 40 50.63	0005406.59	0002537.91	0008984.92	0001689.93	0006687.57	07
1010	0095	16 40 51.63	0005430.64	0002537.91	0008888.69	0001713.99	0006711.62	07
1010	0095	16 40 52.63	0005430.64	0002513.85	0008960.86	0001762.10	0006663.51	07
1010	0095	16 40 53.63	0005430.64	0002561.96	0008960.86	0001738.05	0006687.57	07
1010	0100	16 44 33.87	0005286.31	0002273.29	0008816.52	0001497.49	0006471.06	07

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	P180052A	P0071A	P0072A	P180071A	P180072A	GP
1010	0100	16 44 34.87	0005334.42	0002249.24	0008768.41	0001569.65	0006447.01	07
1010	0100	16 44 35.87	0005334.42	0002321.40	0008816.52	0001497.49	0006567.29	07
1010	0100	16 44 36.87	0005358.47	0002345.46	0008792.47	0001497.49	0006495.12	07
1010	0100	16 44 37.87	0005358.47	0002273.29	0008840.58	0001593.71	0006591.34	07
1010	0021	16 52 40.66	0004829.24	0003812.88	0007252.88	0002026.72	0006038.03	07
1010	0021	16 52 41.66	0004805.19	0003788.82	0007228.83	0002026.72	0005941.83	07
1010	0021	16 52 42.66	0004853.30	0003812.88	0007228.83	0002074.83	0005965.89	07
1010	0021	16 52 43.66	0004805.19	0003740.71	0007180.72	0002026.72	0005989.94	07
1010	0021	16 52 44.66	0004805.19	0003812.88	0007276.94	0002098.89	0005941.83	07

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	P0091A	P0092A	P180091A	P180092A	L11210A	GP
0000 0000 08 47 18.26	0000018.04	0000012.02-	0000048.10-	0000030.07	0000054.12-	08
1000 0000 12 58 53.77	0000102.23-	0001070.49	0000072.16-	0001112.59	0000330.77	08
1000 0000 12 58 54.77	0000006.00-	0000998.32	0000048.10-	0001112.59	0000354.83	08
1000 0000 12 58 55.77	0000078.17-	0001022.38	0000072.16-	0001088.53	0000354.83	08
1000 0000 12 58 56.77	0000054.12-	0001022.38	0000024.06	0001088.53	0000523.22	08
1000 0000 12 58 57.77	0000078.17-	0000974.27	0000048.10-	0001112.59	0000475.11	08
1005 0000 13 06 59.24	0000956.23	0002080.84	0000457.06	0002026.72	0000835.95	08
1005 0000 13 07 00.24	0000980.28	0002080.84	0000505.18	0002050.77	0000884.06	08
1005 0000 13 07 01.24	0000956.23	0002080.84	0000505.18	0002026.72	0000908.11	08
1005 0000 13 07 02.24	0001028.39	0002104.90	0000433.01	0002074.83	0001052.45	08
1005 0000 13 07 03.24	0000980.28	0002104.90	0000457.06	0002026.72	0001028.39	08
1010 0000 13 08 54.04	0002134.97	0003331.76	0001034.41	0003133.29	0001196.79	08
1010 0000 13 08 55.04	0002134.97	0003307.70	0001082.52	0003133.29	0001244.90	08
1010 0000 13 08 56.04	0002159.03	0003259.59	0001082.52	0003133.29	0001244.90	08
1010 0000 13 08 57.04	0002134.97	0003331.76	0001106.58	0003109.24	0001293.01	08
1010 0000 13 08 58.04	0002159.03	0003307.70	0001130.63	0003061.13	0001317.07	08
1010 0020 13 19 52.40	0000066.15	0003452.04	0000649.51	0003205.46	0001076.51	08
1010 0020 13 19 53.40	0000090.21	0003548.26	0000673.57	0003205.46	0001172.73	08
1010 0020 13 19 54.40	0000186.43	0003500.15	0000673.57	0003205.46	0001268.95	08
1010 0020 13 19 55.40	0000066.15	0003500.15	0000673.57	0003205.46	0001268.95	08
1010 0020 13 19 56.40	0000138.32	0003548.26	0000649.51	0003229.52	0001196.79	08
1010 0040 13 24 23.72	0001954.54-	0003836.93	0000360.84	0003421.97	0001244.90	08
1010 0040 13 24 24.72	0001978.60-	0003885.04	0000408.95	0003470.08	0001244.90	08
1010 0040 13 24 25.72	0001978.60-	0003885.04	0000408.95	0003470.08	0001148.67	08
1010 0040 13 24 26.72	0001978.60-	0003909.10	0000360.84	0003470.08	0001148.67	08
1010 0040 13 24 27.72	0001978.60-	0003909.10	0000384.90	0003494.13	0001100.56	08
1010 0060 15 08 30.65	0004408.25-	0004125.60	0000096.21-	0003494.13	0001100.56	08
1010 0060 15 08 31.65	0004384.20-	0004101.55	0000024.05-	0003494.13	0001100.56	08
1010 0060 15 08 32.65	0004432.31-	0004029.38	0000024.06	0003518.19	0001004.34	08
1010 0060 15 08 33.65	0004360.14-	0004005.32	0000000.00	0003494.13	0001076.51	08
1010 0060 15 08 34.65	0004360.14-	0004053.44	0000024.05-	0003518.19	0001124.62	08
1010 0080 15 16 27.09	0006380.84-	0004414.28	0000360.83-	0003782.81	0000980.28	08
1010 0080 15 16 28.09	0006380.84-	0004390.22	0000384.89-	0003758.75	0000908.11	08
1010 0080 15 16 29.09	0006356.79-	0004414.28	0000360.83-	0003806.86	0001100.56	08
1010 0080 15 16 30.09	0006428.96-	0004414.28	0000336.77-	0003758.75	0001004.34	08
1010 0080 15 16 31.09	0006356.79-	0004414.28	0000360.83-	0003782.81	0001004.34	08
1010 0090 16 37 17.85	0007679.87-	0004390.22	0000745.73-	0003590.36	0000908.11	08
1010 0090 16 37 18.85	0007679.87-	0004390.22	0000721.67-	0003614.41	0000956.23	08
1010 0090 16 37 19.85	0007727.98-	0004366.16	0000721.67-	0003614.41	0001052.45	08
1010 0090 16 37 20.85	0007607.70-	0004438.33	0000697.61-	0003614.41	0000932.17	08
1010 0090 16 37 21.85	0007631.76-	0004390.22	0000721.67-	0003614.41	0000980.28	08
1010 0095 16 40 49.63	0008040.71-	0004702.95	0000745.73-	0003830.92	0000980.28	08
1010 0095 16 40 50.63	0007992.60-	0004727.00	0000673.56-	0003854.97	0001004.34	08
1010 0095 16 40 51.63	0008016.65-	0004678.89	0000697.61-	0003903.09	0000908.11	08
1010 0095 16 40 52.63	0008088.82-	0004654.84	0000697.61-	0003854.97	0001076.51	08
1010 0095 16 40 53.63	0008016.65-	0004727.00	0000673.56-	0003854.97	0001028.39	08
1010 0100 16 44 53.87	0008618.05-	0004582.67	0000866.01-	0003806.86	0000956.23	08

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	P0091A	P0092A	P180091A	P180092A	L11210A	GP
1010 0100 16 44 34.87	0008618.05-	0004606.72	0000866.01-	0003830.92	0000956.23	08
1010 0100 16 44 35.87	0008618.05-	0004654.84	0000890.06-	0003854.97	0000908.11	08
1010 0100 16 44 36.87	0008594.00-	0004654.84	0000841.95-	0003830.92	0001004.34	08
1010 0100 16 44 37.87	0008569.94-	0004678.89	0000866.01-	0003903.09	0000932.17	08
1010 0021 16 52 40.66	0000054.12-	0003620.43	0000625.46	0003157.35	0001124.62	08
1010 0021 16 52 41.66	0000102.23-	0003620.43	0000625.46	0003181.41	0001220.84	08
1010 0021 16 52 42.66	0000102.23-	0003620.43	0000625.46	0003205.46	0001100.56	08
1010 0021 16 52 43.66	0000102.23-	0003644.48	0000697.62	0003157.35	0001220.84	08
1010 0021 16 52 44.66	0000078.17-	0003620.43	0000625.46	0003205.46	0001196.79	08

ELEMENT STRESS

ID 1029 REC PT 400 RATE 01 10/29/69 CONJUGATE STRUCTURE TEST COND 1

TEST	COND	HR/MN/SEC	R0113A	R0112A	R0111A	R90113A	R90112A	GP
0000	0000	08 47 18.26	0000006.00-	0000066.15	0000024.05-	0000006.01	0000006.01	09
1000	0000	12 58 53.77	0003000.99	0001293.01	0000240.56	0003085.18	0001858.33	09
1000	0000	12 58 54.77	0002904.76	0001365.18	0000312.73	0003037.07	0001906.44	09
1000	0000	12 58 55.77	0002880.71	0001341.12	0000264.62	0003085.18	0001882.38	09
1000	0000	12 58 56.77	0002952.87	0001365.18	0000312.73	0003037.07	0001906.44	09
1000	0000	12 58 57.77	0002904.76	0001365.18	0000312.73	0003037.07	0001834.27	09
1005	0000	13 06 59.24	0004636.79	0002640.15	0001347.14	0005442.67	0003614.41	09
1005	0000	13 07 00.24	0004564.63	0002664.20	0001347.14	0005418.61	0003662.53	09
1005	0000	13 07 01.24	0004588.68	0002688.26	0001323.08	0005394.56	0003662.53	09
1005	0000	13 07 02.24	0004588.68	0002712.31	0001323.08	0005418.61	0003638.47	09
1005	0000	13 07 03.24	0004612.74	0002712.31	0001395.25	0005394.56	0003662.53	09
1010	0000	13 08 54.04	0006465.05	0004227.84	0002501.82	0008064.77	0005683.23	09
1010	0000	13 08 55.04	0006465.05	0004179.73	0002501.82	0008088.83	0005659.17	09
1010	0000	13 08 56.04	0006513.16	0004227.84	0002525.88	0008040.72	0005635.12	09
1010	0000	13 08 57.04	0006489.11	0004179.73	0002477.77	0008064.77	0005659.17	09
1010	0000	13 08 58.04	0006513.16	0004179.73	0002501.82	0008040.72	0005659.17	09
1010	0020	13 19 52.40	0007090.51	0003578.33	0000769.79	0008233.17	0005779.45	09
1010	0020	13 19 53.40	0007090.51	0003626.44	0000745.74	0008305.33	0005803.51	09
1010	0020	13 19 54.40	0007114.56	0003578.33	0000745.74	0008281.28	0005827.57	09
1010	0020	13 19 55.40	0007138.62	0003602.39	0000745.74	0008257.22	0005851.62	09
1010	0020	13 19 56.40	0007186.73	0003578.33	0000745.74	0008281.28	0005875.68	09
1010	0040	13 24 23.72	0008076.80	0003241.55	0000841.95-	0008810.51	0006092.18	09
1010	0040	13 24 24.72	0008148.97	0003169.38	0000841.95-	0008762.40	0006164.35	09
1010	0040	13 24 25.72	0008028.69	0003241.55	0000817.89-	0008810.51	0006116.24	09
1010	0040	13 24 26.72	0008076.80	0003217.49	0000841.95-	0008786.45	0006140.29	09
1010	0040	13 24 27.72	0008028.69	0003265.60	0000841.95-	0008762.40	0006164.35	09
1010	0060	15 08 30.65	0008726.31	0002567.98	0002790.49-	0008858.62	0006212.46	09
1010	0060	15 08 31.65	0008726.31	0002471.75	0002766.43-	0008930.79	0006260.57	09
1010	0060	15 08 32.65	0008726.31	0002519.87	0002790.49-	0008858.62	0006188.41	09
1010	0060	15 08 33.65	0008702.26	0002519.87	0002790.49-	0008858.62	0006212.46	09
1010	0060	15 08 34.65	0008750.37	0002567.98	0002814.54-	0008858.62	0006236.52	09
1010	0080	15 16 27.09	0009592.33	0002134.97	0004402.24-	0009387.85	0006525.19	09
1010	0080	15 16 28.09	0009592.33	0002134.97	0004378.18-	0009363.80	0006549.25	09
1010	0080	15 16 29.09	0009664.50	0002134.97	0004378.18-	0009411.91	0006549.25	09
1010	0080	15 16 30.09	0009616.39	0002159.03	0004378.18-	0009363.80	0006501.13	09
1010	0080	15 16 31.09	0009568.27	0002183.08	0004426.29-	0009411.91	0006525.19	09
1010	0090	16 37 17.85	0009856.95	0001581.68	0005484.76-	0009099.18	0006164.35	09
1010	0090	16 37 18.85	0009784.78	0001653.85	0005484.76-	0009099.18	0006164.35	09
1010	0090	16 37 19.85	0009881.00	0001629.79	0005436.65-	0009051.07	0006188.41	09
1010	0090	16 37 20.85	0009856.95	0001605.74	0005460.70-	0009075.13	0006164.35	09
1010	0090	16 37 21.85	0009808.83	0001581.68	0005484.76-	0009051.07	0006188.41	09
1010	0095	16 40 49.63	0010410.23	0001750.07	0005749.37-	0009676.53	0006597.36	09
1010	0095	16 40 50.63	0010434.29	0001750.07	0005749.37-	0009676.53	0006573.30	09
1010	0095	16 40 51.63	0010410.23	0001798.19	0005797.49-	0009676.53	0006597.36	09
1010	0095	16 40 52.63	0010434.29	0001750.07	0005821.54-	0009652.47	0006621.41	09
1010	0095	16 40 53.63	0010458.35	0001750.07	0005773.43-	0009676.53	0006597.36	09
1010	0100	16 44 33.87	0010410.23	0001509.51	0006374.83-	0009532.19	0006477.08	09

ELEMENT STRESS

ID 1029 REC PT 400 RATE 01 10/29/69 CONJUGATE STRUCTURE TEST COND 1

TEST	COND	HR/MN/SEC	R0113A	R0112A	R0111A	R90113A	R90112A	GP
1010	0100	16 44 34.87	0010458.35	0001509.51	0006326.72-	0009556.25	0006525.19	09
1010	0100	16 44 35.87	0010386.18	0001533.57	0006278.61-	0009556.25	0006525.19	09
1010	0100	16 44 36.87	0010434.29	0001509.51	0006302.66-	0009556.25	0006525.19	09
1010	0100	16 44 37.87	0010458.35	0001533.57	0006302.66-	0009532.19	0006549.25	09
1010	0021	16 52 40.66	0007379.18	0003482.11	0000649.51	0008185.05	0005659.17	09
1010	0021	16 52 41.66	0007451.35	0003530.22	0000721.68	0008185.05	0005659.17	09
1010	0021	16 52 42.66	0007427.29	0003530.22	0000625.46	0008185.05	0005707.29	09
1010	0021	16 52 43.66	0007379.18	0003482.11	0000673.57	0008136.94	0005683.23	09
1010	0021	16 52 44.66	0007451.35	0003506.16	0000673.57	0008161.00	0005707.29	09

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	R90111A	P177121A	P177122A	P180131A	P180132A	GP
0000	0000	08 47 18.26	0000030.06-	0000012.02-	0000066.14-	0000072.17	0000078.17-	10
1000	0000	12 58 53.77	0000547.27	0001671.89	0005538.89	0001563.63-	0001665.87-	10
1000	0000	12 58 54.77	0000571.33	0001671.89	0005538.89	0001587.69-	0001665.87-	10
1000	0000	12 58 55.77	0000547.27	0001671.89	0005538.89	0001587.69-	0001689.92-	10
1000	0000	12 58 56.77	0000523.22	0001671.89	0005490.78	0001587.69-	0001641.81-	10
1000	0000	12 58 57.77	0000499.16	0001647.84	0005490.78	0001539.57-	0001641.81-	10
1005	0000	13 06 59.24	0001629.79	0004582.67	0010975.55	0003127.27-	0003301.68-	10
1005	0000	13 07 00.24	0001653.85	0004582.67	0011023.66	0003079.16-	0003253.56-	10
1005	0000	13 07 01.24	0001701.96	0004606.72	0010975.55	0003055.10-	0003301.68-	10
1005	0000	13 07 02.24	0001701.96	0004582.67	0010975.55	0003031.05-	0003349.79-	10
1005	0000	13 07 03.24	0001653.85	0004654.84	0010951.49	0003031.05-	0003253.56-	10
1010	0000	13 08 54.04	0002928.82	0007517.50	0017254.17	0004714.97-	0005250.21-	10
1010	0000	13 08 55.04	0002880.71	0007493.44	0017182.00	0004666.85-	0005226.16-	10
1010	0000	13 08 56.04	0002904.76	0007493.44	0017157.94	0004666.85-	0005274.27-	10
1010	0000	13 08 57.04	0002952.87	0007517.50	0017206.05	0004666.85-	0005250.21-	10
1010	0000	13 08 58.04	0002880.71	0007445.33	0017133.89	0004690.91-	0005178.04-	10
1010	0020	13 19 52.40	0002159.03	0007397.22	0017013.61	0004690.91-	0005202.10-	10
1010	0020	13 19 53.40	0002231.19	0007397.22	0016965.49	0004690.91-	0005202.10-	10
1010	0020	13 19 54.40	0002207.14	0007373.16	0016965.49	0004618.74-	0005202.10-	10
1010	0020	13 19 55.40	0002207.14	0007373.16	0016989.55	0004690.91-	0005202.10-	10
1010	0020	13 19 56.40	0002183.08	0007373.16	0016989.55	0004666.85-	0005226.16-	10
1010	0040	13 24 23.72	0001581.68	0007493.44	0017446.61	0004859.30-	0005466.72-	10
1010	0040	13 24 24.72	0001557.63	0007493.44	0017542.84	0004835.25-	0005394.55-	10
1010	0040	13 24 25.72	0001557.63	0007541.56	0017566.89	0004811.19-	0005370.49-	10
1010	0040	13 24 26.72	0001605.74	0007517.50	0017446.61	0004859.30-	0005466.72-	10
1010	0040	13 24 27.72	0001581.68	0007517.50	0017518.78	0004811.19-	0005370.49-	10
1010	0060	15 08 30.65	0000691.61	0007276.94	0017302.28	0004739.02-	0005274.27-	10
1010	0060	15 08 31.65	0000763.78	0007325.05	0017254.17	0004763.08-	0005274.27-	10
1010	0060	15 08 32.65	0000691.61	0007252.88	0017278.22	0004787.13-	0005298.32-	10
1010	0060	15 08 33.65	0000715.67	0007325.05	0017278.22	0004739.02-	0005274.27-	10
1010	0060	15 08 34.65	0000691.61	0007325.05	0017254.17	0004739.02-	0005274.27-	10
1010	0080	15 16 27.09	0000066.15	0007445.33	0017807.45	0004955.53-	0005538.88-	10
1010	0080	15 16 28.09	0000138.32	0007445.33	0017735.29	0004955.53-	0005514.83-	10
1010	0080	15 16 29.09	0000090.21	0007397.22	0017759.34	0004907.41-	0005490.77-	10
1010	0080	15 16 30.09	0000090.21	0007469.39	0017831.51	0004907.41-	0005514.83-	10
1010	0080	15 16 31.09	0000042.10	0007445.33	0017807.45	0004907.41-	0005418.60-	10
1010	0090	16 37 17.85	0000511.18-	0006916.10	0016797.10	0004570.63-	0005178.04-	10
1010	0090	16 37 18.85	0000511.18-	0006988.27	0016773.05	0004570.63-	0005153.99-	10
1010	0090	16 37 19.85	0000535.24-	0006916.10	0016773.05	0004546.57-	0005226.16-	10
1010	0090	16 37 20.85	0000511.18-	0006940.16	0016700.88	0004618.74-	0005153.99-	10
1010	0090	16 37 21.85	0000535.24-	0006916.10	0016797.10	0004594.69-	0005153.99-	10
1010	0095	16 40 49.63	0000463.07-	0007397.22	0017879.62	0004859.30-	0005587.00-	10
1010	0095	16 40 50.63	0000559.29-	0007397.22	0017879.62	0004883.36-	0005587.00-	10
1010	0095	16 40 51.63	0000487.12-	0007397.22	0017903.68	0004859.30-	0005587.00-	10
1010	0095	16 40 52.63	0000511.18-	0007421.28	0017879.62	0004931.47-	0005514.83-	10
1010	0095	16 40 53.63	0000487.12-	0007445.33	0017855.57	0004859.30-	0005514.83-	10
1010	0100	16 44 33.87	0000799.85-	0007204.77	0017422.56	0004763.08-	0005418.60-	10

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	R90111A	P177121A	P177122A	P180131A	P180132A	GP
1010	0100	16 44 34.87	0000751.74-	0007180.72	0017374.45	0004763.08-	0005418.60-	10
1010	0100	16 44 35.87	0000751.74-	0007204.77	0017374.45	0004739.02-	0005442.66-	10
1010	0100	16 44 36.87	0000751.74-	0007228.83	0017422.56	0004787.13-	0005418.60-	10
1010	0100	16 44 37.87	0000727.68-	0007204.77	0017446.61	0004811.19-	0005418.60-	10
1010	0021	16 52 40.66	0002110.91	0007204.77	0017157.96	0004594.69-	0005274.27-	10
1010	0021	16 52 41.66	0002134.97	0007276.94	0017085.77	0004570.63-	0005298.32-	10
1010	0021	16 52 42.66	0002159.03	0007325.05	0017109.83	0004618.74-	0005274.27-	10
1010	0021	16 52 43.66	0002110.91	0007301.00	0017182.00	0004618.74-	0005274.27-	10
1010	0021	16 52 44.66	0002159.03	0007301.00	0017061.72	0004570.63-	0005298.32-	10

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND	HR/MN/SEC	P0061B	P0062B	P1800618	P1800628	P0081B	GP
0000 0000	08 47 18.26	0000042.09-	0000024.05-	0000012.02-	0000000.00	0000018.04	11
1000 0000	12 58 53.77	0000847.97	0000288.67	0000829.93	0001226.86	0000042.10	11
1000 0000	12 58 54.77	0000920.14	0000336.78	0000853.99	0001250.91	0000042.10	11
1000 0000	12 58 55.77	0000872.03	0000336.78	0000853.99	0001250.91	0000018.04	11
1000 0000	12 58 56.77	0000847.97	0000312.73	0000853.99	0001299.02	0000018.04	11
1000 0000	12 58 57.77	0000847.97	0000312.73	0000805.88	0001274.97	0000042.10	11
1005 0000	13 06 59.24	0000920.14	0000553.29	0001455.39	0001419.30	0000198.45-	11
1005 0000	13 07 00.24	0000920.14	0000577.34	0001383.22	0001467.42	0000246.56-	11
1005 0000	13 07 01.24	0000992.31	0000553.29	0001359.16	0001419.30	0000246.56-	11
1005 0000	13 07 02.24	0000920.14	0000577.34	0001383.22	0001419.30	0000246.56-	11
1005 0000	13 07 03.24	0000920.14	0000577.34	0001407.28	0001443.36	0000222.51-	11
1010 0000	13 08 54.04	0000944.20	0000866.02	0001864.34	0001635.81	0000439.01-	11
1010 0000	13 08 55.04	0000944.20	0000914.13	0001840.28	0001683.92	0000439.01-	11
1010 0000	13 08 56.04	0000895.09	0000914.13	0001912.45	0001756.09	0000511.18-	11
1010 0000	13 08 57.04	0000920.14	0000890.07	0001864.34	0001780.14	0000463.07-	11
1010 0000	13 08 58.04	0000920.14	0000866.02	0001888.40	0001683.92	0000439.01-	11
1010 0020	13 19 52.40	0001353.15	0000697.62	0001864.34	0001611.75	0000439.01-	11
1010 0020	13 19 53.40	0001329.09	0000745.74	0001888.40	0001611.75	0000414.96-	11
1010 0020	13 19 54.40	0001377.21	0000769.79	0001888.40	0001611.75	0000511.18-	11
1010 0020	13 19 55.40	0001377.21	0000745.74	0001864.34	0001683.92	0000414.96-	11
1010 0020	13 19 56.40	0001377.21	0000745.74	0001912.45	0001659.86	0000390.90-	11
1010 0040	13 24 23.72	0001834.27	0000553.29	0002056.79	0001611.75	0000439.01-	11
1010 0040	13 24 24.72	0001834.27	0000601.40	0001984.62	0001635.81	0000414.96-	11
1010 0040	13 24 25.72	0001882.38	0000553.29	0002008.68	0001659.86	0000439.01-	11
1010 0040	13 24 26.72	0001786.16	0000577.34	0002056.79	0001611.75	0000414.96-	11
1010 0040	13 24 27.72	0001882.38	0000577.34	0002080.84	0001611.75	0000414.96-	11
1010 0060	15 08 30.65	0002267.28	0000360.84	0002153.01	0001635.81	0000318.73-	11
1010 0060	15 08 31.65	0002219.17	0000336.78	0002177.07	0001707.98	0000294.68-	11
1010 0060	15 08 32.65	0002243.22	0000312.73	0002128.96	0001707.98	0000342.79-	11
1010 0060	15 08 33.65	0002267.28	0000360.84	0002177.07	0001659.86	0000318.73-	11
1010 0060	15 08 34.65	0002219.17	0000360.84	0002128.96	0001683.92	0000294.68-	11
1010 0080	15 16 27.09	0002724.34	0000168.39	0002417.63	0001635.81	0000318.73-	11
1010 0080	15 16 28.09	0002748.40	0000144.34	0002441.68	0001635.81	0000366.84-	11
1010 0080	15 16 29.09	0002772.45	0000144.34	0002393.57	0001659.86	0000294.68-	11
1010 0080	15 16 30.09	0002796.51	0000192.45	0002393.57	0001635.81	0000318.73-	11
1010 0080	15 16 31.09	0002796.51	0000168.39	0002393.57	0001635.81	0000342.79-	11
1010 0090	16 37 17.85	0003181.41	0000048.10-	0002586.02	0001467.42	0000342.79-	11
1010 0090	16 37 18.85	0003229.52	0000048.10-	0002586.02	0001443.36	0000342.79-	11
1010 0090	16 37 19.85	0003253.57	0000048.10-	0002561.96	0001539.58	0000366.84-	11
1010 0090	16 37 20.85	0003229.52	0000024.05-	0002610.08	0001515.53	0000318.73-	11
1010 0090	16 37 21.85	0003229.52	0000048.10-	0002682.24	0001491.47	0000390.90-	11
1010 0095	16 40 49.63	0003349.80	0000048.10-	0002586.02	0001491.47	0000414.96-	11
1010 0095	16 40 50.63	0003397.91	0000072.16-	0002586.02	0001563.64	0000318.73-	11
1010 0095	16 40 51.63	0003446.02	0000072.16-	0002610.08	0001515.53	0000366.84-	11
1010 0095	16 40 52.63	0003421.97	0000096.21-	0002610.08	0001467.42	0000366.84-	11
1010 0095	16 40 53.63	0003421.97	0000024.05-	0002586.02	0001491.47	0000366.84-	11
1010 0100	16 44 33.87	0003566.30	0000120.27-	0002658.19	0001419.30	0000366.84-	11

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND	HR/MN/SEC	P0061B	P0062B	P1800618	P1800628	P0081B	GP
1010 0100	16 44 34.87	0003590.36	0000120.27-	0002610.08	0001467.42	0000318.73-	11
1010 0100	16 44 35.87	0003542.25	0000120.27-	0002682.24	0001467.42	0000366.84-	11
1010 0100	16 44 36.87	0003542.25	0000144.33-	0002658.19	0001443.36	0000342.79-	11
1010 0100	16 44 37.87	0003542.25	0000096.21-	0002682.24	0001443.36	0000318.73-	11
1010 0021	16 52 40.66	0001353.15	0000625.46	0001671.89	0001635.81	0000559.29-	11
1010 0021	16 52 41.66	0001377.21	0000649.51	0001744.06	0001732.03	0000535.24-	11
1010 0021	16 52 42.66	0001401.26	0000673.57	0001744.06	0001707.98	0000559.29-	11
1010 0021	16 52 43.66	0001353.15	0000673.57	0001695.95	0001683.92	0000583.35-	11
1010 0021	16 52 44.66	0001401.26	0000697.62	0001744.06	0001659.86	0000535.24-	11

ELEMENT STRESS

ID 1029 REC PT 400 RATE 01 10/29/69 CONJUGATE STRUCTURE TEST COND 1

TEST	COND	HR/MN/SEC	P00828	P1800818	P1800828	L11210B	R01118	GP
0000	0000	08 47 18.26	0000006.01	0000066.14-	0000006.01	0000078.18	0000048.10-	12
1000	0000	12 58 53.77	0000366.85	0000258.59-	0000607.41	0000234.54-	0001130.62-	12
1000	0000	12 58 54.77	0000342.80	0000234.54-	0000583.36	0000258.59-	0001082.51-	12
1000	0000	12 58 55.77	0000294.69	0000210.48-	0000607.41	0000282.65-	0001130.62-	12
1000	0000	12 58 56.77	0000366.85	0000282.65-	0000583.36	0000282.65-	0001130.62-	12
1000	0000	12 58 57.77	0000366.85	0000282.65-	0000535.25	0000306.70-	0001130.62-	12
1005	0000	13 06 59.24	0000968.25	0000475.10-	0001088.53	0000595.38-	0001395.24-	12
1005	0000	13 07 00.24	0000944.20	0000475.10-	0001088.53	0000595.38-	0001395.24-	12
1005	0000	13 07 01.24	0001016.37	0000475.10-	0001112.59	0000547.26-	0001347.13-	12
1005	0000	13 07 02.24	0000992.31	0000451.04-	0001136.65	0000643.49-	0001395.24-	12
1005	0000	13 07 03.24	0000992.31	0000451.04-	0001136.65	0000571.32-	0001299.01-	12
1010	0000	13 08 54.04	0001713.99	0000715.66-	0001786.16	0000787.82-	0001635.80-	12
1010	0000	13 08 55.04	0001762.10	0000739.71-	0001810.21	0000787.82-	0001587.69-	12
1010	0000	13 08 56.04	0001762.10	0000667.54-	0001810.21	0000739.71-	0001611.74-	12
1010	0000	13 08 57.04	0001762.10	0000739.71-	0001810.21	0000715.66-	0001611.74-	12
1010	0000	13 08 58.04	0001762.10	0000715.66-	0001834.27	0000739.71-	0001635.80-	12
1010	0020	13 19 52.40	0001738.05	0000691.60-	0001786.16	0000763.77-	0003488.11-	12
1010	0020	13 19 53.40	0001738.05	0000739.71-	0001786.16	0000763.77-	0003415.94-	12
1010	0020	13 19 54.40	0001762.10	0000691.60-	0001738.05	0000763.77-	0003464.05-	12
1010	0020	13 19 55.40	0001713.99	0000691.60-	0001738.05	0000763.77-	0003488.11-	12
1010	0020	13 19 56.40	0001689.93	0000691.60-	0001810.21	0000691.60-	0003464.05-	12
1010	0040	13 24 23.72	0001762.10	0000715.66-	0001834.27	0000739.71-	0005268.25-	12
1010	0040	13 24 24.72	0001786.16	0000739.71-	0001786.16	0000715.66-	0005244.20-	12
1010	0040	13 24 25.72	0001786.16	0000715.66-	0001810.21	0000691.60-	0005196.09-	12
1010	0040	13 24 26.72	0001713.99	0000739.71-	0001762.10	0000739.71-	0005292.31-	12
1010	0040	13 24 27.72	0001738.05	0000667.54-	0001786.16	0000715.66-	0005220.14-	12
1010	0060	15 08 30.65	0001665.88	0000715.66-	0001713.99	0000691.60-	0007192.73-	12
1010	0060	15 08 31.65	0001689.93	0000691.60-	0001738.05	0000595.38-	0007192.73-	12
1010	0060	15 08 32.65	0001665.88	0000667.54-	0001762.10	0000643.49-	0007192.73-	12
1010	0060	15 08 33.65	0001713.99	0000619.43-	0001762.10	0000595.38-	0007192.73-	12
1010	0060	15 08 34.65	0001689.93	0000667.54-	0001738.05	0000667.54-	0007192.73-	12
1010	0080	15 16 27.09	0001738.05	0000643.49-	0001762.10	0000595.38-	0008948.82-	12
1010	0080	15 16 28.09	0001713.99	0000691.60-	0001762.10	0000547.26-	0008924.77-	12
1010	0080	15 16 29.09	0001713.99	0000691.60-	0001762.10	0000571.32-	0008924.77-	12
1010	0080	15 16 30.09	0001738.05	0000667.54-	0001786.16	0000571.32-	0008924.77-	12
1010	0080	15 16 31.09	0001738.05	0000691.60-	0001762.10	0000571.32-	0008876.65-	12
1010	0090	16 37 17.85	0001617.77	0000547.26-	0001545.60	0000426.98-	0009622.39-	12
1010	0090	16 37 18.85	0001593.71	0000547.26-	0001593.71	0000451.04-	0009598.33-	12
1010	0090	16 37 19.85	0001617.77	0000571.32-	0001521.54	0000426.98-	0009622.39-	12
1010	0090	16 37 20.85	0001593.71	0000499.15-	0001521.54	0000402.93-	0009598.33-	12
1010	0090	16 37 21.85	0001641.82	0000547.26-	0001497.49	0000451.04-	0009598.33-	12
1010	0095	16 40 49.63	0001713.99	0000619.43-	0001641.82	0000378.87-	0010175.68-	12
1010	0095	16 40 50.63	0001762.10	0000571.32-	0001713.99	0000330.76-	0010175.68-	12
1010	0095	16 40 51.63	0001738.05	0000547.26-	0001689.93	0000330.76-	0010151.62-	12
1010	0095	16 40 52.63	0001738.05	0000571.32-	0001665.88	0000402.93-	0010127.57-	12
1010	0095	16 40 53.63	0001810.21	0000595.38-	0001689.93	0000354.82-	0010127.57-	12
1010	0100	16 44 33.87	0001665.88	0000619.43-	0001569.65	0000378.87-	0010560.57-	12

ELEMENT STRESS

ID 1029 REC PT 400 RATE 01 10/29/69 CONJUGATE STRUCTURE TEST COND 1

TEST	COND	HR/MN/SEC	P00828	P1800818	P1800828	L11210B	R01128	GP
1010	0100	16 44 34.87	0001713.99	0000595.38-	0001593.71	0000354.82-	0010560.57-	12
1010	0100	16 44 35.87	0001713.99	0000571.32-	0001641.82	0000330.76-	0010560.57-	12
1010	0100	16 44 36.87	0001713.99	0000571.32-	0001641.82	0000378.87-	0010560.57-	12
1010	0100	16 44 37.87	0001713.99	0000571.32-	0001593.71	0000330.76-	0010536.52-	12
1010	0021	16 52 40.66	0001786.16	0000667.54-	0001641.82	0000571.32-	0003079.16-	12
1010	0021	16 52 41.66	0001786.16	0000691.60-	0001689.93	0000595.38-	0003079.16-	12
1010	0021	16 52 42.66	0001810.21	0000619.43-	0001689.93	0000523.21-	0003055.10-	12
1010	0021	16 52 43.66	0001810.21	0000667.54-	0001665.88	0000571.32-	0003127.27-	12
1010	0021	16 52 44.66	0001786.16	0000667.54-	0001665.88	0000571.32-	0003006.99-	12

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	R01128	R01138	R901118	R901128	R901138	GP
0000	0000	08 47 18.26	0000012.02-	0000048.10-	0000048.10-	0000024.06	0000024.05-	13
1000	0000	12 58 53.77	0000902.10	0002549.94	0001010.34-	0000769.79	0002886.72	13
1000	0000	12 58 54.77	0000878.04	0002598.05	0000938.17-	0000721.68	0002982.94	13
1000	0000	12 58 55.77	0000902.10	0002573.99	0000938.17-	0000721.68	0002910.78	13
1000	0000	12 58 56.77	0000902.10	0002598.05	0000938.17-	0000745.74	0002910.78	13
1000	0000	12 58 57.77	0000853.99	0002573.99	0000986.29-	0000721.68	0002910.78	13
1005	0000	13 06 59.24	0001455.39	0004498.47	0001082.51-	0001611.75	0005123.93	13
1005	0000	13 07 00.24	0001455.39	0004546.58	0001082.51-	0001611.75	0005123.93	13
1005	0000	13 07 01.24	0001479.44	0004546.58	0001034.40-	0001683.92	0005123.93	13
1005	0000	13 07 02.24	0001455.39	0004570.64	0001082.51-	0001635.81	0005099.87	13
1005	0000	13 07 03.24	0001479.44	0004522.53	0001082.51-	0001587.70	0005196.10	13
1010	0000	13 08 54.04	0002201.12	0006639.48	0001226.85-	0002670.22	0007553.58	13
1010	0000	13 08 55.04	0002201.12	0006687.57	0001226.85-	0002694.27	0007553.58	13
1010	0000	13 08 56.04	0002201.12	0006687.57	0001226.85-	0002670.22	0007577.64	13
1010	0000	13 08 57.04	0002177.07	0006615.40	0001178.73-	0002622.10	0007553.58	13
1010	0000	13 08 58.04	0002153.01	0006687.57	0001178.73-	0002646.16	0007553.58	13
1010	0020	13 19 52.40	0001503.50	0007313.02	0002044.75-	0002718.33	0007794.14	13
1010	0020	13 19 53.40	0001527.56	0007313.02	0002044.75-	0002646.16	0007842.26	13
1010	0020	13 19 54.40	0001503.50	0007313.02	0002020.69-	0002718.33	0007794.14	13
1010	0020	13 19 55.40	0001479.44	0007337.08	0002068.81-	0002694.27	0007818.20	13
1010	0020	13 19 56.40	0001503.50	0007337.08	0002020.69-	0002718.33	0007842.26	13
1010	0040	13 24 23.72	0000974.27	0008154.98	0002910.77-	0002838.61	0008347.43	13
1010	0040	13 24 24.72	0001046.44	0008179.04	0002934.82-	0002790.50	0008371.49	13
1010	0040	13 24 25.72	0001022.38	0008203.10	0002934.82-	0002814.55	0008371.49	13
1010	0040	13 24 26.72	0001070.49	0008203.10	0002910.77-	0002790.50	0008395.54	13
1010	0040	13 24 27.72	0001022.38	0008154.98	0002958.88-	0002814.55	0008323.38	13
1010	0060	15 08 30.65	0000348.81	0008828.55	0003848.95-	0002742.38	0008636.10	13
1010	0060	15 08 31.65	0000348.81	0008804.50	0003824.89-	0002742.38	0008563.94	13
1010	0060	15 08 32.65	0000396.92	0008804.50	0003848.95-	0002766.44	0008491.77	13
1010	0060	15 08 33.65	0000372.87	0008852.61	0003848.95-	0002742.38	0008587.99	13
1010	0060	15 08 34.65	0000348.81	0008756.38	0003873.01-	0002790.50	0008515.82	13
1010	0080	15 16 27.09	0000108.24-	0009646.46	0004739.02-	0002910.78	0009117.22	13
1010	0080	15 16 28.09	0000060.13-	0009646.46	0004690.91-	0002910.78	0009117.22	13
1010	0080	15 16 29.09	0000060.13-	0009670.51	0004666.85-	0002886.72	0009117.22	13
1010	0080	15 16 30.09	0000084.19-	0009646.46	0004666.85-	0002910.78	0009141.28	13
1010	0080	15 16 31.09	0000036.07-	0009670.51	0004714.97-	0002910.78	0009165.34	13
1010	0090	16 37 17.85	0000132.30-	0009598.34	0004618.74-	0002814.55	0009093.17	13
1010	0090	16 37 18.85	0000180.41-	0009646.46	0004666.85-	0002814.55	0009117.22	13
1010	0090	16 37 19.85	0000180.41-	0009622.40	0004618.74-	0002790.50	0009093.17	13
1010	0090	16 37 20.85	0000132.30-	0009622.40	0004618.74-	0002838.61	0009093.17	13
1010	0090	16 37 21.85	0000156.35-	0009598.34	0004618.74-	0002790.50	0009045.06	13
1010	0095	16 40 49.63	0000180.41-	0010223.80	0004883.36-	0003007.00	0009646.46	13
1010	0095	16 40 50.63	0000180.41-	0010223.80	0004883.36-	0002982.94	0009646.46	13
1010	0095	16 40 51.63	0000156.35-	0010223.80	0004859.30-	0002982.94	0009670.51	13
1010	0095	16 40 52.63	0000228.52-	0010223.80	0004907.41-	0002958.89	0009646.46	13
1010	0095	16 40 53.63	0000204.47-	0010151.63	0004907.41-	0002982.94	0009670.51	13
1010	0100	16 44 33.87	0000396.91-	0010199.74	0005147.97-	0002910.78	0009502.12	13

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	R01128	R01138	R901118	R901128	R901138	GP
1010	0100	16 44 34.87	0000396.91-	0010199.74	0005172.03-	0002934.83	0009550.23	13
1010	0100	16 44 35.87	0000396.91-	0010247.86	0005172.03-	0002934.83	0009502.12	13
1010	0100	16 44 36.87	0000396.91-	0010223.80	0005147.97-	0002934.83	0009550.23	13
1010	0100	16 44 37.87	0000420.97-	0010247.86	0005123.92-	0002910.78	0009574.29	13
1010	0021	16 52 40.66	0002249.26	0007264.91	0001467.41-	0002670.22	0008058.76	13
1010	0021	16 52 41.66	0002273.29	0007288.97	0001443.35-	0002646.16	0008058.76	13
1010	0021	16 52 42.66	0002273.29	0007313.02	0001443.35-	0002646.16	0008106.87	13
1010	0021	16 52 43.66	0002297.35	0007264.91	0001443.35-	0002646.16	0008058.76	13
1010	0021	16 52 44.66	0002273.29	0007313.02	0001443.35-	0002622.10	0008058.76	13

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	P1771218	P1771228	P0131A	P0132A	P0131B	GP
0000	0000	08 47 18.26	0000012.02-	0000024.05-	0000030.07	0000018.04	0000006.00-	14
1000	0000	12 58 53.77	0006579.31-	0001106.58	0002014.68-	0002555.94-	0000042.10	14
1000	0000	12 58 54.77	0006579.31-	0001058.46	0002014.60-	0002507.83-	0000042.10	14
1000	0000	12 58 55.77	0006579.31-	0001106.58	0001990.62-	0002483.77-	0000042.10	14
1000	0000	12 58 56.77	0006579.31-	0001082.52	0002038.74-	0002555.94-	0000042.10	14
1000	0000	12 58 57.77	0006603.36-	0001058.46	0002062.79-	0002531.88-	0000042.10	14
1005	0000	13 06 59.24	0013603.66-	0002718.33	0003770.77-	0004480.42-	0002014.69	14
1005	0000	13 07 00.24	0013627.71-	0002742.38	0003746.71-	0004456.36-	0002014.69	14
1005	0000	13 07 01.24	0013579.60-	0002742.38	0003794.82-	0004408.25-	0002014.69	14
1005	0000	13 07 02.24	0013579.60-	0002742.38	0003770.77-	0004432.31-	0001990.63	14
1005	0000	13 07 03.24	0013603.66-	0002742.38	0003746.71-	0004408.25-	0002014.69	14
1010	0000	13 08 54.04	0020243.11-	0004979.59	0005599.02-	0006501.12-	0004131.62	14
1010	0000	13 08 55.04	0020219.06-	0005003.65	0005599.02-	0006428.96-	0004003.51	14
1010	0000	13 08 56.04	0020195.00-	0004979.59	0005550.91-	0006453.01-	0004131.62	14
1010	0000	13 08 57.04	0020195.00-	0005003.65	0005574.97-	0006453.01-	0004131.62	14
1010	0000	13 08 58.04	0020219.06-	0005003.65	0005574.97-	0006453.01-	0004107.56	14
1010	0020	13 19 52.40	0020026.61-	0004883.37	0005623.08-	0006645.46-	0000066.15	14
1010	0020	13 19 53.40	0020050.67-	0004883.37	0005574.97-	0006645.46-	0000066.15	14
1010	0020	13 19 54.40	0020002.55-	0004955.54	0005526.86-	0006573.29-	0000138.32	14
1010	0020	13 19 55.40	0020002.55-	0004931.48	0005550.91-	0006621.40-	0000138.32	14
1010	0020	13 19 56.40	0020002.55-	0004955.54	0005623.08-	0006573.29-	0000066.15	14
1010	0040	13 24 23.72	0020531.79-	0005051.76	0004949.51-	0005659.16-	0008473.72-	14
1010	0040	13 24 24.72	0020483.67-	0005196.10	0004901.40-	0005611.05-	0008401.55-	14
1010	0040	13 24 25.72	0020459.62-	0005147.98	0004925.46-	0005611.05-	0008401.55-	14
1010	0040	13 24 26.72	0020483.67-	0005123.93	0004925.46-	0005635.11-	0008425.60-	14
1010	0040	13 24 27.72	0020459.62-	0005099.87	0004901.40-	0005587.00-	0008449.66-	14
1010	0060	15 08 30.65	0020002.55-	0005003.65	0003794.82-	0005202.10-	0015714.57-	14
1010	0060	15 08 31.65	0019930.39-	0005003.65	0003770.77-	0005226.16-	0015666.46-	14
1010	0060	15 08 32.65	0019954.44-	0004979.59	0003818.88-	0005226.16-	0015690.52-	14
1010	0060	15 08 33.65	0020002.55-	0004979.59	0003794.82-	0005178.04-	0015666.46-	14
1010	0060	15 08 34.65	0020002.55-	0004931.48	0003842.94-	0005226.16-	0015714.57-	14
1010	0080	15 16 27.09	0020459.62-	0005196.10	0002231.18-	0005538.88-	0024134.17-	14
1010	0080	15 16 28.09	0020411.51-	0005196.10	0002207.13-	0005466.72-	0024110.12-	14
1010	0080	15 16 29.09	0020435.56-	0005196.10	0002159.02-	0005490.77-	0024134.17-	14
1010	0080	15 16 30.09	0020459.62-	0005196.10	0002134.96-	0005418.60-	0024134.17-	14
1010	0080	15 16 31.09	0020459.62-	0005196.10	0002183.07-	0005466.72-	0024134.17-	14
1010	0090	16 37 17.85	0019232.76-	0004931.48	0000078.18	0005178.04-	0031182.58-	14
1010	0090	16 37 18.85	0019208.71-	0004955.54	0000102.24	0005105.88-	0031230.69-	14
1010	0090	16 37 19.85	0019280.87-	0004931.48	0000126.29	0005153.99-	0031230.69-	14
1010	0090	16 37 20.85	0019232.76-	0004979.59	0000078.18	0005129.93-	0031230.69-	14
1010	0090	16 37 21.85	0019232.76-	0004979.59	0000102.24	0005153.99-	0031230.69-	14
1010	0095	16 40 49.63	0020315.28-	0005484.77	0000511.19	0005611.05-	0033395.73-	14
1010	0095	16 40 50.63	0020315.28-	0005388.54	0000511.19	0005611.05-	0033395.73-	14
1010	0095	16 40 51.63	0020291.23-	0005436.66	0000535.25	0005587.00-	0033395.73-	14
1010	0095	16 40 52.63	0020267.17-	0005388.54	0000535.25	0005635.11-	0033395.73-	14
1010	0095	16 40 53.63	0020291.23-	0005484.77	0000559.30	0005611.05-	0033395.73-	14
1010	0100	16 44 33.87	0019810.11-	0005244.21	0001184.76	0005370.49-	0035608.88-	14

