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PARAMETRIC BLADE STUDY TEST REPORT ROTOR CONFIGURATION NO. 1

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The results of an experimental evaluation of one compressor test of a series of design parameter investigations are presented. The purpose of the parametric blade design study was to investigate the effects of specific rotor blade design parameters on the performance of one compressor configuration of current interest with state-of-the-art performance. It was the intent of the program to vary only one design parameter at a time, keeping the other parameters as closely as possible to their original baseline design values. Design parameters investigated were the chordwise location of maximum blade thickness, suction surface blade shape, effective blade camber, and blade leading edge sweep. Experimental performance and detailed aerodynamic analysis results are presented.

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Report Rotor Configuration No. 1

PREFACE

This report was prepared by Dr. C. Herbert Law and Steven L. Puterbaugh of the Technology Branch, Turbine Engine Division, Aero Propulsion Laboratory, Air Force Wright Aeronautical Laboratories, Wright-Patterson AFB, Ohio. The work was accomplished between 1 January 1987 and 31 May 1988. This work could not have been so successfully accomplished without the expert technical assistance of Dr. Arthur J. Wennerstrom, Mr. Robert D. DeRose and Mr. Robert Wirrig.

This report represents results from a portion of the effort of the Compressor Research Group, supervised by Dr. Arthur J. Wennerstrom, and was conducted under Work Unit 27, Task S1, of Project 2307, "Turbomachinery Fluid Mechanics."

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SECTION I

INTRODUCTION

This report presents the results of an experimental evaluation of one compressor test of a series of design parameter investigations. In total, eight rotor design configurations (including one baseline and seven variations) and two stator design configurations (including one baseline and one variation) were included in the study. The rotor/stator configuration which was considered as the baseline compressor configuration was initially described in Reference 1 ("Redesign of a Rotor for a 1500 ft/sec Transonic, High-Through-Flow, Single-Stage Axial-Flow Compressor with Low Hub/Tip Ratio," September 1979). That compressor configuration was designated the "BASELINE" and subsequently referenced and compared with the other configuration designs and test results to determine specific design parameter effectiveness.

The primary purpose of the "Parametric Blade Study (PBS)" was to investigate the effects of specific rotor blade design parameters on the performance of one compressor configuration of current interest with state-of-the-art performance. It was the intent of the program to vary only one design parameter at a time, keeping the other parameters as closely as possible to their original baseline design values. Specifically, rotor configurations numbered 1 and 2 were designed to investigate the effectiveness of the chordwise location of maximum blade thickness on rotor performance. Rotor configurations numbered 3 and 4 were designed to investigate the effect of the suction surface shape ahead of the

leading edge passage shock on performance and to determine the interrelation of the suction surface shape and the cascade throat area. Rotor configuration number 5 was designed to determine the influence on performance of "effective camber" of the blade, or loosely to determine the circulation capacity of the cascade. Finally, rotor configurations numbered 6 and 7 were designed to investigate the potential gain in rotor performance through the introduction of effective aerodynamic leading edge sweep and accompanying reduced shock strength and associated losses.

The overall objective of this study was to perform the aerodynamic design of a series of seven transonic compressor rotors, all parametrically related, fabricate and test all of the rotors (plus re-test the original baseline rotor) and compare their performances to the baseline compressor rotor. The baseline rotor and each of the seven parametrically similar rotors are described as high-through-flow, high-aerodynamic-loading, low hub/tip ratio first stage compressor or fan rotors. The original baseline hub, case, and leading/trailing edge envelope was preserved to the maximum extent practical. All designs were accomplished using comparable computer design systems, all hardware was manufactured by the same contractor using identical fabrication specifications, and all experimental tests were conducted in the same test facility using the same instrumentation and data acquisition system, and under similar environmental conditions.

SECTION II

DESIGN APPROACH

In an attempt to define the effect of the location of airfoil maximum thickness on rotor blade performance, PBS rotor configurations numbered 1 and 2 were designed with maximum thickness locations at the tip different from the baseline rotor design. In all cases, maximum thickness at the hub was held at the original position of 55% chord and the changes were linearly distributed along the span to the new values defined at the rotor tip. PBS rotor configuration number 1 was designed with the maximum thickness located at 40% of meanline length (measured from the leading edge), whereas PBS #2 was designed with maximum thickness located at 55% and the baseline rotor had maximum thickness located at 70%, all referenced to the tip section. Early research by NASA generally indicated that it was desirable to move the location of maximum thickness aft as the relative inlet Mach number increased. However, there is an incentive to move the location of maximum thickness forward to minimize bird strike damage. Also, inasmuch as most modern fan tip sections and the baseline rotor have S-shaped camber lines at the tip, a shift of thickness (equals blockage) forward tends to straighten out the airfoil; there is less negative camber followed by less positive camber. This could conceivably improve the aerodynamic performance through reduced surface curvature and possibly deviation. In effect, no controlled tests had been made to-date (with state-of-the-art transonic airfoil shapes) to help the compressor designer optimize transonic rotor blade performance with respect to thickness distribution.