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	P1771218	P1771228	P0131A	P0132A	P0131B	GP
1010	0100	16 44 34.87	0019834.16-	0005220.15	0001208.81	0005370.49-	0035608.88-	14
1010	0100	16 44 35.87	0019786.05-	0005292.32	0001184.76	0005370.49-	0035608.88-	14
1010	0100	16 44 36.87	0019882.27-	0005244.21	0001232.87	0005370.49-	0035608.88-	14
1010	0100	16 44 37.87	0019858.22-	0005268.26	0001232.87	0005394.55-	0035657.00-	14
1010	0021	16 52 40.66	0019665.77-	0005099.87	0002712.30-	0004841.26-	0012250.51-	14
1010	0021	16 52 41.66	0019665.77-	0005123.93	0002688.25-	0004865.32-	0012250.51-	14
1010	0021	16 52 42.66	0019713.88-	0005123.93	0002640.14-	0004793.15-	0012250.51-	14
1010	0021	16 52 43.66	0019689.83-	0005123.93	0002688.25-	0004793.15-	0012250.51-	14
1010	0021	16 52 44.66	0019617.66-	0005172.04	0002640.14-	0004817.20-	0012298.62-	14

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	P0132B	P1801318	P1801328	P0141B	P0142B	GP
0000	0000	08 47 18.26	0000078.18	0000048.10-	0000042.09-	0000024.05-	0000133.31-	15
1000	0000	12 58 53.77	0003097.20-	0001539.58	0001244.89-	0000024.05-	0001966.57-	15
1000	0000	12 58 54.77	0003145.31-	0001587.70	0001172.72-	0000024.06	0001918.46-	15
1000	0000	12 58 55.77	0003121.26-	0001539.58	0001196.78-	0000000.00	0001942.51-	15
1000	0000	12 58 56.77	0003121.26-	0001563.64	0001124.61-	0000000.00	0001894.40-	15
1000	0000	12 58 57.77	0003121.26-	0001611.75	0001172.72-	0000024.06	0001918.46-	15
1005	0000	13 06 59.24	0006320.70-	0004474.42	0002640.14-	0000024.05-	0003433.98-	15
1005	0000	13 07 00.24	0006320.70-	0004450.36	0002688.25-	0000000.00	0003458.04-	15
1005	0000	13 07 01.24	0006344.76-	0004426.30	0002712.30-	0000024.05-	0003458.04-	15
1005	0000	13 07 02.24	0006344.76-	0004474.42	0002760.42-	0000024.05-	0003409.93-	15
1005	0000	13 07 03.24	0006320.70-	0004498.47	0002688.25-	0000000.00	0003482.10-	15
1010	0000	13 08 54.04	0010049.38-	0007890.37	0004492.45-	0000120.27-	0005214.13-	15
1010	0000	13 08 55.04	0010049.38-	0007938.48	0004468.39-	0000072.16-	0005166.02-	15
1010	0000	13 08 56.04	0010025.33-	0007938.48	0004468.39-	0000072.16-	0005141.96-	15
1010	0000	13 08 57.04	0010025.33-	0007890.37	0004468.39-	0000048.10-	0005166.02-	15
1010	0000	13 08 58.04	0010001.27-	0007914.42	0004492.45-	0000072.16-	0005141.96-	15
1010	0020	13 19 52.40	0009472.04-	0007048.41	0004227.83-	0000120.27-	0005238.18-	15
1010	0020	13 19 53.40	0009447.98-	0007072.46	0004203.78-	0000072.16-	0005190.07-	15
1010	0020	13 19 54.40	0009447.98-	0007096.52	0004227.83-	0000048.10-	0005166.02-	15
1010	0020	13 19 55.40	0009472.04-	0007096.52	0004251.89-	0000072.16-	0005166.02-	15
1010	0020	13 19 56.40	0009472.04-	0007072.46	0004251.89-	0000096.21-	0005214.13-	15
1010	0040	13 24 23.72	0008846.58-	0006928.13	0004324.06-	0000048.10-	0005478.74-	15
1010	0040	13 24 24.72	0008798.47-	0006855.96	0004275.94-	0000120.27-	0005478.74-	15
1010	0040	13 24 25.72	0008798.47-	0006904.07	0004251.89-	0000072.16-	0005502.80-	15
1010	0040	13 24 26.72	0008774.42-	0006807.85	0004251.89-	0000072.16-	0005502.80-	15
1010	0040	13 24 27.72	0008750.36-	0006880.02	0004179.72-	0000096.21-	0005454.69-	15
1010	0060	15 08 30.65	0007932.46-	0006038.06	0003939.16-	0000168.38-	0005406.58-	15
1010	0060	15 08 31.65	0007884.34-	0006062.11	0003866.99-	0000144.33-	0005454.69-	15
1010	0060	15 08 32.65	0007884.34-	0005965.89	0003939.16-	0000120.27-	0005454.69-	15
1010	0060	15 08 33.65	0007908.40-	0005989.94	0003915.10-	0000120.27-	0005358.46-	15
1010	0060	15 08 34.65	0007956.51-	0006038.06	0003891.05-	0000168.38-	0005382.52-	15
1010	0080	15 16 27.09	0008028.68-	0005532.88	0003866.99-	0000312.72-	0005815.53-	15
1010	0080	15 16 28.09	0007980.57-	0005532.88	0003842.94-	0000264.61-	0005767.42-	15
1010	0080	15 16 29.09	0008004.62-	0005580.99	0003770.77-	0000264.61-	0005647.14-	15
1010	0080	15 16 30.09	0007980.57-	0005508.82	0003866.99-	0000264.61-	0005719.30-	15
1010	0080	15 16 31.09	0008052.74-	0005484.77	0003818.88-	0000312.72-	0005743.36-	15
1010	0090	16 37 17.85	0008606.02-	0004306.02	0003265.59-	0000384.89-	0005502.80-	15
1010	0090	16 37 18.85	0008606.02-	0004209.80	0003289.65-	0000384.89-	0005478.74-	15
1010	0090	16 37 19.85	0008630.08-	0004306.02	0003313.70-	0000360.83-	0005502.80-	15
1010	0090	16 37 20.85	0008581.97-	0004233.86	0003241.54-	0000360.83-	0005574.97-	15
1010	0090	16 37 21.85	0008654.14-	0004257.91	0003289.65-	0000384.89-	0005478.74-	15
1010	0095	16 40 49.63	0009423.93-	0004811.20	0003602.38-	0000384.89-	0005863.64-	15
1010	0095	16 40 50.63	0009375.82-	0004787.14	0003554.26-	0000408.94-	0005839.58-	15
1010	0095	16 40 51.63	0009399.87-	0004811.20	0003578.32-	0000433.00-	0005839.58	15
1010	0095	16 40 52.63	0009351.76-	0004859.31	0003602.38-	0000384.89-	0005839.58-	15
1010	0095	16 40 53.63	0009375.82-	0004811.20	0003554.26-	0000408.94-	0005839.58-	15
1010	0100	16 44 33.87	0008894.70-	0004137.63	0003385.87-	0000433.00-	0005743.36-	15

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	P0132B	P1801318	P1801328	P0141B	P0142B	GP
1010	0100	16 44 34.87	0008894.70-	0004209.80	0003361.82-	0000457.05-	0005719.30-	15
1010	0100	16 44 35.87	0008918.75-	0004257.91	0003361.82-	0000433.00-	0005743.36-	15
1010	0100	16 44 36.87	0008990.92-	0004281.97	0003385.87-	0000457.05-	0005719.30-	15
1010	0100	16 44 37.87	0008966.86-	0004257.91	0003337.76-	0000457.05-	0005791.47-	15
1010	0021	16 52 40.66	0011516.80-	0006880.02	0003987.27-	0000336.77-	0005406.58-	15
1010	0021	16 52 41.66	0011588.97-	0006855.96	0004011.33-	0000288.66-	0005382.52-	15
1010	0021	16 52 42.66	0011516.80-	0006880.02	0003963.22-	0000336.77-	0005382.52-	15
1010	0021	16 52 43.66	0011516.80-	0006904.07	0003987.27-	0000312.72-	0005382.52-	15
1010	0021	16 52 44.66	0011492.74-	0006855.96	0003963.22-	0000336.77-	0005430.63-	15

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	P1801418	P1801428	P01518	P01528	P1801518	GP
0000	0000	08 47 18.26	0000012.03	0000030.07-	0000030.07	DOS-	0000006.00-	16
1000	0000	12 58 53.77	0000637.48	0001762.09-	0000631.47	DOS-	0001293.01	16
1000	0000	12 58 54.77	0000565.32	0001713.98-	0000655.53	DOS-	0001220.84	16
1000	0000	12 58 55.77	0000589.37	0001762.09-	0000655.53	DOS-	0001244.90	16
1000	0000	12 58 56.77	0000613.43	0001713.98-	0000655.53	DOS-	0001268.95	16
1000	0000	12 58 57.77	0000565.32	0001689.92-	0000655.53	DOS-	0001244.90	16
1005	0000	13 06 59.24	0000974.27	0003109.23-	0001184.76	DOS-	0001846.30	16
1005	0000	13 07 00.24	0000998.32	0003061.12-	0001208.81	DOS-	0001918.47	16
1005	0000	13 07 01.24	0001070.49	0003109.23-	0001208.81	DOS-	0001918.47	16
1005	0000	13 07 02.24	0000998.32	0003037.06-	0001184.76	DOS-	0001870.35	16
1005	0000	13 07 03.24	0001070.49	0003085.17-	0001232.87	DOS-	0001942.52	16
1010	0000	13 08 54.04	0001479.44	0004600.70-	0001882.38	DOS-	0002664.20	16
1010	0000	13 08 55.04	0001431.33	0004648.81-	0001858.33	DOS-	0002712.31	16
1010	0000	13 08 56.04	0001455.39	0004600.70-	0001906.44	DOS-	0002712.31	16
1010	0000	13 08 57.04	0001431.33	0004648.81-	0001882.38	DOS-	0002712.31	16
1010	0000	13 08 58.04	0001431.33	0004600.70-	0001834.27	DOS-	0002712.31	16
1010	0020	13 19 52.40	0001407.28	0004600.70-	0001858.33	DOS-	0002640.15	16
1010	0020	13 19 53.40	0001455.39	0004600.70-	0001858.33	DOS-	0002664.20	16
1010	0020	13 19 54.40	0001431.33	0004552.59-	0001834.27	DOS-	0002640.15	16
1010	0020	13 19 55.40	0001431.33	0004600.70-	0001906.44	DOS-	0002640.15	16
1010	0020	13 19 56.40	0001407.28	0004552.59-	0001858.33	DOS-	0002640.15	16
1010	0040	13 24 23.72	0001431.33	0004769.09-	0002050.77	DOS-	0002688.26	16
1010	0040	13 24 24.72	0001455.39	0004720.98-	0002002.66	DOS-	0002688.26	16
1010	0040	13 24 25.72	0001479.44	0004672.87-	0002026.72	DOS-	0002664.20	16
1010	0040	13 24 26.72	0001455.39	0004720.98-	0001954.55	DOS-	0002688.26	16
1010	0040	13 24 27.72	0001455.39	0004648.81-	0002050.77	DOS-	0002688.26	16
1010	0060	15 08 30.65	0001455.39	0004576.64-	0001954.55	DOS-	0002664.20	16
1010	0060	15 08 31.65	0001431.33	0004600.70-	0001930.49	DOS-	0002688.26	16
1010	0060	15 08 32.65	0001527.56	0004624.76-	0001978.61	DOS-	0002664.20	16
1010	0060	15 08 33.65	0001455.39	0004624.76-	0001954.55	DOS-	0002640.15	16
1010	0060	15 08 34.65	0001431.33	0004624.76-	0001978.61	DOS-	0002616.09	16
1010	0080	15 16 27.09	0001455.39	0004720.98-	0002074.83	DOS-	0002712.31	16
1010	0080	15 16 28.09	0001431.33	0004745.04-	0002050.77	DOS-	0002712.31	16
1010	0080	15 16 29.09	0001503.50	0004720.98-	0002098.89	DOS-	0002712.31	16
1010	0080	15 16 30.09	0001503.50	0004720.98-	0002098.89	DOS-	0002712.31	16
1010	0080	15 16 31.09	0001455.39	0004745.04-	0002074.83	DOS-	0002760.43	16
1010	0090	16 37 17.85	0001455.39	0004263.92-	0002002.66	DOS-	0002664.20	16
1010	0090	16 37 18.85	0001503.50	0004239.86-	0002002.66	DOS-	0002760.43	16
1010	0090	16 37 19.85	0001431.33	0004095.52-	0001978.61	DOS-	0002688.26	16
1010	0090	16 37 20.85	0001479.44	0004239.86-	0002002.66	DOS-	0002664.20	16
1010	0090	16 37 21.85	0001479.44	0004263.92-	0001978.61	DOS-	0002640.15	16
1010	0095	16 40 49.63	0001575.67	0004552.59-	0002122.94	DOS-	0002880.71	16
1010	0095	16 40 50.63	0001527.56	0004552.59-	0002122.94	DOS-	0002832.59	16
1010	0095	16 40 51.63	0001575.67	0004576.64-	0002147.00	DOS-	0002832.59	16
1010	0095	16 40 52.63	0001503.50	0004576.64-	0002098.89	DOS-	0002784.48	16
1010	0095	16 40 53.63	0001551.61	0004528.53-	0002122.94	DOS-	0002808.54	16
1010	0100	16 44 33.87	0001431.33	0004384.20-	0002050.77	DOS-	0002736.37	16

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	P1801418	P1801428	P01518	P01528	P1801518	GP
1010	0100	16 44 34.87	0001527.56	0004408.25-	0002050.77	DOS-	0002760.43	16
1010	0100	16 44 35.87	0001503.50	0004408.25-	0002074.83	DOS-	0002760.43	16
1010	0100	16 44 36.87	0001479.44	0004432.31-	0002098.89	DOS-	0002808.54	16
1010	0100	16 44 37.87	0001551.61	0004408.25-	0002074.83	DOS-	0002784.48	16
1010	0021	16 52 40.66	0001551.61	0004287.97-	0001954.55	DOS-	0002736.37	16
1010	0021	16 52 41.66	0001527.56	0004408.25-	0002026.72	DOS-	0002832.59	16
1010	0021	16 52 42.66	0001551.61	0004384.20-	0001930.49	DOS-	0002832.59	16
1010	0021	16 52 43.66	0001503.50	0004408.25-	0002002.66	DOS-	0002808.54	16
1010	0021	16 52 44.66	0001503.50	0004360.14-	0001978.61	DOS-	0002832.59	16

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	P1801528	P01618	P01628	P1801618	P1801628	GP
0000 0000 08 47 18.26	0000036.07-	0000006.01	0000084.19-	0000042.10	0000036.07-	17
1000 0000 12 58 53.77	0002225.17-	0000463.08	0001527.55-	0001148.67	0002369.51-	17
1000 0000 12 58 54.77	0002177.06-	0000535.25	0001527.55-	0001172.73	0002369.51-	17
1000 0000 12 58 55.77	0002225.17-	0000487.13	0001551.60-	0001148.67	0002393.56-	17
1000 0000 12 58 56.77	0002201.11-	0000511.19	0001503.49-	0001124.62	0002345.45-	17
1000 0000 12 58 57.77	0002177.06-	0000511.19	0001479.43-	0001100.56	0002369.51-	17
1005 0000 13 06 59.24	0004486.43-	0000703.64	0003115.24-	0001629.79	0004390.21-	17
1005 0000 13 07 00.24	0004486.43-	0000751.75	0003115.24-	0001557.63	0004462.38-	17
1005 0000 13 07 01.24	0004486.43-	0000896.09	0003043.07-	0001653.85	0004414.27-	17
1005 0000 13 07 02.24	0004438.32-	0000799.86	0003067.13-	0001581.68	0004390.21-	17
1005 0000 13 07 03.24	0004390.21-	0000799.86	0003019.02-	0001629.79	0004414.27-	17
1010 0000 13 08 54.04	0006916.09-	0001208.81	0004991.61-	0002134.97	0006531.19-	17
1010 0000 13 08 55.04	0006964.20-	0001160.70	0004919.44-	0002134.97	0006579.31-	17
1010 0000 13 08 56.04	0006916.09-	0001184.76	0004823.22-	0002183.08	0006579.31-	17
1010 0000 13 08 57.04	0006964.20-	0001184.76	0004871.33-	0002134.97	0006603.36-	17
1010 0000 13 08 58.04	0006916.09-	0001184.76	0004871.33-	0002159.03	0006483.08-	17
1010 0020 13 19 52.40	0006892.03-	0001136.65	0004847.27-	0002134.97	0006434.97-	17
1010 0020 13 19 53.40	0006843.92-	0001208.81	0004847.27-	0002110.91	0006434.97-	17
1010 0020 13 19 54.40	0006771.75-	0001136.65	0004775.11-	0002134.97	0006459.03-	17
1010 0020 13 19 55.40	0006843.92-	0001160.70	0004823.22-	0002110.91	0006386.86-	17
1010 0020 13 19 56.40	0006843.92-	0001160.70	0004847.27-	0002086.86	0006386.86-	17
1010 0040 13 24 23.72	0007036.37-	0001184.76	0004895.39-	0002159.03	0006555.25-	17
1010 0040 13 24 24.72	0006988.26-	0001160.70	0004919.44-	0002086.86	0006555.25-	17
1010 0040 13 24 25.72	0006964.20-	0001088.53	0004895.39-	0002134.97	0006507.14-	17
1010 0040 13 24 26.72	0006988.26-	0001136.65	0004919.44-	0002134.97	0006507.14-	17
1010 0040 13 24 27.72	0006988.26-	0001184.76	0004895.39-	0002159.03	0006555.25-	17
1010 0060 15 08 30.65	0006627.42-	0001160.70	0004702.94-	0002159.03	0006362.80-	17
1010 0060 15 08 31.65	0006603.36-	0001160.70	0004775.11-	0002134.97	0006386.86-	17
1010 0060 15 08 32.65	0006603.36-	0001160.70	0004751.05-	0002159.03	0006410.91-	17
1010 0060 15 08 33.65	0006627.42-	0001160.70	0004751.05-	0002159.03	0006386.86-	17
1010 0060 15 08 34.65	0006651.47-	0001184.76	0004726.99-	0002159.03	0006362.80-	17
1010 0080 15 16 27.09	0006843.92-	0001160.70	0004919.44-	0002183.08	0006483.08-	17
1010 0080 15 16 28.09	0006843.92-	0001232.87	0004847.27-	0002183.08	0006531.19-	17
1010 0080 15 16 29.09	0006771.75-	0001232.87	0004847.27-	0002207.14	0006459.03-	17
1010 0080 15 16 30.09	0006819.87-	0001136.65	0004847.27-	0002183.08	0006459.03-	17
1010 0080 15 16 31.09	0006795.81-	0001208.81	0004871.33-	0002207.14	0006483.08-	17
1010 0090 16 37 17.85	0006170.35-	0001184.76	0004414.27-	0002014.69	0006098.19-	17
1010 0090 16 37 18.85	0006122.24-	0001232.87	0004390.21-	0002062.80	0006098.19-	17
1010 0090 16 37 19.85	0006194.41-	0001136.65	0004414.27-	0002014.69	0006098.19-	17
1010 0090 16 37 20.85	0006146.30-	0001208.81	0004390.21-	0002014.69	0006074.13-	17
1010 0090 16 37 21.85	0006170.35-	0001232.87	0004293.99-	0001942.52	0006122.24-	17
1010 0095 16 40 49.63	0006603.36-	0001256.93	0004702.94-	0002134.97	0006507.14-	17
1010 0095 16 40 50.63	0006579.31-	0001232.87	0004775.11-	0002086.86	0006459.03-	17
1010 0095 16 40 51.63	0006579.31-	0001305.04	0004799.16-	0002134.97	0006507.14-	17
1010 0095 16 40 52.63	0006603.36-	0001280.98	0004751.05-	0002110.91	0006459.03-	17
1010 0095 16 40 53.63	0006603.36-	0001305.04	0004775.11-	0002110.91	0006459.03-	17
1010 0100 16 44 33.87	0006362.80-	0001184.76	0004606.71-	0002086.86	0006314.69-	17

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	P1801528	P01618	P01628	P1801618	P1801628	GP
1010 0100 16 44 34.87	0006410.91-	0001232.87	0004654.83-	0002038.75	0006266.58-	17
1010 0100 16 44 35.87	0006410.91-	0001256.93	0004606.71-	0002110.91	0006242.52-	17
1010 0100 16 44 36.87	0006362.80-	0001208.81	0004582.66-	0002062.80	0006314.69-	17
1010 0100 16 44 37.87	0006410.91-	0001256.93	0004654.83-	0002086.86	0006290.63-	17
1010 0021 16 52 40.66	0006507.14-	0001256.93	0004751.05-	0002062.80	0006507.14-	17
1010 0021 16 52 41.66	0006507.14-	0001208.81	0004726.99-	0002038.75	0006434.97-	17
1010 0021 16 52 42.66	0006483.08-	0001280.98	0004726.99-	0002110.91	0006434.97-	17
1010 0021 16 52 43.66	0006483.08-	0001256.93	0004702.94-	0002086.86	0006434.97-	17
1010 0021 16 52 44.66	0006483.08-	0001280.98	0004702.94-	0002086.86	0006386.86-	17

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND	HR/MN/SEC	P0202B	P1802O1B	P1802O2B	P0211A	P0212A	GP
0000 0000	08 47 18.26	0000030.06-	0000024.05-	0000102.24	0000048.11	0000006.00-	19
1000 0000	12 58 53.77	0000667.55	0000000.00	0000138.31-	0001154.69	0000860.00	19
1000 0000	12 58 54.77	0000643.50	0000024.06	0000090.20-	0001154.69	0000908.11	19
1000 0000	12 58 55.77	0000715.67	0000000.00	0000114.26-	0001106.58	0000908.11	19
1000 0000	12 58 56.77	0000715.67	0000024.06	0000138.31-	0001178.74	0000908.11	19
1000 0000	12 58 57.77	0000691.61	0000000.00	0000114.26-	0001154.69	0000884.06	19
1005 0000	13 06 59.24	0001028.39	0000240.55-	0000306.70-	0001250.91	0002134.97	19
1005 0000	13 07 00.24	0000980.28	0000240.55-	0000330.76-	0001274.97	0002279.31	19
1005 0000	13 07 01.24	0001028.39	0000216.49-	0000282.65-	0001274.97	0002231.19	19
1005 0000	13 07 02.24	0001004.34	0000192.44-	0000282.65-	0001226.86	0002231.19	19
1005 0000	13 07 03.24	0001052.45	0000264.61-	0000330.76-	0001226.86	0002255.25	19
1010 0000	13 08 54.04	0001437.35	0000505.17-	0000402.93-	0001226.86	0003770.78	19
1010 0000	13 08 55.04	0001341.12	0000505.17-	0000402.93-	0001274.97	0003818.89	19
1010 0000	13 08 56.04	0001389.23	0000529.22-	0000402.93-	0001178.74	0003746.72	19
1010 0000	13 08 57.04	0001413.29	0000505.17-	0000378.87-	0001226.86	0003770.78	19
1010 0000	13 08 58.04	0001341.12	0000481.11-	0000402.93-	0001202.80	0003794.83	19
1010 0020	13 19 52.40	0001413.29	0000481.11-	0000426.98-	0001154.69	0003722.67	19
1010 0020	13 19 53.40	0001365.18	0000481.11-	0000378.87-	0001178.74	0003818.89	19
1010 0020	13 19 54.40	0001365.18	0000433.00-	0000354.82-	0001178.74	0003770.78	19
1010 0020	13 19 55.40	0001389.23	0000505.17-	0000402.93-	0001178.74	0003770.78	19
1010 0020	13 19 56.40	0001389.23	0000457.05-	0000378.87-	0001178.74	0003746.72	19
1010 0040	13 24 23.72	0001485.46	0000505.17-	0000354.82-	0001010.35	0003891.06	19
1010 0040	13 24 24.72	0001461.40	0000481.11-	0000378.87-	0001082.52	0003891.06	19
1010 0040	13 24 25.72	0001437.35	0000529.22-	0000330.76-	0001034.41	0003867.00	19
1010 0040	13 24 26.72	0001437.35	0000505.17-	0000354.82-	0001058.46	0003915.11	19
1010 0040	13 24 27.72	0001437.35	0000457.05-	0000378.87-	0001082.52	0003915.11	19
1010 0060	15 08 30.65	0001485.46	0000553.28-	0000330.76-	0000986.30	0003818.89	19
1010 0060	15 08 31.65	0001461.40	0000505.17-	0000306.70-	0001010.35	0003818.89	19
1010 0060	15 08 32.65	0001509.51	0000505.17-	0000330.76-	0001010.35	0003818.89	19
1010 0060	15 08 33.65	0001509.51	0000457.05-	0000258.59-	0001034.41	0003794.83	19
1010 0060	15 08 34.65	0001533.57	0000505.17-	0000282.65-	0000962.24	0003818.89	19
1010 0080	15 16 27.09	0001509.51	0000529.22-	0000330.76-	0000938.18	0003987.28	19
1010 0080	15 16 28.09	0001581.68	0000481.11-	0000282.65-	0000890.07	0003867.00	19
1010 0080	15 16 29.09	0001581.68	0000505.17-	0000258.59-	0000890.07	0003963.23	19
1010 0080	15 16 30.09	0001509.51	0000577.33-	0000330.76-	0000938.18	0003939.17	19
1010 0080	15 16 31.09	0001557.63	0000457.05-	0000258.59-	0000890.07	0003939.17	19
1010 0090	16 37 17.85	0001485.46	0000529.22-	0000282.65-	0000841.96	0003578.33	19
1010 0090	16 37 18.85	0001509.51	0000529.22-	0000210.48-	0000890.07	0003554.27	19
1010 0090	16 37 19.85	0001485.46	0000553.28-	0000258.59-	0000841.96	0003530.22	19
1010 0090	16 37 20.85	0001533.57	0000553.28-	0000210.48-	0000841.96	0003554.27	19
1010 0090	16 37 21.85	0001485.46	0000505.17-	0000258.59-	0000866.02	0003578.33	19
1010 0095	16 40 49.63	0001557.63	0000529.22-	0000234.54-	0000793.85	0003867.00	19
1010 0095	16 40 50.63	0001557.63	0000553.28-	0000234.54-	0000793.85	0003842.95	19
1010 0095	16 40 51.63	0001605.74	0000553.28-	0000234.54-	0000817.90	0003867.00	19
1010 0095	16 40 52.63	0001581.68	0000625.45-	0000234.54-	0000841.96	0003842.95	19
1010 0095	16 40 53.63	0001629.79	0000577.33-	0000282.65-	0000817.90	0003867.00	19
1010 0100	16 44 33.87	0001557.63	0000601.39-	0000234.54-	0000793.85	0003794.83	19

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND	HR/MN/SEC	P0202B	P1802O1B	P1802O2B	P0211A	P0212A	GP
1010 0100	16 44 34.87	0001581.68	0000553.28-	0000258.59-	0000817.90	0003722.67	19
1010 0100	16 44 35.87	0001533.57	0000553.28-	0000186.42-	0000841.96	0003770.78	19
1010 0100	16 44 36.87	0001509.51	0000601.39-	0000234.54-	0000817.90	0003770.78	19
1010 0100	16 44 37.87	0001605.74	0000553.28-	0000234.54-	0000841.96	0003818.89	19
1010 0021	16 52 40.66	0001413.29	0000625.45-	0000378.87-	0000986.30	0003602.39	19
1010 0021	16 52 41.66	0001437.35	0000625.45-	0000378.87-	0000986.30	0003602.39	19
1010 0021	16 52 42.66	0001437.35	0000649.50-	0000378.87-	0000986.30	0003578.33	19
1010 0021	16 52 43.66	0001413.29	0000673.56-	0000306.70-	0001058.46	0003578.33	19
1010 0021	16 52 44.66	0001389.23	0000625.45-	0000354.82-	0001010.35	0003602.39	19

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ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	P0221A	P0222A	P0231A	P0232A	N/A	GP
0000 0000 08 47 18.26	0000024.06	0000030.07	0000060.13-	0000006.01	0000000.00	20
1000 0000 12 58 53.77	0002165.04	0001305.04	0000613.43	0002459.73	0000168.39	20
1000 0000 12 58 54.77	0002165.04	0001377.21	0000637.48	0002411.61	0000216.50	20
1000 0000 12 58 55.77	0002116.93	0001353.15	0000637.48	0002435.67	0000120.28	20
1000 0000 12 58 56.77	0002140.98	0001280.98	0000613.43	0002459.73	0000168.39	20
1000 0000 12 58 57.77	0002189.10	0001377.21	0000589.37	0002435.67	0000144.34	20
1005 0000 13 06 59.24	0003800.85	0001810.21	0000372.87	0004263.93	0000096.22	20
1005 0000 13 07 [illegible]24	0003848.96	0001810.21	0000348.81	0004312.04	0000168.39	20
1005 0000 13 07 0[illegible]24	0003848.96	0001858.33	0000396.92	0004287.98	0000168.39	20
1005 0000 13 07 0[illegible]4	0003800.85	0001834.27	0000396.92	0004263.93	0000168.39	20
1005 0000 13 07 03.24	0003848.96	0001786.16	0000348.81	0004287.98	0000168.39	20
1010 0000 13 08 54.04	0005725.33	0002147.00	0000108.24-	0006356.80	0000168.39	20
1010 0000 13 08 55.04	0005701.27	0002147.00	0000084.19-	0006380.85	0000168.39	20
1010 0000 13 08 56.04	0005701.27	0002195.11	0000036.07-	0006380.85	0000192.45	20
1010 0000 13 08 57.04	0005677.22	0002147.00	0000084.19-	0006356.80	0000144.34	20
1010 0000 13 08 58.04	0005725.33	0002122.94	0000012.02-	0006356.80	0000192.45	20
1010 0020 13 19 52.40	0005677.22	0002122.94	0000012.02-	0006332.74	0000144.34	20
1010 0020 13 19 53.40	0005605.(5	0002147.00	0000060.13-	0006332.74	0000120.28	20
1010 0020 13 19 54.40	0005701.27	0002147.00	0000012.03	0006308.69	0000144.34	20
1010 0020 13 19 55.40	0005653.16	0002122.94	0000060.13-	0006284.63	0000168.39	20
1010 0020 13 19 56.40	0005653.16	0002098.89	0000012.03	0006308.69	0000120.28	20
1010 0040 13 24 23.72	0005845.61	0002074.83	0000036.07-	0006549.25	0000240.56	20
1010 0040 13 24 24.72	0005845.61	0002098.89	0000036.07-	0006549.25	0000168.39	20
1010 0040 13 24 25.72	0005845.61	0002147.00	0000012.02-	0006549.25	0000168.39	20
1010 0040 13 24 26.72	0005845.61	0002074.83	0000036.07-	0006501.13	0000120.28	20
1010 0040 13 24 27.72	0005869.66	0002171.05	0000012.02-	0006501.13	0000168.39	20
1010 0060 15 08 30.65	0005677.22	0002098.89	0000012.03	0006356.80	0000192.45	20
1010 0060 15 08 31.65	0005701.27	0002074.83	0000060.14	0006356.80	0000192.45	20
1010 0060 15 08 32.65	0005701.27	0002074.83	0000084.20	0006332.74	0000168.39	20
1010 0060 15 08 33.65	0005725.33	0002098.89	0000060.14	0006428.97	0000144.34	20
1010 0060 15 08 34.65	0005749.38	0002122.94	0000084.20	0006356.80	0000168.39	20
1010 0080 15 16 27.09	0005845.61	0002098.89	0000012.03	0006549.25	0000192.45	20
1010 0080 15 16 28.09	0005869.66	0002074.83	0000036.08	0006621.41	0000192.45	20
1010 0080 15 16 29.09	0005893.72	0002122.94	0000036.08	0006621.41	0000192.45	20
1010 0080 15 16 30.09	0005869.66	0002147.00	0000084.20	0006597.36	0000144.34	20
1010 0080 15 16 31.09	0005845.61	0002074.83	0000060.14	0006597.36	0000240.56	20
1010 0090 16 37 17.85	0005460.71	0002098.89	0000132.31	0006140.29	0000168.39	20
1010 0090 16 37 18.85	0005508.82	0002050.77	0000108.25	0006212.46	0000216.50	20
1010 0090 16 37 19.85	0005508.82	0002074.83	0000132.31	0006212.46	0000240.56	20
1010 0090 16 37 20.85	0005508.82	0002074.83	0000132.31	0006188.41	0000192.45	20
1010 0090 16 37 21.85	0005532.88	0002098.89	0000108.25	0006188.41	0000168.39	20
1010 0095 16 40 49.63	0005845.61	0002122.94	0000060.14	0006597.36	0000216.50	20
1010 0095 16 40 50.63	0005845.61	0002171.05	0000084.20	0006549.25	0000192.45	20
1010 0095 16 40 51.63	0005893.72	0002147.00	0000084.20	0006573.30	0000144.34	20
1010 0095 16 40 52.63	0005845.61	0002122.94	0000060.14	0006597.36	0000192.45	20
1010 0095 16 40 53.63	0005869.66	0002122.94	0000060.14	0006549.25	0000192.45	20
1010 0100 16 44 33.87	0005701.27	0002050.77	0000084.20	0006404.91	0000144.34	20

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	P0221A	P0222A	P0231A	P0232A	N/A	GP
1010 0100 16 44 34.87	0005677.22	0002050.77	0000156.34	0006428.97	0000192.45	20
1010 0100 16 44 35.87	0005749.38	0002122.94	0000108.25	0006428.97	0000216.50	20
1010 0100 16 44 36.87	0005725.33	0002122.94	0000084.20	0006404.91	0000192.45	20
1010 0100 16 44 37.87	0005773.44	0002122.94	0000084.20	0006477.08	0000192.45	20
1010 0021 16 52 40.66	0005460.71	0002171.05	0000012.03	0006188.41	0000168.39	20
1010 0021 16 52 41.66	0005484.77	0002147.00	0000012.03	0006188.41	0000192.45	20
1010 0021 16 52 42.66	0005532.88	0002171.05	0000036.07-	0006212.46	0000216.50	20
1010 0021 16 52 43.66	0005484.77	0002098.89	0000060.13-	0006212.46	0000216.50	20
1010 0021 16 52 44.66	0005532.88	0002147.00	0000012.02-	0006188.41	0000168.39	20

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND	HR/MN/SEC	P0171A	P0172A	P180172A	P180171A	P1801818	GP
0000 0000	08 47 18.26	0000060.13-	0000030.06-	0000078.17-	0000006.01	0000036.08	21
1000 0000	12 58 53.77	0001118.59-	0001665.87-	0000872.02-	0002207.13-	0002032.73	21
1000 0000	12 58 54.77	0001118.59-	0001569.64-	0000896.08-	0002207.13-	0002032.73	21
1000 0000	12 58 55.77	0001118.59-	0001665.87-	0000896.08-	0002183.07-	0002032.73	21
1000 0000	12 58 56.77	0001070.48-	0001665.87-	0000896.08-	0002110.90-	0002008.68	21
1000 0000	12 58 57.77	0001118.59-	0001665.87-	0000872.02-	0002183.07-	0001984.62	21
1005 0000	13 06 59.24	0001623.77-	0003421.96-	0002026.71-	0003217.48-	0003259.59	21
1005 0000	13 07 00.24	0001623.77-	0003157.34-	0002050.76-	0003193.42-	0003283.64	21
1005 0000	13 07 01.24	0001647.83-	0003181.40-	0002122.93-	0003265.59-	0003355.81	21
1005 0000	13 07 02.24	0001599.71-	0003205.45-	0002074.82-	0003289.65-	0003259.59	21
1005 0000	13 07 03.24	0001599.71-	0003181.40-	0002074.82-	0003241.54-	0003307.70	21
1010 0000	13 08 54.04	0002273.28-	0005057.76-	0003446.01-	0004420.28-	0004823.23	21
1010 0000	13 08 55.04	0002273.28-	0004913.43-	0003494.12-	0004420.28-	0004775.12	21
1010 0000	13 08 56.04	0002225.17-	0004913.43-	0003446.01-	0004468.39-	0004799.17	21
1010 0000	13 08 57.04	0002225.17-	0004889.37-	0003470.07-	0004420.28-	0004799.17	21
1010 0000	13 08 58.04	0002249.23-	0004913.43-	0003494.12-	0004444.34-	0004799.17	21
1010 0020	13 19 52.40	0003933.15-	0004937.48-	0003397.90-	0004901.40-	0005304.35	21
1010 0020	13 19 53.40	0003957.20-	0004865.32-	0003446.01-	0004949.51-	0005376.52	21
1010 0020	13 19 54.40	0003909.09-	0004865.32-	0003421.96-	0004925.46-	0005328.40	21
1010 0020	13 19 55.40	0003909.09-	0004841.26-	0003446.01-	0004901.40-	0005328.40	21
1010 0020	13 19 56.40	0003885.03-	0004841.26-	0003470.07-	0004901.40-	0005328.40	21
1010 0040	13 24 23.72	0008984.91-	0004769.09-	0003470.07-	0005454.69-	0005761.41	21
1010 0040	13 24 24.72	0009008.96-	0004985.60-	0003518.18-	0005382.52-	0005689.24	21
1010 0040	13 24 25.72	0008984.91-	0004985.60-	0003518.18-	0005406.58-	0005641.13	21
1010 0040	13 24 26.72	0008960.85-	0005033.71-	0003518.18-	0005382.52-	0005641.13	21
1010 0040	13 24 27.72	0008960.85-	0005009.65-	0003518.18-	0005406.58-	0005617.08	21
1010 0060	15 08 30.65	0012088.13-	0004841.26-	0003421.96-	0005743.36-	0005833.58	21
1010 0060	15 08 31.65	0012040.02-	0004841.26-	0003373.84-	0005695.25-	0005833.58	21
1010 0060	15 08 32.65	0012064.07-	0004817.20-	0003349.79-	0005695.25-	0005857.64	21
1010 0060	15 08 33.65	0012112.19-	0004793.15-	0003397.90-	0005719.30-	0005929.80	21
1010 0060	15 08 34.65	0012064.07-	0004817.20-	0003470.07-	0005719.30-	0005857.64	21
1010 0080	15 16 27.09	0015407.86-	0004985.60-	0003518.18-	0006392.87-	0006314.70	21
1010 0080	15 16 28.09	0015383.80-	0004937.48-	0003446.01-	0006416.93-	0006290.64	21
1010 0080	15 16 29.09	0015431.91-	0004865.32-	0003494.12-	0006344.76-	0006314.70	21
1010 0080	15 16 30.09	0015407.86-	0004961.54-	0003494.12-	0006368.82-	0006314.70	21
1010 0080	15 16 31.09	0015407.86-	0004937.48-	0003518.18-	0006392.87-	0006290.64	21
1010 0090	16 37 17.85	0017500.73-	0004624.76-	0003157.34-	0006537.21-	0006699.60	21
1010 0090	16 37 18.85	0017476.67-	0004672.87-	0003157.34-	0006561.26-	0006747.71	21
1010 0090	16 37 19.85	0017500.73-	0004576.64-	0003181.40-	0006537.21-	0006747.71	21
1010 0090	16 37 20.85	0017500.73-	0004648.81-	0003181.40-	0006513.15-	0006771.76	21
1010 0090	16 37 21.85	0017500.73-	0004624.76-	0003157.34-	0006585.32-	0006747.71	21
1010 0095	16 40 49.63	0018511.08-	0004985.60-	0003446.01-	0006753.71-	0007108.55	21
1010 0095	16 40 50.63	0018535.14-	0005009.65-	0003446.01-	0006825.88-	0007108.55	21
1010 0095	16 40 51.63	0018559.19-	0004961.54-	0003446.01-	0006849.94-	0007084.49	21
1010 0095	16 40 52.63	0018535.14-	0004985.60-	0003518.18-	0006825.88-	0007060.44	21
1010 0095	16 40 53.63	0018511.08-	0004889.37-	0003494.12-	0006801.82-	0007108.55	21
1010 0100	16 44 33.87	0019112.48-	0004793.15-	0003349.79-	0006970.22-	0007108.55	21

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND	HR/MN/SEC	P0171A	P0172A	P180172A	P180171A	P1801818	GP
1010 0100	16 44 34.87	0019160.59-	0004793.15-	0003397.90-	0006994.27-	0007084.49	21
1010 0100	16 44 35.87	0019136.54-	0004817.20-	0003349.79-	0006970.22-	0007132.60	21
1010 0100	16 44 36.87	0019136.54-	0004745.04-	0003421.96-	0006994.27-	0007132.60	21
1010 0100	16 44 37.87	0019136.54-	0004817.20-	0003397.90-	0007018.33-	0007108.55	21
1010 0021	16 52 40.66	0008672.18-	0005081.82-	0003397.90-	0004853.29-	0006194.42	21
1010 0021	16 52 41.66	0008648.12-	0005033.71-	0003446.01-	0004877.34-	0006194.42	21
1010 0021	16 52 42.66	0008624.07-	0004985.60-	0003421.96-	0004925.46-	0006170.36	21
1010 0021	16 52 43.66	0008624.07-	0004961.54-	0003470.07-	0004925.46-	0006194.42	21
1010 0021	16 52 44.66	0008648.12-	0004937.48-	0003470.07-	0004901.40-	0006170.36	21

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	P180182B	P180191A	P180192A	P180211A	P180212A	GP
0000	0000	08 47 18.[illegible]	0000012.03	0000120.27-	000000.00	0000024.05-	0000048.11	22
1000	0000	12 58 53.77	0001166.71-	0001347.13-	0000481.11-	0003199.44-	0002068.82	22
1000	0000	12 58 54.77	0001166.71-	0001323.07-	0000457.05-	0003175.38-	0002068.82	22
1000	0000	12 58 55.77	0001166.71-	0001323.07-	0000457.05-	0003223.49-	0002068.82	22
1000	0000	12 58 56.77	0001190.76-	0001371.18-	0000481.11-	0003223.49-	0002092.87	22
1000	0000	12 58 57.77	0001142.65-	0001371.18-	0000481.11-	0003247.55-	0002044.76	22
1005	0000	13 06 59.24	0002297.34-	0002477.76-	0001274.96-	0005629.09-	0003512.10	22
1005	0000	13 07 00.24	0002369.51-	0002477.76-	0001226.85-	0005653.15-	0003415.95	22
1005	0000	13 07 01.24	0002369.51-	0002453.70-	0001250.90-	0005605.04-	0003415.95	22
1005	0000	13 07 02.24	0002345.45-	0002501.81-	0001250.90-	0005605.04-	0003415.95	22
1005	0000	13 07 03.24	0002297.34-	0002525.87-	0001250.90-	0005653.15-	0003488.12	22
1010	0000	13 08 54.04	0003668.53-	0003415.94-	0002285.31-	0007625.74-	0004931.48	22
1010	0000	13 08 55.04	0003716.64-	0003391.88-	0002309.37-	0007625.74-	0004907.42	22
1010	0000	13 08 56.04	0003764.75-	0003295.66-	0002213.14-	0007625.74-	0004907.42	22
1010	0000	13 08 57.04	0003812.87-	0003343.77-	0002237.20-	0007601.69-	0004883.37	22
1010	0000	13 08 58.04	0003716.64-	0003367.83-	0002213.14-	0007577.63-	0004883.37	22
1010	0020	13 19 52.40	0003692.59-	0003343.77-	0002237.20-	0007625.74-	0004907.42	22
1010	0020	13 19 53.40	0003692.59-	0003367.83-	0002189.09-	0007577.63-	0004835.26	22
1010	0020	13 19 54.40	0003692.59-	0003343.77-	0002189.09-	0007529.52-	0004859.31	22
1010	0020	13 19 55.40	0003692.59-	0003367.83-	0002237.20-	0007529.52-	0004859.31	22
1010	0020	13 19 56.40	0003668.53-	0003343.77-	0002189.09-	0007553.57-	0004931.48	22
1010	0040	13 24 23.72	0003692.59-	0003319.72-	0002213.14-	0007673.85-	0005075.82	22
1010	0040	13 24 24.72	0003812.87-	0003367.83-	0002213.14-	0007746.02-	0005051.76	22
1010	0040	13 24 25.72	0003764.75-	0003343.77-	0002285.31-	0007697.91-	0004979.59	22
1010	0040	13 24 26.72	0003812.87-	0003343.77-	0002261.25-	0007721.97-	0005051.76	22
1010	0040	13 24 27.72	0003788.81-	0003415.94-	0002285.31-	0007746.02-	0005003.65	22
1010	0060	15 08 30.65	0003668.53-	0003319.72-	0002285.31-	0007697.91-	0004907.42	22
1010	0060	15 08 31.65	0003596.36-	0003319.72-	0002189.09-	0007770.08-	0004907.42	22
1010	0060	15 08 32.65	0003668.53-	0003295.66-	0002189.09-	0007721.97-	0004931.48	22
1010	0060	15 08 33.65	0003644.47-	0003295.66-	0002237.20-	0007649.80-	0004883.37	22
1010	0060	15 08 34.65	0003620.42-	0003367.83-	0002237.20-	0007697.91-	0004835.26	22
1010	0080	15 16 27.09	0003764.75-	0003367.83-	0002309.37-	0007914.41-	0005027.70	22
1010	0080	15 16 28.09	0003764.75-	0003343.77-	0002309.37-	0007890.36-	0004979.59	22
1010	0080	15 16 29.09	0003740.70-	0003367.83-	0002309.37-	0007890.36-	0005051.76	22
1010	0080	15 16 30.09	0003740.70-	0003343.77-	0002309.37-	0007962.53-	0005075.82	22
1010	0080	15 16 31.09	0003716.64-	0003343.77-	0002357.48-	0007866.30-	0005027.70	22
1010	0090	16 37 17.85	0003476.08-	0003199.44-	0002165.03-	0007577.63-	0004739.03	22
1010	0090	16 37 18.85	0003476.08-	0003175.38-	0002092.86-	0007529.52-	0004739.03	22
1010	0090	16 37 19.85	0003476.08-	0003199.44-	0002068.81-	0007577.63-	0004570.64	22
1010	0090	16 37 20.85	0003476.08-	0003[illegible]	0002116.92-	0007529.52-	0004739.03	22
1010	0090	16 37 21.85	0003427.97-	0003[illegible]	0002116.92-	0007529.52-	0004739.03	22
1010	0095	16 40 49.63	0003620.42-	0003[illegible]	0002285.31-	0007914.41-	0005003.65	22
1010	0095	16 40 50.63	0003668.53-	0003319.72-	0002285.31-	0007890.36-	0004955.54	22
1010	0095	16 40 51.63	0003668.53-	0003247.55-	0002285.31-	0007842.25-	0005027.70	22
1010	0095	16 40 52.63	0003668.53-	0003343.77-	0002285.31-	0007890.36-	0005003.65	22
1010	0095	16 40 53.63	0003716.64-	0003343.77-	0002213.14-	0007866.30-	0005003.65	22
1010	0100	16 44 33.87	0003524.19-	0003223.49-	0002189.09-	0007866.30-	0004907.42	22

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	P180182B	P180191A	P180192A	P180211A	P180212A	GP
1010	0100	16 44 34.87	0003596.36-	0003247.55-	0002213.14-	0007770.08-	0004907.42	22
1010	0100	16 44 35.87	0003596.36-	0003247.55-	0002189.09-	0007770.08-	0004883.37	22
1010	0100	16 44 36.87	0003548.25-	0003223.49-	0002213.14-	0007818.19-	0004883.37	22
1010	0100	16 44 37.87	0003572.31-	0003223.49-	0002189.09-	0007746.02-	0004979.59	22
1010	0021	16 52 40.66	0003548.25-	0003271.61-	0002285.31-	0007577.63-	0004739.03	22
1010	0021	16 52 41.66	0003596.36-	0003271.61-	0002285.31-	0007601.69-	0004787.14	22
1010	0021	16 52 42.66	0003620.42-	0003271.61-	0002261.25-	0007577.63-	0004763.09	22
1010	0021	16 52 43.66	0003620.42-	0003247.55-	0002309.37-	0007553.57-	0004763.09	22
1010	0021	16 52 44.66	0003572.31-	0003295.66-	0002237.20-	0007553.57-	0004811.20	22

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	P180221A	P180222A	P180231A	P180232A	R169243A	GP
0000 0000 08 47 18.26	0000042.10	0000018.04	0000000.00	0000000.00	0000018.03-	23
1000 0000 12 58 53.77	0002026.71-	0001557.63	0005725.32-	0001491.47	0001545.60	23
1000 0000 12 58 54.77	0002050.76-	0001581.68	0005773.43-	0001467.42	0001545.60	23
1000 0000 12 58 55.77	0002074.82-	0001557.63	0005821.54-	0001443.36	0001545.60	23
1000 0000 12 58 56.77	0002026.71-	0001533.57	0005797.49-	0001539.58	0001545.60	23
1000 0000 12 58 57.77	0002050.76-	0001533.57	0005749.37-	0001491.47	0001569.65	23
1005 0000 13 06 59.24	0003542.24-	0002904.76	0011643.09-	0002910.78	0003085.18	23
1005 0000 13 07 00.24	0003614.40-	0002904.76	0011643.09-	0002886.72	0003061.13	23
1005 0000 13 07 01.24	0003566.29-	0002904.76	0011643.09	0002886.72	0003037.07	23
1005 0000 13 07 02.24	0003590.35-	0002904.76	0011643.09-	0002838.61	0003037.07	23
1005 0000 13 07 03.24	0003566.29-	0002904.76	0011643.09-	0002886.72	0003037.07	23
1010 0000 13 08 54.04	0004937.48-	0004444.35	0018017.93-	0004522.53	0004769.10	23
1010 0000 13 08 55.04	0004961.54-	0004396.23	0018090.10-	0004546.58	0004793.16	23
1010 0000 13 08 56.04	0004889.37-	0004468.40	0017993.88-	0004570.64	0004817.21	23
1010 0000 13 08 57.04	0004913.43-	0004420.29	0018017.93-	0004546.58	0004793.16	23
1010 0000 13 08 58.04	0004889.37-	0004396.23	0017969.82-	0004570.64	0004769.10	23
1010 0020 13 19 52.40	0004889.37-	0004275.95	0017825.49-	0004546.58	0004720.99	23
1010 0020 13 19 53.40	0004961.54-	0004348.12	0017801.43-	0004546.58	0004745.05	23
1010 0020 13 19 54.40	0004841.26-	0004275.95	0017801.43-	0004546.58	0004745.05	23
1010 0020 13 19 55.40	0004889.37-	0004468.40	0017801.43-	0004522.53	0004672.88	23
1010 0020 13 19 56.40	0004889.37-	0004396.23	0017753.32-	0004570.64	0004745.05	23
1010 0040 13 24 23.72	0005081.82-	0004612.74	0018258.49-	0004763.09	0004937.49	23
1010 0040 13 24 24.72	0004985.60-	0004564.63	0018210.38-	0004714.98	0004937.49	23
1010 0040 13 24 25.72	0004937.48-	0004636.79	0018234.44-	0004714.98	0004865.33	23
1010 0040 13 24 26.72	0005057.76-	0004660.85	0018258.49-	0004714.98	0004937.49	23
1010 0040 13 24 27.72	0004961.54-	0004612.74	0018162.27-	0004763.09	0004937.49	23
1010 0060 15 08 30.65	0004985.60-	0004516.51	0017825.49-	0004690.92	0004769.10	23
1010 0060 15 08 31.65	0004985.60-	0004516.51	0017825.49-	0004690.92	0004745.05	23
1010 0060 15 08 32.65	0004985.60-	0004492.46	0017801.43-	0004690.92	0004817.21	23
1010 0060 15 08 33.65	0004913.43-	0004516.51	0017777.37-	0004666.86	0004745.05	23
1010 0060 15 08 34.65	0004985.60-	0004516.51	0017825.49-	0004714.98	0004769.10	23
1010 0080 15 16 27.09	0005105.88-	0004636.79	0018306.61-	0004835.26	0004937.49	23
1010 0080 15 16 28.09	0005057.76-	0004660.85	0018282.55-	0004835.26	0004913.44	23
1010 0080 15 16 29.09	0005057.76-	0004781.13	0018306.61-	0004883.37	0004937.49	23
1010 0080 15 16 30.09	0005057.76-	0004781.13	0018282.55-	0004835.26	0004937.49	23
1010 0080 15 16 31.09	0005033.71-	0004684.91	0018282.55-	0004883.37	0004937.49	23
1010 0090 16 37 17.85	0004817.20-	0004348.12	0017103.81-	0004450.36	0004552.60	23
1010 0090 16 37 18.85	0004817.20-	0004396.23	0017103.81-	0004450.36	0004576.65	23
1010 0090 16 37 19.85	0004913.43-	0004372.18	0017103.81-	0004498.47	0004576.65	23
1010 0090 16 37 20.85	0004769.09-	0004396.23	0017055.69-	0004474.42	0004576.65	23
1010 0090 16 37 21.85	0004793.15-	0004420.29	0017055.69-	0004378.19	0004552.60	23
1010 0095 16 40 49.63	0004985.60-	0004684.91	0018258.49-	0004787.14	0004809.38	23
1010 0095 16 40 50.63	0005057.76-	0004708.96	0018282.55-	0004811.20	0004937.49	23
1010 0095 16 40 51.63	0005081.82-	0004660.85	0018258.49-	0004787.14	0004937.49	23
1010 0095 16 40 52.63	0005057.76-	0004684.91	0018258.49-	0004811.20	0004913.44	23
1010 0095 16 40 53.63	0005033.71-	0004660.85	0018234.44-	0004835.26	0004937.49	23
1010 0100 16 44 33.87	0004937.48-	0004564.63	0017729.26-	0004618.75	0004745.05	23

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	P180221A	P180222A	P180231A	P180232A	R169243A	GP
1010 0100 16 44 34.87	0004937.48-	0004564.63	0017729.26-	0004618.75	0004745.05	23
1010 0100 16 44 35.87	0004961.54-	0004564.63	0017777.37-	0004666.86	0004793.16	23
1010 0100 16 44 36.87	0004985.60-	0004540.57	0017801.43-	0004642.81	0004745.05	23
1010 0100 16 44 37.87	0004985.60-	0004564.63	0017849.54-	0004690.92	0004793.16	23
1010 0021 16 52 40.66	0004865.32-	0004275.95	0017753.32-	0004450.36	0004648.82	23
1010 0021 16 52 41.66	0004913.43-	0004348.12	0017777.37-	0004426.30	0004600.71	23
1010 0021 16 52 42.66	0004937.48-	0004348.12	0017705.21-	0004426.30	0004672.88	23
1010 0021 16 52 43.66	0004841.26-	0004348.12	0017729.26-	0004450.36	0004648.82	23
1010 0021 16 52 44.66	0004841.26-	0004372.18	0017729.26-	0004498.47	0004648.82	23

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	R169242A	R169241A	L15626A	L16228A	L16228B	GP
0000	0000	08 47 18.26	0000042.09-	0000048.10-	0000024.05-	0000024.06	0000038.03-	24
1000	0000	12 58 53.77	0001088.53	0000962.24	0000986.30	0000481.11-	0000847.97	24
1000	0000	12 58 54.77	0001089.53	0000986.30	0000962.24	0000577.33-	0000847.97	24
1000	0000	12 58 55.77	0001160.70	0000986.30	0000986.30	0000505.17-	0000847.97	24
1000	0000	12 58 56.77	0001112.59	0000986.30	0000986.30	0000529.22-	0000847.97	24
1000	0000	12 58 57.77	0001088.53	0000986.30	0000986.30	0000529.22-	0000823.92	24
1005	0000	13 06 59.24	0001810.21	0001419.30	0001467.42	0008082.81-	0012418.91	24
1005	0000	13 07 00.24	0001810.21	0001467.42	0001443.36	0008106.86-	0012394.85	24
1005	0000	13 07 01.24	0001858.33	0001467.42	0001443.36	0008082.81-	0012394.85	24
1005	0000	13 07 02.24	0001858.33	0001419.30	0001443.36	0008130.92-	0012394.85	24
1005	0000	13 07 03.24	0001834.27	0001467.42	0001467.42	0008082.81-	0012346.74	24
1010	0000	13 08 54.04	0002676.23	0001900.42	0001924.48	0016430.24-	0025000.20	24
1010	0000	13 08 55.04	0002652.17	0001900.42	0001948.54	0016406.18-	0024783.69	24
1010	0000	13 08 56.04	0002652.17	0001876.37	0001924.48	0016382.13-	0024783.69	24
1010	0000	13 08 57.04	0002676.23	0001852.31	0001924.48	0016382.13-	0024783.69	24
1010	0000	13 08 58.04	0002604.06	0001900.42	0001900.42	0016309.96-	0024783.69	24
1010	0020	13 19 52.40	0002628.12	0001780.14	0001852.31	0016334.01-	0024639.36	24
1010	0020	13 19 53.40	0002604.06	0001876.37	0001876.37	0016309.96-	0024687.47	24
1010	0020	13 19 54.40	0002604.06	0001852.31	0001852.31	0016285.90-	0024639.36	24
1010	0020	13 19 55.40	0002628.12	0001876.37	0001876.37	0016285.90-	0024663.41	24
1010	0020	13 19 56.40	0002604.06	0001804.20	0001876.37	0016309.96-	0024639.36	24
1010	0040	13 24 23.72	0002700.29	0001876.37	0001948.54	0017151.92-	0025866.21	24
1010	0040	13 24 24.72	0002652.17	0001852.31	0001900.42	0017127.86-	0025818.10	24
1010	0040	13 24 25.72	0002676.23	0001876.37	0001900.42	0017127.86-	0025866.21	24
1010	0040	13 24 26.72	0002652.17	0001852.31	0001924.48	0017151.92-	0025769.99	24
1010	0040	13 24 27.72	0002652.17	0001852.31	0001876.37	0017127.86-	0025818.10	24
1010	0060	15 08 30.65	0002459.73	0001780.14	0001828.26	0016502.41-	0024519.08	24
1010	0060	15 08 31.65	0002507.84	0001756.09	0001828.26	0016478.35-	0024519.08	24
1010	0060	15 08 32.65	0002483.78	0001780.14	0001828.26	0016478.35-	0024495.02	24
1010	0060	15 08 33.65	0002483.78	0001804.20	0001804.20	0016478.35-	0024470.97	24
1010	0060	15 08 34.65	0002435.67	0001780.14	0001828.26	0016478.35-	0024519.08	24
1010	0080	15 16 27.09	0002555.95	0001780.14	0001852.31	0017224.09-	0025529.43	24
1010	0080	15 16 28.09	0002555.95	0001732.03	0001780.14	0017175.97-	0025433.21	24
1010	0080	15 16 29.09	0002555.95	0001804.20	0001828.26	0017224.09-	0025481.32	24
1010	0080	15 16 30.09	0002507.84	0001780.14	0001780.14	0017175.97-	0025481.32	24
1010	0080	15 16 31.09	0002531.89	0001756.09	0001828.26	0017151.92-	0025481.32	24
1010	0090	16 37 17.85	0002267.28	0001683.92	0001756.09	0015492.05-	0027790.69	24
1010	0090	16 37 18.85	0002267.28	0001659.86	0001732.03	0015588.28-	0027838.81	24
1010	0090	16 37 19.85	0002291.33	0001683.92	0001707.98	0015540.17-	0027742.58	24
1010	0090	16 37 20.85	0002315.39	0001707.98	0001756.09	0015516.11-	0027742.58	24
1010	0090	16 37 21.85	0002291.33	0001659.86	0001707.98	0015516.11-	0027742.58	24
1010	0095	16 40 49.63	0002435.67	0001780.14	0001852.31	0017127.86-	0030292.52	24
1010	0095	16 40 50.63	0002387.56	0001732.03	0001780.14	0017175.97-	0030292.52	24
1010	0095	16 40 51.63	0002435.67	0001804.20	0001780.14	0017175.97-	0030292.52	24
1010	0095	16 40 52.63	0002459.73	0001780.14	0001780.14	0017151.92-	0030244.41	24
1010	0095	16 40 53.63	0002411.61	0001756.09	0001804.20	0017127.86-	0030292.52	24
1010	0100	16 44 33.87	0002387.56	0001707.98	0001732.03	0016454.29-	0028945.38	24

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	R169242A	R169241A	L15626A	L16228A	L16228B	GP
1010	0100	16 44 34.87	0002339.45	0001707.98	0001707.98	0016526.46-	0028849.16	24
1010	0100	16 44 35.87	0002363.50	0001756.09	0001756.09	0016574.57-	0028993.49	24
1010	0100	16 44 36.87	0002363.50	0001756.09	0001780.14	0016598.63-	0029089.72	24
1010	0100	16 44 37.87	0002339.45	0001732.03	0001780.14	0016646.74-	0029185.94	24
1010	0021	16 52 40.66	0002459.73	0001876.37	0001876.37	0015347.72-	0028175.59	24
1010	0021	16 52 41.66	0002459.73	0001852.31	0001900.42	0015347.72-	0028127.48	24
1010	0021	16 52 42.66	0002459.73	0001876.37	0001852.31	0015251.49-	0028127.48	24
1010	0021	16 52 43.66	0002411.61	0001876.37	0001852.31	0015347.72-	0028127.48	24
1010	0021	16 52 44.66	0002459.73	0001852.31	0001876.37	0015347.72-	0028223.70	24

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	P1	P2	N/A	N/A	N/A	GP
0000 0000 08 47 18.26	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1000 0000 12 58 53.77	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1000 0000 12 58 54.77	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1000 0000 12 58 55.77	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1000 0000 12 58 56.77	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1000 0000 12 58 57.77	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1005 0000 13 06 59.24	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1005 0000 13 07 00.24	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1005 0000 13 07 01.24	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1005 0000 13 07 02.24	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1005 0000 13 07 03.24	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0000 13 08 54.04	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0000 13 08 55.04	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0000 13 08 56.04	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0000 13 08 57.04	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0000 13 08 58.04	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0020 13 19 52.40	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0020 13 19 53.40	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0020 13 19 54.40	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0020 13 19 55.40	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0020 13 19 56.40	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0040 13 24 23.72	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0040 13 24 24.72	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0040 13 24 25.72	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0040 13 24 26.72	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0040 13 24 27.72	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0060 15 08 30.65	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0060 15 08 31.65	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0060 15 08 32.65	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0060 15 08 33.65	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0060 15 08 34.65	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0080 15 16 27.09	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0080 15 16 28.09	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0080 15 16 29.09	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0080 15 16 30.09	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0080 15 16 31.09	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0090 16 37 17.85	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0090 16 37 18.85	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0090 16 37 19.85	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0090 16 37 20.85	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0090 16 37 21.85	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0095 16 40 49.63	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0095 16 40 50.63	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0095 16 40 51.63	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0095 16 40 52.63	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0095 16 40 53.63	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0100 16 44 33.87	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	P1	P2	N/A	N/A	N/A	GP
1010 0100 16 44 34.87	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0100 16 44 35.87	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0100 16 44 36.87	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0100 16 44 37.87	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0021 16 52 40.66	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0021 16 52 41.66	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0021 16 52 42.66	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0021 16 52 43.66	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
1010 0021 16 52 44.66	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND	HR/MN/SEC	R1692418	R1692428	R1692438	R349241A	R349242A	GP
0000 0000	08 47 19.26	0000042.10	0000012.02-	0000012.02-	0000060.13-	0000000.00	31
1000 0000	12 58 53.71	0001437.35	0002537.91	0002850.64	0001094.55	0001034.41	31
1000 0000	12 58 54.77	0001485.46	0002658.19	0002874.69	0001142.66	0001058.46	31
1000 0000	12 58 55.77	0001437.35	0002561.96	0002898.75	0001118.60	0001058.46	31
1000 0000	12 58 56.77	0001533.57	0002634.13	0002874.69	0001142.66	0001082.52	31
1000 0000	12 58 57.77	0001461.40	0002586.02	0002850.64	0001094.55	0001082.52	31
1005 0000	13 06 59.24	0002351.47	0003957.21	0004582.67	0001503.50	0001876.37	31
1005 0000	13 07 00.24	0002327.42	0003933.16	0004582.67	0001455.39	0001852.31	31
1005 0000	13 07 01.24	0002351.47	0003957.21	0004582.67	0001455.39	0001876.37	31
1005 0000	13 07 02.24	0002327.42	0003957.21	0004630.78	0001479.44	0001852.31	31
1005 0000	13 07 03.24	0002375.53	0003981.27	0004558.61	0001503.50	0001900.42	31
1010 0000	13 08 54.04	0003433.99	0005376.52	0006603.37	0001840.28	0002790.50	31
1010 0000	13 08 55.04	0003433.99	0005376.52	0006579.32	0001816.23	0002790.50	31
1010 0000	13 08 56.04	0003482.11	0005424.63	0006603.37	0001816.23	0002838.61	31
1010 0000	13 08 57.04	0003433.99	0005376.52	0006603.37	0001864.34	0002886.72	31
1010 0000	13 08 58.04	0003409.94	0005424.63	0006579.32	0001840.28	0002838.61	31
1010 0020	13 19 52.40	0003409.94	0005328.40	0006483.09	0001744.06	0002742.38	31
1010 0020	13 19 53.40	0003361.83	0005328.40	0006531.20	0001720.00	0002742.38	31
1010 0020	13 19 54.40	0003361.83	0005376.52	0006507.15	0001840.28	0002766.44	31
1010 0020	13 19 55.40	0003361.83	0005352.46	0006434.98	0001744.06	0002742.38	31
1010 0020	13 19 56.40	0003385.88	0005328.40	0006507.15	0001792.17	0002766.44	31
1010 0040	13 24 23.72	0003433.99	0005448.68	0006723.65	0001720.00	0002790.50	31
1010 0040	13 24 24.72	0003433.99	0005424.63	0006651.48	0001720.00	0002814.55	31
1010 0040	13 24 25.72	0003433.99	0005472.74	0006699.60	0001744.06	0002766.44	31
1010 0040	13 24 26.72	0003409.94	0005448.68	0006747.71	0001695.95	0002742.38	31
1010 0040	13 24 27.72	0003433.99	0005448.68	0006747.71	0001720.00	0002814.55	31
1010 0060	15 08 30.65	0003313.71	0005304.35	0006603.37	0001695.95	0002670.22	31
1010 0060	15 08 31.65	0003361.83	0005328.40	0006627.43	0001720.00	0002670.22	31
1010 0060	15 08 32.65	0003313.71	0005352.46	0006579.32	0001720.00	0002694.27	31
1010 0060	15 08 33.65	0003361.83	0005328.40	0006603.37	0001695.95	0002718.33	31
1010 0060	15 08 34.65	0003313.71	0005304.35	0006555.26	0001695.95	0002694.27	31
1010 0080	15 16 27.09	0003433.99	0005424.63	0006795.82	0001671.89	0002694.27	31
1010 0080	15 16 28.09	0003458.05	0005448.68	0006747.71	0001647.84	0002742.38	31
1010 0080	15 16 29.09	0003385.88	0005472.74	0006795.82	0001671.89	0002790.50	31
1010 0080	15 16 30.09	0003361.83	0005448.68	0006747.71	0001623.78	0002742.38	31
1010 0080	15 16 31.09	0003458.05	0005448.68	0006747.71	0001671.89	0002718.33	31
1010 0090	16 37 17.85	0003121.27	0005160.01	0006386.87	0001623.78	0002549.94	31
1010 0090	16 37 18.85	0003145.32	0005160.01	0006386.87	0001599.72	0002573.99	31
1010 0090	16 37 19.85	0003073.15	0005208.12	0006386.87	0001599.72	0002622.10	31
1010 0090	16 37 20.85	0003121.27	0005135.96	0006386.87	0001599.72	0002549.94	31
1010 0090	16 37 21.85	0003145.32	0005135.96	0006386.87	0001623.78	0002573.99	31
1010 0095	16 40 49.63	0003313.71	0005448.68	0006795.82	0001671.89	0002718.33	31
1010 0095	16 40 50.63	0003361.83	0005424.63	0006771.76	0001671.89	0002670.22	31
1010 0095	16 40 51.63	0003361.83	0005424.63	0006795.82	0001671.89	0002718.33	31
1010 0095	16 40 52.63	0003361.83	0005424.63	0006747.71	0001695.95	0002766.44	31
1010 0095	16 40 53.63	0003385.88	0005448.68	0006795.82	0001720.00	0002694.27	31
1010 0100	16 44 33.87	0003313.71	0005304.35	0006531.20	0001599.72	0002670.22	31

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND	HR/MN/SEC	R1692418	R1692428	R1692438	R349241A	R349242A	GP
1010 0100	16 44 34.87	0003289.66	0005280.29	0006555.26	0001551.61	0002694.27	31
1010 0100	16 44 35.87	0003289.66	0005352.46	0006579.32	0001647.84	0002646.16	31
1010 0100	16 44 36.87	0003265.60	0005352.46	0006579.32	0001671.89	0002670.22	31
1010 0100	16 44 37.87	0003313.71	0005376.52	0006603.37	0001647.84	0002670.22	31
1010 0021	16 52 40.66	0003337.77	0005304.35	0006386.87	0001864.34	0002742.38	31
1010 0021	16 52 41.66	0003409.94	0005256.24	0006386.87	0001864.34	0002742.38	31
1010 0021	16 52 42.66	0003313.71	0005256.24	0006386.87	0001888.40	0002766.44	31
1010 0021	16 52 43.66	0003313.71	0005280.29	0006386.87	0001864.34	0002742.38	31
1010 0021	16 52 44.66	0003337.77	0005280.29	0006410.92	0001864.34	0002766.44	31

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	R349243A	R349241B	R349242B	R349243B	L1562581	GP
0000 0000 08 47 18.26	0000018.03-	0000036.07-	0000030.06-	0000078.17-	0000012.02-	32
1000 0000 12 58 53.77	0001521.54	0000805.88	0001750.07	0002447.70	0001407.27-	32
1000 0000 12 58 54.77	0001521.54	0000853.99	0001726.02	0002471.75	0001383.21-	32
1000 0000 12 58 55.77	0001593.71	0000829.93	0001726.02	0002351.47	0001383.21-	32
1000 0000 12 58 56.77	0001545.60	0000829.93	0001822.24	0002495.81	0001455.38-	32
1000 0000 12 58 57.77	0001545.60	0000853.99	0001750.07	0002447.70	0001407.27-	32
1005 0000 13 06 59.24	0002868.68	0000926.16	0002207.14	0004275.95	0002417.62-	32
1005 0000 13 07 00.24	0002892.73	0000950.21	0002183.08	0004203.79	0002393.56-	32
1005 0000 13 07 01.24	0002820.57	0000926.16	0002231.19	0004227.84	0002369.51-	32
1005 0000 13 07 02.24	0002892.73	0000998.32	0002183.08	0004251.90	0002369.51-	32
1005 0000 13 07 03.24	0002868.68	0000974.27	0002207.14	0004203.79	0002345.45-	32
1010 0000 13 08 54.04	0004432.32	0001118.60	0002616.09	0006272.60	0003379.86-	32
1010 0000 13 08 55.04	0004432.32	0001190.77	0002616.09	0006272.60	0003427.97-	32
1010 0000 13 08 56.04	0004432.32	0001166.72	0002712.31	0006320.71	0003403.91-	32
1010 0000 13 08 57.04	0004432.32	0001142.66	0002688.26	0006272.60	0003403.91-	32
1010 0000 13 08 58.04	0004456.37	0001166.72	0002640.15	0006248.55	0003379.86-	32
1010 0020 13 19 52.40	0004360.15	0001094.55	0002640.15	0006272.60	0003403.91-	32
1010 0020 13 19 53.40	0004408.26	0001070.49	0002664.20	0006224.49	0003403.91-	32
1010 0020 13 19 54.40	0004408.26	0001046.44	0002640.15	0006224.49	0003355.80-	32
1010 0020 13 19 55.40	0004384.21	0001118.60	0002688.26	0006248.55	0003379.86-	32
1010 0020 13 19 56.40	0004432.32	0001070.49	0002640.15	0006248.55	0003403.91-	32
1010 0040 13 24 23.72	0004600.71	0000998.32	0002616.09	0006489.11	0003403.91-	32
1010 0040 13 24 24.72	0004528.54	0000998.32	0002640.15	0006513.16	0003452.03-	32
1010 0040 13 24 25.72	0004528.54	0001046.44	0002640.15	0006440.99	0003403.91-	32
1010 0040 13 24 26.72	0004576.65	0001022.38	0002640.15	0006416.94	0003452.03-	32
1010 0040 13 24 27.72	0004528.54	0001046.44	0002616.09	0006465.05	0003427.97-	32
1010 0060 15 08 30.65	0004384.21	0000950.21	0002640.15	0006344.77	0003403.91-	32
1010 0060 15 08 31.65	0004360.15	0000902.10	0002736.37	0006296.66	0003403.91-	32
1010 0060 15 08 32.65	0004408.26	0000902.10	0002664.20	0006296.66	0003379.86-	32
1010 0060 15 08 33.65	0004432.32	0000998.32	0002760.43	0006344.77	0003355.80-	32
1010 0060 15 08 34.65	0004432.32	0000950.21	0002664.20	0006344.77	0003403.91-	32
1010 0080 15 16 27.09	0004552.60	0000926.16	0002760.43	0006465.05	0003476.08-	32
1010 0080 15 16 28.09	0004600.71	0000902.10	0002688.26	0006561.27	0003500.14-	32
1010 0080 15 16 29.09	0004600.71	0000902.10	0002688.26	0006537.22	0003476.08-	32
1010 0080 15 16 30.09	0004552.60	0000878.04	0002712.31	0006489.11	0003452.03-	32
1010 0080 15 16 31.09	0004552.60	0000926.16	0002664.20	0006561.27	0003500.14-	32
1010 0090 16 37 17.85	0004239.87	0000829.93	0002616.09	0006176.38	0003203.63-	32
1010 0090 16 37 18.85	0004312.04	0000853.99	0002616.09	0006128.27	0003259.58-	32
1010 0090 16 37 19.85	0004287.98	0000853.99	0002567.98	0006224.49	0003307.69-	32
1010 0090 16 37 20.85	0004263.93	0000853.99	0002592.03	0006176.38	0003259.58-	32
1010 0090 16 37 21.85	0004287.98	0000878.04	0002616.09	0006176.38	0003235.52-	32
1010 0095 16 40 49.63	0004600.71	0000878.04	0002736.37	0006585.33	0003524.19-	32
1010 0095 16 40 50.63	0004528.54	0000853.99	0002688.26	0006585.33	0003427.97-	32
1010 0095 16 40 51.63	0004432.32	0000853.99	0002736.37	0006537.22	0003476.08-	32
1010 0095 16 40 52.63	0004528.54	0000853.99	0002688.26	0006585.33	0003476.08-	32
1010 0095 16 40 53.63	0004576.65	0000853.99	0002712.31	0006585.33	0003476.08-	32
1010 0100 16 44 33.87	0004456.37	0000781.82	0002664.20	0006465.05	0003427.97-	32

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND HR/MN/SEC	R349243A	R349241B	R349242B	R349243B	L1562581	GP
1010 0100 16 44 34.87	0004456.37	0000829.93	0002640.15	0006392.88	0003355.80-	32
1010 0100 16 44 35.87	0004456.37	0000829.93	0002712.31	0006416.94	0003355.80-	32
1010 0100 16 44 36.87	0004432.32	0000829.93	0002616.09	0006440.99	0003355.80-	32
1010 0100 16 44 37.87	0004456.37	0000853.99	0002640.15	0006465.05	0003403.91-	32
1010 0021 16 52 40.66	0004287.98	0001022.38	0002760.43	0006176.38	0003355.80-	32
1010 0021 16 52 41.66	0004287.98	0001046.44	0002760.43	0006224.49	0003331.75-	32
1010 0021 16 52 42.66	0004263.93	0001022.38	0002760.43	0006200.43	0003403.91-	32
1010 0021 16 52 43.66	0004384.21	0001046.44	0002808.54	0006200.43	0003379.86-	32
1010 0021 16 52 44.66	0004287.98	0001046.44	0002808.54	0006248.55	0003355.80-	32

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	L15625B2	L33625B1	L33625B2	L15626B	L33626A	GP
0000	0000	08 47 18.26	0000024.06	0000012.03	0000030.06-	0000030.06-	0000054.13	33
1000	0000	12 58 53.77	0000914.12-	0003091.19-	0002796.50-	0000787.83	0002339.45	33
1000	0000	12 58 54.77	0000938.17-	0003139.30-	0002796.50-	0000715.67	0002363.50	33
1000	0000	12 58 55.77	0000890.06-	0003115.24-	0002844.61-	0000763.78	0002339.45	33
1000	0000	12 58 56.77	0000914.12-	0003115.24-	0002820.56-	0000739.72	0002411.61	33
1000	0000	12 58 57.77	0000866.01-	0003091.19-	0002820.56-	0000763.78	0002363.50	33
1005	0000	13 06 59.24	0001876.36-	0004197.76-	0003999.30-	0001100.56	0002772.45	33
1005	0000	13 07 00.24	0001876.36-	0004197.76-	0003975.24-	0001100.56	0002796.51	33
1005	0000	13 07 01.24	0001828.25-	0004342.10-	0003951.19-	0001148.67	0002772.45	33
1005	0000	13 07 02.24	0001876.36-	0004366.15-	0004047.41-	0001076.51	0002820.57	33
1005	0000	13 07 03.24	0001852.30-	0004366.15-	0003975.24-	0001124.62	0002844.62	33
1010	0000	13 08 54.04	0002718.32-	0005087.83-	0004769.09-	0001533.57	0003421.97	33
1010	0000	13 08 55.04	0002790.49-	0005087.83-	0004769.09-	0001509.51	0003421.97	33
1010	0000	13 08 56.04	0002790.49-	0005063.78-	0004720.98-	0001557.63	0003446.02	33
1010	0000	13 08 57.04	0002814.54-	0005111.89-	0004769.09-	0001557.63	0003421.97	33
1010	0000	13 08 58.04	0002742.37-	0005087.83-	0004696.92-	0001533.57	0003470.08	33
1010	0020	13 19 52.40	0002742.37-	0005063.78-	0004720.98-	0001509.51	0003301.69	33
1010	0020	13 19 53.40	0002766.43-	0005135.95-	0004745.04-	0001461.40	0003277.63	33
1010	0020	13 19 54.40	0002766.43-	0005087.83-	0004745.04-	0001485.46	0003277.63	33
1010	0020	13 19 55.40	0002790.49-	0005111.89-	0004769.09-	0001509.51	0003349.80	33
1010	0020	13 19 56.40	0002742.37-	0005063.78-	0004745.04-	0001557.63	0003301.69	33
1010	0040	13 24 23.72	0002814.54-	0005160.00-	0004817.20-	0001461.40	0003301.69	33
1010	0040	13 24 24.72	0002838.60-	0005135.95-	0004817.20-	0001485.46	0003277.63	33
1010	0040	13 24 25.72	0002814.54-	0005135.95-	0004793.15-	0001509.51	0003253.57	33
1010	0040	13 24 26.72	0002814.54-	0005184.06-	0004817.20-	0001485.46	0003229.52	33
1010	0040	13 24 27.72	0002814.54-	0005184.06-	0004769.09-	0001485.46	0003229.52	33
1010	0060	15 08 30.65	0002766.43-	0005160.00-	0004817.20-	0001437.35	0002772.45	33
1010	0060	15 08 31.65	0002742.37-	0005087.83-	0004793.15-	0001437.35	0002820.57	33
1010	0060	15 08 32.65	0002766.43-	0005087.83-	0004769.09-	0001461.40	0002772.45	33
1010	0060	15 08 33.65	0002742.37-	0005087.83-	0004769.09-	0001389.23	0002820.57	33
1010	0060	15 08 34.65	0002742.37-	0005087.83-	0004793.15-	0001437.35	0002820.57	33
1010	0080	15 16 27.09	0002814.54-	0005111.89-	0004865.32-	0001461.40	0002820.57	33
1010	0080	15 16 28.09	0002790.49-	0005135.95-	0004817.20-	0001437.35	0002820.57	33
1010	0080	15 16 29.09	0002814.54-	0005111.89-	0004841.26-	0001461.40	0002772.45	33
1010	0080	15 16 30.09	0002790.49-	0005160.00-	0004841.26-	0001413.29	0002772.45	33
1010	0080	15 16 31.09	0002766.43-	0005063.78-	0004793.15-	0001437.35	0002772.45	33
1010	0090	16 37 17.85	0002573.98-	0004967.55-	0004720.98-	0001365.18	0002604.06	33
1010	0090	16 37 18.85	0002598.04-	0004967.55-	0004696.92-	0001293.01	0002580.01	33
1010	0090	16 37 19.85	0002573.98-	0004943.50-	0004672.87-	0001293.01	0002580.01	33
1010	0090	16 37 20.85	0002501.81-	0004967.55-	0004624.76-	0001341.12	0002580.01	33
1010	0090	16 37 21.85	0002598.04-	0004967.55-	0004720.98-	0001341.12	0002628.12	33
1010	0095	16 40 49.63	0002718.32-	0005087.83-	0004745.04-	0001413.29	0002724.34	33
1010	0095	16 40 50.63	0002694.26-	0005087.83-	0004793.15-	0001437.35	0002724.34	33
1010	0095	16 40 51.63	0002670.21-	0005063.78-	0004793.15-	0001437.35	0002748.40	33
1010	0095	16 40 52.63	0002694.26-	0005111.89-	0004769.09-	0001341.12	0002700.29	33
1010	0095	16 40 53.63	0002694.26-	0005087.83-	0004769.09-	0001437.35	0002748.40	33
1010	0100	16 44 33.87	0002622.09-	0005087.83-	0004745.04-	0001437.35	0002628.12	33

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST	COND	HR/MN/SEC	L15625B2	L33625B1	L33625B2	L15626B	L33626A	GP
1010	0100	16 44 34.87	0002573.98-	0005063.78-	0004769.09-	0001413.29	0002676.23	33
1010	0100	16 44 35.87	0002670.21-	0005015.67-	0004745.04-	0001413.29	0002676.23	33
1010	0100	16 44 36.87	0002646.15-	0005087.83-	0004793.15-	0001389.18	0002676.23	33
1010	0100	16 44 37.87	0002646.15-	0005063.78-	0004720.98-	0001389.23	0002628.12	33
1010	0021	16 52 40.66	0002622.09-	0005015.67-	0004720.98-	0001461.40	0002820.57	33
1010	0021	16 52 41.66	0002670.21-	0005039.72-	0004720.98-	0001485.46	0002844.62	33
1010	0021	16 52 42.66	0002598.04-	0004943.50-	0004696.92-	0001509.51	0002796.51	33
1010	0021	16 52 43.66	0002573.98-	0004991.61-	0004720.98-	0001485.46	0002772.45	33
1010	0021	16 52 44.66	0002622.09-	0004967.55-	0004720.98-	0001533.57	0002820.57	33

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND	HR/MN/SEC	L336268	L1562781	L1562782	L3362781	L3362782	GP
0000 0000	08 47 18.26	0000024.05-	0000018.04	0000042.09-	0000054.12-	0000042.09-	34
1000 0000	12 58 53.77	0000841.96	0000174.40-	0001076.50-	0001497.48-	0001148.66-	34
1000 0000	12 58 54.77	0000890.07	0000150.34-	0001052.44-	0001449.36-	0001100.55-	34
1000 0000	12 58 55.77	0000841.96	0000150.34-	0001076.50-	0001473.42-	0001148.66-	34
1000 0000	12 58 56.77	0000817.90	0000150.34-	0001004.33-	0001497.48-	0001124.61-	34
1000 0000	12 58 57.77	0000866.02	0000198.45-	0001076.50-	0001449.36-	0001172.72-	34
1005 0000	13 06 59.24	0001299.02	0000439.01-	0001461.39-	0002171.04-	0001822.23-	34
1005 0000	13 07 00.24	0001250.91	0000487.12-	0001413.28-	0002243.21-	0001846.29-	34
1005 0000	13 07 01.24	0001299.02	0000463.07-	0001389.22-	0002219.16-	0001798.18-	34
1005 0000	13 07 02.24	0001323.08	0000439.01-	0001461.39-	0002219.16-	0001822.23-	34
1005 0000	13 07 03.24	0001250.91	0000511.18-	0001413.28-	0002219.16-	0001774.12-	34
1010 0000	13 08 54.04	0001804.20	0000655.52-	0001677.90-	0002772.44-	0002207.13-	34
1010 0000	13 08 55.04	0001756.09	0000751.74-	0001653.84-	0002748.39-	0002231.18-	34
1010 0000	13 08 56.04	0001683.92	0000703.63-	0001653.84-	0002772.44-	0002255.24-	34
1010 0000	13 08 57.04	0001732.03	0000679.57-	0001605.73-	0002748.39-	0002303.35-	34
1010 0000	13 08 58.04	0001707.98	0000727.68-	0001653.84-	0002796.50-	0002255.24-	34
1010 0020	13 19 52.40	0001683.92	0000727.68-	0001701.95-	0002820.56-	0002279.30-	34
1010 0020	13 19 53.40	0001707.98	0000703.63-	0001677.90-	0002772.44-	0002279.30-	34
1010 0020	13 19 54.40	0001683.92	0000703.63-	0001701.95-	0002772.44-	0002279.30-	34
1010 0020	13 19 55.40	0001659.86	0000727.68-	0001726.01-	0002748.39-	0002255.24-	34
1010 0020	13 19 56.40	0001756.09	0000727.68-	0001677.90-	0002748.39-	0002231.18-	34
1010 0040	13 24 23.72	0001683.92	0000727.68-	0001677.90-	0002844.61-	0002255.24-	34
1010 0040	13 24 24.72	0001635.81	0000727.68-	0001750.06-	0002844.61-	0002303.35-	34
1010 0040	13 24 25.72	0001683.92	0000727.68-	0001750.06-	0002820.56-	0002351.46-	34
1010 0040	13 24 26.72	0001635.81	0000703.63-	0001750.06-	0002844.61-	0002303.35-	34
1010 0040	13 24 27.72	0001683.92	0000751.74-	0001726.01-	0002844.61-	0002303.35-	34
1010 0060	15 08 30.65	0001611.75	0000727.68-	0001701.95-	0002916.78-	0002255.24-	34
1010 0060	15 08 31.65	0001635.81	0000727.68-	0001701.95-	0002940.84-	0002279.30-	34
1010 0060	15 08 32.65	0001635.81	0000679.57-	0001677.90-	0002868.67-	0002231.18-	34
1010 0060	15 08 33.65	0001659.86	0000703.63-	0001726.01-	0002844.61-	0002231.18-	34
1010 0060	15 08 34.65	0001659.86	0000703.63-	0001677.90-	0002868.67-	0002255.24-	34
1010 0080	15 16 27.09	0001659.86	0000727.68-	0001726.01-	0002940.84-	0002351.46-	34
1010 0080	15 16 28.09	0001659.86	0000751.74-	0001677.90-	0002916.78-	0002327.41-	34
1010 0080	15 16 29.09	0001683.92	0000751.74-	0001726.01-	0002964.89-	0002279.30-	34
1010 0080	15 16 30.09	0001683.92	0000751.74-	0001701.95-	0002940.84-	0002279.30-	34
1010 0080	15 16 31.09	0001707.98	0000751.74-	0001677.90-	0002916.78-	0002327.41-	34
1010 0090	16 37 17.85	0001587.70	0000703.63-	0001293.00-	0002916.78-	0002231.18-	34
1010 0090	16 37 18.85	0001683.92	0000727.68-	0001341.11-	0002916.78-	0002207.13-	34
1010 0090	16 37 19.85	0001683.92	0000751.74-	0001268.94-	0002892.72-	0002255.24-	34
1010 0090	16 37 20.85	0001611.75	0000655.52-	0001293.00-	0002868.67-	0002255.24-	34
1010 0090	16 37 21.85	0001659.86	0000703.63-	0001293.00-	0002868.67-	0002255.24-	34
1010 0095	16 40 49.63	0001707.98	0000751.74-	0001365.17-	0002868.95-	0002279.30-	34
1010 0095	16 40 50.63	0001732.03	0000751.74-	0001317.06-	0002964.89-	0002231.18-	34
1010 0095	16 40 51.63	0001683.92	0000727.68-	0001317.06-	0002964.89-	0002255.24-	34
1010 0095	16 40 52.63	0001659.86	0000751.74-	0001268.94-	0002964.89-	0002279.30-	34
1010 0095	16 40 53.63	0001635.81	0000751.74-	0001341.11-	0002940.84-	0002279.30-	34
1010 0100	16 44 33.87	0001635.81	0000751.74-	0001293.00-	0002892.72-	0002255.24-	34

ELEMENT STRESS

ID REC PT RATE 10/29/69 CONJUGATE STRUCTURE TEST COND 1
1029 400 01

TEST COND	HR/MN/SEC	L336268	L1562781	L1562782	L3362781	L3362782	GP
1010 0100	16 44 34.87	0001683.92	0000727.68-	0001341.11-	0002964.89-	0002279.30-	34
1010 0100	16 44 35.87	0001683.92	0000727.68-	0001268.94-	0002940.84-	0002327.41-	34
1010 0100	16 44 36.87	0001683.92	0000775.80-	0001293.00-	0002940.84-	0002279.30-	34
1010 0100	16 44 37.87	0001659.86	0000727.68-	0001317.06-	0002892.72-	0002327.41-	34
1010 0021	16 52 40.66	0001732.03	0000655.52-	0001196.78-	0002868.67-	0002183.07-	34
1010 0021	16 52 41.66	0001780.14	0000703.63-	0001293.00-	0002844.61-	0002231.18-	34
1010 0021	16 52 42.66	0001756.09	0000679.57-	0001220.83-	0002868.67-	0002183.07-	34
1010 0021	16 52 43.66	0001756.09	0000679.57-	0001268.94-	0002844.61-	0002183.07-	34
1010 0021	16 52 44.66	0001756.09	0000679.57-	0001196.78-	0002820.56-	0002159.02-	34

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APPENDIX III

Conjugate Structure Test
Condition 2

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	N/A	L001A	L001B	P0021A	P0022A	GP
2000 0000 09 50 06.68	0000000.00	0000120.27-	0000072.16-	0000186.43	0000120.27-	01
2100 0000 11 19 12.32	0000000.00	0000048.10-	0000024.05-	0000042.10	0000288.66-	01
2100 0000 11 19 13.32	0000000.00	0000048.11	0000048.10-	0000090.21	0000072.17	01
2100 0000 11 19 14.32	0000000.00	0000096.22	0000096.21-	0000042.10	0000024.06	01
2100 0000 11 19 15.32	0000000.00	0000168.39	0000072.16-	0000054.12-	0000072.17	01
2100 0000 11 19 16.32	0000000.00	0000192.45	0000096.21-	0000222.51-	0000024.06	01
2110 0000 13 02 50.73	0000000.00	0008900.72	0005965.89	0000390.90-	0000192.44-	01
2110 0000 13 02 51.73	0000000.00	0009309.67	0005989.94	0000342.79-	0000120.27-	01
2110 0000 13 02 52.73	0000000.00	0009309.67	0005989.94	0000390.90-	0000144.33-	01
2110 0000 13 02 53.73	0000000.00	0009429.95	0005965.89	0000318.73-	0000168.38-	01
2110 0000 13 02 54.73	0000000.00	0009454.01	0005989.94	0000511.18-	0000192.44-	01
2120 0000 13 07 26.70	0000000.00	0021794.74	0008924.78	0000968.24-	0000240.55-	01
2120 0000 13 07 27.70	0000000.00	0022035.30	0008900.72	0000992.30-	0000192.44-	01
2120 0000 13 07 28.70	0000000.00	0022107.46	0008852.61	0000944.19-	0000168.38-	01
2120 0000 13 07 29.70	0000000.00	0022059.35	0008876.66	0001208.80-	0000168.38-	01
2120 0000 13 07 30.70	0000000.00	0022083.41	0008900.72	0001088.52-	0000168.38-	01
2130 0000 14 11 14.22	0000000.00	0034327.91	0012196.39	0001449.36-	0000096.21-	01
2130 0000 14 11 15.22	0000000.00	0034279.80	0012100.17	0001473.42-	0000096.21-	01
2130 0000 14 11 16.22	0000000.00	0034279.80	0012124.22	0001521.53-	0000168.38-	01
2130 0000 14 11 17.22	0000000.00	0034231.69	0012124.22	0001569.64-	0000144.33-	01
2130 0000 14 11 18.22	0000000.00	0034231.69	0012100.17	0001641.81-	0000144.33-	01
2140 0000 14 15 59.89	0000000.00	0045345.56	0015997.24	0002098.88-	0000192.44-	01
2140 0000 14 16 00.89	0000000.00	0045634.23	0016069.41	0002146.99-	0000120.27-	01
2140 0000 14 16 01.89	0000000.00	0045778.57	0016045.35	0002267.27-	0000120.27-	01
2140 0000 14 16 02.89	0000000.00	0045634.23	0016069.41	0002243.21-	0000168.38-	01
2140 0000 14 16 03.89	0000000.00	0045682.34	0016045.35	0002243.21-	0000096.21-	01
2140 0000 14 16 04.89	0000000.00	0045634.23	0016045.35	0002267.27-	0000096.21-	01
2131 0000 14 52 06.49	0000000.00	0036011.83	0013086.46	0001689.92-	0000192.44-	01
2131 0000 14 52 07.49	0000000.00	0035915.61	0013134.58	0001545.59-	0000264.61-	01
2131 0000 14 52 08.49	0000000.00	0035867.50	0013134.58	0001569.64-	0000312.72-	01
2131 0000 14 52 09.49	0000000.00	0035915.61	0013110.52	0001545.59-	0000240.55-	01
2131 0000 14 52 10.49	0000000.00	0035963.72	0013110.52	0001593.70-	0000240.55-	01
2100 0010 15 31 46.68	0000000.00	0006591.34	0006233.86	0000042.10	0000168.38-	01
2100 0010 15 31 47.68	0000000.00	0006759.74	0004426.30	0000006.00-	0000168.38-	01
2100 0010 15 31 48.68	0000000.00	0006807.85	0004498.47	0000042.10	0000168.38-	01
2100 0010 15 31 49.68	0000000.00	0006976.24	0004546.58	0000006.00-	0000240.55-	01
2100 0010 15 32 49.18	0000000.00	0011378.49	0006495.12	0000270.62-	0000264.61-	01
2100 0010 15 32 50.18	0000000.00	0011859.61	0006615.40	0000270.62-	0000240.55-	01
2100 0010 15 32 51.18	0000000.00	0012052.06	0006615.40	0000270.62-	0000264.61-	01
2100 0020 15 34 42.66	0000000.00	0023983.83	0009862.96	0000968.24-	0000336.77-	01
2100 0020 15 34 43.66	0000000.00	0024561.18	0009983.24	0000896.08-	0000312.72-	01
2100 0030 15 36 06.02	0000000.00	0035723.16	0013014.30	0001521.53-	0000216.49-	01
2100 0030 15 36 07.02	0000000.00	0035867.50	0012918.07	0001521.53-	0000192.44-	01
2100 0040 15 38 03.12	0000000.00	0046019.13	0016189.69	0002146.99-	0000168.38-	01
2100 0040 15 38 04.12	0000000.00	0046452.14	0016165.63	0002098.88-	0000120.27-	01
2150 0000 15 40 32.15	0000000.00	0056363.21	0019822.14	0002700.28-	0000096.21-	01
2150 0000 15 40 33.15	0000000.00	0056651.88	0019942.42	0002748.39-	0000000.00	01

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	N/A	L001A	L001B	P0021A	P0022A	GP
2150 0000 15 40 34.15	0000000.00	0056748.10	0019918.37	0002724.33-	0000024.05-	01
2150 0000 15 40 35.15	0000000.00	0056844.33	0019894.31	0002748.39-	0000024.05-	01
2150 0000 15 40 36.15	0000000.00	0056748.10	0019966.48	0002820.56-	0000024.06	01
2155 0000 15 45 59.61	0000000.00	0061366.86	0021770.68	0003013.00-	0000024.06	01
2155 0000 15 46 00.61	0000000.00	0061751.75	0021842.85	0003013.00-	0000072.17	01
2155 0000 15 46 01.61	0000000.00	0061751.75	0021770.68	0003013.00-	0000048.11	01
2155 0000 15 46 02.61	0000000.00	0061847.98	0021770.68	0003013.00-	0000048.11	01
2155 0000 15 46 03.61	0000000.00	0061847.98	0021794.74	0003085.17-	0000024.06	01
2160 0000 16 29 34.86	0000000.00	0066562.95	0023671.10	0003253.56-	0000120.28	01
2160 0000 16 29 35.86	0000000.00	0066562.95	0023647.05	0003229.51-	0000120.28	01
2160 0000 16 29 36.86	0000000.00	0066466.73	0023574.88	0003253.56-	0000120.28	01
2160 0000 16 29 37.86	0000000.00	0066466.73	0023598.94	0003253.56-	0000072.17	01
2160 0000 16 29 38.86	0000000.00	0066466.73	0023574.88	0003253.56-	0000120.28	01
2165 0000 16 33 04.12	0000000.00	0072913.74	0026990.83	0004312.03-	0000433.01	01
2165 0000 16 33 05.12	0000000.00	0071566.60	0025739.92	0003494.12-	0000168.39	01
2165 0000 16 33 06.12	0000000.00	0071662.82	0025739.92	0003590.35-	0000168.39	01
2165 0000 16 33 07.12	0000000.00	0071662.82	0025739.92	0003518.18-	0000120.28	01
2165 0000 16 33 08.12	0000000.00	0071662.82	0025739.92	0003542.24-	0000120.28	01
2111 0000 16 39 31.91	0000000.00	0016526.47	0007144.63	0000126.28-	0000673.56-	01
2111 0000 16 39 32.91	0000000.00	0016742.98	0007024.35	0000102.23-	0000601.39-	01
2111 0000 16 39 33.91	0000000.00	0016742.98	0007024.35	0000126.28-	0000673.56-	01
2111 0000 16 39 34.91	0000000.00	0016863.26	0007024.35	0000150.34-	0000649.50-	01
2111 0000 16 39 35.91	0000000.00	0016863.26	0007024.35	0000198.45-	0000577.33-	01

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P90021A	P90022A	P180021A	P180022A	P0031B	GP
2000 0000 09 50 06.68	0000024.06	0000060.13-	0000000.00	0000030.07	0000000.00	02
2100 0000 11 19 12.32	0000168.38-	0000012.03	0000312.72-	0000006.01	0001443.36	02
2100 0000 11 19 13.32	0000240.55-	0000012.02-	0000144.33-	0000186.42-	0001467.42	02
2100 0000 11 19 14.32	0000168.38-	0000060.13-	0000144.33-	0000006.01	0001491.47	02
2100 0000 11 19 15.32	0000168.38-	0000036.07-	0000144.33-	0000030.07	0001443.36	02
2100 0000 11 19 16.32	0000168.38-	0000036.07-	0000192.44-	0000018.03-	0001515.53	02
2110 0000 13 02 50.73	0001010.34-	0000180.41-	0000841.95-	0000439.02	0024585.23	02
2110 0000 13 02 51.73	0000962.23-	0000084.19-	0000866.01-	0000414.97	0024609.29	02
2110 0000 13 02 52.73	0000914.12-	0000060.13-	0000866.01-	0000390.91	002.333.34	02
2110 0000 13 02 53.73	0000962.23-	0000108.24-	0000866.01-	0000414.97	0024537.12	02
2110 0000 13 02 54.73	0000914.12-	0000132.30-	0000866.01-	0000439.02	0024609.29	02
2120 0000 13 07 26.70	0001707.97-	0000108.24-	0001635.80-	0000631.47	0043974.37	02
2120 0000 13 07 27.70	0001683.91-	0000132.30-	0001635.80-	0000679.58	0044022.48	02
2120 0000 13 07 28.70	0001683.91-	0000204.47-	0001635.80-	0000703.64	0043926.26	02
2120 0000 13 07 29.70	0001659.85-	0000108.24-	0001683.91-	0000703.64	0043926.26	02
2120 0000 13 07 30.70	0001732.02-	0000084.19-	0001683.91-	0000679.58	0043926.26	02
2130 0000 14 11 14.22	0002309.37-	0000012.03	0002598.04-	0001016.37	0061487.14	02
2130 0000 14 11 15.22	0002381.53-	0000036.08	0002549.93-	0001016.37	0061487.14	02
2130 0000 14 11 16.22	0002598.04-	0000084.19-	0002549.93-	0001040.42	0061390.91	02
2130 0000 14 11 17.22	0002453.70-	0000060.13-	0002598.04-	0000968.25	0061487.14	02
2130 0000 14 11 18.22	0002598.04-	0000012.03	0002549.93-	0001016.37	0061390.91	02
2140 0000 14 15 59.89	0003079.16-	0000012.03	0003415.94-	0001377.21	0074669.82	02
2140 0000 14 16 00.89	0003079.16-	0000084.20	0003391.89-	0001377.21	0074573.60	02
2140 0000 14 16 01.89	0003175.38-	0000108.25	0003464.05-	0001377.21	0074669.82	02
2140 0000 14 16 02.89	0003199.44-	0000132.31	0003415.94-	0001425.32	0074573.60	02
2140 0000 14 16 03.89	0003223.49-	0000012.03	0003464.05-	0001377.21	0074477.38	02
2140 0000 14 16 04.89	0003271.61-	0000060.14	0003440.00-	0001425.32	0074477.38	02
2131 0000 14 52 06.49	0002285.31-	0000036.07-	0002718.32-	0000944.20	0053404.32	02
2131 0000 14 52 07.49	0002309.37-	0000036.07-	0002766.43-	0001136.65	0053404.32	02
2131 0000 14 52 08.49	0002333.42-	0000060.13-	0002742.37-	0001160.70	0053308.10	02
2131 0000 14 52 09.49	0002357.48-	0000084.19-	0002766.43-	0001088.53	0053404.32	02
2131 0000 14 52 10.49	0002333.42-	0000084.19-	0002742.37-	0001208.81	0053404.32	02
2100 0010 15 31 46.68	0000529.22-	0000252.58-	0000529.22-	0000360.85	0012461.01	02
2100 0010 15 31 47.68	0000529.22-	0000108.24-	0000529.22-	0000294.69	0012773.74	02
2100 0010 15 31 48.68	0000553.28-	0000132.30-	0000553.28-	0000439.02	0012966.18	02
2100 0010 15 31 49.68	0000577.33-	0000108.24-	0000577.33-	0000390.91	0013254.86	02
2100 0010 15 32 49.18	0000914.12-	0000132.30-	0000890.06-	0000439.02	0020351.38	02
2100 0010 15 32 50.18	0000793.84-	0000132.30-	0000817.89-	0000463.08	0020495.71	02
2100 0010 15 32 51.18	0000841.95-	0000132.30-	0000769.78-	0000487.13	0020567.88	02
2100 0020 15 34 42.66	0001659.85-	0000132.30-	0001611.74-	0000679.58	0037334.91	02
2100 0020 15 34 43.66	0001539.57-	0000084.19-	0001635.80-	0000727.69	0037479.25	02
2100 0030 15 36 06.02	0002405.59-	0000060.13-	0002453.70-	0001016.37	0054270.34	02
2100 0030 15 36 07.02	0002333.42-	0000012.03	0002573.98-	0001040.42	0054270.34	02
2100 0040 15 38 03.12	0003103.21-	0000060.14	0003464.05-	0001425.32	0069762.40	02
2100 0040 15 38 04.12	0003006.99-	0000084.20	0003440.00-	0001425.32	0069858.62	02
2150 0000 15 40 32.15	0003945.17-	0000060.14	0004354.13-	0001738.05	0077748.99	02
2150 0000 15 40 33.15	0003921.12-	0000156.36	0004330.07-	0001738.05	0077748.99	02

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P90021A	P90022A	P180021A	P180022A	P0031B	GP
2150 0000 15 40 34.15	0003897.06-	0000132.31	0004354.13-	0001786.16	0077652.77	02
2150 0000 15 40 35.15	0003945.17-	0000204.48	0004378.18-	0001786.16	0077556.54	02
2150 0000 15 40 36.15	0003921.12-	0000228.53	0004378.18-	0001786.16	0077556.54	02
2155 0000 15 45 59.61	0004378.18-	0000180.42	0004739.02-	0001954.55	0078230.11	02
2155 0000 15 46 00.61	0004306.01-	0000300.70	0004763.08-	0001906.44	0078230.11	02
2155 0000 15 46 01.61	0004306.01-	0000276.64	0004690.91-	0001906.44	0078133.89	02
2155 0000 15 46 02.61	0004281.96-	0000300.70	0004714.97-	0002002.66	0078133.89	02
2155 0000 15 46 03.61	0004306.01-	0000252.59	0004763.08-	0001930.49	0078037.68	02
2160 0000 16 29 34.86	0004666.85-	0000348.81	0005099.86-	0002098.89	0077845.27	02
2160 0000 16 29 35.86	0004642.80-	0000396.92	0005099.86-	0002026.72	0077941.46	02
2160 0000 16 29 36.86	0004594.69-	0000348.81	0005099.86-	0002098.89	0078037.68	02
2160 0000 16 29 37.86	0004618.74-	0000348.81	0005123.92-	0002050.89	0077941.46	02
2160 0000 16 29 38.86	0004594.69-	0000300.70	0005099.86-	0002098.89	0077941.46	02
2165 0000 16 33 04.12	0005051.75-	0000324.76	0005508.61-	0002387.56	0080058.37	02
2165 0000 16 33 05.12	0005027.69-	0000445.04	0005532.67-	0002315.39	0079962.14	02
2165 0000 16 33 06.12	0005027.69-	0000348.81	0005436.55-	0002363.50	0079865.92	02
2165 0000 16 33 07.12	0005003.64-	0000445.04	0005484.66-	0002363.50	0079962.14	02
2165 0000 16 33 08.12	0005003.64-	0000445.04	0005508.71-	0002339.45	0079865.92	02
2111 0000 16 39 31.91	0000890.06-	0000348.80-	0000890.06-	0000439.02	0012076.11	02
2111 0000 16 39 32.91	0000793.84-	0000348.80-	0000865.23-	0000414.97	0012052.06	02
2111 0000 16 39 33.91	0000745.73-	0000324.79-	0000841.17-	0000390.91	0011979.89	02
2111 0000 16 39 34.91	0000817.89-	0000396.91-	0000889.29-	0000414.97	0012076.11	02
2111 0000 16 39 35.91	0000769.78-	0000348.80-	0000938.17-	0000463.08	0012052.06	02

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P00328	P90031B	P90032B	P1800318	P1800328	GP
2000 0000 09 50 06.68	0000024.06	0000030.06-	0000018.03-	0000054.12-	0000012.02-	03
2100 0000 11 19 12.32	0000336.77-	0001268.95	0000078.18	0003674.55	0000685.59-	03
2100 0000 11 19 13.32	0000072.16-	0001268.95	0000102.24	0003674.55	0000613.42-	03
2100 0000 11 19 14.32	0000216.49-	0001244.90	0000054.13	0003626.44	0000661.53-	03
2100 0000 11 19 15.32	0000192.44-	0001317.07	0000126.29	0003650.50	0000661.53-	03
2100 0000 11 19 16.32	0000336.77-	0001268.95	0000102.24	0003626.44	0000613.42-	03
2110 0000 13 02 50.73	0000890.07	0032782.31	0002207.13-	0051786.55	0004871.33-	03
2110 0000 13 02 51.73	0000962.24	0032782.31	0002231.18-	0051690.33	0004775.11-	03
2110 0000 13 02 52.73	0000914.13	0032782.31	0002231.18-	0051690.33	0004775.11-	03
2110 0000 13 02 53.73	0000890.07	0032782.31	0002231.18-	0051690.33	0004751.05-	03
2110 0000 13 02 54.73	0000890.07	0032782.31	0002134.96-	0051690.33	0004775.11-	03
2120 0000 13 07 26.70	0000168.39	0059869.37	0003987.27-	0075553.88	0006338.75-	03
2120 0000 13 07 27.70	0000144.34	0059869.37	0003963.22-	0075457.66	0006338.75-	03
2120 0000 13 07 28.70	0000120.28	0059869.37	0003987.27-	0075457.66	0006242.52-	03
2120 0000 13 07 29.70	0000072.17	0059869.37	0003987.27-	0075457.66	0006266.58-	03
2120 0000 13 07 30.70	0000072.17	0059869.37	0004035.38-	0075457.66	0006314.69-	03
2130 0000 14 11 14.22	0002453.70-	0061697.63	0005526.86-	0084983.83	0006603.36-	03
2130 0000 14 11 15.22	0002429.65-	0061793.85	0005478.74-	0084887.61	0006579.31-	03
2130 0000 14 11 16.22	0002477.76-	0061697.63	0005526.86-	0084887.61	0006627.42-	03
2130 0000 14 11 17.22	0002453.70-	0061601.40	0005502.80-	0084695.16	0006603.36-	03
2130 0000 14 11 18.22	0002429.65-	0061505.18	0005526.86-	0084695.16	0006603.36-	03
2140 0000 14 15 59.89	0005701.26-	0063814.55	0006946.16-	0089987.48	0007060.43-	03
2140 0000 14 16 00.89	0005701.26-	0063718.33	0006922.10-	0089795.03	0007036.37-	03
2140 0000 14 16 01.89	0005653.15-	0063718.33	0006922.10-	0089987.48	0006964.20-	03
2140 0000 14 16 02.89	0005653.15-	0063622.11	0006873.99-	0089698.81	0006964.20-	03
2140 0000 14 16 03.89	0005580.98-	0063622.11	0006849.94-	0089698.81	0006940.15-	03
2140 0000 14 16 04.89	0005605.04-	0063525.88	0006873.99-	0089602.59	0006940.15-	03
2131 0000 14 52 06.49	0003512.17-	0043463.18	0005574.97-	0069491.77	0006771.75-	03
2131 0000 14 52 07.49	0003608.39-	0043511.29	0005574.97-	0069395.55	0006843.92-	03
2131 0000 14 52 08.49	0003584.33-	0043559.40	0005599.02-	0069395.55	0006795.81-	03
2131 0000 14 52 09.49	0003512.17-	0043511.29	0005526.86-	0069395.55	0006771.75-	03
2131 0000 14 52 10.49	0003512.17-	0043511.29	0005502.80-	0069395.55	0006747.70-	03
2100 0010 15 31 46.68	0001130.62-	0018709.55	0001557.62-	0034706.79	0003909.09-	03
2100 0010 15 31 47.68	0001226.85-	0018926.06	0001629.78-	0034947.35	0003909.09-	03
2100 0010 15 31 48.68	0001202.79-	0019166.62	0001653.84-	0035204.14	0003957.20-	03
2100 0010 15 31 49.68	0001178.73-	0019431.23	0001653.84-	0035620.92	0003957.20-	03
2100 0010 15 32 49.18	0000841.95-	0025180.62	0002471.74-	0042982.06	0004630.77-	03
2100 0010 15 32 50.18	0001010.34-	0025276.84	0002447.69-	0043174.51	0004558.60-	03
2100 0010 15 32 51.18	0000817.89-	0025469.29	0002447.69-	0043270.73	0004606.71-	03
2100 0020 15 34 42.66	0001202.79-	0037545.40	0004083.50-	0058329.79	0005665.18-	03
2100 0020 15 34 43.66	0001395.24-	0037593.51	0004107.55-	0058329.79	0005593.01-	03
2100 0030 15 36 06.02	0003391.89-	0048322.49	0005574.97-	0071223.80	0006459.03-	03
2100 0030 15 36 07.02	0003608.39-	0048274.38	0005599.02-	0071223.80	0006483.08-	03
2100 0040 15 38 03.12	0005773.43-	0058426.01	0006825.88-	0083348.03	0006843.92-	03
2100 0040 15 38 04.12	0006038.05-	0058426.01	0006849.94-	0083444.25	0006819.87-	03
2150 0000 15 40 32.15	0008539.87-	0064007.00	0008245.18-	0091527.07	0007613.71-	03
2150 0000 15 40 33.15	0008852.60-	0064007.00	0008221.13-	0091527.07	0007517.49-	03

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P00328	P90031B	P90032B	P1800318	P1800328	GP
2150 0000 15 40 34.15	0008684.21-	0064007.00	0008245.18-	0091527.07	0007469.38-	03
2150 0000 15 40 35.15	0008660.15-	0064007.00	0008221.13-	0091430.84	0007541.55-	03
2150 0000 15 40 36.15	0008636.09-	0063910.78	0008221.13-	0091430.84	0007493.43-	03
2155 0000 15 45 59.61	0010055.40-	0065257.91	0008894.70-	0093451.55	0008720.29-	03
2155 0000 15 46 00.61	0010295.96-	0065161.69	0008846.58-	0093451.55	0008648.12-	03
2155 0000 15 46 01.61	0010079.45-	0065065.47	0008798.47-	0093355.32	0008624.07-	03
2155 0000 15 46 02.61	0010055.40-	0065065.47	0008846.58-	0093355.32	0008696.23-	03
2155 0000 15 46 03.61	0010079.45-	0065065.47	0008822.53-	0093259.10	0008696.23-	03
2160 0000 15 29 34.86	0011234.14-	0065065.47	0009684.49-	0093836.44	0009802.81-	03
2160 0000 15 29 35.86	0011378.48-	0064969.24	0009664.49-	0093740.22	0009826.87-	03
2160 0000 15 29 36.86	0011522.81-	0064969.24	0009664.49-	0093643.99	0009850.92-	03
2160 0000 15 29 37.86	0011282.25-	0064969.24	0009640.43-	0093643.99	0009802.81-	03
2160 0000 15 29 38.86	0011306.31-	0064873.02	0009688.54-	0093547.77	0009850.92-	03
2165 0000 15 33 04.12	0012557.22-	0067086.17	0010362.11-	0097300.51	0010981.55-	03
2165 0000 15 33 05.12	0012797.78-	0067086.17	0010314.00-	0097300.51	0010957.50-	03
2165 0000 15 33 06.12	0012869.95-	0066989.95	0010338.06-	0097300.51	0010957.50-	03
2165 0000 15 33 07.12	0012677.50-	0066989.95	0010289.94-	0097300.51	0010933.44-	03
2165 0000 15 33 08.12	0012677.50-	0066893.72	0010314.00-	0097204.28	0010957.50-	03
2111 0000 16 39 31.91	0002020.69-	0021644.39	0004059.44-	0036823.72	0006916.09-	03
2111 0000 16 39 32.91	0002381.53-	0021644.39	0004035.38-	0036823.72	0006892.03-	03
2111 0000 16 39 33.91	0002357.48-	0021596.27	0004059.44-	0036823.72	0006867.98-	03
2111 0000 16 39 34.91	0002165.03-	0021644.39	0004035.38-	0036871.83	0006843.92-	03
2111 0000 16 39 35.91	0002213.14-	0021668.44	0004035.38-	0036919.95	0006843.92-	03

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	R0041A	R0042A	R0043A	R0041B	R0042B	GP
2040 0000 09 50 06.68	0000096.21-	0000048.10-	0000042.09-	0000054.12-	0000066.14-	04
2100 0000 11 19 12.32	0000288.66-	0000721.68	0001593.71	0000162.38	0001256.93	04
2100 0000 11 19 13.32	0000264.61-	0000721.68	0001617.77	0000210.49	0001280.98	04
2100 0000 11 19 14.32	0000264.61-	0000769.79	0001593.71	0000210.49	0001256.93	04
2100 0000 11 19 15.32	0000240.55-	0000745.74	0001569.65	0000162.38	0001305.04	04
2100 0000 11 19 16.32	0000264.61-	0000793.85	0001641.82	0000186.43	0001256.93	04
2110 0000 13 02 50.73	0000697.62	0004281.97	0007463.37	0001124.62	0005490.78	04
2110 0000 13 02 51.73	0000721.68	0004306.02	0007487.43	0001196.79	0005562.95	04
2110 0000 13 02 52.73	0000769.79	0004330.08	0007511.49	0001148.67	0005562.95	04
2110 0000 13 02 53.73	0000745.74	0004354.14	0007559.60	0001124.62	0005490.78	04
2110 0000 13 02 54.73	0000697.62	0004402.25	0007511.49	0001148.67	0005514.84	04
2120 0000 13 07 26.70	0001683.92	0007914.42	0013501.43	0002038.75	0009556.25	04
2120 0000 13 07 27.70	0001611.75	0007938.48	0013453.32	0002062.80	0009508.13	04
2120 0000 13 07 28.70	0001659.86	0007890.37	0013549.54	0002062.80	0009508.13	04
2120 0000 13 07 29.70	0001683.92	0007914.42	0013477.37	0002038.75	0009435.97	04
2120 0000 13 07 30.70	0001659.86	0007938.48	0013453.32	0002014.69	0009532.19	04
2130 0000 14 11 14.22	0002549.94	0011258.21	0019034.31	0002952.87	0013308.98	04
2130 0000 14 11 15.22	0002549.94	0011306.32	0019082.42	0002976.93	0013333.04	04
2130 0000 14 11 16.22	0002573.99	0011282.26	0019034.31	0002928.82	0013284.93	04
2130 0000 14 11 17.22	0002573.99	0011354.43	0018986.20	0002928.82	0013284.93	04
2130 0000 14 11 18.22	0002622.10	0011234.15	0018986.20	0002976.93	0013284.93	04
2140 0000 14 15 59.89	0003464.06	0014626.05	0024567.19	0003891.06	0016941.44	04
2140 0000 14 16 00.89	0003512.18	0014698.22	0024567.19	0003891.06	0016917.38	04
2140 0000 14 16 01.89	0003488.12	0014698.22	0024567.19	0003891.06	0017013.61	04
2140 0000 14 16 02.89	0003464.06	0014601.99	0024567.19	0003915.11	0016941.44	04
2140 0000 14 16 03.89	0003536.23	0014698.22	0024567.19	0003939.17	0016893.33	04
2140 0000 14 16 04.89	0003488.12	0014650.10	0024567.19	0003891.06	0016941.44	04
2131 0000 14 52 06.49	0002165.04	0011113.87	0019106.48	0002567.98	0013164.65	04
2131 0000 14 52 07.49	0002213.15	0011137.93	0019130.53	0002567.98	0013236.81	04
2131 0000 14 52 08.49	0002116.93	0011041.70	0019058.37	0002519.87	0013212.76	04
2131 0000 14 52 09.49	0002165.04	0011089.82	0019154.59	0002592.03	0013284.93	04
2131 0000 14 52 10.49	0002189.10	0011041.70	0019106.48	0002567.98	0013260.87	04
2100 0010 15 31 46.68	0000072.17	0002525.88	0004865.33	0000451.05	0003686.58	04
2100 0010 15 31 47.68	0000096.22	0002646.16	0004985.61	0000426.99	0003782.81	04
2100 0010 15 31 48.68	0000072.17	0002670.22	0005057.77	0000451.05	0003854.97	04
2100 0010 15 31 49.68	0000096.22	0002670.22	0005105.89	0000402.94	0003927.14	04
2100 0010 15 32 49.18	0000360.84	0004065.46	0007391.21	0000811.89	0005370.50	04
2100 0010 15 32 50.18	0000384.90	0004065.46	0007439.32	0000739.72	0005442.67	04
2100 0010 15 32 51.18	0000457.06	0004161.69	0007463.37	0000787.83	0005490.78	04
2100 0020 15 34 42.66	0001178.74	0007553.58	0013212.76	0001653.85	0009267.57	04
2100 0020 15 34 43.66	0001274.97	0007601.70	0013308.98	0001701.96	0009315.69	04
2100 0030 15 36 06.02	0002116.93	0010921.42	0018986.20	0002616.09	0013092.48	04
2100 0030 15 36 07.02	0002116.93	0011017.65	0019010.25	0002592.03	0013116.53	04
2100 0040 15 38 03.12	0003079.17	0014457.66	0024783.69	0003506.16	0016845.21	04
2100 0040 15 38 04.12	0002982.94	0014505.77	0024783.69	0003433.99	0016845.21	04
2150 0000 15 40 32.15	0003897.07	0017921.72	0030605.25	0004420.29	0020670.12	04
2150 0000 15 40 33.15	0003945.18	0017993.89	0030653.36	0004396.23	0020694.17	04

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	R0041A	R0042A	R0043A	R0041B	R0042B	GP
2150 0000 15 40 34.15	0003969.24	0017993.89	0030653.36	0004396.23	0020694.17	04
2150 0000 15 40 35.15	0003945.18	0017993.89	0030653.36	0004468.40	0020718.23	04
2150 0000 15 40 36.15	0004017.35	0018017.94	0030701.47	0004396.23	0020694.17	04
2155 0000 15 45 59.61	0004402.25	0019749.98	0033588.19	0004829.24	0022570.54	04
2155 0000 15 46 00.61	0004450.36	0019749.98	0033636.30	0004901.41	0022546.49	04
2155 0000 15 46 01.61	0004450.36	0019725.92	0033636.30	0004925.47	0022570.54	04
2155 0000 15 46 02.61	0004378.19	0019749.98	0033588.19	0004901.41	0022546.49	04
2155 0000 15 46 03.61	0004450.36	0019749.98	0033588.19	0004853.30	0022570.54	04
2160 0000 16 29 34.86	0004859.31	0021313.62	0036234.35	0005214.14	0024208.24	04
2160 0000 16 29 35.86	0004811.20	0021265.50	0036186.24	0005334.42	0024134.18	04
2160 0000 16 29 36.86	0004811.20	0021289.56	0036186.24	0005262.25	0024230.41	04
2160 0000 16 29 37.86	0004811.20	0021313.62	0036234.35	0005262.25	0024182.29	04
2160 0000 16 29 38.86	0004859.31	0021289.56	0036186.24	0005310.36	0024158.24	04
2165 0000 16 33 04.12	0005292.32	0023069.70	0039313.52	0005695.26	0026082.72	04
2165 0000 16 33 05.12	0005292.32	0023117.82	0039361.63	0005743.37	0026178.94	04
2165 0000 16 33 06.12	0005292.32	0023189.98	0039265.41	0005719.31	0026178.94	04
2165 0000 16 33 07.12	0005240.43	0023141.87	0039313.52	0005743.37	0026178.94	04
2165 0000 16 33 08.12	0005316.38	0023141.87	0039265.41	0005743.37	0026178.94	04
2111 0000 16 39 31.91	0000433.01	0004209.80	0007752.05	0000763.78	0005466.73	04
2111 0000 16 39 32.91	0000384.90	0004233.86	0007752.05	0000811.89	0005490.78	04
2111 0000 16 39 33.91	0000384.90	0004257.91	0007727.93	0000763.78	0005490.78	04
2111 0000 16 39 34.91	0000384.90	0004161.69	0007703.93	0000787.83	0005490.78	04
2111 0000 16 39 35.91	0000408.95	0004257.91	0007776.10	0000811.89	0005562.95	04

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	R0043B	R90041A	R90042A	R90043A	R90041B	GP
2000 0000 09 50 06.68	0000012.03	0000018.03-	0000048.11	0000066.14-	0000042.09-	05
2100 0000 11 19 12.32	0001984.62	0000018.03-	0000769.79	0001665.88	0000198.46	05
2100 0000 11 19 13.32	0002032.73	0000042.09-	0000817.90	0001762.10	0000198.46	05
2100 0000 11 19 14.32	0002008.68	0000018.03-	0000793.85	0001713.99	0000198.46	05
2100 0000 11 19 15.32	0002008.68	0000018.03-	0000793.85	0001738.05	0000198.46	05
2100 0000 11 19 16.32	0002032.73	0000018.03-	0000817.90	0001738.05	0000150.35	05
2110 0000 13 02 50.73	0008359.46	0001208.81	0004161.69	0007559.60	0001208.81	05
2110 0000 13 02 51.73	0008383.52	0001256.93	0004281.97	0007583.65	0001184.76	05
2110 0000 13 02 52.73	0008359.46	0001232.87	0004233.86	0007583.65	0001112.59	05
2110 0000 13 02 53.73	0008383.52	0001208.81	0004209.80	0007583.65	0001184.76	05
2110 0000 13 02 54.73	0008359.46	0001208.81	0004306.02	0007607.71	0001184.76	05
2120 0000 13 07 26.70	0014493.74	0002411.61	0007649.81	0013381.15	0002147.00	05
2120 0000 13 07 27.70	0014517.80	0002363.50	0007649.81	0013429.26	0002171.05	05
2120 0000 13 07 28.70	0014517.80	0002363.50	0007649.81	0013357.09	0002147.00	05
2120 0000 13 07 29.70	0014614.02	0002315.39	0007649.81	0013429.26	0002122.94	05
2120 0000 13 07 30.70	0014565.91	0002387.56	0007673.86	0013308.98	0002171.05	05
2130 0000 14 11 14.22	0020219.07	0003349.80	0010753.03	0018841.86	0002940.85	05
2130 0000 14 11 15.22	0020219.07	0003349.80	0010777.09	0018865.92	0002940.85	05
2130 0000 14 11 16.22	0020219.07	0003325.74	0010825.20	0018817.81	0002916.79	05
2130 0000 14 11 17.22	0020195.01	0003301.69	0010753.03	0018817.81	0002940.85	05
2130 0000 14 11 18.22	0020170.96	0003277.63	0010728.98	0018841.86	0002940.85	05
2140 0000 14 15 59.89	0025968.45	0004239.87	0014000.59	0024446.91	0003830.92	05
2140 0000 14 16 00.89	0025872.23	0004215.81	0014000.59	0024422.85	0003782.81	05
2140 0000 14 16 01.89	0025968.45	0004312.04	0014048.70	0024470.97	0003830.92	05
2140 0000 14 16 02.89	0025872.23	0004312.04	0014000.59	0024398.80	0003854.97	05
2140 0000 14 16 03.89	0025920.34	0004287.98	0014024.65	0024398.80	0003806.86	05
2140 0000 14 16 04.89	0025872.23	0004215.81	0013976.54	0024446.91	0003830.92	05
2131 0000 14 52 06.49	0020387.46	0003301.69	0010704.92	0018673.47	0003037.07	05
2131 0000 14 52 07.49	0020387.46	0003373.85	0010728.98	0018721.58	0003037.07	05
2131 0000 14 52 08.49	0020387.46	0003373.85	0010753.03	0018721.58	0002988.96	05
2131 0000 14 52 09.49	0020363.40	0003373.85	0010704.92	0018697.53	0002988.96	05
2131 0000 14 52 10.49	0020363.40	0003373.85	0010728.98	0018697.53	0002988.96	05
2100 0010 15 31 46.68	0005568.96	0000703.64	0002622.10	0004793.16	0000751.75	05
2100 0010 15 31 47.68	0005593.02	0000703.64	0002694.27	0004913.44	0000751.75	05
2100 0010 15 31 48.68	0005713.30	0000703.64	0002718.33	0004889.38	0000727.69	05
2100 0010 15 31 49.68	0005857.64	0000751.75	0002790.50	0005081.83	0000751.75	05
2100 0010 15 32 49.18	0008191.07	0001184.76	0004017.35	0007246.87	0001112.59	05
2100 0010 15 32 50.18	0008239.18	0001208.81	0004065.46	0007294.98	0001160.70	05
2100 0010 15 32 51.18	0008263.24	0001232.87	0004089.52	0007270.93	0001160.70	05
2100 0020 15 34 42.66	0014205.07	0002291.33	0007337.08	0012875.97	0002074.83	05
2100 0020 15 34 43.66	0014253.18	0002339.45	0007313.02	0012924.09	0002074.83	05
2100 0030 15 36 06.02	0020122.84	0003325.74	0010632.75	0018601.39	0002940.85	05
2100 0030 15 36 07.02	0020122.84	0003301.69	0010584.64	0018577.25	0003013.01	05
2100 0040 15 38 03.12	0026064.68	0004287.98	0013952.48	0024326.63	0003806.86	05
2100 0040 15 38 04.12	0026112.79	0004336.09	0013976.54	0024422.85	0003830.92	05
2150 0000 15 40 32.15	0032030.56	0005226.17	0017344.38	0030292.52	0004672.88	05
2150 0000 15 40 33.15	0032030.56	0005322.39	0017344.38	0030340.63	0004769.10	05

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	R0043B	R90041A	R90042A	R90043A	R90041B	GP
2150 0000 15 40 34.15	0032030.56	0005298.33	0017344.38	0030292.52	0004672.88	05
2150 0000 15 40 35.15	0032030.56	0005274.28	0017368.43	0030292.52	0004720.99	05
2150 0000 15 40 36.15	0032030.56	0005298.33	0017344.38	0030340.63	0004672.88	05
2155 0000 15 45 59.61	0034965.40	0005755.40	0018956.13	0033179.24	0005154.00	05
2155 0000 15 46 00.61	0035013.51	0005779.45	0019004.24	0033179.24	0005105.89	05
2155 0000 15 46 01.61	0034965.40	0005779.45	0018980.18	0033179.24	0005081.83	05
2155 0000 15 46 02.61	0034917.28	0005755.40	0018980.18	0033131.13	0005129.94	05
2155 0000 15 46 03.61	0034869.17	0005803.51	0018980.18	0033179.24	0005129.94	05
2160 0000 16 29 34.86	0037467.22	0006188.41	0020399.49	0035681.06	0005418.61	05
2160 0000 16 29 35.86	0037515.33	0006188.41	0020423.54	0035681.06	0005490.78	05
2160 0000 16 29 36.86	0037515.33	0006188.41	0020375.43	0035681.06	0005442.67	05
2160 0000 16 29 37.86	0037467.22	0006212.46	0020423.54	0035632.95	0005490.78	05
2160 0000 16 29 38.86	0037563.44	0006164.35	0020447.60	0035681.06	0005442.67	05
2165 0000 16 33 04.12	0040690.72	0006621.41	0022155.58	0038760.23	0005875.68	05
2165 0000 16 33 05.12	0040690.72	0006597.36	0022155.58	0038808.34	0005899.73	05
2165 0000 16 33 06.12	0040642.61	0006669.53	0022179.63	0038808.34	0005875.68	05
2165 0000 16 33 07.12	0040738.84	0006669.53	0022131.52	0038808.34	0005851.62	05
2165 0000 16 33 08.12	0040642.61	0006693.58	0022131.52	0038808.34	0005875.68	05
2111 0000 16 39 31.91	0008407.57	0001305.04	0004113.58	0007343.09	0001208.81	05
2111 0000 16 39 32.91	0008431.63	0001305.04	0004161.69	0007343.09	0001184.76	05
2111 0000 16 39 33.91	0008431.63	0001232.87	0004065.46	0007367.15	0001184.76	05
2111 0000 16 39 34.91	0008431.63	0001280.98	0004089.52	0007415.26	0001160.70	05
2111 0000 16 39 35.91	0008431.63	0001280.98	0004161.69	0007391.21	0001160.70	05

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	R900428	R900438	P0051A	P0052A	P180051A	GP
2000 0000 09 50 06.68	0000030.06-	0000018.04	0000030.06-	0000096.21-	0000048.11	06
2100 0000 11 19 12.32	0001004.34	0001533.57	0000499.16	0000649.51	0000360.84	06
2100 0000 11 19 13.32	0001028.39	0001605.74	0000475.11	0000625.46	0000312.73	06
2100 0000 11 19 14.32	0001004.34	0001533.57	0000402.94	0000697.62	0000360.84	06
2100 0000 11 19 15.32	0001028.39	0001557.63	0000426.99	0000673.57	0000360.84	06
2100 0000 11 19 16.32	0000980.28	0001509.51	0000451.05	0000673.57	0000336.78	06
2110 0000 13 02 50.73	0004612.74	0006513.16	0004997.63	0002766.44	0003319.73	06
2110 0000 13 02 51.73	0004588.68	0006489.11	0005021.69	0002790.50	0003415.95	06
2110 0000 13 02 52.73	0004588.68	0006513.16	0004949.52	0002814.55	0003440.01	06
2110 0000 13 02 53.73	0004588.68	0006489.11	0004997.63	0002790.50	0003391.90	06
2110 0000 13 02 54.73	0004612.74	0006537.22	0005021.69	0002766.44	0003391.90	06
2120 0000 13 07 26.70	0008269.25	0012286.60	0009351.77	0005075.82	0006374.84	06
2120 0000 13 07 27.70	0008173.03	0012310.66	0009279.60	0005051.76	0006326.73	06
2120 0000 13 07 28.70	0008197.08	0012262.55	0009327.71	0005075.82	0006350.78	06
2120 0000 13 07 29.70	0008221.14	0012262.55	0009255.55	0005003.65	0006350.78	06
2120 0000 13 07 30.70	0008221.14	0012286.60	0009327.71	0005051.76	0006326.73	06
2130 0000 14 11 14.22	0011685.20	0017843.54	0013321.01	0007264.91	0008900.72	06
2130 0000 14 11 15.22	0011709.26	0017891.65	0013321.01	0007264.91	0008948.83	06
2130 0000 14 11 16.22	0011685.20	0017843.54	0013272.90	0007288.97	0008948.83	06
2130 0000 14 11 17.22	0011637.09	0017771.37	0013296.95	0007288.97	0008948.83	06
2130 0000 14 11 18.22	0011661.15	0017795.43	0013296.95	0007216.80	0008972.89	06
2140 0000 14 15 59.89	0015221.43	0023472.64	0017242.14	0009502.12	0011594.99	06
2140 0000 14 16 00.89	0015269.55	0023520.75	0017194.03	0009478.06	0011570.94	06
2140 0000 14 16 01.89	0015269.55	0023544.81	0017266.19	0009478.06	0011570.94	06
2140 0000 14 16 02.89	0015245.49	0023472.64	0017242.14	0009478.06	0011619.05	06
2140 0000 14 16 03.89	0015293.60	0023448.59	0017266.19	0009454.01	0011594.99	06
2140 0000 14 16 04.89	0015221.43	0023568.87	0017218.08	0009454.01	0011522.82	06
2131 0000 14 52 06.49	0011661.15	0017602.98	0012190.38	0007481.42	0008852.61	06
2131 0000 14 52 07.49	0011661.15	0017602.98	0012214.43	0007505.47	0008900.72	06
2131 0000 14 52 08.49	0011613.03	0017578.92	0012190.38	0007409.25	0008900.72	06
2131 0000 14 52 09.49	0011661.15	0017578.92	0012190.38	0007457.36	0008948.83	06
2131 0000 14 52 10.49	0011637.09	0017578.92	0012190.38	0007457.36	0008948.83	06
2100 0010 15 31 46.68	0002856.65	0003818.89	0002351.47	0002092.87	0001996.65	06
2100 0010 15 31 47.68	0002856.65	0003867.00	0002399.59	0002116.93	0002044.76	06
2100 0010 15 31 48.68	0002976.93	0003939.17	0002471.75	0002092.87	0002068.82	06
2100 0010 15 31 49.68	0003025.04	0004059.45	0002495.81	0002139.10	0002092.87	06
2100 0010 15 32 49.18	0004324.07	0006128.27	0004083.51	0002982.94	0003175.39	06
2100 0010 15 32 50.18	0004372.18	0006176.38	0004203.79	0003031.06	0003319.73	06
2100 0010 15 32 51.18	0004420.29	0006200.43	0004227.84	0003079.17	0003247.56	06
2100 0020 15 34 42.66	0007884.35	0011781.43	0008317.36	0005244.21	0006110.22	06
2100 0020 15 34 43.66	0007908.41	0011853.59	0008341.42	0005292.32	0006158.34	06
2100 0030 15 36 06.02	0011492.75	0017506.75	0012238.49	0007481.42	0008828.55	06
2100 0030 15 36 07.02	0011468.70	0017530.81	0012310.66	0007481.42	0008852.61	06
2100 0040 15 38 03.12	0015149.27	0023328.31	0016111.51	0009742.68	0011498.77	06
2100 0040 15 38 04.12	0015197.38	0023376.42	0016207.72	0009814.85	0011570.94	06
2150 0000 15 40 32.15	0018877.95	0029510.70	0020032.63	0012196.39	0014144.93	06
2150 0000 15 40 33.15	0018877.95	0029510.70	0020080.75	0012220.45	0014241.15	06

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	R900428	R900438	P0051A	P0052A	P180051A	GP
2150 0000 15 40 34.15	0018950.11	0029462.59	0020056.69	0012220.45	0014217.10	06
2150 0000 15 40 35.15	0018853.89	0029510.70	0020080.75	0012244.50	0014241.15	06
2150 0000 15 40 36.15	0018902.00	0029510.70	0020032.63	0012172.34	0014241.15	06
2155 0000 15 45 59.61	0020682.15	0032445.53	0021884.95	0013423.25	0015419.90	06
2155 0000 15 46 00.61	0020634.03	0032445.53	0021909.00	0013423.25	0015492.06	06
2155 0000 15 46 01.61	0020634.03	0032445.53	0021860.89	0013399.19	0015468.01	06
2155 0000 15 46 02.61	0020706.20	0032445.53	0021836.83	0013423.25	0015492.06	06
2155 0000 15 46 03.61	0020730.26	0032397.42	0021836.83	0013447.30	0015492.06	06
2160 0000 16 29 34.86	0022245.79	0034995.47	0023496.70	0014481.71	0016598.64	06
2160 0000 16 29 35.86	0022221.73	0035043.58	0023472.64	0014433.60	0016622.70	06
2160 0000 16 29 36.86	0022245.79	0035043.58	0023448.59	0014433.60	0016622.70	06
2160 0000 16 29 37.86	0022269.84	0034947.35	0023472.64	0014409.54	0016598.64	06
2160 0000 16 29 38.86	0022173.62	0034947.35	0023424.53	0014409.54	0016646.75	06
2165 0000 16 33 04.12	0024170.27	0038218.97	0025349.01	0015732.62	0017921.72	06
2165 0000 16 33 05.12	0024146.21	0038218.97	0025397.12	0015732.62	0017921.72	06
2165 0000 16 33 06.12	0024170.27	0038267.08	0025349.01	0015780.74	0017921.72	06
2165 0000 16 33 07.12	0024194.32	0038170.86	0025349.01	0015732.62	0017897.66	06
2165 0000 16 33 08.12	0024170.27	0038218.97	0025349.01	0015732.62	0017897.66	06
2111 0000 16 39 31.91	0004348.17	0006032.04	0004468.40	0003127.28	0003464.06	06
2111 0000 16 39 32.91	0004396.28	0006056.10	0004516.51	0003103.22	0003488.12	06
2111 0000 16 39 33.91	0004324.07	0006056.10	0004516.51	0003151.34	0003488.12	06
2111 0000 16 39 34.91	0004348.17	0006056.10	0004540.57	0003151.34	0003512.18	06
2111 0000 16 39 35.91	0004396.28	0006032.04	0004468.40	0003175.39	0003464.06	06

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P180052A	P0071A	P0072A	P180071A	P180072A	GP
2000 0000 09 50 06.68	0000006.01	0000054.12-	0000024.06	0000024.05-	0000048.10-	07
2100 0000 11 19 12.32	0001088.53	0000884.06	0001659.86	0000360.84	0001491.47	07
2100 0000 11 19 13.32	0001040.42	0000860.00	0001635.81	0000360.84	0001515.53	07
2100 0000 11 19 14.32	0001088.53	0000884.06	0001659.86	0000312.73	0001515.53	07
2100 0000 11 19 15.32	0001136.65	0000835.95	0001707.98	0000312.73	0001587.70	07
2100 0000 11 19 16.32	0001040.42	0000860.00	0001611.75	0000288.67	0001515.53	07
2110 0000 13 02 50.73	0004528.54	0004300.01	0006759.74	0002237.21	0006038.06	07
2110 0000 13 02 51.73	0004576.65	0004275.95	0006711.62	0002237.21	0005989.94	07
2110 0000 13 02 52.72	0004504.49	0004300.01	0006783.79	0002309.38	0006038.06	07
2110 0000 13 02 53.73	0004504.49	0004324.07	0006735.68	0002213.15	0006062.11	07
2110 0000 13 02 54.73	0004480.43	0004275.95	0006759.74	0002237.21	0006062.11	07
2120 0000 13 07 26.70	0007944.49	0007691.91	0011715.27	0004426.30	0010680.86	07
2120 0000 13 07 27.70	0007920.44	0007643.79	0011763.38	0004426.30	0010632.75	07
2120 0000 13 07 28.70	0007968.55	0007691.91	0011739.33	0004426.30	0010584.64	07
2120 0000 13 07 29.70	0007944.49	0007667.85	0011763.38	0004354.14	0010680.86	07
2120 0000 13 07 30.70	0007992.61	0007667.85	0011739.33	0004426.30	0010656.81	07
2130 0000 14 11 14.22	0011119.89	0010674.85	0016358.08	0006615.40	0015083.11	07
2130 0000 14 11 15.22	0011095.83	0010650.79	0016382.14	0006639.46	0015083.11	07
2130 0000 14 11 16.22	0011047.72	0010626.74	0016309.97	0006591.34	0015083.11	07
2130 0000 14 11 17.22	0011047.72	0010650.79	0016358.08	0006615.40	0015059.06	07
2130 0000 14 11 18.22	0011071.77	0010626.74	0016334.02	0006591.34	0015059.06	07
2140 0000 14 15 59.89	0014271.22	0013705.91	0021049.00	0008876.66	0019509.42	07
2140 0000 14 16 00.89	0014199.05	0013585.63	0020952.78	0008852.61	0019509.42	07
2140 0000 14 16 01.89	0014271.22	0013657.79	0021000.89	0008924.78	0019509.42	07
2140 0000 14 16 02.89	0014271.22	0013633.74	0020928.72	0008900.72	0019509.42	07
2140 0000 14 16 03.89	0014150.94	0013561.57	0020904.66	0008900.72	0019509.42	07
2140 0000 14 16 04.89	0014199.05	0013609.68	0020976.83	0008852.61	0019461.30	07
2131 0000 14 52 06.49	0011119.89	0010771.07	0016334.02	0006591.34	0014986.89	07
2131 0000 14 52 07.49	0011071.77	0010819.19	0016285.91	0006639.46	0014986.89	07
2131 0000 14 52 08.49	0011119.89	0010819.19	0016285.91	0006591.34	0015035.00	07
2131 0000 14 52 09.49	0011071.77	0010795.13	0016285.91	0006615.40	0015035.00	07
2131 0000 14 52 10.49	0011095.83	0010771.07	0016285.91	0006591.34	0014986.89	07
2100 0010 15 31 46.68	0003037.07	0002592.03	0004522.53	0001299.02	0003897.07	07
2100 0010 15 31 47.68	0003061.13	0002592.03	0004666.86	0001347.14	0003969.24	07
2100 0010 15 31 48.68	0003109.24	0002616.09	0004666.86	0001371.19	0004089.52	07
2100 0010 15 31 49.68	0003157.35	0002688.26	0004787.14	0001395.25	0004113.58	07
2100 0010 15 32 49.18	0004384.21	0003939.17	0006663.51	0002116.93	0005893.72	07
2100 0010 15 32 50.18	0004480.43	0003963.23	0006735.68	0002140.98	0005869.66	07
2100 0010 15 32 51.18	0004480.43	0003987.28	0006783.79	0002116.93	0005869.66	07
2100 0020 15 34 42.66	0007776.10	0007186.73	0011570.94	0004257.91	0010368.14	07
2100 0020 15 34 43.66	0007824.21	0007210.79	0011594.99	0004281.97	0010392.19	07
2100 0030 15 38 06.02	0010999.61	0010314.01	0016382.14	0006447.01	0014490.66	07
2100 0030 15 36 07.02	0010999.61	0010314.01	0016358.08	0006543.23	0014962.83	07
2100 0040 15 38 03.12	0014247.17	0013393.18	0021097.11	0008804.50	0019533.47	07
2100 0040 15 38 04.12	0014319.33	0013465.35	0021145.22	0008900.72	0019533.47	07
2150 0000 15 40 32.15	0017639.06	0016472.35	0025980.48	0011186.04	0024152.22	07
2150 0000 15 40 33.15	0017615.01	0016424.23	0026028.59	0011258.21	0024152.22	07

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P180052A	P0071A	P0072A	P180071A	P180072A	GP
2150 0000 15 40 34.15	0017639.06	0016472.35	0025980.48	0011210.10	0024224.39	07
2150 0000 15 40 35.15	0017687.1.	0016496.40	0025932.37	0011186.04	0024152.22	07
2150 0000 15 40 36.15	0017663.12	0016520.46	0025980.48	0011186.04	0024152.22	07
2155 0000 15 45 59.61	0019202.70	0017891.65	0028289.86	0012340.73	0026437.54	07
2155 0000 15 46 00.61	0019250.81	0017915.71	0028289.86	0012364.78	0026389.43	07
2155 0000 15 46 01.61	0019226.76	0017915.71	0028289.86	0012340.73	0026437.54	07
2155 0000 15 46 02.61	0019250.81	0017915.71	0028289.86	0012340.73	0026341.32	07
2155 0000 15 46 03.61	0019274.87	0017915.71	0028241.74	0012388.84	0026389.43	07
2160 0000 16 29 34.86	0020670.12	0019118.51	0030262.45	0013230.80	0028362.02	07
2160 0000 16 29 35.86	0020670.12	0019142.56	0030262.45	0013278.91	0028362.02	07
2160 0000 16 29 36.86	0020573.89	0019142.56	0030262.45	0013206.74	0028362.02	07
2160 0000 16 29 37.86	0020694.17	0019094.45	0030214.34	0013278.91	0028362.02	07
2160 0000 16 29 38.86	0020622.01	0019070.39	0030214.34	0013254.86	0028362.02	07
2165 0000 16 33 04.12	0022305.93	0020634.03	0032668.05	0014409.54	0030767.62	07
2165 0000 16 33 05.12	0022329.98	0020634.03	0032668.05	0014481.71	0030767.62	07
2165 0000 16 33 06.12	0022329.98	0020585.92	0032668.05	0014433.60	0030815.74	07
2165 0000 16 33 07.12	0022378.09	0020634.03	0032668.05	0014433.60	0030767.62	07
2165 0000 16 33 08.12	0022329.98	0020561.87	0032619.94	0014457.66	0030719.51	07
2111 0000 16 39 31.91	0004624.77	0004155.67	0006904.07	0002213.15	0006038.06	07
2111 0000 16 39 32.91	0004672.88	0004155.67	0006904.07	0002237.21	0005965.89	07
2111 0000 16 39 33.91	0004648.82	0004155.67	0006928.13	0002213.15	0006038.06	07
2111 0000 16 39 34.91	0004672.88	0004179.73	0006855.96	0002213.15	0005965.89	07
2111 0000 16 39 35.91	0004624.77	0004131.62	0006928.13	0002165.04	0006038.06	07

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P0091A	P0092A	P180091A	P180092A	L11210A	GP
2000 0000 09 50 06.68	0000024.05-	0000066.14-	0000012.02-	0000012.02-	0000168.38-	08
2100 0000 11 19 12.32	0000216.49-	0000847.97	0000084.19-	0000902.10	0000096.22	08
2100 0000 11 19 13.32	0000216.49-	0000847.97	0000012.02-	0000902.10	0000072.17	08
2100 0000 11 19 14.32	0000168.38-	0000847.97	0000012.02-	0000902.10	0000048.10-	08
2100 0000 11 19 15.32	0000168.38-	0000872.03	0000060.13-	0000902.10	0000000.00	08
2100 0000 11 19 16.32	0000192.44-	0000872.03	0000084.19-	0000902.10	0000024.05-	08
2110 0000 13 02 50.73	0002140.98	0003061.13	0001070.49	0002922.80	0000288.67	08
2110 0000 13 02 51.73	0002165.04	0003133.29	0001142.66	0002922.80	0000312.73	08
2110 0000 13 02 52.73	0002165.04	0003109.24	0001142.66	0002922.80	0000288.67	08
2110 0000 13 02 53.73	0002165.04	0003157.35	0001142.66	0002922.80	0000312.73	08
2110 0000 13 02 54.73	0002189.10	0003157.35	0001166.72	0003019.03	0000336.78	08
2120 0000 13 07 26.70	0004378.19	0005490.78	0002249.24	0005063.79	0000721.68	08
2120 0000 13 07 27.70	0004330.08	0005466.73	0002225.18	0004991.62	0000721.68	08
2120 0000 13 07 28.70	0004378.19	0005442.67	0002273.29	0005063.79	0000697.62	08
2120 0000 13 07 29.70	0004378.19	0005466.73	0002225.18	0005039.73	0000697.62	08
2120 0000 13 07 30.70	0004378.19	0005442.67	0002225.18	0005015.68	0000697.62	08
2130 0000 14 11 14.22	0006422.95	0007727.99	0003331.76	0007036.38	0000697.62	08
2130 0000 14 11 15.22	0006422.95	0007752.05	0003307.70	0007060.44	0000697.62	08
2130 0000 14 11 16.22	0006422.95	0007727.99	0003355.81	0007012.32	0000769.79	08
2130 0000 14 11 17.22	0006447.01	0007703.93	0003331.76	0007012.32	0000817.90	08
2130 0000 14 11 18.22	0006398.90	0007727.99	0003355.81	0007012.32	0000769.79	08
2140 0000 14 15 59.89	0008467.71	0010013.31	0004438.33	0008984.92	0000745.74	08
2140 0000 14 16 00.89	0008443.66	0010037.37	0004438.33	0009033.03	0000817.90	08
2140 0000 14 16 01.89	0008467.71	0010013.31	0004462.39	0009008.97	0000841.96	08
2140 0000 14 16 02.89	0008419.60	0009989.25	0004486.44	0008984.92	0000697.62	08
2140 0000 14 16 03.89	0008443.66	0009989.25	0004486.44	0009008.97	0000721.68	08
2140 0000 14 16 04.89	0008443.66	0010013.31	0004438.33	0009033.03	0000769.79	08
2131 0000 14 52 06.49	0005484.77	0007511.49	0003331.76	0006940.16	0000890.06-	08
2131 0000 14 52 07.49	0005460.71	0007463.37	0003307.70	0006964.21	0000890.06-	08
2131 0000 14 52 08.49	0005508.82	0007487.43	0003307.70	0006988.27	0000938.17-	08
2131 0000 14 52 09.49	0005508.82	0007535.54	0003331.76	0006916.10	0000962.23-	08
2131 0000 14 52 10.49	0005532.88	0007511.49	0003355.81	0006964.21	0000914.12-	08
2100 0010 15 31 46.68	0000505.18	0002090.89	0000565.32	0002032.73	0000264.61-	08
2100 0010 15 31 47.66	0000529.23	0002147.00	0000613.43	0002080.84	0000264.61-	08
2100 0010 15 31 48.68	0000529.23	0002147.00	0000589.37	0002080.84	0000240.55-	08
2100 0010 15 31 49.68	0000601.40	0002171.05	0000517.20	0002080.84	0000144.33-	08
2100 0010 15 32 49.18	0001347.14	0003085.18	0001046.44	0002826.58	0000000.00	08
2100 0010 15 32 50.18	0001395.25	0003085.18	0001046.44	0002898.75	0000024.06	08
2100 0010 15 32 51.18	0001395.25	0003109.24	0001022.38	0002898.75	0000144.34	08
2100 0020 15 34 42.66	0003391.90	0005394.56	0002177.07	0004871.34	0000384.90	08
2100 0020 15 34 43.66	0003415.95	0005418.61	0002177.07	0004895.40	0000408.95	08
2100 0030 15 36 06.02	0005412.60	0007679.88	0003211.48	0006940.16	0000433.01	08
2100 0030 15 36 07.02	0005412.60	0007727.99	0003283.64	0006916.10	0000408.95	08
2100 0040 15 38 03.12	0007385.19	0010133.59	0004366.16	0008960.86	0000312.73	08
2100 0040 15 38 04.12	0007385.19	0010133.59	0004414.28	0008936.80	0000336.78	08
2150 0000 15 40 32.15	0009309.67	0012563.25	0005520.85	0011077.79	0000336.78	08
2150 0000 15 40 33.15	0009333.73	0012539.19	0005544.91	0011125.90	0000360.84	08

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P0091A	P0092A	P180091A	P180092A	L11210A	GP
2150 0000 15 40 34.15	0009357.78	0012563.25	0005593.02	0011101.84	0000408.95	08
2150 0000 15 40 35.15	0009309.67	0012563.25	0005593.02	0011125.90	0000433.01	08
2150 0000 15 40 36.15	0009309.67	0012563.25	0005568.96	0011149.96	0000408.95	08
2155 0000 15 45 59.61	0010223.80	0013741.99	0006098.20	0012160.31	0000384.90	08
2155 0000 15 46 00.61	0010223.80	0013741.99	0006170.36	0012160.31	0000408.95	08
2155 0000 15 46 01.61	0010247.86	0013790.10	0006170.36	0012232.48	0000433.01	08
2155 0000 15 46 02.61	0010223.80	0013766.05	0006122.25	0012208.42	0000360.84	08
2155 0000 15 46 03.61	0010199.74	0013766.05	0006146.31	0012160.31	0000336.78	08
2160 0000 16 29 34.66	0010945.48	0014824.51	0006603.37	0013122.55	0000288.67	08
2160 0000 16 29 35.86	0010993.59	0014848.57	0006603.37	0013122.55	0000264.62	08
2160 0000 16 29 36.86	0010969.54	0014824.51	0006651.48	0013122.55	0000288.67	08
2160 0000 16 29 37.86	0010993.59	0014848.57	0006627.43	0013122.55	0000288.67	08
2160 0000 16 29 38.86	0010945.48	0014848.57	0006627.43	0013122.55	0000288.67	08
2165 0000 16 33 04.12	0011907.72	0016147.59	0007156.66	0014253.18	0000288.67	08
2165 0000 16 33 05.12	0011931.78	0016123.53	0007204.77	0014253.18	0000336.78	08
2165 0000 16 33 06.12	0011955.83	0016147.59	0007204.77	0014253.18	0000384.90	08
2165 0000 16 33 07.12	0011931.78	0016123.53	0007180.72	0014253.18	0000360.84	08
2165 0000 16 33 08.12	0011979.89	0016147.59	0007180.72	0014277.24	0000312.73	08
2111 0000 16 39 31.91	0001539.58	0003253.57	0001262.94	0002922.80	0000817.89-	08
2111 0000 16 39 32.91	0001491.47	0003205.46	0001262.94	0002970.92	0000866.01-	08
2111 0000 16 39 33.91	0001515.53	0003253.57	0001214.83	0002922.80	0000793.84-	08
2111 0000 16 39 34.91	0001491.47	0003277.63	0001214.83	0002970.92	0000817.89-	08
2111 0000 16 39 35.91	0001515.53	0003229.52	0001214.83	0002946.86	0000866.01-	08

ELEMENT STRESS

ID 1106 REC PT 400 RATE 01 11/06/69 CONJUGATE STRUCTURE TEST COND 2

TEST	COND	HR/MN/SEC	R0111A	R0112A	R0113A	R90111A	R90112A	GP
2000	0000	09 50 06.68	0000018.04	0000042.09-	0000030.06-	0000036.07-	0000006.00-	09
2100	0000	11 19 12.32	0000426.99	0001305.04	0002207.14	0000589.37	0002014.69	09
2100	0000	11 19 13.32	0000475.11	0001353.15	0002279.31	0000613.43	0002014.69	09
2100	0000	11 19 14.32	0000402.94	0001329.09	0002231.19	0000589.37	0002014.69	09
2100	0000	11 19 15.32	0000426.99	0001280.98	0002231.19	0000589.37	0002038.75	09
2100	0000	11 19 16.32	0000451.05	0001353.15	0002183.08	0000637.48	0002062.80	09
2110	0000	13 02 50.73	0002712.31	0004239.87	0005815.54	0002970.92	0005815.54	09
2110	0000	13 02 51.73	0002760.43	0004215.81	0005815.54	0003019.03	0005887.71	09
2110	0000	13 02 52.73	0002688.26	0004239.87	0005791.48	0002994.97	0005863.65	09
2110	0000	13 02 53.73	0002664.20	0004191.76	0005791.48	0002994.97	0005887.71	09
2110	0000	13 02 54.73	0002640.15	0004215.81	0005791.48	0002994.97	0005863.65	09
2120	0000	13 07 26.70	0004901.41	0007054.42	0009375.83	0005424.63	0009616.39	09
2120	0000	13 07 27.70	0004925.47	0007054.42	0009303.66	0005376.52	0009544.22	09
2120	0000	13 07 28.70	0004901.41	0007102.53	0009351.77	0005328.40	0009592.33	09
2120	0000	13 07 29.70	0004901.41	0007030.37	0009351.77	0005448.68	0009592.33	09
2120	0000	13 07 30.70	0004901.41	0007078.48	0009303.66	0005400.57	0009568.27	09
2130	0000	14 11 14.22	0006801.83	0009796.81	0012960.17	0007541.56	0012960.17	09
2130	0000	14 11 15.22	0006801.83	0009820.86	0012936.11	0007589.67	0012984.23	09
2130	0000	14 11 16.22	0006849.95	0009796.81	0012936.11	0007613.72	0012936.11	09
2130	0000	14 11 17.22	0006849.95	0009868.97	0012912.06	0007541.56	0012960.17	09
2130	0000	14 11 18.22	0006801.83	0009868.97	0012936.11	0007541.56	0012984.23	09
2140	0000	14 15 59.89	0008389.53	0012370.80	0016400.18	0009682.54	0016376.12	09
2140	0000	14 16 00.89	0008365.47	0012418.91	0016352.07	0009706.60	0016279.90	09
2140	0000	14 16 01.89	0008413.59	0012370.80	0016352.07	0009730.65	0016352.07	09
2140	0000	14 16 02.89	0008341.42	0012346.74	0016376.12	0009682.54	0016328.01	09
2140	0000	14 16 03.89	0008365.47	0012394.85	0016400.18	0009730.65	0016303.95	09
2140	0000	14 16 04.89	0008317.36	0012346.74	0016352.07	0009682.54	0016352.07	09
2131	0000	14 52 06.49	0004131.62	0010326.04	0017843.54	0007589.67	0012888.00	09
2131	0000	14 52 07.49	0004179.73	0010350.09	0017819.48	0007565.61	0012815.83	09
2131	0000	14 52 08.49	0004131.62	0010301.98	0017843.54	0007517.50	0012863.95	09
2131	0000	14 52 09.49	0004107.56	0010277.93	0017867.59	0007493.44	0012888.00	09
2131	0000	14 52 10.49	0004131.62	0010301.98	0017747.31	0007565.61	0012815.83	09
2100	0010	15 31 46.68	0000054.12-	0002940.85	0007258.90	0001888.40	0003939.17	09
2100	0010	15 31 47.68	0000054.12-	0003013.01	0007403.23	0001936.51	0004035.39	09
2100	0010	15 31 48.68	0000018.04	0003037.07	0007403.23	0001936.51	0004035.39	09
2100	0010	15 31 49.68	0000042.10	0003109.24	0007499.46	0001984.62	0004131.62	09
2100	0010	15 32 49.18	0000643.50	0004191.76	0009159.32	0002850.64	0005526.87	09
2100	0010	15 32 50.18	0000667.55	0004239.87	0009183.38	0002922.80	0005574.98	09
2100	0010	15 32 51.18	0000715.67	0004239.87	0009183.38	0002970.92	0005574.98	09
2100	0020	15 34 42.66	0002375.53	0007198.76	0013537.51	0005208.12	0009279.60	09
2100	0020	15 36 43.66	0002447.70	0007270.93	0013537.51	0005280.29	0009231.49	09
2100	0030	15 36 06.02	0004083.51	0010133.59	0017747.31	0007493.44	0012791.78	09
2100	0030	15 36 07.02	0004131.62	0010109.53	0017771.37	0007493.44	0012791.78	09
2100	0040	15 38 03.12	0005791.48	0013092.48	0021933.06	0009730.65	0016231.79	09
2100	0040	15 38 04.12	0005767.43	0013164.65	0021957.11	0009778.76	0016279.90	09
2150	0000	15 40 32.15	0007451.35	0016051.37	0026166.91	0012040.03	0019840.19	09
2150	0000	15 40 33.15	0007475.40	0016075.42	0026118.80	0012040.03	0019816.13	09

ELEMENT STRESS

ID 1106 REC PT 400 RATE 01 11/06/69 CONJUGATE STRUCTURE TEST COND 2

TEST	COND	HR/MN/SEC	R0111A	R0112A	R0113A	R90111A	R90112A	GP
2150	0000	15 40 34.15	0007475.40	0016099.48	0026166.91	0012112.20	0019864.24	09
2150	0000	15 40 35.15	0007499.46	0016099.48	0026070.69	0012088.14	0019768.02	09
2150	0000	15 40 36.15	0007475.40	0016099.48	0026166.91	0012064.08	0019792.07	09
2155	0000	15 45 59.61	0008245.19	0017542.84	0028139.51	0013194.72	0021379.77	09
2155	0000	15 46 00.61	0008245.19	0017470.67	0028091.39	0013218.77	0021475.99	09
2155	0000	15 46 01.61	0008317.36	0017518.78	0028139.51	0013218.77	0021403.83	09
2155	0000	15 46 02.61	0008221.14	0017494.73	0028091.39	0013170.66	0021427.88	09
2155	0000	15 46 03.61	0008293.31	0017470.67	0028139.51	0013170.66	0021427.88	09
2160	0000	16 29 34.86	0008918.76	0018745.64	0029871.54	0014205.07	0022630.68	09
2160	0000	16 29 35.86	0008894.71	0018745.64	0029871.54	0014229.12	0022678.79	09
2160	0000	16 29 36.86	0008918.76	0018745.64	0029823.43	0014205.07	0022678.79	09
2160	0000	16 29 37.86	0008918.76	0018745.64	0029871.54	0014205.07	0022678.79	09
2160	0000	16 29 38.86	0008870.65	0018721.58	0029871.54	0014229.12	0022654.74	09
2165	0000	16 33 04.12	0009784.78	0020213.05	0031940.35	0015576.26	0024146.21	09
2165	0000	16 33 05.12	0009808.83	0020237.11	0031988.47	0015600.32	0024098.10	09
2165	0000	16 33 06.12	0009784.78	0020213.05	0031988.47	0015648.43	0024146.21	09
2165	0000	16 33 07.12	0009832.89	0020237.11	0031988.47	0015600.32	0024074.04	09
2165	0000	16 33 08.12	0009784.78	0020261.17	0031988.47	0015648.43	0024122.15	09
2111	0000	16 39 31.91	0000571.33	0004360.15	0009279.60	0003187.42	0005382.53	09
2111	0000	16 39 32.91	0000547.27	0004360.15	0009255.55	0003163.36	0005358.47	09
2111	0000	16 39 33.91	0000595.39	0004384.21	0009327.71	0003163.36	0005430.64	09
2111	0000	16 39 34.91	0000595.39	0004336.09	0009255.55	0003115.25	0005382.53	09
2111	0000	16 39 35.91	0000547.27	0004336.09	0009279.60	0003163.36	0005406.59	09

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST	COND	HR/MN/SEC	R90113A	P177121A	P177122A	P180131A	P180132A	GP
2000	0000	09 50 06.68	0000024.06	0000006.00-	0000042.09-	0000024.05-	0000018.03-	10
2100	0000	11 19 12.32	0003175.39	0001533.57	0005081.83	0001587.69-	0001798.18-	10
2100	0000	11 19 13.32	0003199.45	0001533.57	0005129.94	0001563.63-	0001701.95-	10
2100	0000	11 19 14.32	0003223.50	0001485.46	0005129.94	0001587.69-	0001750.06-	10
2100	0000	11 19 15.32	0003271.62	0001533.57	0005057.77	0001635.80-	0001750.06-	10
2100	0000	11 19 16.32	0003199.45	0001509.51	0005105.89	0001611.74-	0001774.12-	10
2110	0000	13 02 50.73	0008227.15	0007403.23	0016893.33	0004811.19-	0005334.41-	10
2110	0000	13 02 51.73	0008299.32	0007427.29	0016845.21	0004787.13-	0005310.25-	10
2110	0000	13 02 52.73	0008275.26	0007451.35	0016773.05	0004763.08-	0005334.41-	10
2110	0000	13 02 53.73	0008251.21	0007355.12	0016773.05	0004811.19-	0005334.41-	10
2110	0000	13 02 54.73	0008275.26	0007355.12	0016845.21	0004787.13-	0005334.41-	10
2120	0000	13 07 26.70	0013230.80	0010771.07	0027502.02	0007746.02-	0009327.70-	10
2120	0000	13 07 27.70	0013206.74	0010819.19	0027453.91	0007721.97-	0009327.70-	10
2120	0000	13 07 28.70	0013182.69	0010747.02	0027502.02	0007770.08-	0009399.87-	10
2120	0000	13 07 29.70	0013182.69	0010819.19	0027405.80	0007721.97-	0009351.76-	10
2120	0000	13 07 30.70	0013182.69	0010771.07	0027405.80	0007746.02-	0009351.76-	10
2130	0000	14 11 14.22	0017753.33	0012406.88	0035681.06	0010223.79-	0013441.28-	10
2130	0000	14 11 15.22	0017753.33	0012406.88	0035729.17	0010175.68-	0013465.34-	10
2130	0000	14 11 16.22	0017681.16	0012382.83	0035632.95	0010223.79-	0013441.28-	10
2130	0000	14 11 17.22	0017681.16	0012406.88	0035681.06	0010151.62-	0013465.34-	10
2130	0000	14 11 18.22	0017657.10	0012406.88	0035632.95	0010151.62-	0013489.39-	10
2140	0000	14 15 59.89	0022179.63	0013441.29	0042801.64	0012412.89-	0017843.53-	10
2140	0000	14 16 00.89	0022179.63	0013417.23	0042801.64	0012388.83-	0017843.53-	10
2140	0000	14 16 01.89	0022179.63	0013369.12	0042801.64	0012412.89-	0017795.42-	10
2140	0000	14 16 02.89	0022179.63	0013369.12	0042801.64	0012364.77-	0017747.30-	10
2140	0000	14 16 03.89	0022179.63	0013417.23	0042801.64	0012340.72-	0017795.42-	10
2140	0000	14 16 04.89	0022179.63	0013369.12	0042753.53	0012388.83-	0017795.42-	10
2131	0000	14 52 06.49	0017657.10	0012310.66	0035729.17	0009141.27-	0013513.45-	10
2131	0000	14 52 07.49	0017681.16	0012334.71	0035681.06	0009117.21-	0013561.56-	10
2131	0000	14 52 08.49	0017657.10	0012334.71	0035681.06	0009165.33-	0013561.56-	10
2131	0000	14 52 09.49	0017681.16	0012238.49	0035681.06	0009093.16-	0013489.39-	10
2131	0000	14 52 10.49	0017633.05	0012262.55	0035632.95	0009117.21-	0013561.56-	10
2100	0010	15 31 46.68	0005893.72	0004853.30	0011552.89	0002092.86-	0003939.16-	10
2100	0010	15 31 47.68	0005917.78	0004973.58	0011673.17	0002044.75-	0003987.27-	10
2100	0010	15 31 48.68	0006014.00	0005045.75	0011889.68	0002140.97-	0004011.33-	10
20 2100	0010	15 31 49.68	0006062.11	0005141.97	0012034.01	0002189.09-	0004059.44-	10
19 2100	0010	15 32 49.18	0007986.59	0007210.79	0016508.43	0003415.94-	0005454.69-	10
18 2100	0010	15 32 50.18	0008010.65	0007186.73	0016628.71	0003343.77-	0005478.74-	10
17 2100	0010	15 32 51.18	0008058.76	0007162.67	0016676.82	0003391.89-	0005526.86-	10
16 2100	0020	15 34 42.66	0012797.79	0010506.46	0027020.90	0006278.61-	0009327.70-	10
15 2100	0020	15 34 43.66	0012845.90	0010530.51	0027020.90	0006302.66-	0009375.82-	10
14 2100	0030	15 36 06.02	0017464.66	0012238.49	0035488.61	0009261.55-	0013441.28-	10
13 2100	0030	15 36 07.02	0017488.71	0012286.60	0035488.61	0009237.49-	0013417.22-	10
12 2100	0040	15 38 03.12	0022107.46	0013296.95	0042897.86	0012124.21-	0017843.53-	10
11 2100	0040	15 38 04.12	0022035.30	0013321.01	0042945.97	0012196.38-	0017795.42-	10
10 2150	0000	15 40 32.15	0026605.94	0014138.91	0049489.21	0014481.70-	0022606.62-	10
9 2150	0000	15 40 33.15	0026702.16	0014187.03	0049585.43	0014481.70-	0022606.62-	10

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST	COND	HR/MN/SEC	R90113A	P177121A	P177122A	P180131A	P180132A	GP
2150	0000	15 40 34.15	0026654.05	0014187.03	0049585.43	0014481.70-	0022510.39-	10
2150	0000	15 40 35.15	0026605.94	0014114.86	0049585.43	0014385.48-	0022606.62-	10
2150	0000	15 40 36.15	0026605.94	0014187.03	0049585.43	0014385.48-	0022558.50-	10
2155	0000	15 45 59.61	0028722.86	0014595.98	0052568.37	0015155.27-	0025084.38-	10
2155	0000	15 46 00.61	0028722.86	0014571.92	0052664.60	0015155.27-	0025132.50-	10
2155	0000	15 46 01.61	0028770.98	0014595.98	0052664.60	0015155.27-	0025132.50-	10
2155	0000	15 46 02.61	0028722.86	0014620.03	0052568.37	0015131.21-	0025084.38-	10
2155	0000	15 46 03.61	0028722.86	0014595.98	0052568.37	0015107.16-	0025084.38-	10
2160	0000	16 29 34.86	0030647.34	0014908.71	0055166.42	0015588.28-	0027345.65-	10
2160	0000	16 29 35.86	0030647.34	0014956.82	0055166.42	0015540.17-	0027345.65-	10
2160	0000	16 29 36.86	0030647.34	0014956.82	0055166.42	0015588.28-	0027345.65-	10
2160	0000	16 29 37.86	0030647.34	0014956.82	0055166.42	0015516.11-	0027297.54-	10
2160	0000	16 29 38.86	0030695.46	0014908.71	0055166.42	0015540.17-	0027345.65-	10
2165	0000	16 33 04.12	0032860.50	0015389.83	0058245.59	0013206.73-	0030521.04-	10
2165	0000	16 33 05.12	0032860.50	0015365.77	0058245.59	0013182.68-	0030569.15-	10
2165	0000	16 33 06.12	0032908.61	0015413.88	0058245.59	0013206.73-	0030617.26-	10
2165	0000	16 33 07.12	0032812.38	0015341.71	0058245.59	0013206.73-	0030665.38-	10
2165	0000	16 33 08.12	0032812.38	0015365.77	0058149.37	0013158.62-	0030617.26-	10
2111	0000	16 39 31.91	0008419.60	0007282.95	0017182.00	0001683.92	0005526.86-	10
2111	0000	16 39 32.91	0008371.49	0007307.01	0017157.94	0001659.86	0005526.86-	10
2111	0000	16 39 33.91	0008419.60	0007331.07	0017182.00	0001611.75	0005502.80-	10
2111	0000	16 39 34.91	0008395.54	0007307.01	0017230.11	0001659.86	0005526.86-	10
2111	0000	16 39 35.91	0008419.60	0007331.07	0017182.00	0001659.86	0005550.91-	10

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P0061B	P0062B	P1800618	P1800628	P0081B	GP
2000 0000 09 50 06.68	0000030.07	0000036.07-	0000012.02-	0000000.00	0000018.03-	11
2100 0000 11 19 12.32	0000847.97	0000420.98	0000613.43	0000481.12	0000138.31-	11
2100 0000 11 19 13.32	0000847.97	0000469.09	0000685.60	0000529.23	0000114.26-	11
2100 0000 11 19 14.32	0000847.97	0000445.04	0000661.54	0000481.12	0000162.37-	11
2100 0000 11 19 15.32	0000872.03	0000445.04	0000613.43	0000577.34	0000114.26-	11
2100 0000 11 19 16.32	0000872.03	0000468.09	0000613.43	0000505.18	0000138.31-	11
2110 0000 13 02 50.73	0000799.86	0001022.38	0002201.12	0002044.76	0000715.66-	11
2110 0000 13 02 51.73	0000799.86	0001022.38	0002201.12	0002044.76	0000643.49-	11
2110 0000 13 02 52.73	0000872.03	0001046.44	0002225.18	0002044.76	0000667.54-	11
2110 0000 13 02 53.73	0000799.86	0001070.49	0002249.24	0002092.87	0000643.49-	11
2110 0000 13 02 54.73	0000847.97	0001046.44	0002273.29	0002068.82	0000667.54-	11
2120 0000 13 07 26.70	0000679.58	0001792.17	0002922.80	0002573.99	0001196.78-	11
2120 0000 13 07 27.70	0000679.58	0001744.06	0002922.80	0002598.05	0001172.72-	11
2120 0000 13 07 28.70	0000751.75	0001768.12	0002922.80	0002622.10	0001196.78-	11
2120 0000 13 07 29.70	0000703.64	0001792.17	0002898.75	0002549.94	0001196.78-	11
2120 0000 13 07 30.70	0000703.64	0001768.12	0002946.86	0002622.10	0001172.72-	11
2130 0000 14 11 14.22	0000078.18	0002537.91	0003067.14	0003319.73	0001750.06-	11
2130 0000 14 11 15.22	0000126.29	0002586.02	0003091.20	0003415.95	0001701.95-	11
2130 0000 14 11 16.22	0000102.24	0002610.08	0003043.08	0003391.90	0001798.18-	11
2130 0000 14 11 17.22	0000150.35	0002610.08	0003019.03	0003343.78	0001774.12-	11
2130 0000 14 11 18.22	0000126.29	0002561.96	0003043.08	0003367.84	0001726.01-	11
2140 0000 14 15 59.89	0000018.03-	0003283.64	0003668.54	0003945.18	0002375.52-	11
2140 0000 14 16 00.89	0000054.13	0003379.87	0003668.54	0003921.13	0002351.46-	11
2140 0000 14 16 01.89	0000006.01	0003307.70	0003668.54	0003921.13	0002327.41-	11
2140 0000 14 16 02.89	0000030.07	0003331.76	0003644.48	0003897.07	0002327.41-	11
2140 0000 14 16 03.89	0000018.03-	0003331.76	0003692.60	0003897.07	0002327.41-	11
2140 0000 14 16 04.89	0000054.13	0003307.70	0003668.54	0003921.13	0002327.41-	11
2131 0000 14 52 06.49	0005851.62	0001840.28	0003644.48	0003343.78	0001966.57-	11
2131 0000 14 52 07.49	0005875.68	0001888.40	0003620.43	0003319.73	0001918.46-	11
2131 0000 14 52 08.49	0005851.62	0001888.40	0003596.37	0003391.90	0001894.40-	11
2131 0000 14 52 09.49	0005851.62	0001888.40	0003644.48	0003391.90	0001942.51-	11
2131 0000 14 52 10.49	0005875.68	0001864.34	0003620.43	0003391.90	0001966.57-	11
2100 0010 15 31 46.68	0001112.59	0000613.43	0001864.34	0002189.10	0000306.70-	11
2100 0010 15 31 47.68	0001088.53	0000709.65	0001888.40	0002213.15	0000282.65-	11
2100 0010 15 31 48.68	0001088.53	0000661.54	0001888.40	0002237.21	0000378.87-	11
2100 0010 15 31 49.68	0001088.53	0000661.54	0001912.45	0002213.15	0000354.82-	11
2100 0010 15 32 49.18	0001208.81	0000926.16	0002369.52	0002405.60	0000499.15-	11
2100 0010 15 32 50.18	0001160.70	0000878.04	0002393.57	0002453.71	0000571.32-	11
2100 0010 15 32 51.18	0001208.81	0000878.04	0002393.57	0002405.60	0000547.26-	11
2100 0020 15 34 42.66	0001184.76	0001527.56	0002994.97	0002838.61	0001124.61-	11
2100 0020 15 34 43.66	0001184.76	0001551.61	0002946.86	0002838.61	0001100.55-	11
2100 0030 15 36 06.02	0000535.25	0002369.52	0003235.53	0003440.01	0001629.78-	11
2100 0030 15 36 07.02	0000559.30	0002393.57	0003235.53	0003440.01	0001653.84-	11
2100 0040 15 38 03.12	0000222.52	0003163.36	0003836.93	0003969.24	0002303.35-	11
2100 0040 15 38 04.12	0000198.46	0003235.53	0003860.99	0003993.30	0002231.18-	11
2150 0000 15 40 32.15	0000186.42-	0004053.44	0003716.65	0004642.81	0002880.70-	11
2150 0000 15 40 33.15	0000162.37-	0004101.55	0003740.71	0004714.98	0002904.75-	11

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P0061B	P0062B	P1800618	P1800628	P0081B	GP
2150 0000 15 40 34.15	0000186.42-	0004101.55	0003788.82	0004714.98	0002 30.70-	11
2150 0000 15 40 35.15	0000138.31-	0004053.44	0003812.88	0004763.09	0002904.75-	11
2150 0000 15 40 36.15	0000162.37-	0004101.55	0003788.82	0004666.86	0002832.58-	11
2155 0000 15 45 59.61	0000451.04-	0004534.56	0003716.65	0005003.65	0003193.42-	11
2155 0000 15 46 00.61	0000402.93-	0004534.56	0003740.71	0005027.70	0003169.37-	11
2155 0000 15 46 01.61	0000378.87-	0004582.67	0003716.65	0005051.76	0003169.37-	11
2155 0000 15 46 02.61	0000402.93-	0004558.61	0003764.76	0005027.70	0003217.48-	11
2155 0000 15 46 03.61	0000402.93-	0004558.61	0003740.71	0005051.76	0003169.37-	11
2160 0000 16 29 34.86	0000571.32-	0004991.62	0003403.92	0005364.49	0003482.10-	11
2160 0000 16 29 35.86	0000595.38-	0004943.51	0003379.87	0005388.54	0003433.98-	11
2160 0000 16 29 36.86	0000595.38-	0004991.62	0003403.92	0005388.54	0003433.98-	11
2160 0000 16 29 37.86	0000595.38-	0004967.56	0003355.81	0005388.54	0003458.04-	11
2160 0000 16 29 38.86	0000619.43-	0004991.62	0003355.81	0005364.49	0003482.10-	11
2165 0000 16 33 04.12	0000956.22-	0005496.80	0003307.70	0005749.38	0003818.88-	11
2165 0000 16 33 05.12	0000932.16-	0005520.85	0003307.70	0005773.44	0003842.94-	11
2165 0000 16 33 06.12	0000956.22-	0005496.80	0003307.70	0005701.27	0003794.82-	11
2165 0000 16 33 07.12	0000956.22-	0005496.80	0003307.70	0005701.27	0003794.82-	11
2165 0000 16 33 08.12	0000884.05-	0005496.80	0003307.70	0005773.44	0003794.82-	11
2111 0000 16 39 31.91	0001232.87	0000926.16	0002369.52	0002453.71	0000571.32-	11
2111 0000 16 39 32.91	0001256.93	0000950.21	0002369.52	0002429.66	0000523.21-	11
2111 0000 16 39 33.91	0001232.87	0000926.16	0002321.40	0002405.60	0000595.38-	11
2111 0000 16 39 34.91	0001256.93	0000902.10	0002369.52	0002429.66	0000571.32-	11
2111 0000 16 39 35.91	0001232.87	0000974.27	0002369.52	0002405.60	0000547.26-	11

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P00828	P1800818	P1800828	L112108	R01118	GP
2000 0000 09 50 06.68	0000054.12-	0000030.06-	0000030.06-	0000024.06	0000072.16-	12
2100 0000 11 19 12.32	0000354.83	0000366.84-	0000138.32	0000048.10-	0001010.34-	12
2100 0000 11 19 13.32	0000354.83	0000318.73-	0000186.43	0000024.05-	0001010.34-	12
2100 0000 11 19 14.32	0000354.83	0000366.84-	0000186.43	0000024.05-	0000986.29-	12
2100 0000 11 19 15.32	0000378.88	0000390.90-	0000186.43	0000000.00	0001010.34-	12
2100 0000 11 19 16.32	0000354.83	0000366.84-	0000162.38	0000024.05-	0001034.40-	12
2110 0000 13 02 50.73	0001798.19	0000823.91-	0001268.95	0000096.21-	0001395.24-	12
2110 0000 13 02 51.73	0001822.24	0000823.91-	0001293.01	0000168.38-	0001419.29-	12
2110 0000 13 02 52.73	0001798.19	0000823.91-	0001317.07	0000168.38-	0001347.13-	12
2110 0000 13 02 53.73	0001798.19	0000823.91-	0001293.01	0000192.44-	0001371.18-	12
2110 0000 13 02 54.73	0001870.35	0000823.91-	0001317.07	0000168.38-	0001347.13-	12
2120 0000 13 07 26.70	0003361.83	0001305.03-	0002543.92	0000408.94-	0001659.85-	12
2120 0000 13 07 27.70	0003361.83	0001377.20-	0002543.92	0000433.00-	0001732.02-	12
2120 0000 13 07 28.70	0003313.71	0001329.08-	0002543.92	0000408.94-	0001683.91-	12
2120 0000 13 07 29.70	0003337.77	0001353.14-	0002592.03	0000408.94-	0001732.02-	12
2120 0000 13 07 30.70	0003265.60	0001377.20-	0002519.87	0000457.05-	0001659.85-	12
2130 0000 14 11 14.22	0004805.19	0001882.37-	0003915.11	0000577.33-	0001467.41-	12
2130 0000 14 11 15.22	0004781.13	0001882.37-	0003915.11	0000505.17-	0001467.41-	12
2130 0000 14 11 16.22	0004805.19	0001882.37-	0003939.17	0000529.22-	0001491.46-	12
2130 0000 14 11 17.22	0004781.13	0001858.32-	0003987.28	0000505.17-	0001491.46-	12
2130 0000 14 11 18.22	0004829.24	0001834.26-	0003963.23	0000529.22-	0001467.41-	12
2140 0000 14 15 59.89	0006320.71	0002435.66-	0005574.98	0000577.33-	0001515.52-	12
2140 0000 14 16 00.89	0006368.83	0002411.60-	0005574.98	0000553.28-	0001491.46-	12
2140 0000 14 16 01.89	0006296.66	0002435.66-	0005599.03	0000601.39-	0001419.29-	12
2140 0000 14 16 02.89	0006320.71	0002435.66-	0005574.98	0000577.33-	0001443.35-	12
2140 0000 14 16 03.89	0006272.60	0002387.55-	0005623.09	0000505.17-	0001443.35-	12
2140 0000 14 16 04.89	0006248.55	0002435.66-	0005599.03	0000553.28-	0001515.52-	12
2131 0000 14 52 06.49	0005141.97	0001858.32-	0004083.51	0000408.95	0004907.41-	12
2131 0000 14 52 07.49	0005190.08	0001834.26-	0004131.62	0000433.01	0004907.41-	12
2131 0000 14 52 08.49	0005190.08	0001882.37-	0004059.45	0000384.90	0004835.25-	12
2131 0000 14 52 09.49	0005141.97	0001810.20-	0003939.17	0000384.90	0004883.36-	12
2131 0000 14 52 10.49	0005190.08	0001882.37-	0004083.51	0000408.95	0004907.41-	12
2100 0010 15 31 46.68	0001076.51	0000607.40-	0000860.00	0000024.05-	0003127.27-	12
2100 0010 15 31 47.68	0001100.56	0000607.40-	0000835.95	0000024.05-	0003175.38-	12
2100 0010 15 31 48.68	0001076.51	0000559.29-	0000835.95	0000048.11	0003223.49-	12
2100 0010 15 31 49.68	0001148.67	0000607.40-	0000860.00	0000024.05-	0003223.49-	12
2100 0010 15 32 49.18	0001677.91	0000799.85-	0001293.01	0000216.49-	0003560.28-	12
2100 0010 15 32 50.18	0001629.79	0000799.85-	0001365.18	0000216.49-	0003536.22-	12
2100 0010 15 32 51.18	0001677.91	0000799.85-	0001293.01	0000216.49-	0003536.22-	12
2100 0020 15 34 42.66	0003073.15	0001353.14-	0002495.81	0000384.89-	0004281.96-	12
2100 0020 15 34 43.66	0003073.15	0001353.14-	0002519.87	0000457.05-	0004185.73-	12
2100 0030 15 36 06.02	0004564.63	0001882.37-	0003915.11	0000433.00-	0004835.25-	12
2100 0030 15 36 07.02	0004588.68	0001978.60-	0003891.06	0000433.00-	0004811.19-	12
2100 0040 15 38 03.12	0006128.27	0002411.60-	0005574.98	0000433.00-	0005340.42-	12
2100 0040 15 38 04.12	0006152.32	0002435.66-	0005550.92	0000408.94-	0005340.42-	12
2150 0000 15 40 32.15	0007836.24	0002988.95-	0007307.01	0000433.00-	0005845.60-	12
2150 0000 15 40 33.15	0007788.13	0003061.12-	0007379.18	0000457.05-	0005821.54-	12

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P00828	P1800818	P1800828	L112108	R01118	GP
2150 0000 15 40 34.15	0007812.19	0003013.00-	0007403.23	0000457.05-	0005821.54-	12
2150 0000 15 40 35.15	0007812.19	0003013.00-	0007403.23	0000433.00-	0005869.65-	12
2150 0000 15 40 36.15	0007884.35	0002988.95-	0007355.12	0000384.89-	0005845.60-	12
2155 0000 15 45 59.61	0008606.03	0003277.62-	0008365.47	0000481.11-	0006062.10-	12
2155 0000 15 46 00.61	0008630.09	0003373.84-	0008365.47	0000481.11-	0006086.16-	12
2155 0000 15 46 01.61	0008630.09	0003325.73-	0008389.53	0000457.05-	0006062.10-	12
2155 0000 15 46 02.61	0008630.09	0003373.84-	0008365.47	0000505.17-	0006110.21-	12
2155 0000 15 46 03.61	0008606.03	0003325.73-	0008365.47	0000505.17-	0006062.10-	12
2160 0000 16 29 34.86	0009327.71	0003542.24-	0009039.04	0000408.94-	0006278.61-	12
2160 0000 16 29 35.86	0009351.77	0003542.24-	0009111.21	0000408.94-	0006278.61-	12
2160 0000 16 29 36.86	0009351.77	0003590.35-	0009087.15	0000384.89-	0006254.55-	12
2160 0000 16 29 37.86	0009351.77	0003542.24-	0009087.15	0000384.89-	0006278.61-	12
2160 0000 16 29 38.86	0009351.77	0003590.35-	0009087.15	0000360.83-	0006326.72-	12
2165 0000 16 33 04.12	0010193.73	0003903.08-	0010097.51	0000433.00-	0006471.05-	12
2165 0000 16 33 05.12	0010289.95	0003879.02-	0010049.39	0000457.05-	0006422.94-	12
2165 0000 16 33 06.12	0010217.79	0003903.08-	0010049.39	0000433.00-	0006422.94-	12
2165 0000 16 33 07.12	0010241.84	0003854.96-	0010097.51	0000408.94-	0006447.00-	12
2165 0000 16 33 08.12	0010289.95	0003879.02-	0010097.51	0000408.94-	0006398.89-	12
2111 0000 16 39 31.91	0001750.07	0000775.80-	0001365.18	0000360.84	0003728.67-	12
2111 0000 16 39 32.91	0001774.13	0000823.91-	0001389.23	0000336.78	0003728.67-	12
2111 0000 16 39 33.91	0001750.07	0000775.80-	0001389.23	0000384.90	0003728.67-	12
2111 0000 16 39 34.91	0001774.13	0000823.91-	0001389.23	0000288.67	0003704.61-	12
2111 0000 16 39 35.91	0001750.07	0000775.80-	0001413.29	0000360.84	0003704.61-	12

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST	COND	HR/MN/SEC	R0112B	R0113B	R90111B	R90112B	R90113B	GP
2000	0000	09 50 06.68	0000030.07	0000000.00	0000024.05-	0000042.09-	0000054.12-	13
2100	0000	11 19 12.32	0000559.30	0002549.94	0000890.06-	0000847.97	0002808.54	13
2100	0000	11 19 13.32	0000583.36	0002573.99	0000938.17-	0000847.97	0002856.65	13
2100	0000	11 19 14.32	0000511.19	0002549.94	0000890.06-	0000823.92	0002832.59	13
2100	0000	11 19 15.32	0000511.19	0002525.88	0000890.06-	0000847.97	0002832.59	13
2100	0000	11 19 16.32	0000559.30	0002525.88	0000914.12-	0000823.92	0002856.65	13
2110	0000	13 02 50.73	0002122.94	0006711.62	0001202.79-	0002724.34	0007571.63	13
2110	0000	13 02 51.73	0002195.11	0006687.57	0001178.73-	0002676.23	0007595.68	13
2110	0000	13 02 52.73	0002219.17	0006759.74	0001130.62-	0002676.23	0007595.68	13
2110	0000	13 02 53.73	0002195.11	0006735.68	0001130.62-	0002700.29	0007595.68	13
2110	0000	13 02 54.73	0002195.11	0006735.68	0001106.57-	0002652.17	0007643.79	13
2120	0000	13 07 26.70	0003734.69	0011161.98	0001299.01-	0004552.60	0012166.32	13
2120	0000	13 07 27.70	0003662.53	0011137.93	0001323.07-	0004552.60	0012142.27	13
2120	0000	13 07 28.70	0003710.64	0011065.76	0001274.96-	0004576.65	0012190.38	13
2120	0000	13 07 29.70	0003734.69	0011113.87	0001274.96-	0004552.60	0012166.32	13
2120	0000	13 07 30.70	0003662.53	0011113.87	0001250.90-	0004528.54	0012142.27	13
2130	0000	14 11 14.22	0005250.22	0015275.56	0001323.07-	0006236.52	0016279.90	13
2130	0000	14 11 15.22	0005274.28	0015251.50	0001323.07-	0006188.41	0016279.90	13
2130	0000	14 11 16.22	0005250.22	0015299.62	0001323.07-	0006188.41	0016255.84	13
2130	0000	14 11 17.22	0005298.33	0015299.62	0001371.18-	0006188.41	0016231.79	13
2130	0000	14 11 18.22	0005274.28	0015251.50	0001347.13-	0006212.46	0016231.79	13
2140	0000	14 15 59.89	0006886.03	0020856.55	0001443.35-	0007824.21	0020321.31	13
2140	0000	14 16 00.89	0006910.09	0020832.50	0001419.29-	0007776.10	0020393.47	13
2140	0000	14 16 01.89	0006886.03	0020832.50	0001395.24-	0007800.16	0020321.31	13
2140	0000	14 16 02.89	0006861.97	0020856.55	0001443.35-	0007824.21	0020297.25	13
2140	0000	14 16 03.89	0006861.97	0020808.44	0001419.29-	0007824.21	0020297.25	13
2140	0000	14 16 04.89	0006934.14	0020808.44	0001395.24-	0007752.05	0020321.31	13
2131	0000	14 52 06.49	0006140.29	0025355.02	0001250.90-	0006020.01	0016207.73	13
2131	0000	14 52 07.49	0006212.46	0025403.14	0001226.85-	0006068.13	0016183.67	13
2131	0000	14 52 08.49	0006188.41	0025306.91	0001299.01-	0006092.18	0016183.67	13
2131	0000	14 52 09.49	0006236.52	0025355.02	0001250.90-	0006044.07	0016207.73	13
2131	0000	14 52 10.49	0006188.41	0025306.91	0001299.01-	0006044.07	0016231.79	13
2100	0010	15 31 46.68	0002195.11	0014698.22	0000938.17-	0001762.10	0005478.75	13
2100	0010	15 31 47.68	0002171.05	0014770.38	0000914.12-	0001786.16	0005599.03	13
2100	0010	15 31 48.68	0002171.05	0014794.44	0000962.23-	0001786.16	0005647.15	13
2100	0010	15 31 49.68	0002243.22	0014890.66	0001010.34-	0001810.21	0005695.26	13
2100	0010	15 32 49.18	0002844.62	0016718.92	0001058.45-	0002555.95	0007379.18	13
2100	0010	15 32 50.18	0002868.68	0016742.98	0001034.40-	0002531.89	0007427.29	13
2100	0010	15 32 51.18	0002844.62	0016815.14	0001034.40-	0002555.95	0007499.46	13
2100	0020	15 34 42.66	0004504.49	0021842.85	0001154.68-	0004360.15	0011853.59	13
2100	0020	15 34 43.66	0004456.37	0021842.85	0001202.79-	0004384.21	0011901.71	13
2100	0030	15 36 06.02	0006116.24	0027808.74	0001274.96-	0006068.13	0016111.51	13
2100	0030	15 36 07.02	0006164.35	0027808.74	0001299.01-	0006116.24	0016135.56	13
2100	0040	15 38 03.12	0007896.38	0034303.86	0001323.07-	0007727.99	0020297.25	13
2100	0040	15 38 04.12	0007896.38	0034303.86	0001371.18-	0007727.99	0020321.31	13
2150	0000	15 40 32.15	0009700.58	0043830.03	0001395.24-	0009556.25	0024458.94	13
2150	0000	15 40 33.15	0009724.64	0043878.14	0001371.18-	0009508.13	0024482.99	13

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST	COND	HR/MN/SEC	R0112B	R0113B	R90111B	R90112B	R90113B	GP
2150	0000	15 40 34.15	0009748.69	0043974.37	0001323.07-	0009532.19	0024458.94	13
2150	0000	15 40 35.15	0009724.64	0043926.26	0001323.07-	0009508.13	0024458.94	13
2150	0000	15 40 36.15	0009700.58	0043878.14	0001299.01-	0009532.19	0024458.94	13
2155	0000	15 45 59.61	0010638.77	0048785.57	0001347.13-	0010374.15	0026455.59	13
2155	0000	15 46 00.61	0010638.77	0048689.34	0001323.07-	0010398.21	0026455.59	13
2155	0000	15 46 01.61	0010710.93	0048737.46	0001299.01-	0010422.26	0026455.59	13
2155	0000	15 46 02.61	0010686.88	0048689.34	0001347.13-	0010398.21	0026407.47	13
2155	0000	15 46 03.61	0010662.82	0048737.46	0001347.13-	0010422.26	0026407.47	13
2160	0000	16 29 34.86	0011576.95	0059177.76	0001274.96-	0011312.33	0028283.84	13
2160	0000	16 29 35.86	0011552.89	0059177.76	0001274.96-	0011312.33	0028331.95	13
2160	0000	16 29 36.86	0011576.95	0059177.76	0001323.07-	0011240.17	0028331.95	13
2160	0000	16 29 37.86	0011552.89	0059177.76	0001323.07-	0011312.33	0028331.95	13
2160	0000	16 29 38.86	0011576.95	0059081.54	0001299.01-	0011264.22	0028235.73	13
2165	0000	16 33 04.12	0012587.30	0067934.14	0001299.01-	0012346.74	0030545.11	13
2165	0000	16 33 05.12	0012587.30	0067934.14	0001274.96-	0012370.80	0030545.11	13
2165	0000	16 33 06.12	0012563.25	0067837.92	0001299.01-	0012394.85	0030545.11	13
2165	0000	16 33 07.12	0012515.13	0067934.14	0001347.13-	0012370.80	0030496.99	13
2165	0000	16 33 08.12	0012563.25	0067934.14	0001299.01-	0012370.80	0030545.11	13
2111	0000	16 39 31.91	0002964.90	0025739.92	0001058.45-	0002916.79	0007980.58	13
2111	0000	16 39 32.91	0002940.85	0025739.92	0001058.45-	0002868.68	0007932.47	13
2111	0000	16 39 33.91	0002964.90	0025788.03	0001034.40-	0002916.79	0007908.41	13
2111	0000	16 39 34.91	0002964.90	0025691.81	0001034.40-	0002916.79	0007980.58	13
2111	0000	16 39 35.91	0002940.85	0025788.03	0001058.45-	0002892.73	0008004.63	13

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P1771218	P1771228	P0131A	P0132A	P0131B	GP
2000 0000 09 50 06.68	0000018.04	0000042.09-	0000054.12-	0000024.05-	0000006.01	14
2100 0000 11 19 12.32	0006765.74-	0000944.20	0001521.53-	0002092.86-	0001726.01-	14
2100 0000 11 19 13.32	0006765.74-	0001016.37	0001569.64-	0002165.03-	0001726.01-	14
2100 0000 11 19 14.32	0006813.85-	0000992.31	0001521.53-	0002116.92-	0001774.12-	14
2100 0000 11 19 15.32	0006813.85-	0000968.25	0001497.48-	0002092.86-	0001653.84-	14
2100 0000 11 19 16.32	0006813.85-	0000992.31	0001521.53-	0002068.81-	0001701.95-	14
2110 0000 13 02 50.73	0020549.83-	0005105.89	0005129.93-	0005965.88-	0001401.26	14
2110 0000 13 02 51.73	0020501.72-	0005081.83	0005105.88-	0005965.88-	0001401.26	14
2110 0000 13 02 52.73	0020477.66-	0005105.89	0005081.82-	0005941.82-	0001425.32	14
2110 0000 13 02 53.73	0020501.72-	0005081.83	0005081.82-	0005941.82-	0001449.37	14
2110 0000 13 02 54.73	0020453.60-	0005081.83	0005129.93-	0005917.77-	0001473.43	14
2120 0000 13 07 26.70	0028295.86-	0009989.25	0008594.00-	0009790.78-	0004360.15	14
2120 0000 13 07 27.70	0028295.86-	0009965.20	0008569.94-	0009814.84-	0004360.15	14
2120 0000 13 07 28.70	0028295.86-	0010013.31	0008569.94-	0009718.61-	0004408.26	14
2120 0000 13 07 29.70	0028247.75-	0009989.25	0008618.05-	0009814.84-	0004360.15	14
2120 0000 13 07 30.70	0028295.86-	0009989.25	0008594.00-	0009742.67-	0004384.21	14
2130 0000 14 11 14.22	0031615.59-	0014728.29	0014523.81	0003319.72-	0010698.90-	14
2130 0000 14 11 15.22	0031567.48-	0014680.17	0014620.03	0003271.61-	0010795.12-	14
2130 0000 14 11 16.22	0031615.59-	0014704.23	0014620.03	0003271.61-	0010963.51-	14
2130 0000 14 11 17.22	0031615.59-	0014680.17	0014668.15	0003319.72-	0011011.62-	14
2130 0000 14 11 18.22	0031567.48-	0014656.12	0014716.26	0003367.83-	0011107.85-	14
2140 0000 14 15 59.89	0033203.28-	0019611.65	0033191.27	0003175.38-	0018420.87-	14
2140 0000 14 16 00.89	0033155.17-	0019635.71	0033239.38	0003079.16-	0018444.93-	14
2140 0000 14 16 01.89	0033107.06-	0019587.60	0033143.15	0003127.27-	0018468.98-	14
2140 0000 14 16 02.89	0033107.06-	0019635.71	0033383.71	0002934.82-	0018468.98-	14
2140 0000 14 16 03.89	0033155.17-	0019563.54	0033528.05	0002982.93-	0018493.04-	14
2140 0000 14 16 04.89	0033107.06-	0019587.60	0033528.05	0002934.82-	0018517.10-	14
2131 0000 14 52 06.49	0031615.59-	0014680.17	0016087.45	0012292.61-	DOS	14
2131 0000 14 52 07.49	0031663.70-	0014656.12	0016159.62	0012268.55-	DOS	14
2131 0000 14 52 08.49	0031663.70-	0014680.17	0016111.51	0012316.66-	DOS	14
2131 0000 14 52 09.49	0031663.70-	0014632.06	0016159.62	0012268.55-	DOS	14
2131 0000 14 52 10.49	0031663.70-	0014632.06	0016135.56	0012340.72-	DOS	14
2100 0010 15 31 46.68	0014752.33-	0002916.79	0007451.35	0003367.83-	DOS	14
2100 0010 15 31 47.68	0014896.67-	0003061.13	0007499.46	0003367.83-	DOS	14
2100 0010 15 31 48.68	0015089.12-	0002988.96	0007547.57	0003415.94-	DOS	14
2100 0010 15 31 49.68	0015281.56-	0003109.24	0007523.51	0003536.22-	DOS	14
2100 0010 15 32 49.18	0020020.60-	0004720.99	0008533.87	0004955.53-	DOS	14
2100 0010 15 32 50.18	0020044.65-	0004745.05	0008533.87	0004883.36-	DOS	14
2100 0010 15 32 51.18	0020092.76-	0004865.33	0008557.92	0004907.41-	DOS	14
2100 0020 15 34 42.66	0027910.96-	0009556.25	0012046.04	0008275.25-	DOS	14
2100 0020 15 34 43.66	0027910.96-	0009508.13	0012118.21	0008347.42-	DOS	14
2100 0030 15 36 06.02	0031567.48-	0014439.61	0016135.56	0011787.43-	DOS	14
2100 0030 15 36 07.02	0031615.59-	0014487.73	0016183.67	0011763.37-	DOS	14
2100 0040 15 38 03.12	0033251.40-	0019443.26	0020898.65	0015443.94-	DOS	14
2100 0040 15 38 04.12	0033203.28-	0019587.60	0020922.71	0015492.05-	DOS	14
2150 0000 15 40 32.15	0033828.74-	0024735.58	0026551.81	0019244.79-	DOS	14
2150 0000 15 40 33.15	0033828.74-	0024783.69	0026551.81	0019292.90-	DOS	14

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P1771218	P1771228	P0131A	P0132A	P0131B	GP
2150 0000 15 40 34.15	0033828.74-	0024735.58	0026551.81	0019244.79-	DOS	14
2150 0000 15 40 35.15	0033828.74-	0024687.47	0026648.03	0019292.90-	DOS	14
2150 0000 15 40 36.15	0033828.74-	0024735.58	0026551.81	0019292.90-	DOS	14
2155 0000 15 45 59.61	0033876.85-	0027237.41	0029630.98	0021000.88-	DOS	14
2155 0000 15 46 00.61	0033828.74-	0027189.29	0029630.98	0021073.05-	DOS	14
2155 0000 15 46 01.61	0033828.74-	0027189.29	0029630.98	0021000.88-	DOS	14
2155 0000 15 46 02.61	0033876.85-	0027189.29	0029630.98	0021073.05-	DOS	14
2155 0000 15 46 03.61	0033876.85-	0027189.29	0029630.98	0021048.99-	DOS	14
2160 0000 16 29 34.86	0033876.85-	0029354.33	0032613.92	0022564.52-	DOS	14
2160 0000 16 29 35.86	0033828.74-	0029354.33	0032613.92	0022564.52-	DOS	14
2160 0000 16 29 36.86	0033828.74-	0029306.22	0032565.81	0022516.41-	DOS	14
2160 0000 16 29 37.86	0033828.74-	0029402.45	0032517.70	0022564.52-	DOS	14
2160 0000 16 29 38.86	0033876.85-	0029354.33	0032565.81	0022612.63-	DOS	14
2165 0000 16 33 04.12	0033732.52-	0032000.49	0036174.21	0024344.66-	DOS	14
2165 0000 16 33 05.12	0033732.52-	0031904.27	0036174.21	0024344.66-	DOS	14
2165 0000 16 33 06.12	0033732.52-	0032000.49	0036174.21	0024344.66-	DOS	14
2165 0000 16 33 07.12	0033732.52-	0032000.49	0036222.32	0024561.17-	DOS	14
2165 0000 16 33 08.12	0033684.40-	0032000.49	0036222.32	0024344.66-	DOS	14
2111 0000 16 39 31.91	0020381.44-	0005033.72	0010530.51	0005340.42-	DOS	14
2111 0000 16 39 32.91	0020333.32-	0004985.61	0010530.51	0005292.31-	DOS	14
2111 0000 16 39 33.91	0020309.27-	0004985.61	0010530.51	0005292.31-	DOS	14
2111 0000 16 39 34.91	0020381.44-	0005057.77	0010530.51	0005316.37-	DOS	14
2111 0000 16 39 35.91	0020381.44-	0005081.83	0010578.63	0005292.31-	DOS	14

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P01328	P1801318	P1801328	P01418	P01428	GP
2000 0000 09 50 06.68	0000018.03-	0000036.07-	0000018.03-	0000012.02-	0000072.16-	15
2100 0000 11 19 12.32	0003409.93-	0001311.05	0001629.78-	0000084.19-	0002189.09-	15
2100 0000 11 19 13.32	0003313.70-	0001311.05	0001677.90-	0000132.30-	0002140.97-	15
2100 0000 11 19 14.32	0003313.70-	0001262.94	0001653.84-	0000084.19-	0002213.14-	15
2100 0000 11 19 15.32	0003337.76-	0001311.05	0001605.73-	0000108.24-	0002213.14-	15
2100 0000 11 19 16.32	0003265.59-	0001262.94	0001605.73-	0000060.13-	0002165.03-	15
2110 0000 13 02 50.73	0011011.62-	0008022.68	0005117.90-	0000276.63-	0005460.70-	15
2110 0000 13 02 51.73	0010939.46-	0008070.79	0005117.90-	0000276.63-	0005460.70-	15
2110 0000 13 02 52.73	0010939.46-	0008070.79	0005117.90-	0000276.63-	0005460.70-	15
2110 0000 13 02 53.73	0010915.40-	0008046.73	0005141.96-	0000300.69-	0005460.70-	15
2110 0000 13 02 54.73	0010939.46-	0007998.62	0005117.90-	0000276.63-	0005460.70-	15
2120 0000 13 07 26.70	0019022.27-	0014734.30	0008726.30-	0000493.14-	0008756.37-	15
2120 0000 13 07 27.70	0018998.22-	0014782.41	0008798.47-	0000469.08-	0008804.49-	15
2120 0000 13 07 28.70	0018974.16-	0014806.47	0008774.42-	0000396.91-	0008852.60-	15
2120 0000 13 07 29.70	0019022.27-	0014710.24	0008726.30-	0000469.08-	0008828.54-	15
2120 0000 13 07 30.70	0018998.22-	0014830.52	0008798.47-	0000493.14-	0008828.54-	15
2130 0000 14 11 14.22	0037449.17-	0020868.58	0012310.65-	0001455.38-	0012797.78-	15
2130 0000 14 11 15.22	0037497.28-	0020844.52	0012334.70-	0001431.32-	0012749.67-	15
2130 0000 14 11 16.22	0037737.84-	0020844.52	0012334.70-	0001479.43-	0012797.78-	15
2130 0000 14 11 17.22	0037737.84-	0020820.47	0012334.70-	0001455.38-	0012749.67-	15
2130 0000 14 11 18.22	0037737.84-	0020868.58	0012286.59-	0001383.21-	0012725.61-	15
2140 0000 14 15 59.89	0077526.46-	0026930.69	0016279.89-	0002970.91-	0017488.70-	15
2140 0000 14 16 00.89	0077526.46-	0026978.80	0016255.83-	0002946.85-	0017416.53-	15
2140 0000 14 16 01.89	0077430.24-	0026930.69	0016159.61-	0002946.85-	0017416.53-	15
2140 0000 14 16 02.89	0077622.69-	0026882.58	0016255.83-	0002922.79-	0017416.53-	15
2140 0000 14 16 03.89	0077718.91-	0026882.58	0016231.78-	0002946.85-	0017392.48-	15
2140 0000 14 16 04.89	0077718.91-	0026834.47	0016231.78-	0002946.85-	0017392.48-	15
2131 0000 14 52 06.49	0099140.79	0019521.44	0012430.93-	0007036.37-	0024272.49-	15
2131 0000 14 52 07.49	0099910.58	0019497.39	0012406.87-	0006988.26-	0024272.49-	15
2131 0000 14 52 08.49	0100487.93	0019449.28	0012430.93-	0006964.20-	0024296.55-	15
2131 0000 14 52 09.49	0101257.72	0019473.33	0012406.87-	0007036.37-	0024320.61-	15
2131 0000 14 52 10.49	0102027.51	0019521.44	0012430.93-	0007036.37-	0024296.55-	15
2100 0010 15 31 46.68	DOS	0003933.16	0003433.98-	0003355.80-	0010464.35-	15
2100 0010 15 31 47.68	DOS	0004005.32	0003482.10-	0003307.69-	0010584.63-	15
2100 0010 15 31 48.68	DOS	0004101.55	0003554.26-	0003403.91-	0010608.69-	15
2100 0010 15 31 49.68	DOS	0004149.66	0003626.43-	0003307.69-	0010680.85-	15
2100 0010 15 32 49.18	DOS	0006675.54	0004949.51-	0003885.03-	0012725.61-	15
2100 0010 15 32 50.18	DOS	0006699.60	0004925.46-	0003885.03-	0012773.73-	15
2100 0010 15 32 51.18	DOS	0006747.71	0004925.46-	0003860.98-	0012749.67-	15
2100 0020 15 34 42.66	DOS	0013290.94	0008485.74-	0005376.51-	0018114.16-	15
2100 0020 15 34 43.66	DOS	0013387.16	0008485.74-	0005376.51-	0018114.16-	15
2100 0030 15 36 06.02	DOS	0020074.73	0012142.26-	0006771.75-	0023887.60-	15
2100 0030 15 36 07.02	DOS	0020074.73	0012166.31-	0006819.87-	0023887.60-	15
2100 0040 15 38 03.12	DOS	0027219.36	0016159.61-	0007589.66-	0029540.76-	15
2100 0040 15 38 04.12	DOS	0027267.48	0016183.66-	0007541.55-	0029588.87-	15
2150 0000 15 40 32.15	DOS	0033666.37	0020489.69-	0008094.83-	0034881.19-	15
2150 0000 15 40 33.15	DOS	0033618.26	0020561.86-	0008118.89-	0034881.19-	15

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P01328	P1801318	P1801328	P01418	P01428	GP
2150 0000 15 40 34.15	DOS	0033618.26	0020561.86-	0008094.83-	0034833.08-	15
2150 0000 15 40 35.15	DOS	0033618.26	0020561.86-	0008118.89-	0034833.08-	15
2150 0000 15 40 36.15	DOS	0033666.37	0020513.74-	0008070.78-	0034833.08-	15
2155 0000 15 45 59.61	DOS	0036360.64	0022799.06-	0008311.34-	0037286.79-	15
2155 0000 15 46 00.61	DOS	0036408.76	0022847.18-	0008335.39-	0037383.01-	15
2155 0000 15 46 01.61	DOS	0036312.53	0022847.18-	0008407.56-	0037286.79-	15
2155 0000 15 46 02.61	DOS	0036312.53	0022847.18-	0008311.34-	0037334.90-	15
2155 0000 15 46 03.61	DOS	0036312.53	0022775.01-	0008263.23-	0037286.79-	15
2160 0000 16 29 34.86	DOS	0038525.68	0024867.88-	0008527.84-	0039355.61-	15
2160 0000 16 29 35.86	DOS	0038477.57	0024819.77-	0008527.84-	0039307.49-	15
2160 0000 16 29 36.86	DOS	0038629.46	0024891.94-	0008551.84-	0039307.49-	15
2160 0000 16 29 37.86	DOS	0038429.47	0024795.71-	0008551.90-	0039259.38-	15
2160 0000 16 29 38.86	DOS	0038477.57	0024819.77-	0008527.84-	0039259.38-	15
2165 0000 16 33 04.12	DOS	0039680.37	0026166.90-	0008744.05-	0041761.21-	15
2165 0000 16 33 05.12	DOS	0039776.60	0026166.90-	0008696.23-	0041809.32-	15
2165 0000 16 33 06.12	DOS	0039680.37	0026166.90-	0008696.23-	0041809.32-	15
2165 0000 16 33 07.12	DOS	0039680.37	0026166.90-	0008720.29-	0041809.32-	15
2165 0000 16 33 08.12	DOS	0039680.37	0026166.90-	0008696.23-	0041761.21-	15
2111 0000 16 39 31.91	DOS	0000445.04	0005069.79-	0004269.93-	0013182.68-	15
2111 0000 16 39 32.91	DOS	0000541.26	0005069.79-	0004342.10-	0013158.62-	15
2111 0000 16 39 33.91	DOS	0000517.20	0005021.68-	0004390.21-	0013134.57-	15
2111 0000 16 39 34.91	DOS	0000541.26	0005045.74-	0004342.10-	0013134.57-	15
2111 0000 16 39 35.91	DOS	0000445.04	0005069.79-	0004342.10-	0013182.68-	15

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P1801418	P1801428	P01518	P01528	P1801518	GP
2000 0000 09 50 06.68	0000048.11	0000060.13-	0000018.03-	0000048.10-	0000030.06-	16
2100 0000 11 19 12.32	0000384.90	0001960.55-	0000583.36	0000048.11	0000523.22	16
2100 0000 11 19 13.32	0000360.84	0001936.50-	0000511.19	0000024.06	0000475.11	16
2100 0000 11 19 14.32	0000408.95	0001936.50-	0000559.30	0000000.00	0000475.11	16
2100 0000 11 19 15.32	0000384.90	0001888.39-	0000535.25	0000000.00	0000499.16	16
2100 0000 11 19 16.32	0000360.84	0001960.55-	0000511.19	0000024.05-	0000475.11	16
2110 0000 13 02 50.73	0001299.02	0005039.72-	0001762.10	0000024.05-	0001846.30	16
2110 0000 13 02 51.73	0001323.08	0005039.72-	0001738.05	0000024.05-	0001942.52	16
2110 0000 13 02 52.73	0001323.08	0005063.78-	0001810.21	0000024.05-	0001894.41	16
2110 0000 13 02 53.73	0001371.19	0005015.67-	0001810.21	0000048.10-	0001894.41	16
2110 0000 13 02 54.73	0001347.14	0004991.61-	0001786.16	0000072.16-	0001918.47	16
2120 0000 13 07 26.70	0002116.93	0008191.06-	0003397.91	0000024.06	0003602.39	16
2120 0000 13 07 27.70	0002020.70	0008191.06-	0003277.63	0000000.00	0003554.27	16
2120 0000 13 07 28.70	0002116.93	0008191.06-	0003325.74	0000000.00	0003578.33	16
2120 0000 13 07 29.70	0002044.76	0008191.06-	0003325.74	0000072.16-	0003554.27	16
2120 0000 13 07 30.70	0002068.82	0008191.06-	0003325.74	0000048.10-	0003602.39	16
2130 0000 14 11 14.22	0002694.27	0011534.84-	0005755.40	0000096.21-	0005647.15	16
2130 0000 14 11 15.22	0002742.38	0011486.73-	0005779.45	0000024.05-	0005647.15	16
2130 0000 14 11 16.22	0002742.38	0011510.79-	0005779.45	0000048.10-	0005647.15	16
2130 0000 14 11 17.22	0002694.27	0011462.67-	0005755.40	0000048.10-	0005623.09	16
2130 0000 14 11 18.22	0002742.38	0011534.84-	0005755.40	0000072.16-	0005599.03	16
2140 0000 14 15 59.89	0003175.39	0015167.30-	0010133.59	0000000.00	0009197.08	16
2140 0000 14 16 00.89	0003151.34	0015167.30-	0010157.65	0000072.16-	0008245.19	16
2140 0000 14 16 01.89	0003127.28	0015119.19-	0010085.48	0000072.16-	0008173.03	16
2140 0000 14 16 02.89	0003175.39	0015143.24-	0010133.59	0000072.16-	0008148.97	16
2140 0000 14 16 03.89	0003127.28	0015167.30-	0010133.59	0000096.21-	0008197.08	16
2140 0000 14 16 04.89	0003103.22	0015143.24-	0010133.59	0000048.10-	0008197.08	16
2131 0000 14 52 06.49	0002838.61	0011486.73-	0014920.73	0000024.05-	0006777.78	16
2131 0000 14 52 07.49	0002814.55	0011438.62-	0014968.85	0000048.10-	0006777.78	16
2131 0000 14 52 08.49	0002814.55	0011486.73-	0014944.79	0000024.05-	0006777.78	16
2131 0000 14 52 09.49	0002838.61	0011462.67-	0014944.79	0000024.05-	0006753.72	16
2131 0000 14 52 10.49	0002814.55	0011486.73-	0014920.73	0000048.10-	0006777.78	16
2100 0010 15 31 46.68	0001202.80	0003716.64-	0004312.04	0000096.21-	0002471.75	16
2100 0010 15 31 47.68	0001178.74	0003692.59-	0004504.49	0000048.10-	0002495.81	16
2100 0010 15 31 48.68	0001154.69	0003812.87-	0004480.43	0000048.10-	0002471.75	16
2100 0010 15 31 49.68	0001250.91	0003812.87-	0004528.54	0000048.10-	0002592.03	16
2100 0010 15 32 49.18	0001587.70	0004943.50-	0005611.06	0000072.16-	0003049.10	16
2100 0010 15 32 50.18	0001539.58	0004967.55-	0005659.17	0000048.10-	0003097.21	16
2100 0010 15 32 51.18	0001539.58	0004919.44-	0005707.29	0000072.16-	0003121.27	16
2100 0020 15 34 42.66	0002261.26	0007998.61-	0009363.80	0000072.16-	0004636.79	16
2100 0020 15 34 43.66	0002309.38	0008046.72-	0009363.80	0000072.16-	0004684.91	16
2100 0030 15 36 06.02	0002886.72	0011366.45-	0014608.01	0000072.16-	0006705.61	16
2100 0030 15 36 07.02	0002886.72	0011318.34-	0014632.06	0000096.21-	0006777.78	16
2100 0040 15 38 03.12	0003319.73	0015095.13-	0020189.00	0000072.16-	0009375.83	16
2100 0040 15 38 04.12	0003319.73	0015047.02-	0020261.17	0000096.21-	0009423.94	16
2150 0000 15 40 32.15	0003632.46	0019016.26-	0025144.53	0000048.10-	0012358.77	16
2150 0000 15 40 33.15	0003656.51	0018895.98-	0025144.53	0000072.16-	0012430.94	16

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P1801418	P1801428	P01518	P01528	P1801518	GP
2150 0000 15 40 34.15	0003656.51	0018944.09-	0025192.65	0000024.05-	0012382.83	16
2150 0000 15 40 35.15	0003656.51	0018968.15-	0025096.42	0000048.10-	0012334.71	16
2150 0000 15 40 36.15	0003632.46	0018944.09-	0025144.53	0000024.05-	0012382.83	16
2155 0000 15 45 59.61	0003776.79	0020748.29-	0027309.57	0000072.16-	0013778.07	16
2155 0000 15 46 00.61	0003752.74	0020748.29-	0027309.57	0000072.16-	0013802.13	16
2155 0000 15 46 01.61	0003728.68	0020748.29-	0027309.57	0000072.16-	0013826.19	16
2155 0000 15 46 02.61	0003800.85	0020796.40-	0027261.46	0000072.16-	0013754.02	16
2155 0000 15 46 03.61	0003800.85	0020748.29-	0027357.69	0000048.10-	0013754.02	16
2160 0000 16 29 34.86	0003848.96	0022311.93-	0029185.94	0000072.16-	0014980.87	16
2160 0000 16 29 35.86	0003897.07	0022335.99-	0029234.05	0000048.10-	0014956.82	16
2160 0000 16 29 36.86	0003897.07	0022360.04-	0029185.94	0000072.16-	0014932.76	16
2160 0000 16 29 37.86	0003848.96	0022384.10-	0029185.94	0000072.16-	0014956.82	16
2160 0000 16 29 38.86	0003848.96	0022360.04-	0029185.94	0000120.27-	0014956.82	16
2165 0000 16 33 04.12	0003873.02	0024621.31-	0031302.87	0000072.16-	0016400.18	16
2165 0000 16 33 05.12	0003897.07	0024621.31-	0031350.98	0000072.16-	0016400.18	16
2165 0000 16 33 06.12	0003969.24	0024717.53-	0031350.98	0000024.05-	0016424.23	16
2165 0000 16 33 07.12	0003873.02	0024573.19-	0031350.98	0000048.10-	0016352.07	16
2165 0000 16 33 08.12	0003921.13	0024621.31-	0031350.98	0000072.16-	0016424.23	16
2111 0000 16 39 31.91	0001250.91	0005304.34-	0006236.52	0000096.21-	0003337.77	16
2111 0000 16 39 32.91	0001202.80	0005256.23-	0006236.52	0000072.16-	0003337.77	16
2111 0000 16 39 33.91	0001250.91	0005304.34-	0006236.52	0000048.10-	0003337.77	16
2111 0000 16 39 34.91	0001250.91	0005328.39-	0006260.57	0000072.16-	0003361.83	16
2111 0000 16 39 35.91	0001250.91	0005280.28-	0006260.57	0000120.27-	0003409.94	16

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P1801528	P01618	P01628	P1801618	P1801628	GP
2000 0000 09 50 06.68	0000090.20-	0000090.20-	0000048.10-	0000018.03-	0000006.00-	17
2100 0000 11 19 12.32	0002808.53-	0000246.57	0001707.97-	0000366.85	0002940.84-	17
2100 0000 11 19 13.32	0002808.53-	0000246.57	0001683.91-	0000390.91	0002892.72-	17
2100 0000 11 19 14.32	0002808.53-	0000222.52	0001732.02-	0000366.85	0002892.72-	17
2100 0000 11 19 15.32	0002808.53-	0000246.57	0001756.08-	0000414.97	0002868.67-	17
2100 0000 11 19 16.32	0002808.53-	0000246.57	0001707.97-	0000414.97	0002892.72-	17
2110 0000 13 02 50.73	0007210.78-	0000872.03	0005051.75-	0001353.15	0007006.30-	17
2110 0000 13 02 51.73	0007162.66-	0000920.14	0005051.75-	0001377.21	0006934.13-	17
2110 0000 13 02 52.73	0007234.83-	0000944.20	0005051.75-	0001377.21	0006861.96	17
2110 0000 13 02 53.73	0007162.66-	0000920.14	0005075.81-	0001401.26	0006910.08-	17
2110 0000 13 02 54.73	0007186.72-	0000968.25	0005051.75-	0001401.26	0006934.13-	17
2120 0000 13 07 26.70	0011492.74-	0001641.82	0008323.37-	0002267.28	0010710.92-	17
2120 0000 13 07 27.70	0011468.69-	0001641.82	0008443.65-	0002195.11	0010734.98-	17
2120 0000 13 07 28.70	0011516.80-	0001593.71	0008419.59-	0002219.17	0010710.92-	17
2120 0000 13 07 29.70	0011516.80-	0001545.60	0008419.59-	0002219.17	0010710.92-	17
2120 0000 13 07 30.70	0011492.74-	0001665.88	0008419.59-	0002267.28	0010734.98-	17
2130 0000 14 11 14.22	0015028.98-	0002219.17	0011522.81-	0003013.01	0014078.76-	17
2130 0000 14 11 15.22	0015004.92-	0002243.22	0011450.65-	0002988.96	0014150.93-	17
2130 0000 14 11 16.22	0015004.92-	0002243.22	0011402.53-	0002964.90	0014150.93-	17
2130 0000 14 11 17.22	0014908.70-	0002267.28	0011474.70-	0002988.96	0014030.65-	17
2130 0000 14 11 18.22	0014908.70-	0002219.17	0011474.70-	0002988.96	0014054.71-	17
2140 0000 14 15 59.89	0018348.71-	0003061.13	0015107.16-	0003710.64	0017566.88-	17
2140 0000 14 16 00.89	0018372.76-	0003085.18	0015083.10-	0003758.75	0017542.83-	17
2140 0000 14 16 01.89	0018348.70-	0003061.13	0015083.10-	0003758.75	0017518.77-	17
2140 0000 14 16 02.89	0018372.76-	0003109.24	0015083.10-	0003734.69	0017518.77-	17
2140 0000 14 16 03.89	0018300.59-	0003061.13	0015083.10-	0003758.75	0017566.88-	17
2140 0000 14 16 04.89	0018276.54-	0003109.24	0015083.10-	0003782.81	0017542.83-	17
2131 0000 14 52 06.49	0014908.70-	0003446.02	0014866.66-	0003013.01	0014199.04-	17
2131 0000 14 52 07.49	0014956.81-	0003446.02	0014938.87-	0003037.07	0014126.88-	17
2131 0000 14 52 08.49	0014908.70-	0003446.02	0014914.71-	0003013.01	0014078.76-	17
2131 0000 14 52 09.49	0014932.75-	0003470.08	0014914.71-	0003013.01	0014150.93-	17
2131 0000 14 52 10.49	0014908.70-	0003421.97	0014962.82-	0003037.07	0014102.82-	17
2100 0010 15 31 46.68	0003891.05-	0001232.87	0005123.92-	0000896.09	0005057.76-	17
2100 0010 15 31 47.68	0003866.99-	0001256.93	0005147.97-	0000968.25	0005105.88-	17
2100 0010 15 31 48.68	0003915.10-	0001208.81	0005268.25-	0000944.20	0005226.16-	17
2100 0010 15 31 49.68	0003987.27-	0001280.98	0005244.20-	0001016.37	0005226.16-	17
2100 0010 15 32 49.18	0005767.42-	0001569.65	0006783.78-	0001353.15	0006741.68-	17
2100 0010 15 32 50.18	0005815.53-	0001617.77	0006783.78-	0001377.21	0006813.85-	17
2100 0010 15 32 51.18	0005815.53-	0001593.71	0006855.95-	0001377.21	0006813.85-	17
2100 0020 15 34 42.66	0010145.61-	0002531.89	0010704.91-	0002147.00	0010470.36-	17
2100 0020 15 34 43.66	0010145.61-	0002507.84	0010704.91-	0002195.11	0010542.53-	17
2100 0030 15 36 06.02	0014283.24-	0003421.97	0014722.26-	0002988.96	0014006.60-	17
2100 0030 15 36 07.02	0014259.18-	0003397.91	0014770.37-	0003037.07	0013982.54-	17
2100 0040 15 38 03.12	0017819.47-	0004336.09	0018932.06-	0003734.69	0017470.66-	17
2100 0040 15 38 04.12	0017843.53-	0004239.87	0019004.23-	0003782.81	0017446.60-	17
2150 0000 15 40 32.15	0021283.54-	0005322.30	0023165.92-	0004624.77	0021319.62-	17
2150 0000 15 40 33.15	0021283.54-	0005394.56	0023165.92-	0004624.77	0021319.62-	17

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P1801528	P01618	P01628	P1801618	P1801628	GP
2150 0000 15 40 34.15	0021307.59-	0005346.45	0023117.81-	0004624.77	0021271.51-	17
2150 0000 15 40 35.15	0021235.42-	0005298.33	0023141.86-	0004624.77	0021295.56-	17
2150 0000 15 40 36.15	0021307.59-	0005298.33	0023165.92-	0004624.77	0021223.40-	17
2155 0000 15 45 59.61	0022654.73-	0005755.40	0025234.73-	0005081.83	0023099.76-	17
2155 0000 15 46 00.61	0022678.78-	0005779.45	0025186.62-	0005033.72	0023099.76-	17
2155 0000 15 46 01.61	0022726.90-	0005731.34	0025234.73-	0005081.83	0023099.76-	17
2155 0000 15 46 02.61	0022678.78-	0005779.45	0025186.62-	0005081.83	0023099.76-	17
2155 0000 15 46 03.61	0022654.73-	0005755.40	0025186.62-	0005081.83	0023075.71-	17
2160 0000 16 29 34.86	0024122.14-	0006188.41	0027062.99-	0005394.56	0024615.29-	17
2160 0000 16 29 35.86	0024122.14-	0006212.46	0027111.10-	0005394.56	0024615.29-	17
2160 0000 16 29 36.86	0024122.14-	0006212.46	0027062.99-	0005394.56	0024615.29-	17
2160 0000 16 29 37.86	0024146.20-	0006212.46	0027062.99-	0005370.50	0024615.29-	17
2160 0000 16 29 38.86	0024122.14-	0006188.41	0027014.88-	0005394.56	0024591.24-	17
2165 0000 16 33 04.12	0025830.12-	0006669.53	0029179.92-	0005875.68	0026563.83-	17
2165 0000 16 33 05.12	0025830.12-	0006645.47	0029179.92-	0005803.51	0026563.83-	17
2165 0000 16 33 06.12	0025830.12-	0006693.58	0029179.92-	0005803.51	0026515.72-	17
2165 0000 16 33 07.12	0025878.23-	0006645.47	0029228.03-	0005779.45	0026515.72-	17
2165 0000 16 33 08.12	0025830.12-	0006597.36	0029228.03-	0005827.57	0026563.83-	17
2111 0000 16 39 31.91	0006080.14-	0001713.99	0007361.13-	0001497.49	0007343.08-	17
2111 0000 16 39 32.91	0006080.14-	0001713.99	0007337.07-	0001425.32	0007391.20-	17
2111 0000 16 39 33.91	0006104.20-	0001786.16	0007313.01-	0001497.49	0007415.25-	17
2111 0000 16 39 34.91	0006128.26-	0001713.99	0007361.13-	0001425.32	0007415.25-	17
2111 0000 16 39 35.91	0006032.03-	0001738.05	0007313.01-	0001497.49	0007367.14-	17

ELEMENT STRESS

ID 1106 REC PT 400 RATE 01 11/06/69 CONJUGATE STRUCTURE TEST COND 2

TEST COND	HR/MN/SEC	P0181B	P0182B	P0191A	P0192A	P0201B	GP
2000 0000	09 50 06.68	0000006.01	0000000.00	0000060.13-	0000024.06	0000024.05-	18
2100 0000	11 19 12.32	0003542.25	0001010.34-	0000036.08	0001371.18-	0000625.45-	18
2100 0000	11 19 13.32	0003542.25	0001034.40-	0000036.07-	0001323.07-	0000673.56-	18
2100 0000	11 19 14.32	0003542.25	0001082.51-	0000036.07-	0001299.01-	0000649.50-	18
2100 0000	11 19 15.32	0003542.25	0001010.34-	0000012.02-	0001323.07-	0000601.39-	18
2100 0000	11 19 16.32	0003494.13	0001010.34-	0000012.02-	0001419.29-	0000649.50-	18
2110 0000	13 02 50.73	0007222.81	0004257.90-	0000517.19-	0003608.39-	0001972.58-	18
2110 0000	13 02 51.73	0007222.81	0004281.96-	0000589.36-	0003656.50-	0001948.53-	18
2110 0000	13 02 52.73	0007222.81	0004209.79-	0000517.19-	0003536.22-	0001924.47-	18
2110 0000	13 02 53.73	0007222.81	0004233.85-	0000565.31-	0003608.39-	0001948.53-	18
2110 0000	13 02 54.73	0007246.87	0004233.85-	0000517.19-	0003584.33-	0001972.58-	18
2120 0000	13 07 26.70	0010518.49	0007337.07-	0000709.64-	0005893.71-	0003247.55-	18
2120 0000	13 07 27.70	0010446.32	0007313.01-	0000805.87-	0005845.60-	0003319.72-	18
2120 0000	13 07 28.70	0010518.49	0007313.01-	0000709.64-	0005821.54-	0003271.61-	18
2120 0000	13 07 29.70	0010494.43	0007264.90-	0000709.64-	0005893.71-	0003247.55-	18
2120 0000	13 07 30.70	0010446.32	0007361.13-	0000661.53-	0005869.65-	0003319.72-	18
2130 0000	14 11 14.22	0009917.09	0010295.96-	0000589.37	0007361.13-	0004618.74-	18
2130 0000	14 11 15.22	0009844.92	0010199.73-	0000613.43	0007361.13-	0004546.57-	18
2130 0000	14 11 16.22	0009893.03	0010175.68-	0000661.54	0007409.24-	0004594.69-	18
2130 0000	14 11 17.22	0009893.03	0010151.62-	0000661.54	0007385.18-	0004570.63-	18
2130 0000	14 11 18.22	0009868.97	0010175.68-	0000685.60	0007409.24-	0004570.63-	18
2140 0000	14 15 59.89	0008329.39	0013158.62-	0002778.47	0008804.49-	0006038.05-	18
2140 0000	14 16 00.89	0008281.28	0013158.62-	0002754.41	0008804.49-	0006110.21-	18
2140 0000	14 16 01.89	0008329.39	0013158.62-	0002802.52	0008780.43-	0006038.05-	18
2140 0000	14 16 02.89	0008209.11	0013110.51-	0002778.47	0008780.43-	0006062.10-	18
2140 0000	14 16 03.89	0008257.22	0013134.57-	0002802.52	0008804.49-	0006038.05-	18
2140 0000	14 16 04.89	0008161.00	0013182.68-	0002802.52	0008780.43-	0006062.10-	18
2131 0000	14 52 06.49	0031290.83-	0007721.97-	0021036.97	0001250.90-	0006182.38-	18
2131 0000	14 52 07.49	0031290.83-	0007673.85-	0021109.14	0001178.73-	0006134.27-	18
2131 0000	14 52 08.49	0031290.83-	0007721.97-	0021133.20	0001226.85-	0006182.38-	18
2131 0000	14 52 09.49	0031242.72-	0007649.80-	0021109.14	0001226.85-	0006158.33-	18
2131 0000	14 52 10.49	0031290.83-	0007697.91-	0021061.03	0001202.79-	0006158.33-	18
2100 0010	15 31 46.68	0017386.46-	0000360.83-	0011655.13	0001323.08	0002140.97-	18
2100 0010	15 31 47.68	0017482.69-	0000408.94-	0011679.19	0001371.19	0002140.97-	18
2100 0010	15 31 48.68	0017554.86-	0000384.89-	0011751.36	0001323.08	0002189.09-	18
2100 0010	15 31 49.68	0017554.86-	0000457.05-	0011823.52	0001323.08	0002213.14-	18
2100 0010	15 32 49.18	0019479.34-	0001611.74-	0012954.16	0000793.89	0002862.65-	18
2100 0010	15 32 50.18	0019503.39-	0001587.69-	0013026.32	0000793.85	0002790.49-	18
2100 0010	15 32 51.18	0019551.50-	0001611.74-	0013026.32	0000841.96	0002814.54-	18
2100 0020	15 34 42.66	0025012.22-	0004594.69-	0016514.44	0000240.55-	0004450.35-	18
2100 0020	15 34 43.66	0025084.38-	0004642.80-	0016562.56	0000264.61-	0004402.24-	18
2100 0030	15 36 06.02	0031290.83-	0007601.69-	0020531.80	0001202.79-	0006158.33-	18
2100 0030	15 36 07.02	0031290.83-	0007553.57-	0020555.85	0001154.68-	0006110.21-	18
2100 0040	15 38 03.12	0037401.06-	0010897.36-	0024813.76	0002189.09-	0007914.41-	18
2100 0040	15 38 04.12	0037401.06-	0010849.25-	0024861.88	0002189.09-	0007914.41-	18
2150 0000	15 40 32.15	0043415.06-	0014409.53-	0029288.18	0003295.66-	0009766.73-	18
2150 0000	15 40 33.15	0043415.06-	0014337.37-	0029288.18	0003319.72-	0009718.61-	18

ELEMENT STRESS

ID 1106 REC PT 400 RATE 01 11/06/69 CONJUGATE STRUCTURE TEST COND 2

TEST COND	HR/MN/SEC	P0181B	P0182B	P0191A	P0192A	P0201B	GP
2150 0000	15 40 34.15	0043415.06-	0014337.37-	0029336.29	0003247.55-	0009718.61-	18
2150 0000	15 40 35.15	0043463.17-	0014361.42-	0029240.07	0003271.61-	0009742.67-	18
2150 0000	15 40 36.15	0043415.06-	0014385.48-	0029288.18	0003295.66-	0009718.61-	18
2155 0000	15 45 59.61	0046013.10-	0016117.51-	0031549.44	0003824.89-	0010656.80-	18
2155 0000	15 46 00.61	0046061.22-	0016117.51-	0031549.44	0003824.89-	0010632.74-	18
2155 0000	15 46 01.61	0046013.10-	0016021.29-	0031549.44	0003848.95-	0010632.74-	18
2155 0000	15 46 02.61	0046061.22-	0016069.40-	0031549.44	0003800.84-	0010608.69-	18
2155 0000	15 46 03.61	0046013.10-	0016045.34-	0031549.44	0003800.84-	0010632.74-	18
2160 0000	16 29 34.86	0048226.26-	0013657.09-	0033425.81	0004306.01-	0011474.70-	18
2160 0000	16 29 35.86	0048274.37-	0017512.76-	0033425.81	0004330.07-	0011450.65-	18
2160 0000	16 29 36.86	0048226.26-	0017608.98-	0033377.70	0004354.13-	0011474.70-	18
2160 0000	16 29 37.86	0048178.14-	0017608.98-	0033425.81	0004281.96-	0011474.70-	18
2160 0000	16 29 38.86	0048226.26-	0017608.98-	0033377.70	0004354.13-	0011450.65-	18
2165 0000	16 33 04.12	0050246.96-	0019533.46-	0035735.19	0004907.41-	0012412.89-	18
2165 0000	16 33 05.12	0050150.74-	0019461.29-	0035783.30	0004955.53-	0012364.77-	18
2165 0000	16 33 06.12	0050246.96-	0019437.24-	0035735.19	0004931.47-	0012364.77-	18
2165 0000	16 33 07.12	0050246.96-	0019461.29-	0035735.19	0004979.58-	0012436.94-	18
2165 0000	16 33 08.12	0050246.96-	0019533.46-	0035735.19	0004955.53-	0012388.83-	18
2111 0000	16 39 31.91	0019551.50-	0001756.08-	0014181.01	0001058.46	0002982.93-	18
2111 0000	16 39 32.91	0019551.50-	0001732.02-	0014229.12	0001010.35	0002958.88-	18
2111 0000	16 39 33.91	0019551.50-	0001707.97	0014277.24	0001034.41	0002982.93-	18
2111 0000	16 39 34.91	0019527.45-	0001707.97-	0014205.07	0001058.46	0002910.77-	18
2111 0000	16 39 35.91	0019575.55-	0001659.85-	0014253.18	0001034.41	0002982.93-	18

ELEMENT STRESS

ID 1106 REC PT 400 RATE 01 11/06/69 CONJUGATE STRUCTURE TEST COND 2

TEST COND HR/MN/SEC	P0202B	P1802018	P1802028	P0211A	P0212A	GP
2000 0000 09 50 06.68	0000024.06	0000000.00	0000060.13-	0000036.07-	0000048.10-	19
2100 0000 11 19 12.32	0000433.01	0000433.00-	0000517.19-	0000685.60	0000938.18	19
2100 0000 11 19 13.32	0000433.01	0000384.89-	0000517.19-	0000637.48	0001010.35	19
2100 0000 11 19 14.32	0000457.06	0000384.89-	0000517.19-	0000613.43	0001034.41	19
2100 0000 11 19 15.32	0000481.12	0000360.83-	0000493.14-	0000709.65	0000962.24	19
2100 0000 11 19 16.32	0000408.95	0000433.00-	0000469.08-	0000613.43	0000986.30	19
2110 0000 13 02 50.73	0001178.74	0000841.95-	0000757.75-	0000537.48	0005220.15	19
2110 0000 13 02 51.73	0001178.74	0000866.01-	0000733.70-	0000685.60	0005220.15	19
2110 0000 13 02 52.73	0001202.80	0000817.89-	0000733.70-	0000709.65	0005172.04	19
2110 0000 13 02 53.73	0001226.86	0000866.01-	0000733.70-	0000757.76	0005220.15	19
2110 0000 13 02 54.73	0001202.80	0000841.95-	0000709.64-	0000805.88	0005196.10	19
2120 0000 13 07 26.70	0001900.42	0001299.01-	0000709.64-	0000589.37	0008154.98	19
2120 0000 13 07 27.70	0001876.37	0001395.24-	0000709.64-	0000541.26	0008106.87	19
2120 0000 13 07 28.70	0001876.37	0001395.24-	0000709.64-	0000541.26	0008154.98	19
2120 0000 13 07 29.70	0001804.20	0001347.13-	0000709.64-	0000517.20	0008130.93	19
2120 0000 13 07 30.70	0001876.37	0001347.13-	0000733.70-	0000541.26	0008130.93	19
2130 0000 14 11 14.22	0002525.88	0002020.69-	0000565.31-	0000228.53	0010704.92	19
2130 0000 14 11 15.22	0002598.05	0001996.64-	0000517.19-	0000276.64	0010704.92	19
2130 0000 14 11 16.22	0002622.10	0002020.69-	0000517.19-	0000204.48	0010704.92	19
2130 0000 14 11 17.22	0002622.10	0001972.58-	0000493.14-	0000228.53	0010680.86	19
2130 0000 14 11 18.22	0002646.16	0001996.64-	0000541.25-	0000204.48	0010680.86	19
2140 0000 14 15 59.89	0003295.67	0002718.32-	0000276.63-	0000276.63-	0013423.25	19
2140 0000 14 16 00.89	0003247.56	0002718.32-	0000252.58-	0000300.69-	0013375.14	19
2140 0000 14 16 01.89	0003319.73	0002694.26-	0000276.63-	0000228.52-	0013423.25	19
2140 0000 14 16 02.89	0003271.62	0002742.37-	0000348.80-	0000276.63-	0013375.14	19
2140 0000 14 16 03.89	0003343.78	0002742.37-	0000300.69-	0000276.63-	0013375.14	19
2140 0000 14 16 04.89	0003271.62	0002718.32-	0000324.75-	0000252.58-	0013375.14	19
2131 0000 14 52 06.49	0002165.04	0001996.64-	0000517.19-	0004173.71-	0010728.98	19
2131 0000 14 52 07.49	0002189.10	0002020.69-	0000493.14-	0004125.59-	0010753.03	19
2131 0000 14 52 08.49	0002140.98	0002044.75-	0000493.14-	0004125.59-	0010728.98	19
2131 0000 14 52 09.49	0002116.93	0002020.69-	0000517.19-	0004173.71-	0010728.98	19
2131 0000 14 52 10.49	0002165.04	0001948.53-	0000493.14-	0004101.54-	0010753.03	19
2100 0010 15 31 46.68	0000649.51	0000649.50-	0000589.36-	0001671.88-	0003656.51	19
2100 0010 15 31 47.68	0000673.57	0000601.39-	0000541.25-	0001719.99-	0003632.46	19
2100 0010 15 31 48.68	0000649.51	0000625.45-	0000541.25-	0001719.99-	0003680.57	19
2100 0010 15 31 49.68	0000697.62	0000625.45-	0000613.42-	0001695.94-	0003752.74	19
2100 0010 15 32 49.18	0000914.13	0000841.95-	0000637.47-	0002153.00-	0004811.20	19
2100 0010 15 32 50.18	0000914.13	0000817.89-	0000661.53-	0002128.95-	0004811.20	19
2100 0010 15 32 51.18	0000962.24	0000866.01-	0000637.47-	0002104.89-	0004907.42	19
2100 0020 15 34 42.66	0001611.75	0001371.18-	0000685.59-	0003091.19-	0007746.03	19
2100 0020 15 34 43.66	0001587.70	0001347.13-	0000685.59-	0003139.30-	0007770.09	19
2100 0030 15 36 06.02	0002189.10	0001996.64-	0000445.03-	0004077.48-	0010584.64	19
2100 0030 15 36 07.02	0002140.98	0001972.58-	0000469.08-	0004077.48-	0010608.70	19
2100 0040 15 38 03.12	0002814.55	0002718.32-	0000228.52-	0004919.44-	0013423.25	19
2100 0040 15 38 04.12	0002814.55	0002742.37-	0000180.41-	0004919.44-	0013447.30	19
2150 0000 15 40 32.15	0003415.95	0003728.67-	0000132.31-	0005593.01-	0016285.91	19
2150 0000 15 40 33.15	0003391.90	0003656.50-	0000108.25	0005593.01-	0016334.02	19

ELEMENT STRESS

ID 1106 REC PT 400 RATE 01 11/06/69 CONJUGATE STRUCTURE TEST COND 2

TEST COND HR/MN/SEC	P0202B	P1802018	P1802028	P0211A	P0212A	GP
2150 0000 15 40 34.15	0003415.95	0003656.50-	0000036.08	0005641.12-	0016334.02	19
2150 0000 15 40 35.15	0003415.95	0003656.50-	0000084.20	0005617.07-	0016334.02	19
2150 0000 15 40 36.15	0003415.95	0003680.56-	0000060.14	0005641.12-	0016382.14	19
2155 0000 15 45 59.61	0003776.79	0004161.68-	0000276.64	0005929.79-	0017681.16	19
2155 0000 15 46 00.61	0003728.68	0004209.79-	0000276.64	0005977.91-	0017705.22	19
2155 0000 15 46 01.61	0003728.68	0004161.68-	0000252.59	0005953.85-	0017729.27	19
2155 0000 15 46 02.61	0003728.68	0004185.73-	0000228.53	0005977.91-	0017705.22	19
2155 0000 15 46 03.61	0003728.68	0004137.62-	0000252.59	0005953.85-	0017729.27	19
2160 0000 16 29 34.86	0003969.24	0004642.80-	0000396.92	0006098.19-	0018763.68	19
2160 0000 16 29 35.86	0003969.24	0004642.80-	0000517.20	0006194.41-	0018811.79	19
2160 0000 16 29 36.86	0003969.24	0004594.69-	0000445.04	0006194.41-	0018763.68	19
2160 0000 16 29 37.86	0003993.30	0004642.80-	0000445.04	0006146.30-	0018739.62	19
2160 0000 16 29 38.86	0003969.24	0004642.80-	0000420.98	0006194.41-	0018787.74	19
2165 0000 16 33 04.12	0004378.19	0005147.97-	0000685.60	0006434.97-	0020207.04	19
2165 0000 16 33 05.12	0004330.08	0005196.09-	0000709.65	0006410.91-	0020255.15	19
2165 0000 16 33 06.12	0004306.02	0005172.03-	0000709.65	0006362.80-	0020255.15	19
2165 0000 16 33 07.12	0004354.14	0005196.09-	0000685.60	0006434.97-	0020207.04	19
2165 0000 16 33 08.12	0004306.02	0005147.97-	0000709.65	0006410.91-	0020182.98	19
2111 0000 16 39 31.91	0000817.90	0001058.45-	0000733.70-	0002273.28-	0004787.14	19
2111 0000 16 39 32.91	0000890.07	0001082.51-	0000757.75-	0002273.28-	0004739.03	19
2111 0000 16 39 33.91	0000962.24	0001034.40-	0000733.70-	0002321.39-	0004763.09	19
2111 0000 16 39 34.91	0000890.07	0001034.40-	0000757.75-	0002273.28-	0004739.03	19
2111 0000 16 39 35.91	0000890.07	0001058.45-	0000781.81-	0002225.17-	0004739.03	19

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P0221A	P0222A	P0231A	P0232A	N/A	GP
2000 0000 09 50 06.68	0000012.02-	0000030.06-	0000000.00	0000024.05-	0000048.11	20
2100 0000 11 19 12.32	0001744.06	0001052.45	0000577.34	0002020.70	0000048.10-	20
2100 0000 11 19 13.32	0001816.23	0000980.28	0000601.40	0001996.65	0000048.10-	20
2100 0000 11 19 14.32	0001792.17	0000980.28	0000601.40	0002068.82	0000096.21-	20
2100 0000 11 19 15.32	0001744.06	0001004.34	0000601.40	0002068.82	0000024.05-	20
2100 0000 11 19 16.32	0001792.17	0000980.28	0000577.34	0002044.76	0000048.10-	20
2110 0000 13 02 50.73	0005689.24	0001822.24	0000096.21-	0006014.00	0000024.06	20
2110 0000 13 02 51.73	0005641.13	0001846.30	0000024.05-	0005989.94	0000000.00	20
2110 0000 13 02 52.73	0005617.08	0001798.19	0000024.05-	0005965.89	0000024.05-	20
2110 0000 13 02 53.73	0005665.19	0001822.24	0000120.27-	0006014.00	0000024.05-	20
2110 0000 13 02 54.73	0005689.24	0001846.30	0000072.16-	0006038.06	0000024.05-	20
2120 0000 13 07 26.70	0009273.59	0002327.42	0001010.34-	0009959.18	0000024.05-	20
2120 0000 13 07 27.70	0009321.70	0002279.31	0001058.45-	0009911.07	0000024.05-	20
2120 0000 13 07 28.70	0009249.53	0002255.25	0001010.34-	0009911.07	0000024.05-	20
2120 0000 13 07 29.70	0009249.53	0002303.36	0001034.40-	0009862.96	0000072.16-	20
2120 0000 13 07 30.70	0009297.64	0002303.36	0000962.23-	0009887.02	0000048.11	20
2130 0000 14 11 14.22	0012545.20	0002640.15	0001683.91-	0013495.42	0000024.06	20
2130 0000 14 11 15.22	0012569.26	0002736.37	0001683.91-	0013495.42	0000024.06	20
2130 0000 14 11 16.22	0012545.20	0002664.20	0001707.97-	0013423.25	0000024.06	20
2130 0000 14 11 17.22	0012545.20	0002688.26	0001707.97-	0013447.30	0000000.00	20
2130 0000 14 11 18.22	0012569.26	0002640.15	0001707.97-	0013447.30	0000000.00	20
2140 0000 14 15 59.89	0015888.99	0002952.87	0002309.37-	0017103.82	0000000.00	20
2140 0000 14 16 00.89	0015840.88	0002928.82	0002333.42-	0017103.82	0000024.06	20
2140 0000 14 16 01.89	0015864.93	0002904.76	0002333.42-	0017103.82	0000000.00	20
2140 0000 14 16 02.89	0015816.82	0002880.71	0002357.48-	0017079.76	0000024.05-	20
2140 0000 14 16 03.89	0015864.93	0002928.82	0002405.59-	0017031.65	0000024.06	20
2140 0000 14 16 04.89	0015864.93	0002904.76	0002309.37-	0017055.70	0000024.05-	20
2131 0000 14 52 06.49	0012352.76	0001846.30	0001539.57-	0013327.02	0000000.00	20
2131 0000 14 52 07.49	0012280.59	0001870.35	0001515.52-	0013375.14	0000024.06	20
2131 0000 14 52 08.49	0012280.59	0001846.30	0001539.57-	0013423.25	0000048.11	20
2131 0000 14 52 09.49	0012328.70	0001798.19	0001563.63-	0013327.02	0000048.11	20
2131 0000 14 52 10.49	0012280.59	0001798.19	0001539.57-	0013375.14	0000000.00	20
2100 0010 15 31 46.68	0003909.10	0001172.73	0000962.24	0004161.69	0000024.05-	20
2100 0010 15 31 47.68	0003957.21	0001196.79	0000962.24	0004161.69	0000000.00	20
2100 0010 15 31 48.68	0003981.27	0001196.79	0000962.24	0004257.91	0000024.05-	20
2100 0010 15 31 49.68	0004125.60	0001196.79	0000890.07	0004281.97	0000024.06	20
2100 0010 15 32 49.18	0005376.52	0001365.18	0000577.34	0005773.44	0000000.00	20
2100 0010 15 32 50.18	0005448.68	0001437.35	0000529.23	0005773.44	0000024.05-	20
2100 0010 15 32 51.18	0005520.85	0001437.35	0000553.29-	0005845.61	0000000.00	20
2100 0020 15 34 42.66	0008864.64	0001629.79	0000577.33-	0009550.23	0000024.06	20
2100 0020 15 34 43.66	0008840.58	0001653.85	0000577.33-	0009694.57	0000024.05-	20
2100 0030 15 36 06.02	0012256.53	0001846.30	0001539.57-	0013278.91	0000120.27-	20
2100 0030 15 36 07.02	0012256.53	0001774.13	0001539.57-	0013302.97	0000048.10-	20
2100 0040 15 38 03.12	0015600.32	0001942.52	0002429.65-	0017007.59	0000144.34	20
2100 0040 15 38 04.12	0015648.43	0001918.47	0002429.65-	0017055.70	0000024.06	20
2150 0000 15 40 32.15	0019064.38	0002086.86	0003103.21-	0020808.44	0000048.10-	20
2150 0000 15 40 33.15	0019112.49	0002110.91	0003055.10-	0020784.38	0000024.05-	20

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P0221A	P0222A	P0231A	P0232A	N/A	GP
2150 0000 15 40 34.15	0019088.44	0002183.08	0003127.27-	0020856.55	0000000.00	20
2150 0000 15 40 35.15	0019112.49	0002062.80	0003079.16-	0020832.50	0000024.06	20
2150 0000 15 40 36.15	0019136.55	0002110.91	0003031.05-	0020808.44	0000000.00	20
2155 0000 15 45 59.61	0020844.52	0002207.14	0003295.66-	0022684.81	0000000.00	20
2155 0000 15 46 00.61	0020820.47	0002207.14	0003271.61-	0022684.81	0000000.00	20
2155 0000 15 46 01.61	0020844.52	0002231.19	0003271.61-	0022684.81	0000024.06	20
2155 0000 15 46 02.61	0020820.47	0002207.14	0003247.55-	0022684.81	0000048.11	20
2155 0000 15 46 03.61	0020820.47	0002255.25	0003295.66-	0022708.86	0000024.06	20
2160 0000 16 29 34.86	0022239.77	0002255.25	0003464.05-	0024320.62	0000048.10-	20
2160 0000 16 29 35.86	0022239.77	0002303.36	0003415.94-	0024320.62	0000024.05-	20
2160 0000 16 29 36.86	0022191.66	0002351.47	0003391.89-	0024296.56	0000048.11	20
2160 0000 16 29 37.86	0022263.83	0002279.31	0003391.89-	0024320.62	0000024.05-	20
2160 0000 16 29 38.86	0022239.77	0002327.42	0003464.05-	0024296.56	0000048.11	20
2165 0000 16 33 04.12	0024043.97	0002399.59	0003560.28-	0026341.32	0000024.06	20
2165 0000 16 33 05.12	0024019.92	0002399.59	0003632.45-	0026341.32	0000024.05-	20
2165 0000 16 33 06.12	0024068.03	0002399.59	0003608.39-	0026293.21	0000048.11	20
2165 0000 16 33 07.12	0024068.03	0002399.59	0003608.39-	0026293.21	0000072.17	20
2165 0000 16 33 08.12	0024068.03	0002375.53	0003656.50-	0026293.21	0000048.11	20
2111 0000 16 39 31.91	0005689.24	0001413.29	0000721.68	0006110.22	0000000.00	20
2111 0000 16 39 32.91	0005617.08	0001413.29	0000745.74	0006086.17	0000024.05-	20
2111 0000 16 39 33.91	0005617.08	0001437.35	0000721.68	0006110.22	0000024.05-	20
2111 0000 16 39 34.91	0005641.13	0001437.35	0000769.79	0006110.22	0000024.06	20
2111 0000 16 39 35.91	0005665.19	0001365.18	0000721.68	0006110.22	0000024.06	20

ELEMENT STRESS

ID 1106 REC PT 400 RATE 01 11/06/69 CONJUGATE STRUCTURE TEST COND 2

TEST COND HR/MN/SEC	P0171A	P0172A	P180171A	P180172A	P180181B	GP
2000 0000 09 50 06.68	0000006.00-	0000042.10	0000000.00	0000054.13	0000006.00-	21
2100 0000 11 19 12.32	0002604.05-	0002074.82-	0002405.59-	0001365.17-	0002062.80	21
2100 0000 11 19 13.32	0002604.05-	0002098.88-	0002429.65-	0001365.17-	0002086.86	21
2100 0000 11 19 14.32	0002580.00-	0002122.93-	0002477.76-	0001365.17-	0002038.75	21
2100 0000 11 19 15.32	0002604.05-	0002122.93-	0002453.70-	0001365.17-	0002038.75	21
2100 0000 11 19 16.32	0002580.00-	0002098.88-	0002429.65-	0001365.17-	0002062.80	21
2110 0000 13 02 50.73	0004817.20-	0005442.66-	0004642.80-	0003891.05-	0005021.69	21
2110 0000 13 02 51.73	0004793.15-	0005418.60-	0004714.97-	0003891.05-	0004973.58	21
2110 0000 13 02 52.73	0004817.20-	0005394.55-	0004690.91-	0003866.99-	0005045.75	21
2110 0000 13 02 53.73	0004817.20-	0005418.60-	0004714.97-	0003939.16-	0004997.63	21
2110 0000 13 02 56.73	0004769.09-	0005418.60-	0004666.85-	0003891.05-	0004997.63	21
2120 0000 13 07 26.70	0007054.41-	0008666.16-	0006976.23-	0006753.71-	0008341.42	21
2120 0000 13 07 27.70	0007078.47-	0008666.16-	0007000.29-	0006825.88-	0008341.42	21
2120 0000 13 07 28.70	0007030.36-	0008690.22-	0006952.17-	0006777.77-	0008317.36	21
2120 0000 13 07 29.70	0007030.36-	0008642.11-	0007024.34-	0006801.82-	0008317.36	21
2120 0000 13 07 30.70	0007054.41-	0008618.05-	0007072.45-	0006801.82-	0008317.36	21
2130 0000 14 11 14.22	0011576.94-	0011649.11-	0009309.66-	0009616.38-	0011733.31	21
2130 0000 14 11 15.22	0011576.94-	0011625.05-	0009261.55-	0009592.32-	0011757.37	21
2130 0000 14 11 16.22	0011625.05-	0011649.11-	0009261.55-	0009616.38-	0011781.43	21
2130 0000 14 11 17.22	0011625.05-	0011625.05-	0009261.55-	0009616.38-	0011781.43	21
2130 0000 14 11 18.22	0011625.05-	0011601.00-	0009237.49-	0009664.49-	0011733.31	21
2140 0000 14 15 59.89	0015882.96-	0015690.52-	0011667.15-	0012671.49-	0015461.99	21
2140 0000 14 16 00.89	0015907.02-	0015594.29-	0011667.15-	0012671.49-	0015413.88	21
2140 0000 14 16 01.89	0015858.91-	0015570.24-	0011570.93-	0012695.54-	0015365.77	21
2140 0000 14 16 02.89	0015834.85-	0015546.18-	0011619.04-	0012719.60-	0015413.88	21
2140 0000 14 16 03.89	0015882.96-	0015498.07-	0011643.09-	0012695.54-	0015365.77	21
2140 0000 14 16 04.89	0015810.80-	0015474.01-	0011643.09-	0012695.54-	0015389.83	21
2131 0000 14 52 06.49	0007547.57	0021247.45-	0009646.45-	0009616.38-	0012094.15	21
2131 0000 14 52 07.49	0007547.57	0021247.45-	0009622.39-	0009616.38-	0012142.27	21
2131 0000 14 52 08.49	0007547.57	0021199.34-	0009694.56-	0009592.32-	0012166.32	21
2131 0000 14 52 09.49	0007595.68	0021223.40-	0009646.45-	0009592.32-	0012118.21	21
2131 0000 14 52 10.49	0007571.63	0021223.40-	0009646.45-	0009640.43-	0012142.27	21
2100 0010 15 31 46.68	0007812.19	0009460.01-	0004137.62-	0002736.36-	0004203.79	21
2100 0010 15 31 47.68	0007836.24	0009556.24-	0004185.73-	0002808.53-	0004179.73	21
2100 0010 15 31 48.68	0007836.24	0009604.35-	0004209.79-	0002880.70-	0004275.95	21
2100 0010 15 31 49.68	0007884.35	0009652.46-	0004233.85-	0002856.64-	0004251.90	21
2100 0010 15 32 49.18	0008245.19	0011528.83-	0005123.92-	0003818.88-	0005334.42	21
2100 0010 15 32 50.18	0008245.19	0011528.83-	0005196.09-	0003891.05-	0005382.53	21
2100 0010 15 32 51.18	0008221.14	0011504.77-	0005147.97-	0003891.05-	0005382.53	21
2100 0020 15 34 42.66	0008341.42	0016099.47-	0007337.07-	0006561.26-	0008485.75	21
2100 0020 15 34 43.66	0008341.42	0016123.52-	0007433.29-	0006657.49-	0008461.70	21
2100 0030 15 36 06.02	0007667.85	0020573.88-	0009309.66-	0009472.04-	0011853.59	21
2100 0030 15 36 07.02	0007667.85	0020790.39-	0009478.05-	0009472.04-	0011805.48	21
2100 0040 15 38 03.12	0006296.66	0025697.81-	0011715.26-	0012599.32-	0015341.71	21
2100 0040 15 38 04.12	0006320.71	0025794.04-	0011787.43-	0012575.26-	0015293.60	21
2150 0000 15 40 32.15	0004540.57	0030942.02-	0014337.37-	0015846.88-	0019070.39	21
2150 0000 15 40 33.15	0004588.68	0030942.02-	0014265.20-	0015822.82-	0019070.39	21

ELEMENT STRESS

ID 1106 REC PT 400 RATE 01 11/06/69 CONJUGATE STRUCTURE TEST COND 2

TEST COND HR/MN/SEC	P0171A	P0172A	P180171A	P180172A	P180181B	GP
2150 0000 15 40 34.15	0004636.79	0030942.02-	0014241.14-	0015822.82-	0019070.39	21
2150 0000 15 40 35.15	0004612.74	0030942.02-	0014265.20-	0015822.82-	0019070.39	21
2150 0000 15 40 36.15	0004612.74	0030893.91-	0014265.20-	0015846.88-	0019094.45	21
2155 0000 15 45 59.61	0003674.55	0033443.84-	0015588.28-	0017458.63-	0021091.10	21
2155 0000 15 46 00.61	0003722.67	0033443.84-	0015588.28-	0017458.63-	0020994.87	21
2155 0000 15 46 01.61	0003674.55	0033443.84-	0015636.39-	0017506.74-	0020994.87	21
2155 0000 15 46 02.61	0003722.67	0033443.84-	0015660.45-	0017482.69-	0021018.93	21
2155 0000 15 46 03.61	0003746.72	0033395.73-	0015612.33-	0017482.69-	0021018.93	21
2160 0000 16 29 34.86	0002904.76	0035560.77-	0016911.36-	0018974.16-	0022726.91	21
2160 0000 16 29 35.86	0002928.82	0035608.88-	0016863.25-	0018974.16-	0022823.13	21
2160 0000 16 29 36.86	0002976.93	0035560.77-	0016863.25-	0018950.10-	0022750.96	21
2160 0000 16 29 37.86	0002904.76	0035560.77-	0016815.13-	0018974.16-	0022750.96	21
2160 0000 16 29 38.86	0002904.76	0035560.77-	0016863.25-	0018974.16-	0022726.91	21
2165 0000 16 33 04.12	0001798.19	0038206.93-	0020615.98-	0020682.14-	0024098.10	21
2165 0000 16 33 05.12	0001822.24	0038255.04-	0020688.15-	0020778.36-	0024074.04	21
2165 0000 16 33 06.12	0001894.41	0038206.93-	0020615.98-	0020730.25-	0024122.15	21
2165 0000 16 33 07.12	0001846.30	0038158.82-	0020640.04-	0020730.25-	0024098.10	21
2165 0000 16 33 08.12	0001870.35	0038255.04-	0020640.04-	0020730.25-	0024049.98	21
2111 0000 16 39 31.91	0008533.87	0011985.89-	0007746.02-	0003866.99-	0004179.73	21
2111 0000 16 39 32.91	0008533.87	0011961.84-	0007746.02-	0003939.16-	0004179.73	21
2111 0000 16 39 33.91	0008557.92	0011913.72-	0007770.08-	0003939.16-	0004203.79	21
2111 0000 16 39 34.91	0008557.92	0011985.89-	0007721.97-	0003891.05-	0004131.62	21
2111 0000 16 39 35.91	0008557.92	0011937.78-	0007794.13-	0003915.10-	0004179.73	21

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P180182B	P180191A	P180192A	P180211A	P180212A	GP
2000 0000 09 50 06.68	0000042.10	0000066.14-	0000042.10	0000072.16-	0000048.11	22
2100 0000 11 19 12.32	0001665.87-	0001870.34-	0000799.85-	0003776.78-	0001683.92	22
2100 0000 11 19 13.32	0001689.92-	0001870.34-	0000751.74-	0003728.67-	0001732.03	22
2100 0000 11 19 14.32	0001738.04-	0001870.34-	0000799.85-	0003824.89-	0001732.03	22
2100 0000 11 19 15.32	0001689.92-	0001894.40-	0000799.85-	0003824.89-	0001756.09	22
2100 0000 11 19 16.32	0001713.98-	0001846.29-	0000799.85-	0003873.01-	0001756.09	22
2110 0000 13 02 50.73	0004263.92-	0003842.94-	0002531.88-	0008203.09-	0004666.86	22
2110 0000 13 02 51.73	0004287.97-	0003818.88-	0002555.94-	0008082.81-	0004666.86	22
2110 0000 13 02 52.73	0004215.80-	0003770.77-	0002531.88-	0008130.92-	0004666.86	22
2110 0000 13 02 53.73	0004191.75-	0003770.77-	0002531.88-	0008058.75-	0004690.92	22
2110 0000 13 02 54.73	0004263.92-	0003813.88-	0002507.83-	0008034.69-	0004714.98	22
2120 0000 13 07 26.70	0007078.47-	0004636.78-	0004576.64-	0010344.07-	0007313.02	22
2120 0000 13 07 27.70	0007126.58-	0004612.73-	0004600.70-	0010344.07-	0007216.80	22
2120 0000 13 07 28.70	0007102.52-	0004636.78-	0004552.59-	0010271.90-	0007264.91	22
2120 0000 13 07 29.70	0007150.64-	0004612.73-	0004576.64-	0010271.90-	0007240.86	22
2120 0000 13 07 30.70	0007078.47-	0004636.78-	0004576.64-	0010271.90-	0007168.69	22
2130 0000 14 11 14.22	0009868.96-	0004733.01-	0006621.40-	0011041.69-	0009526.18	22
2130 0000 14 11 15.22	0009844.91-	0004636.78-	0006645.46-	0011041.69-	0009550.23	22
2130 0000 14 11 16.22	0009893.02-	0004708.95-	0006645.46-	0011041.69-	0009478.06	22
2130 0000 14 11 17.22	0009868.96-	0004636.78-	0006597.35-	0010993.58-	0009502.12	22
2130 0000 14 11 18.22	0009820.85-	0004733.01-	0006645.46-	0010993.58-	0009526.18	22
2140 0000 14 15 59.89	0012707.57-	0004373.17-	0008762.39-	0011354.42-	0011835.55	22
2140 0000 14 16 00.89	0012731.63-	0004324.06-	0008858.61-	0011330.37-	0011763.38	22
2140 0000 14 16 01.89	0012707.57-	0004324.06-	0008762.39-	0011258.20-	0011835.55	22
2140 0000 14 16 02.89	0012731.63-	0004348.11-	0008762.39-	0011234.14-	0011763.38	22
2140 0000 14 16 03.89	0012731.63-	0004396.22-	0008786.44-	0011306.31-	0011835.55	22
2140 0000 14 16 04.89	0012683.52-	0004348.11-	0008786.44-	0011258.20-	0011811.50	22
2131 0000 14 52 06.49	0009844.91-	0004660.84-	0006693.57-	0011089.81-	0009526.18	22
2131 0000 14 52 07.49	0009820.85-	0004612.73-	0006645.46-	0011089.81-	0009598.34	22
2131 0000 14 52 08.49	0009748.68-	0004612.73-	0006645.46-	0011089.81-	0009622.40	22
2131 0000 14 52 09.49	0009772.74-	0004684.90-	0006597.35-	0011089.81-	0009598.34	22
2131 0000 14 52 10.49	0009796.80-	0004660.84-	0006597.35-	0011137.92-	0009622.40	22
2100 0010 15 31 46.68	0003205.45-	0002832.58-	0001762.09-	0006422.94-	0003464.06	22
2100 0010 15 31 47.68	0003157.34-	0002880.70-	0001834.26-	0006447.00-	0003536.23	22
2100 0010 15 31 48.68	0003301.68-	0002904.75-	0001834.26-	0006519.17-	0003536.23	22
2100 0010 15 31 49.68	0003325.73-	0002880.70-	0001810.20-	0006519.17-	0003584.34	22
2100 0010 15 32 49.18	0004287.97-	0003602.38-	0002555.94-	0008010.64-	0004666.86	22
2100 0010 15 32 50.18	0004312.03-	0003626.43-	0002580.00-	0007938.47-	0004594.70	22
2100 0010 15 32 51.18	0004336.08-	0003578.32-	0002555.94-	0007962.53-	0004690.92	22
2100 0020 15 34 42.66	0006982.24-	0004420.28-	0004552.59-	0010175.68-	0007168.69	22
2100 0020 15 34 43.66	0007030.36-	0004444.34-	0004528.53-	0010175.68-	0007120.58	22
2100 0030 15 36 06.02	0009676.52-	0004516.50-	0006453.01-	0011186.03-	0009550.23	22
2100 0030 15 36 07.02	0009724.63-	0004684.90-	0006573.29-	0011186.03-	0009550.23	22
2100 0040 15 38 03.12	0012587.29-	0004251.89-	0008666.16-	0011306.31-	0011907.72	22
2100 0040 15 38 04.12	0012683.52-	0004348.11-	0008810.50-	0011378.48-	0011859.61	22
2150 0000 15 40 32.15	0015690.52-	0003794.82-	0011023.65-	0011282.25-	0014313.32	22
2150 0000 15 40 33.15	0015762.68-	0003746.71-	0011095.82-	0011186.03-	0014217.10	22

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	P180182B	P180191A	P180192A	P180211A	P180212A	GP
2150 0000 15 40 34.15	0015786.74-	0003722.66-	0011119.88-	0011186.03-	0014241.15	22
2150 0000 15 40 35.15	0015762.68-	0003746.71-	0011095.82-	0011210.09-	0014265.21	22
2150 0000 15 40 36.15	0015786.74-	0003746.71-	0011095.82-	0011113.86-	0014265.21	22
2155 0000 15 45 59.61	0017302.27-	0003313.70-	0012298.62-	0010921.41-	0015419.90	22
2155 0000 15 46 00.61	0017326.32-	0003241.54-	0012322.68-	0010969.53-	0015395.84	22
2155 0000 15 46 01.61	0017278.21-	0003241.54-	0012298.62-	0010969.53-	0015419.90	22
2155 0000 15 46 02.61	0017302.27-	0003265.59-	0012274.56-	0010945.47-	0015371.78	22
2155 0000 15 46 03.61	0017278.21-	0003265.59-	0012298.62-	0010945.47-	0015395.84	22
2160 0000 16 29 34.86	0018721.57-	0002856.64-	0013381.14-	0010753.02-	0016430.25	22
2160 0000 16 29 35.86	0018649.40-	0002832.58-	0013405.20-	0010728.97-	0016382.14	22
2160 0000 16 29 36.86	0018673.46-	0002808.53-	0013429.25-	0010777.08-	0016382.14	22
2160 0000 16 29 37.86	0018697.52-	0002832.58-	0013405.20-	0010728.97-	0016382.14	22
2160 0000 16 29 38.86	0018649.40-	0002808.53-	0013381.14-	0010753.02-	0016430.25	22
2165 0000 16 33 04.12	0020285.21-	0001413.28-	0014968.84-	0010584.63-	0017560.88	22
2165 0000 16 33 05.12	0020309.27-	0001293.00-	0014992.89-	0010488.41-	0017608.99	22
2165 0000 16 33 06.12	0020357.38-	0001293.00-	0014992.89-	0010488.41-	0017608.99	22
2165 0000 16 33 07.12	0020357.38-	0001317.06-	0015041.00-	0010464.35-	0017584.94	22
2165 0000 16 33 08.12	0020357.38-	0001317.06-	0014992.89-	0010440.29-	0017560.88	22
2111 0000 16 39 31.91	0004552.59-	0002712.30-	0002940.84-	0008106.86-	0004835.26	22
2111 0000 16 39 32.91	0004552.59-	0002712.30-	0003037.06-	0008106.86-	0004739.03	22
2111 0000 16 39 33.91	0004576.64-	0002688.25-	0002988.95-	0008106.86-	0004787.14	22
2111 0000 16 39 34.91	0004504.48-	0002640.14-	0002940.84-	0008106.86-	0004714.98	22
2111 0000 16 39 35.91	0004528.53-	0002712.30-	0002940.84-	0008106.86-	0004835.26	22

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST	COND	HR/MN/SEC	P180221A	P180222A	P180231A	P180232A	R169241A	GP
2000	0000	09 50 06.68	0000024.05-	0000024.05-	0000024.06	0000066.15	0000012.03	23
2100	0000	11 19 12.32	0002357.48-	0001250.91	0006086.16-	0001196.79	0000950.21	23
2100	0000	11 19 13.32	0002381.53-	0001202.80	0006062.10-	0001196.79	0001022.38	23
2100	0000	11 19 14.32	0002405.59-	0001202.80	0006038.05-	0001196.79	0000950.21	23
2100	0000	11 19 15.32	0002357.48-	0001274.97	0006038.05-	0001196.79	0000974.27	23
2100	0000	11 19 16.32	0002453.70-	0001202.80	0006038.05-	0001196.79	0001022.38	23
2110	0000	13 02 50.73	0005244.20-	0004041.41	0018234.44-	0004227.84	0001840.28	23
2110	0000	13 02 51.73	0005244.20-	0004065.46	0018282.55-	0004203.79	0001864.34	23
2110	0000	13 02 52.73	0005244.20-	0004089.52	0018234.44-	0004251.90	0001840.28	23
2110	0000	13 02 53.73	0005244.20-	0004017.35	0018258.49-	0004275.95	0001840.28	23
2110	0000	13 02 54.73	0005268.25-	0004041.41	0018282.55-	0004203.79	0001840.28	23
2120	0000	13 07 26.70	0006928.12-	0007120.58	0028506.35-	0007764.07	0002586.02	23
2120	0000	13 07 27.70	0006928.12-	0007144.63	0028506.35-	0007691.91	0002658.19	23
2120	0000	13 07 28.70	0006880.01-	0007144.63	0028458.24-	0007740.02	0002561.96	23
2120	0000	13 07 29.70	0006928.12-	0007120.58	0028506.35-	0007740.02	0002586.02	23
2120	0000	13 07 30.70	0006855.95-	0007168.69	0028458.24-	0007715.96	0002586.02	23
2130	0000	14 11 14.22	0007770.08-	0010031.35	0035578.81-	0011059.75	0003235.53	23
2130	0000	14 11 15.22	0007746.02-	0010055.41	0035530.70-	0010987.58	0003283.64	23
2130	0000	14 11 16.22	0007818.19-	0010007.30	0035578.81-	0010915.41	0003235.53	23
2130	0000	14 11 17.22	0007794.13-	0010007.30	0035530.70-	0011011.63	0003307.70	23
2130	0000	14 11 18.22	0007746.02-	0010007.30	0035530.70-	0010987.58	0003259.59	23
2140	0000	14 15 59.89	0008251.20-	0013110.52	0040871.13-	0014475.70	0003740.71	23
2140	0000	14 16 00.89	0008275.25-	0013134.58	0040823.02-	0014523.81	0003812.88	23
2140	0000	14 16 01.89	0008251.20-	0013110.52	0040774.91-	0014499.75	0003788.82	23
2140	0000	14 16 02.89	0008251.20-	0013086.46	0040774.91-	0014451.64	0003788.82	23
2140	0000	14 16 03.89	0008227.14-	0013158.63	0040774.91-	0014475.70	0003788.82	23
2140	0000	14 16 04.89	0008275.25-	0013086.46	0040871.13-	0014523.81	0003764.76	23
2131	0000	14 52 06.49	0007794.13-	0010103.52	0035530.70-	0011083.80	0003067.14	23
2131	0000	14 52 07.49	0007794.13-	0010055.41	0035482.59-	0011059.75	0003067.14	23
2131	0000	14 52 08.49	0007818.19-	0010079.46	0035434.48-	0011083.80	0003043.08	23
2131	0000	14 52 09.49	0007770.08-	0010031.35	0035386.37-	0011131.91	0003115.25	23
2131	0000	14 52 10.49	0007842.25-	0010031.35	0035434.48-	0011011.63	0003043.08	23
2100	0010	15 31 46.68	0004089.51-	0002622.10	0012653.45-	0002712.31	0001359.16	23
2100	0010	15 31 47.68	0004065.45-	0002646.16	0012845.89-	0002808.54	0001383.22	23
2100	0010	15 31 48.68	0004113.57-	0002694.27	0012990.23-	0002832.59	0001431.33	23
2100	0010	15 31 49.68	0004161.68-	0002742.38	0013134.57-	0002856.65	0001383.22	23
2100	0010	15 32 49.18	0005099.86-	0003897.07	0017753.32-	0004059.45	0001695.95	23
2100	0010	15 32 50.18	0005147.97-	0003897.07	0017825.49-	0004059.45	0001695.95	23
2100	0010	15 32 51.18	0005196.09-	0003897.07	0017921.71-	0004107.56	0001720.00	23
2100	0020	15 34 42.66	0006807.84-	0006928.13	0027880.89-	0007523.51	0002441.68	23
2100	0020	15 34 43.66	0006928.12-	0006928.13	0027929.01-	0007499.46	0002441.68	23
2100	0030	15 36 06.02	0007770.08-	0009983.24	0035290.14-	0010987.58	0003043.08	23
2100	0030	15 36 07.02	0007746.02-	0010007.30	0035290.14-	0010963.52	0003019.03	23
2100	0040	15 38 03.12	0008275.25-	0013206.74	0040726.80-	0014547.87	0003548.26	23
2100	0040	15 38 04.12	0008395.53-	0013206.74	0040774.91-	0014547.87	0003596.37	23
2150	0000	15 40 32.15	0008539.87-	0016478.36	0044816.32-	0018180.32	0004173.72	23
2150	0000	15 40 33.15	0008587.98-	0016526.47	0044720.09-	0018156.27	0004101.55	23

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST	COND	HR/MN/SEC	P180221A	P180222A	P180231A	P180232A	R169241A	GP
2150	0000	15 40 34.15	0008539.87-	0016526.47	0044768.21-	0018180.32	0004149.66	23
2150	0000	15 40 35.15	0008539.87-	0016478.36	0044768.21-	0018156.27	0004197.77	23
2150	0000	15 40 36.15	0008539.87-	0016478.36	0044768.21-	0018180.32	0004197.77	23
2155	0000	15 45 59.61	0008612.04-	0018114.17	0046355.90-	0019936.41	0004366.16	23
2155	0000	15 46 00.61	0008587.98-	0018138.22	0046355.90-	0019840.19	0004438.33	23
2155	0000	15 46 01.61	0008612.04-	0018090.11	0046307.79-	0019888.30	0004390.22	23
2155	0000	15 46 02.61	0008563.93-	0018138.22	0046307.79-	0019936.41	0004390.22	23
2155	0000	15 46 03.61	0008587.98-	0018090.11	0046307.79-	0019912.35	0004414.28	23
2160	0000	16 29 34.86	0008587.98-	0019509.42	0047606.81-	0021475.99	0004654.84	23
2160	0000	16 29 35.86	0008587.98-	0019509.42	0047510.59-	0021451.94	0004654.84	23
2160	0000	16 29 36.86	0008612.04-	0019533.47	0047606.81-	0021379.77	0004606.72	23
2160	0000	16 29 37.86	0008587.98-	0019485.36	0047510.59-	0021427.88	0004606.72	23
2160	0000	16 29 38.86	0008636.09-	0019461.30	0047558.70-	0021379.77	0004606.72	23
2165	0000	16 33 04.12	0008515.81-	0021169.28	0048809.61-	0023256.14	0004871.34	23
2165	0000	16 33 05.12	0008563.93-	0021217.39	0048809.61-	0023256.14	0004943.51	23
2165	0000	16 33 06.12	0008612.04-	0021217.39	0048809.61-	0023280.19	0004967.56	23
2165	0000	16 33 07.12	0008563.93-	0021145.22	0048857.73-	0023232.08	0004895.40	23
2165	0000	16 33 08.12	0008587.98-	0021169.28	0048809.61-	0023280.19	0004919.45	23
2111	0000	16 39 31.91	0005220.14-	0004065.46	0018306.61-	0004131.62	0001744.06	23
2111	0000	16 39 32.91	0005196.09-	0003993.30	0018378.77-	0004155.67	0001744.06	23
2111	0000	16 39 33.91	0005147.97-	0004065.46	0018378.77-	0004203.79	0001744.06	23
2111	0000	16 39 34.91	0005220.14-	0004017.35	0018402.83-	0004179.73	0001768.12	23
2111	0000	16 39 35.91	0005147.97-	0004089.52	0018306.61-	0004179.73	0001792.17	23

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST	COND	HR/MN/SEC	R169242A	R169243A	L15626A	L16228A	L16228B	GP
2000	0000	09 50 06.68	0000006.01	0000036.07-	0000048.10-	0000072.16-	0000024.06	24
2100	0000	11 19 12.32	0000896.09	0001551.61	0000745.74	0000769.78-	0000793.85	24
2100	0000	11 19 13.32	0000920.14	0001623.78	0000745.74	0000721.67-	0000769.79	24
2100	0000	11 19 14.32	0000920.14	0001575.67	0000745.74	0000769.78-	0000793.85	24
2100	0000	11 19 15.32	0000896.09	0001599.72	0000721.68	0000769.78-	0000745.74	24
2100	0000	11 19 16.32	0000920.14	0001551.61	0000745.74	0000673.56-	0000721.68	24
2110	0000	13 02 50.73	0002531.89	0004775.12	0001707.98	0016791.08-	0024104.11	24
2110	0000	13 02 51.73	0002580.01	0004823.23	0001659.86	0016742.97-	0024104.11	24
2110	0000	13 02 52.73	0002555.95	0004823.23	0001707.98	0016791.08-	0024104.11	24
2110	0000	13 02 53.73	0002580.01	0004847.28	0001707.98	0016767.02-	0024080.06	24
2110	0000	13 02 54.73	0002555.95	0004799.17	0001732.03	0016791.08-	0024104.11	24
2120	0000	13 07 26.70	0004263.93	0008191.07	0002453.71	0031513.35-	0046740.81	24
2120	0000	13 07 27.70	0004239.87	0008191.07	0002405.60	0031513.35-	0046692.70	24
2120	0000	13 07 28.70	0004263.93	0008191.07	0002357.49	0031465.24-	0046740.81	24
2120	0000	13 07 29.70	0004239.87	0008215.12	0002381.54	0031513.35-	0046740.81	24
2120	0000	13 07 30.70	0004215.81	0008167.01	0002405.60	0031465.24-	0046644.58	24
2130	0000	14 11 14.22	0005803.51	0011366.46	0003007.00	0043733.80-	0063147.00	24
2130	0000	14 11 15.22	0005803.51	0011366.46	0003031.06	0043781.91-	0063147.00	24
2130	0000	14 11 16.22	0005803.51	0011294.29	0003055.11	0043781.91-	0063147.00	24
2130	0000	14 11 17.22	0005875.68	0011294.29	0003007.00	0043830.02-	0063147.00	24
2130	0000	14 11 18.22	0005779.45	0011342.40	0003007.00	0043781.91-	0063050.78	24
2140	0000	14 15 59.89	0007463.37	0014662.13	0003512.18	0055376.90-	0074308.98	24
2140	0000	14 16 00.89	0007439.32	0014710.24	0003512.18	0055376.90-	0074308.98	24
2140	0000	14 16 01.89	0007439.32	0014662.13	0003512.18	0055280.68-	0074212.76	24
2140	0000	14 16 02.89	0007391.21	0014638.08	0003488.12	0055280.68-	0074116.54	24
2140	0000	14 16 03.89	0007415.26	0014686.19	0003464.06	0055280.68-	0074116.54	24
2140	0000	14 16 04.89	0007439.32	0014686.19	0003536.23	0055376.90-	0074116.54	24
2131	0000	14 52 06.49	0005659.17	0011318.35	0002814.55	0046572.41-	0054775.51	24
2131	0000	14 52 07.49	0005635.12	0011342.40	0002838.61	0046572.41-	0054775.51	24
2131	0000	14 52 08.49	0005683.23	0011318.35	0002814.55	0046572.41-	0054775.51	24
2131	0000	14 52 09.49	0005707.29	0011366.46	0002814.55	0046476.18-	0054775.51	24
2131	0000	14 52 10.49	0005707.29	0011342.40	0002838.61	0046572.41-	0054679.29	24
2100	0010	15 31 46.68	0001738.05	0003211.48	0001274.97	0014433.59-	0020664.10	24
2100	0010	15 31 47.68	0001762.10	0003283.64	0001274.97	0014698.21-	0020928.72	24
2100	0010	15 31 48.68	0001834.27	0003355.81	0001274.97	0014866.60-	0021097.11	24
2100	0010	15 31 49.68	0001834.27	0003403.92	0001323.08	0015059.05-	0021313.62	24
2100	0010	15 32 49.18	0002411.61	0004606.72	0001659.86	0021097.10-	0027399.78	24
2100	0010	15 32 50.18	0002411.61	0004702.95	0001635.81	0021217.38-	0027544.12	24
2100	0010	15 32 51.18	0002435.67	0004630.78	0001635.81	0021313.61-	0027640.34	24
2100	0020	15 34 42.66	0003975.25	0007902.40	0002285.32	0034929.30-	0043228.63	24
2100	0020	15 34 43.66	0003951.20	0007926.45	0002261.26	0035025.53-	0043324.86	24
2100	0030	15 36 06.02	0005611.06	0011270.24	0002814.55	0046283.73-	0057373.56	24
2100	0030	15 36 07.02	0005587.01	0011246.18	0002838.61	0046283.73-	0057373.56	24
2100	0040	15 38 03.12	0007319.04	0014710.24	0003343.78	0056050.47-	0070171.35	24
2100	0040	15 38 04.12	0007319.04	0014734.30	0003319.73	0056146.69-	0070267.58	24
2150	0000	15 40 32.15	0008978.90	0018222.42	0003897.07	0065672.87-	0078446.62	24
2150	0000	15 40 33.15	0009002.96	0018222.42	0003897.07	0065769.09-	0078350.39	24

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST	COND	HR/MN/SEC	R169242A	R169243A	L15626A	L16228A	L16228B	GP
2150	0000	15 40 34.15	0009027.01	0018270.53	0003897.07	0065769.09-	0078350.39	24
2150	0000	15 40 35.15	0009051.07	0018222.42	0003848.96	0065769.09-	0078254.17	24
2150	0000	15 40 36.15	0009002.96	0018246.48	0003945.18	0065769.09-	0078254.17	24
2155	0000	15 45 59.61	0009893.03	0019954.45	0004065.46	0070387.85-	0079889.98	24
2155	0000	15 46 00.61	0009893.03	0019930.40	0004065.46	0070484.07-	0079889.98	24
2155	0000	15 46 01.61	0009893.03	0019978.51	0004089.52	0070387.85-	0079889.98	24
2155	0000	15 46 02.61	0009868.97	0019978.51	0004089.52	0070484.07-	0079793.75	24
2155	0000	15 46 03.61	0009868.97	0019954.45	0004089.52	0070387.85-	0079793.75	24
2160	0000	16 29 34.86	0010590.65	0021469.98	0004281.97	0074333.03-	0080659.77	24
2160	0000	16 29 35.86	0010662.82	0021494.04	0004354.14	0074236.81-	0080659.77	24
2160	0000	16 29 36.86	0010638.77	0021469.98	0004330.08	0074236.81-	0080659.77	24
2160	0000	16 29 37.86	0010614.71	0021469.98	0004330.08	0074236.81-	0080563.54	24
2160	0000	16 29 38.86	0010638.77	0021445.92	0004306.02	0074236.81-	0080467.32	24
2165	0000	16 33 04.12	0011576.95	0023346.35	0004522.53	0078278.21-	0084220.06	24
2165	0000	16 33 05.12	0011576.95	0023346.35	0004522.53	0078278.21-	0084316.28	24
2165	0000	16 33 06.12	0011625.06	0023346.35	0004570.64	0078374.44-	0084220.06	24
2165	0000	16 33 07.12	0011625.06	0023322.29	0004570.64	0078374.44-	0084123.83	24
2165	0000	16 33 08.12	0011576.95	0023298.24	0004570.64	0078374.44-	0084123.83	24
2111	0000	16 39 31.91	0002411.61	0004799.17	0001659.86	0029733.21-	0029083.70	24
2111	0000	16 39 32.91	0002363.50	0004727.00	0001659.86	0029733.21-	0029131.82	24
2111	0000	16 39 33.91	0002363.50	0004799.17	0001707.98	0029733.21-	0029131.82	24
2111	0000	16 39 34.91	0002363.50	0004751.06	0001635.81	0029733.21-	0029131.82	24
2111	0000	16 39 35.91	0002363.50	0004727.00	0001635.81	0029733.21-	0029179.93	24

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST	COND	HR/MN/SEC	P1	P2	N/A	N/A	N/A	GP
2000	0000	09 50 06.68	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0000	11 19 12.32	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0000	11 19 13.32	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0000	11 19 14.32	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0000	11 19 15.32	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0000	11 19 16.32	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2110	0000	13 02 50.73	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2110	0000	13 02 51.73	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2110	0000	13 02 52.73	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2110	0000	13 02 53.73	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2110	0000	13 02 54.73	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2120	0000	13 07 26.70	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2120	0000	13 07 27.70	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2120	0000	13 07 28.70	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2120	0000	13 07 29.70	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2120	0000	13 07 30.70	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2130	0000	14 11 14.22	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2130	0000	14 11 15.22	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2130	0000	14 11 16.22	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2130	0000	14 11 17.22	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2130	0000	14 11 18.22	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2140	0000	14 15 59.89	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2140	0000	14 16 00.89	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2140	0000	14 16 01.89	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2140	0000	14 16 02.89	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2140	0000	14 16 03.89	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2140	0000	14 16 04.89	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2131	0000	14 52 06.49	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2131	0000	14 52 07.49	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2131	0000	14 52 08.49	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2131	0000	14 52 09.49	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2131	0000	14 52 10.49	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0010	15 31 46.68	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0010	15 31 47.68	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0010	15 31 48.68	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0010	15 31 49.68	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0010	15 32 49.18	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0010	15 32 50.18	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0010	15 32 51.18	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0020	15 34 42.65	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0020	15 34 43.66	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0030	15 36 06.02	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0030	15 36 07.02	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0040	15 38 03.12	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2100	0040	15 38 04.12	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2150	0000	15 40 32.15	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2150	0000	15 40 33.15	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST	COND	HR/MN/SEC	P1	P2	N/A	N/A	N/A	GP
2150	0000	15 40 34.15	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2150	0000	15 40 35.15	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2150	0000	15 40 36.15	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2155	0000	15 45 59.61	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2155	0000	15 46 00.61	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2155	0000	15 46 01.61	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2155	0000	15 46 02.61	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2155	0000	15 46 03.61	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2160	0000	16 29 34.86	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2160	0000	16 29 35.86	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2160	0000	16 29 36.86	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2160	0000	16 29 37.86	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2160	0000	16 29 38.86	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2165	0000	16 33 04.12	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2165	0000	16 33 05.12	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2165	0000	16 33 06.12	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2165	0000	16 33 07.12	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2165	0000	16 33 08.12	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2111	0000	16 39 31.91	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2111	0000	16 39 32.91	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2111	0000	16 39 33.91	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2111	0000	16 39 34.91	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25
2111	0000	16 39 35.91	0000000.00	0000000.00	0000000.00	0000000.00	0000000.00	25

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	R1692418	R1692428	R1692438	R349241A	R349242A	GP
2000 0000 09 50 06.68	0000012.03	0000054.12-	0000006.00-	0000018.03-	0000012.02-	31
2100 0000 11 19 12.32	0001238.88	0002423.64	0002592.03	0000872.03	0001262.94	31
2100 0000 11 19 13.32	0001287.00	0002423.64	0002592.03	0000847.97	0001238.88	31
2100 0000 11 19 14.32	0001287.00	0002447.70	0002616.09	0000896.09	0001238.88	31
2100 0000 11 19 15.32	0001262.94	0002447.70	0002567.98	0000896.09	0001214.83	31
2100 0000 11 19 16.32	0001262.94	0002399.59	0002616.09	0000847.97	0001238.88	31
2110 0000 13 02 50.73	0002393.57	0005286.31	0006440.99	0001184.76	0002970.92	31
2110 0000 13 02 51.73	0002321.40	0005262.25	0006392.88	0001160.70	0002970.92	31
2110 0000 13 02 52.73	0002369.52	0005334.42	0006368.83	0001184.76	0002970.92	31
2110 0000 13 02 53.73	0002345.46	0005262.25	0006368.83	0001207.81	0003019.03	31
2110 0000 13 02 54.73	0002321.40	0005310.36	0006440.99	0001160.70	0002994.97	31
2120 0000 13 07 26.70	0003139.31	0008028.69	0010217.79	0001810.21	0004847.28	31
2120 0000 13 07 27.70	0003115.25	0008028.69	0010193.73	0001762.10	0004799.17	31
2120 0000 13 07 28.70	0003091.20	0008076.80	0010217.79	0001786.16	0004847.28	31
2120 0000 13 07 29.70	0003139.31	0008004.63	0010169.67	0001834.27	0004847.28	31
2120 0000 13 07 30.70	0003115.25	0008004.63	0010193.73	0001810.21	0004847.28	31
2130 0000 14 11 14.22	0003788.82	0010338.07	0013705.91	0002122.94	0006603.37	31
2130 0000 14 11 15.22	0003860.99	0010386.18	0013705.91	0002219.17	0006651.48	31
2130 0000 14 11 16.22	0003788.82	0010362.12	0013681.85	0002147.00	0006555.26	31
2130 0000 14 11 17.22	0003788.82	0010410.23	0013705.91	0002147.00	0006627.43	31
2130 0000 14 11 18.22	0003836.93	0010410.23	0013681.85	0002171.05	0006603.37	31
2140 0000 14 15 59.89	0004294.00	0012719.61	0017362.42	0002676.23	0008455.68	31
2140 0000 14 16 00.89	0004390.22	0012719.61	0017290.25	0002724.36	0008455.68	31
2140 0000 14 16 01.89	0004366.16	0012719.61	0017338.36	0002748.40	0008431.63	31
2140 0000 14 16 02.89	0004414.28	0012719.61	0017314.31	0002676.23	0008383.52	31
2140 0000 14 16 03.89	0004414.28	0012743.67	0017314.31	0002700.29	0008431.63	31
2140 0000 14 16 04.89	0004390.22	0012743.67	0017314.31	0002676.23	0008455.68	31
2131 0000 14 52 06.49	0003668.54	0010217.79	0013778.07	0001305.04	0005857.64	31
2131 0000 14 52 07.49	0003668.54	0010265.90	0013802.13	0001305.04	0005881.69	31
2131 0000 14 52 08.49	0003644.48	0010289.95	0013729.96	0001305.04	0005809.52	31
2131 0000 14 52 09.49	0003692.60	0010265.90	0013778.07	0001280.98	0005857.64	31
2131 0000 14 52 10.49	0003668.54	0010265.90	0013802.13	0001280.98	0005857.64	31
2100 0010 15 31 46.68	0002008.68	0003963.23	0004684.91	0000126.29	0001671.89	31
2100 0010 15 31 47.68	0002056.79	0004035.39	0004829.24	0000174.41	0001671.89	31
2100 0010 15 31 48.68	0002032.73	0003987.28	0004829.24	0000126.29	0001720.00	31
2100 0010 15 31 49.68	0002008.68	0004059.45	0004829.24	0000174.41	0001768.12	31
2100 0010 15 32 49.18	0002297.35	0005117.91	0006296.66	0000366.85	0002369.52	31
2100 0010 15 32 50.18	0002345.46	0005166.03	0006344.77	0000342.80	0002393.57	31
2100 0010 15 32 51.18	0002345.46	0005190.08	0006296.66	0000390.91	0002369.52	31
2100 0020 15 34 42.66	0003019.03	0007740.02	0010001.28	0000872.03	0004053.44	31
2100 0020 15 34 43.66	0003019.03	0007740.02	0009977.23	0000823.92	0004053.44	31
2100 0030 15 36 06.02	0003572.32	0010241.84	0013681.85	0001305.04	0005833.58	31
2100 0030 15 36 07.02	0003644.48	0010169.67	0013729.96	0001256.93	0005761.41	31
2100 0040 15 38 03.12	0004197.77	0012671.50	0017338.36	0001810.21	0007661.84	31
2100 0040 15 38 04.12	0004221.83	0012719.61	0017362.42	0001810.21	0007661.84	31
2150 0000 15 40 32.15	0004775.12	0015101.15	0021115.15	0002339.65	0009490.09	31
2150 0000 15 40 33.15	0004799.17	0015125.21	0021091.10	0002243.22	0009562.26	31

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND HR/MN/SEC	R1692418	R1692428	R1692438	R349241A	R349242A	GP
2150 0000 15 40 34.15	0004847.28	0015077.10	0021115.15	0002243.22	0009562.26	31
2150 0000 15 40 35.15	0004823.23	0015125.21	0021163.27	0002219.17	0009538.20	31
2150 0000 15 40 36.15	0004799.17	0015149.27	0021115.15	0002315.39	0009514.15	31
2155 0000 15 45 59.61	0005087.84	0016303.95	0022919.35	0002507.84	0010548.56	31
2155 0000 15 46 00.61	0005063.79	0016376.12	0022919.35	0002531.89	0010524.50	31
2155 0000 15 46 01.61	0005039.73	0016376.12	0022919.35	0002555.95	0010524.50	31
2155 0000 15 46 02.61	0005039.73	0016376.12	0022895.30	0002580.01	0010476.39	31
2155 0000 15 46 03.61	0005087.84	0016376.12	0022895.30	0002507.84	0010524.50	31
2160 0000 16 29 34.86	0005328.40	0017362.42	0024482.99	0002772.45	0011342.40	31
2160 0000 16 29 35.86	0005424.63	0017434.59	0024482.99	0002772.45	0011414.57	31
2160 0000 16 29 36.86	0005376.52	0017386.47	0024458.94	0002796.51	0011390.52	31
2160 0000 16 29 37.86	0005400.57	0017410.53	0024482.99	0002700.29	0011390.52	31
2160 0000 16 29 38.86	0005352.46	0017362.42	0024458.94	0002772.45	0011390.52	31
2165 0000 16 33 04.12	0005689.24	0018685.50	0026479.64	0003037.07	0012497.09	31
2165 0000 16 33 05.12	0005713.30	0018685.50	0026431.53	0003085.18	0012400.87	31
2165 0000 16 33 06.12	0005689.24	0018709.55	0026431.53	0003085.18	0012424.92	31
2165 0000 16 33 07.12	0005689.24	0018709.55	0026431.53	0003061.13	0012473.04	31
2165 0000 16 33 08.12	0005737.36	0018709.55	0026431.53	0003037.07	0012473.04	31
2111 0000 16 39 31.91	0002754.41	0005166.03	0006465.05	0000414.97	0002537.91	31
2111 0000 16 39 32.91	0002706.30	0005214.14	0006440.99	0000390.91	0002537.91	31
2111 0000 16 39 33.91	0002706.30	0005214.14	0006440.99	0000414.97	0002489.80	31
2111 0000 16 39 34.91	0002754.41	0005238.19	0006465.05	0000366.85	0002537.91	31
2111 0000 16 39 35.91	0002754.41	0005214.14	0006489.11	0000463.08	0002537.91	31

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST	COND	HR/MN/SEC	R349243A	R3492418	R349242B	R349243B	L15625B1	GP
2000	0000	09 50 06.68	0000030.06-	0000000.00	0000006.00-	0000072.16-	0000024.05-	32
2100	0000	11 19 12.32	0001726.02	0000529.23	0001196.79	0002309.38	0001683.91-	32
2100	0000	11 19 13.32	0001750.07	0000601.40	0001220.84	0002285.32	0001683.91-	32
2100	0000	11 19 14.32	0001774.13	0000553.29	0001196.79	0002333.43	0001659.85-	32
2100	0000	11 19 15.32	0001750.07	0000577.34	0001220.84	0002357.49	0001635.80-	32
2100	0000	11 19 16.32	0001701.96	0000553.29	0001172.73	0002333.43	0001635.80-	32
2110	0000	13 02 50.73	0004636.79	0000866.02	0003217.49	0006206.45	0003632.45-	32
2110	0000	13 02 51.73	0004660.85	0000890.07	0003217.49	0006230.50	0003608.39-	32
2110	0000	13 02 52.73	0004636.79	0000866.02	0003313.71	0006230.50	0003632.45-	32
2110	0000	13 02 53.73	0004636.79	0000890.07	0003217.49	0006230.50	0003608.39-	32
2110	0000	13 02 54.73	0004636.79	0000890.07	0003217.49	0006158.34	0003656.50-	32
2120	0000	13 07 26.70	0007788.13	0001178.74	0005430.64	0010103.52	0004883.36-	32
2120	0000	13 07 27.70	0007764.07	0001178.74	0005478.75	0010151.63	0004883.36-	32
2120	0000	13 07 28.70	0007812.19	0001226.86	0005406.59	0010151.63	0004907.41-	32
2120	0000	13 07 29.70	0007812.19	0001202.80	0005406.59	0010079.46	0004859.30-	32
2120	0000	13 07 30.70	0007812.19	0001202.80	0005358.47	0010103.52	0004931.47-	32
2130	0000	14 11 14.22	0010867.30	0001515.53	0007523.51	0013663.81	0005580.98-	32
2130	0000	14 11 15.22	0010867.30	0001563.64	0007523.51	0013639.75	0005556.93-	32
2130	0000	14 11 16.22	0010891.35	0001515.53	0007475.40	0013663.81	0005629.09-	32
2130	0000	14 11 17.22	0010867.30	0001587.70	0007451.35	0013567.58	0005580.98-	32
2130	0000	14 11 18.22	0010795.13	0001635.81	0007427.29	0013663.81	0005629.09-	32
2140	0000	14 15 59.89	0014066.75	0001852.31	0009568.27	0017272.21	0006038.05-	32
2140	0000	14 16 00.89	0014090.80	0001852.31	0009496.11	0017272.21	0006086.16-	32
2140	0000	14 16 01.89	0014042.69	0001876.37	0009664.50	0017224.10	0005989.93-	32
2140	0000	14 16 02.89	0014018.63	0001876.37	0009568.27	0017248.15	0006110.21-	32
2140	0000	14 16 03.89	0014066.75	0001852.31	0009544.22	0017224.10	0006013.99-	32
2140	0000	14 16 04.89	0013994.58	0001876.37	0009544.22	0017200.04	0006038.05-	32
2131	0000	14 52 06.49	0011131.91	0000721.68	0006705.61	0014024.65	0005605.04-	32
2131	0000	14 52 07.49	0011035.69	0000745.74	0006705.61	0014048.70	0005556.93-	32
2131	0000	14 52 08.49	0011011.63	0000721.68	0006729.67	0014024.65	0005701.26-	32
2131	0000	14 52 09.49	0011059.75	0000745.74	0006729.67	0013976.54	0005556.93-	32
2131	0000	14 52 10.49	0011083.80	0000697.62	0006705.61	0014048.70	0005605.04-	32
2100	0010	15 31 46.68	0003337.77	0000288.67	0001798.19	0004642.81	0002886.71-	32
2100	0010	15 31 47.68	0003433.99	0000240.56	0001894.41	0004714.98	0002886.71-	32
2100	0010	15 31 48.68	0003409.94	0000240.56	0001870.35	0004763.09	0002910.77-	32
2100	0010	15 31 49.68	0003506.16	0000240.5	0001894.41	0004787.14	0002886.71-	32
2100	0010	15 32 49.18	0004708.96	0000288.67	0002688.26	0006374.84	0003536.22-	32
2100	0010	15 32 50.18	0004660.85	0000312.73	0002616.09	0006350.78	0003632.45-	32
2100	0010	15 32 51.18	0004733.02	0000288.67	0002664.20	0006398.90	0003656.50-	32
2100	0020	15 34 42.66	0007764.07	0000457.06	0004660.85	0010199.74	0004883.36-	32
2100	0020	15 34 43.66	0007764.07	0000529.23	0004636.79	0010175.69	0004907.41-	32
2100	0030	15 36 06.02	0010987.58	0000769.79	0006657.50	0013952.48	0005677.21-	32
2100	0030	15 36 07.02	0011011.63	0000745.74	0006657.50	0013976.54	0005605.04-	32
2100	0040	15 38 03.12	0014355.42	0001106.58	0008774.43	0017705.22	0006110.21-	32
2100	0040	15 38 04.12	0014331.36	0001034.41	0008822.54	0017705.22	0006134.27-	32
2150	0000	15 40 32.15	0017795.43	0001347.14	0010987.58	0021433.90	0006350.77-	32
2150	0000	15 40 33.15	0017795.43	0001371.19	0010891.35	0021457.95	0006350.77-	32

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST	COND	HR/MN/SEC	R349243A	R3492418	R349242B	R349243B	L15625B1	GP
2150	0000	15 40 34.15	0017619.48	0001371.19	0010987.58	0021457.95	0006350.77-	32
2150	0000	15 40 35.15	0017795.43	0001274.97	0010939.47	0021433.90	0006374.83-	32
2150	0000	15 40 36.15	0017843.54	0001347.14	0010987.58	0021530.12	0006350.77-	32
2155	0000	15 45 59.61	0019503.40	0001563.64	0012026.99	0023286.21	0006471.05-	32
2155	0000	15 46 00.61	0019455.29	0001563.64	0011957.93	0023334.32	0006447.00-	32
2155	0000	15 46 01.61	0019503.40	0001491.47	0012046.04	0023262.15	0006422.94-	32
2155	0000	15 46 02.61	0019479.35	0001515.53	0012021.99	0023238.10	0006422.94-	32
2155	0000	15 46 03.61	0019503.40	0001539.58	0011973.87	0023189.98	0006447.00-	32
2160	0000	16 29 34.86	0020994.87	0001611.75	0012960.17	0024849.85	0006495.11-	32
2160	0000	16 29 35.86	0021018.93	0001659.86	0013008.28	0024681.46	0006495.11-	32
2160	0000	16 29 36.86	0021018.93	0001683.92	0012960.17	0024681.46	0006543.22-	32
2160	0000	16 29 37.86	0020994.87	0001659.86	0012936.11	0024849.85	0006471.05-	32
2160	0000	16 29 38.86	0020970.82	0001635.81	0012960.17	0024681.46	0006519.17-	32
2165	0000	16 33 04.12	0022943.41	0001876.37	0014042.69	0026726.22	0006543.22-	32
2165	0000	16 33 05.12	0022895.30	0001900.42	0014018.63	0026822.44	0006615.39-	32
2165	0000	16 33 06.12	0022895.30	0001876.37	0014042.69	0026622.44	0006567.28-	32
2165	0000	16 33 07.12	0022895.30	0001828.26	0013970.52	0026726.22	0006543.22-	32
2165	0000	16 33 08.12	0022919.35	0001900.42	0014042.69	0026726.22	0006591.33-	32
2111	0000	16 39 31.91	0004925.47	0000336.78	0002616.09	0006471.06	0003656.50-	32
2111	0000	16 39 32.91	0004829.24	0000288.67	0002640.15	0006543.23	0003680.56-	32
2111	0000	16 39 33.91	0004949.52	0000336.78	0002616.09	0006495.12	0003680.56-	32
2111	0000	16 39 34.91	0004677.35	0000288.67	0002616.09	0006495.12	0003680.56-	32
2111	0000	16 39 35.91	0004925.47	0000312.73	0002592.03	0006495.12	0003680.56-	32

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST	COND	HR/MN/SEC	L1562582	L3362581	L3362582	L156268	L336264	GP
2000	0000	09 50 06.68	0000042.09-	0000042.09-	0000054.12-	0000000.00	0000000.00	33
2100	0000	11 19 12.32	0001028.38-	0003193.42-	0002844.61-	0000649.51	0001250.91	33
2100	0000	11 19 13.32	0001052.44-	0003169.37-	0002844.61-	0000649.51	0001323.08	33
2100	0000	11 19 14.32	0001052.44-	0003169.37-	0002868.67-	0000673.57	0001299.02	33
2100	0000	11 19 15.32	0001004.33-	0003145.31-	0002868.67-	0000649.51	0001250.91	33
2100	0000	11 19 16.32	0001076.50-	0003145.31-	0002916.78-	0000601.40	0001299.02	33
2110	0000	13 02 50.73	0002880.70-	0005045.74-	0004720.98-	0001443.36	0002598.05	33
2110	0000	13 02 51.73	0002904.75-	0004997.62-	0004745.04-	0001395.25	0002573.99	33
2110	0000	13 02 52.73	0002904.75-	0005045.74-	0004769.09-	0001443.36	0002598.05	33
2110	0000	13 02 53.73	0002976.92-	0005021.68-	0004769.09-	0001443.36	0002573.99	33
2110	0000	13 02 54.73	0002880.70-	0005045.74-	0004720.98-	0001443.36	0002573.99	33
2120	0000	13 07 26.70	0004131.61-	0005550.91-	0005346.44-	0002020.70	0003584.34	33
2120	0000	13 07 27.70	0004083.50-	0005574.97-	0005298.32-	0002044.76	0003536.23	33
2120	0000	13 07 28.70	0004083.50-	0005599.02-	0005298.32-	0002092.87	0003584.34	33
2120	0000	13 07 29.70	0004059.44-	0005647.14-	0005346.44-	0002068.82	0003560.29	33
2120	0000	13 07 30.70	0004059.44-	0005550.91-	0005346.44-	0002116.93	0003584.34	33
2130	0000	14 11 14.22	0004684.90-	0005695.25-	0005394.55-	0002646.16	0004378.19	33
2130	0000	14 11 15.22	0004708.95-	0005671.19-	0005370.49-	0002670.22	0004378.19	33
2130	0000	14 11 16.22	0004684.90-	0005719.30-	0005394.55-	0002670.22	0004354.14	33
2130	0000	14 11 17.22	0004733.01-	0005647.14-	0005370.49-	0002646.16	0004378.19	33
2130	0000	14 11 18.22	0004708.95-	0005671.19-	0005418.60-	0002670.22	0004306.02	33
2140	0000	14 15 59.89	0005141.96-	0005550.91-	0005298.32-	0003247.56	0005051.76	33
2140	0000	14 16 00.89	0005093.85-	0005550.91-	0005322.38-	0003175.39	0005075.82	33
2140	0000	14 16 01.89	0005117.90-	0005526.86-	0005298.32-	0003175.39	0005051.76	33
2140	0000	14 16 02.89	0005141.96-	0005550.91-	0005298.32-	0003175.39	0005003.65	33
2140	0000	14 16 03.89	0005166.02-	0005574.97-	0005274.27-	0003199.45	0005075.82	33
2140	0000	14 16 04.89	0005190.07-	0005550.91-	0005346.44-	0003175.39	0005051.76	33
2131	0000	14 52 06.49	0004733.01-	0005743.36-	0005538.88-	0002549.94	0004041.41	33
2131	0000	14 52 07.49	0004708.95-	0005695.25-	0005466.72-	0002573.99	0004113.58	33
2131	0000	14 52 08.49	0004684.90-	0005719.30-	0005442.66-	0002598.05	0003993.30	33
2131	0000	14 52 09.49	0004708.95-	0005767.42-	0005514.83-	0002525.88	0004089.52	33
2131	0000	14 52 10.49	0004733.01-	0005743.36-	0005514.83-	0002525.88	0004065.46	33
2100	0010	15 31 46.68	0002183.07-	0004540.56-	0004287.97-	0001106.58	0001828.26	33
2100	0010	15 31 47.68	0002183.07-	0004564.62-	0004263.92-	0001106.58	0001828.26	33
2100	0010	15 31 48.68	0002207.13-	0004588.67-	0004263.92-	0001106.58	0001852.31	33
2100	0010	15 31 49.68	0002183.07-	0004588.67-	0004312.03-	0001082.52	0001900.42	33
2100	0010	15 32 49.18	0002832.58-	0005117.90-	0004793.15-	0001395.25	0002357.69	33
2100	0010	15 32 50.18	0002880.70-	0005117.90-	0004769.09-	0001347.14	0002333.43	33
2100	0010	15 32 51.18	0002832.58-	0005141.96-	0004769.09-	0001371.19	0002333.43	33
2100	0020	15 34 42.66	0003963.22-	0005671.19-	0005442.66-	0001972.59	0003295.37	33
2100	0020	15 34 43.66	0004011.33-	0005695.25-	0005370.49-	0001972.59	0003271.62	33
2100	0030	15 36 06.02	0004684.90-	0005719.30-	0005442.66-	0002525.88	0004017.35	33
2100	0030	15 36 07.02	0004684.90-	0005743.36-	0005466.72-	0002525.88	0004041.41	33
2100	0040	15 38 03.12	0005141.96-	0005574.97-	0005298.32-	0003079.17	0004739.03	33
2100	0040	15 38 04.12	0005166.02-	0005599.02-	0005346.44-	0003055.11	0004739.03	33
2150	0000	15 40 32.15	0005406.58-	0005358.46-	0005129.93-	0003656.51	0005436.66	33
2150	0000	15 40 33.15	0005454.69-	0005334.41-	0005129.93-	0003656.51	0005412.60	33

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST	COND	HR/MN/SEC	L1562582	L3362581	L3362582	L156268	L336264	GP
2150	0000	15 40 34.15	0005382.52-	0005358.46-	0005081.82-	0003656.51	0005388.54	33
2150	0000	15 40 35.15	0005430.63-	0005286.30-	0005105.88-	0003632.46	0005412.60	33
2150	0000	15 40 36.15	0005430.63-	0005286.30-	0005105.88-	0003608.40	0005412.60	33
2155	0000	15 45 59.61	0005478.74-	0005214.13-	0004937.48-	0003873.02	0005773.44	33
2155	0000	15 46 00.61	0005502.80-	0005166.02-	0005033.71-	0003897.07	0005701.27	33
2155	0000	15 46 01.61	0005502.80-	0005190.07-	0004937.48-	0003897.07	0005749.38	33
2155	0000	15 46 02.61	0005430.63-	0005214.13-	0004985.60-	0003848.96	0005749.38	33
2155	0000	15 46 03.61	0005526.86-	0005190.07-	0004961.54-	0003873.02	0005749.38	33
2160	0000	16 29 34.86	0005502.80-	0005141.96-	0004889.37-	0004041.41	0005989.94	33
2160	0000	16 29 35.86	0005502.80-	0005093.85-	0004841.26-	0004065.46	0005965.89	33
2160	0000	16 29 36.86	0005502.80-	0005069.79-	0004817.20-	0004041.41	0005965.89	33
2160	0000	16 29 37.86	0005550.91-	0005045.74-	0004817.20-	0004065.46	0005941.83	33
2160	0000	16 29 38.86	0005526.86-	0005045.74-	0004937.48-	0004089.52	0005941.83	33
2165	0000	16 33 04.12	0005623.08-	0004997.62-	0004672.87-	0004354.14	0006254.56	33
2165	0000	16 33 05.12	0005623.08-	0004901.40-	0004696.92-	0004354.14	0006254.56	33
2165	0000	16 33 06.12	0005599.02-	0004877.34-	0004672.87-	0004330.08	0006302.67	33
2165	0000	16 33 07.12	0005599.02-	0004901.40-	0004696.92-	0004402.25	0006254.56	33
2165	0000	16 33 08.12	0005574.97-	0004877.34-	0004648.81-	0004354.14	0006278.62	33
2111	0000	16 39 31.91	0002808.53-	0005262.24-	0004913.43-	0001443.36	0002333.43	33
2111	0000	16 39 32.91	0002856.64-	0005286.30-	0004913.43-	0001395.25	0002309.38	33
2111	0000	16 39 33.91	0002880.70-	0005286.30-	0004937.48-	0001395.25	0002333.43	33
2111	0000	16 39 34.91	0002904.75-	0005238.18-	0004937.48-	0001323.08	0002333.43	33
2111	0000	16 39 35.91	0002832.58-	0005262.24-	0004913.43-	0001395.25	0002381.54	33

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND	HR/MN/SEC	L336268	L1562781	L1562782	L3362781	L3362782	GP
2000 0000	09 50 06.68	0000024.05-	0000024.05-	0000054.12-	0000072.16-	0000018.03-	34
2100 0000	11 19 12.32	0001395.25	0000072.17	0000799.85-	0001539.57-	0001244.89-	34
2100 0000	11 19 13.32	0001371.19	0000024.06	0000751.74-	0001443.35-	0001220.83-	34
2100 0000	11 19 14.32	0001371.19	0000048.11	0000751.74-	0001539.57-	0001220.83-	34
2100 0000	11 19 15.32	0001323.08	0000000.00	0000751.74-	0001491.46-	0001220.83-	34
2100 0000	11 19 16.32	0001371.19	0000048.11	0000751.74-	0001491.46-	0001268.94-	34
2110 0000	13 02 50.73	0002261.26	0000457.05-	0001545.59-	0002742.37-	0002255.24-	34
2110 0000	13 02 51.73	0002289.10	0000457.05-	0001569.64-	0002766.43-	0002255.24-	34
2110 0000	13 02 52.73	0002261.26	0000457.05-	0001521.53-	0002766.43-	0002255.24-	34
2110 0000	13 02 53.73	0002213.15	0000457.05-	0001545.59-	0002718.32-	0002279.30-	34
2110 0000	13 02 54.73	0002261.26	0000433.00-	0001593.70-	0002718.32-	0002279.30-	34
2120 0000	13 07 26.70	0002934.83	0000625.45-	0001762.09-	0003199.44-	0002592.02-	34
2120 0000	13 07 27.70	0002934.83	0000649.50-	0001738.04-	0003247.55-	0002592.02-	34
2120 0000	13 07 28.70	0002862.66	0000577.33-	0001738.04-	0003223.49-	0002592.02-	34
2120 0000	13 07 29.70	0002934.83	0000625.45-	0001762.09-	0003271.61-	0002567.97-	34
2120 0000	13 07 30.70	0002934.83	0000601.39-	0001689.92-	0003223.49-	0002543.91-	34
2130 0000	14 11 14.22	0003608.40	0000529.22-	0001786.15-	0003391.89-	0002640.14-	34
2130 0000	14 11 15.22	0003536.23	0000601.39-	0001738.04-	0003415.94-	0002640.14-	34
2130 0000	14 11 16.22	0003360.29	0000553.28-	0001786.15-	0003367.83-	0002640.14-	34
2130 0000	14 11 17.22	0003608.40	0000553.28-	0001786.15-	0003343.77-	0002640.14-	34
2130 0000	14 11 18.22	0003584.34	0000505.17-	0001810.20-	0003343.77-	0002616.08-	34
2140 0000	14 15 59.89	0004137.63	0000408.94-	0001713.98-	0003440.00-	0002543.91-	34
2140 0000	14 16 00.89	0004137.63	0000433.00-	0001713.98-	0003367.83-	0002495.80-	34
2140 0000	14 16 01.89	0004161.69	0000360.83-	0001713.98-	0003415.94-	0002543.91-	34
2140 0000	14 16 02.89	0004089.52	0000408.94-	0001738.04-	0003415.94-	0002519.86-	34
2140 0000	14 16 03.89	0004113.58	0000360.83-	0001689.92-	0003391.89-	0002495.80-	34
2140 0000	14 16 04.89	0004161.69	0000408.94-	0001713.98-	0003415.94-	0002543.91-	34
2131 0000	14 52 06.49	0003367.84	0000625.45-	0001930.48-	0003488.11-	0002712.30-	34
2131 0000	14 52 07.49	0003391.90	0000529.22-	0001906.43-	0003488.11-	0002736.36-	34
2131 0000	14 52 08.49	0003440.01	0000601.39-	0001906.43-	0003440.00-	0002736.36-	34
2131 0000	14 52 09.49	0003367.84	0000625.45-	0001858.32-	0003440.00-	0002712.30-	34
2131 0000	14 52 10.49	0003415.95	0000577.33-	0001882.37-	0003464.05-	0002784.47-	34
2100 0010	15 31 46.68	0001876.37	0000288.66-	0001473.42-	0002333.42-	0001966.57-	34
2100 0010	15 31 47.68	0001876.37	0000288.66-	0001497.48-	0002357.48-	0001990.62-	34
2100 0010	15 31 48.68	0001876.37	0000264.61-	0001473.42-	0002381.53-	0001918.46-	34
2100 0010	15 31 49.68	0001900.42	0000312.72-	0001449.36-	0002333.42-	0002014.68-	34
2100 0010	15 32 49.18	0002189.10	0000408.94-	0001665.87-	0002742.37-	0002351.46-	34
2100 0010	15 32 50.18	0002165.04	0000408.94-	0001665.87-	0002766.43-	0002375.52-	34
2100 0010	15 32 51.18	0002189.10	0000505.17-	0001617.76-	0002742.37-	0002279.30-	34
2100 0020	15 34 42.66	0002838.61	0000625.45-	0001834.26-	0003271.61-	0002640.14-	34
2100 0020	15 34 43.66	0002838.61	0000601.39-	0001882.37-	0003319.72-	0002712.30-	34
2100 0030	15 36 06.02	0003440.01	0000577.33-	0001954.54-	0003440.00-	0002712.30-	34
2100 0030	15 36 07.02	0003415.95	0000649.50-	0001882.37-	0003464.05-	0002736.36-	34
2100 0040	15 38 03.12	0003993.30	0000481.11-	0001810.20-	0003440.00-	0002567.97-	34
2100 0040	15 38 04.12	0003921.13	0000433.00-	0001810.20-	0003464.05-	0002640.14-	34
2150 0000	15 40 32.15	0004546.58	0000240.55-	0001569.64-	0003367.83-	0002423.63-	34
2150 0000	15 40 33.15	0004522.53	0000240.55-	0001569.64-	0003319.72-	0002399.58-	34

ELEMENT STRESS

ID REC PT RATE 11/06/69 CONJUGATE STRUCTURE TEST COND 2
1106 400 01

TEST COND	HR/MN/SEC	L336268	L1562781	L1562782	L3362781	L3362782	GP
2150 0000	15 40 34.15	0004522.53	0000192.44-	0001569.64-	0003319.72-	0002399.58-	34
2150 0000	15 40 35.15	0004522.53	0000240.55-	0001641.81-	0003319.72-	0002399.58-	34
2150 0000	15 40 36.15	0004522.53	0000216.49-	0001593.70-	0003343.77-	0002399.58-	34
2155 0000	15 45 59.61	0004763.09	0000144.33-	0001497.48-	0003223.49-	0002279.30-	34
2155 0000	15 46 00.61	0004763.09	0000144.33-	0001497.48-	0003295.66-	0002327.41-	34
2155 0000	15 46 01.61	0004763.09	0000120.27-	0001497.48-	0003223.49-	0002279.30-	34
2155 0000	15 46 02.61	0004763.09	0000120.27-	0001473.42-	0003271.61-	0002327.41-	34
2155 0000	15 46 03.61	0004787.14	0000144.33-	0001521.53-	0003295.66-	0002303.35-	34
2160 0000	16 29 34.86	0004979.59	0000072.16-	0001401.25-	0003247.55-	0002207.13-	34
2160 0000	16 29 35.86	0004979.59	0000024.05-	0001401.25-	0003223.49-	0002183.07-	34
2160 0000	16 29 36.86	0004979.59	0000072.16-	0001353.14-	0003175.38-	0002134.96-	34
2160 0000	16 29 37.86	0005027.70	0000024.05-	0001377.20-	0003175.38-	0002207.13-	34
2160 0000	16 29 38.86	0005051.76	0000048.10-	0001425.31-	0003199.44-	0002183.07-	34
2165 0000	16 33 04.12	0005244.21	0000120.28	0001256.92-	0003127.27-	0002038.74-	34
2165 0000	16 33 05.12	0005244.21	0000120.28	0001256.92-	0003079.16-	0002086.85-	34
2165 0000	16 33 06.12	0005292.32	0000072.17	0001208.80-	0003055.10-	0002062.79-	34
2165 0000	16 33 07.12	0005244.21	0000096.22	0001232.86-	0003151.33-	0002086.85-	34
2165 0000	16 33 08.12	0005316.38	0000120.28	0001232.86-	0003055.10-	0002110.90-	34
2111 0000	16 39 31.91	0002261.26	0000457.05-	0001545.59-	0002862.65-	0002327.41-	34
2111 0000	16 39 32.91	0002237.21	0000408.94-	0001569.64-	0002814.54-	0002327.41-	34
2111 0000	16 39 33.91	0002189.10	0000457.05-	0001593.70-	0002862.65-	0002327.41-	34
2111 0000	16 39 34.91	0002261.26	0000481.11-	0001617.76-	0002790.49-	0002351.46-	34
2111 0000	16 39 35.91	0002237.21	0000408.94-	0001593.70-	0002838.60-	0002327.41-	34

Security Classification

DOCUMENT CONTROL DATA - R&D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

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3 REPORT TITLE

Verification Testing of Conjugate Structure

4 DESCRIPTIVE NOTES (Type of report and inclusive dates)

Final Report (Preliminary)

5 AUTHOR(S) (Last name, first name, initial)

E. Dale Thompson

6 REPORT DATE	7a TOTAL NO OF PAGES	7b NO OF REFS
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10 AVAILABILITY/LIMITATION NOTICES

11 SUPPLEMENTARY NOTES	12 SPONSORING MILITARY ACTIVITY
	Air Force Rocket Propulsion Laboratory, Edwards Air Force Base, California

13 ABSTRACT

The conjugate structure consisted of a forward skirt, forward dome, forward barrel, common dome, aft barrel, aft cone and an aft skirt. The forward and aft barrel sections were made of titanium roll diffusion bonded truss core panels. The conjugate structure was delivered to the Martin Marietta Corporation, Denver Division for structural testing to demonstrate its ability to withstand design conditions by subjection to limit loads and limit internal tank pressures. Martin Marietta Corporation Receiving Inspection identified structural discrepancies which brought about a change in the test contract. Instead of the originally planned three test conditions, the conjugate structure was subjected to a detailed inspection and a structural repair operation, and the test portion was modified to include five test conditions. The first two of these test conditions were completed. A visual and radiographic inspection, made after the completion of the second test, identified seven areas of structural failures. One failure, a 42.5 in. long crack in the inner weld of the aft tank barrel to the lower Y-ring circumferential weld joint, was severe enough to prohibit continued testing. The tank barrel sections, made up of roll-diffusion-bonded-truss-core, successfully carried the design limit loads and internal tank pressures associated with the two test conditions. The failure analysis investigations concluded that the failure point of the 42.5 in. long crack was approximately at its center. It was a brittle failure resulting from the presence of an oxygen-rich, stabilized alpha layer on the parent metal adjacent to the weld, supplemented by residual restriant and mismatch in the area. It was also concluded that the stabilized alpha layer was present before the welding was accomplished.

DD FORM 1 JAN 64 1473

Security Classification

Unclassified

Security Classification

14 KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
o Sandwich Structure						
o Roll Diffusion Bonded Truss Core Structure						
o Titanium Pressure Vessel						
o Structural Test of Booster Tank Structure						

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