Using the "data match" baseline rotor design described in the Parametric Blade Study report introductory volume (Reference 2, "Transonic Fan/ Compressor Rotor Design Study," Volume I, February 1982) as the starting point for the new design, the annulus blockage at the internal blade stations was adjusted to be consistent with the modified airfoil thickness distribution. The chordwise distribution of work was adjusted to maintain a static pressure distribution similar to the baseline design, blade meanline departure angles were adjusted to maintain similar throat areas and flow induction capacity, and the hub contour was modified slightly to account for the modified blockage distribution and to maintain a similar static pressure distribution at the hub. Specific details concerning the design procedure, the design computer program, and blade aerodynamic and structual characteristics may be obtained from the design report (Reference 3, "Transonic Fan/Compressor Rotor Design Study," Volume II, February 1982).

SECTION III

TEST APPARATUS

1. FACILITY FLOWPATH

The test facility used is of the closed-loop variety shown schematically in Figure 1. In the loop, air passes through the 30-inch diameter inlet duct to a Universal Venturi Tube located six pipe diameters downstream of the return tube 90-degree elbow. Two pipe diameters further downstream, the air is turned 90 degrees with the aid of turning vanes. Screens are installed perpendicular to the pipe axis just above the elbow, and in the trailing edge plane of the turning vanes to prevent feedback related to flow separation on the turning vanes from reaching the venturi. Following the elbow, the flow passes through a tube bundle and subsequently enters a 48-inch diameter settling chamber. The settling chamber contains a perforated conical flow spreader and two screens. From the settling chamber, air enters the compressor through a direct-coupled bellmouth. Air leaving the compressor is deflected radially outward to a peripheral throttle. The throttle consists of one stationary and one rotating cylindrical ring, each with 16 circumferentially distributed matching holes. Throttling takes place at a diameter of approximately 47 inches. The throttle is designed to vary continuously from fully closed to fully open. Position indication varies linearly with throttle open area and has a resolution of one part in 200. Downstream of the throttle, the flow enters a collector, from which it is passed through a 24-inch diameter duct to the heat exchanger and filter. Cooling of the air

is accomplished using a circulating water, finned-tube heat exchanger. The air is filtered to remove five micron particles with a 99.5 percent efficiency. After passing through the heat exchanger and filter, the air returns to the facility through the 30-inch diameter inlet duct. The air is turned 90 degrees with the aid of turning vanes before entering the heat exchanger vessel and again before entering the inlet duct. Upstream of the heat exchanger a perforated conical flow spreader is installed to uniformly distribute the air across the entire heat exchanger/filter grid.

For this test, a modification was made to the facility throttle to increase the flow capacity and decrease the back-pressure at the wide-open throttle position. Eight large holes were drilled in the throttle plate to reduce the metal blockage area by 50% (wide-open position). Cover plates were fabricated to cover the holes when not needed. During this test, it was discovered that there was a slight gain in flow capacity with all (except one, which was difficult to remove and replace because of limited access) cover plates removed. However, with the throttle in this configuration, recovering from surge (by opening a surge valve to bypass the throttle) was slow or impossible at high rotating speeds without first opening the throttle some amount. A test procedure was hence adopted to obtain a compressor map in two phases. The first phase was conducted with one throttle cover plate installed to get the high-flow end of each speed line on the compressor performance map, being careful to avoid the surge-line at all speeds. The second phase was conducted with four throttle cover plates installed (distributed uniformly around the

circumference) to get the mid-flow and low-flow ends of each speed line and to determine the surge-line at all speeds. Data were taken at each speed line during both test phases to sufficiently map the compressor performance at each speed with some overlap of throttle settings to assure that continuous and consistent results were obtained. This test procedure was used for all PBS rotor configurations investigated.

2. COMPRESSOR TEST VEHICLE

A cross-section of the research compressor is shown in Figure 2. The design employs a cantilevered rotor supported by four 0.5-inch-thick bearing support struts with leading edges located about two stator chord lengths downstream of the stator trailing edge plane. The rotor tip diameter is nominally 17 inches. Cold radial tip clearance with the rotor at rest was nominally 0.030 to 0.045 inches, depending on the rotor configuration and axial location. Hot clearance was measured with an active, non-touching spark-gap type clearance measuring system at the rotor leading edge and mid-chord regions at two circumferential locations. The average hot clearance at design speed was found to be approximately 0.020 to 0.025 from leading to trailing edge for all rotor configurations, or about 0.6 percent of the rotor tip chord. The variation of rotor tip clearance with rpm is shown in Figure 2. The rotor shaft is mounted on an oil-damped roller bearing at the forward location and a ball bearing at the aft location; radial runout does not exceed 0.001 inch. Forward and aft buffer controlled gap carbon seals were used and no oil leakage into the flowpath was detected. This

configuration uses no inlet guide vanes. Surface finish on all surfaces adjacent to the flow upstream of the bearing support struts is 32 microinches or better. The rotors were all of integral construction, the blades and discs being machined from single forgings of 6A1-4V titanium (one forging per rotor configuration). The stator was fabricated as an integral ring machined from AMS 5616.

3. COMPRESSOR INSTRUMENTATION

Aerodynamic instrumentation in the compressor consists of measuring probes in the stator leading edges for total pressure and temperature, rakes downstream of the stators for total pressure and temperature, static pressure taps on the inner and outer flow paths, dynamic pressure measurements along the casing wall over the rotor tip, and dynamic strain gage measurements at several points on the rotor blades. Measurements of inlet total pressure and temperature, mass flow, relative humidity, and rotor speed are accomplished outside the compressor and are discussed below. The compressor research vehicle has a total of 276 sensors measuring aerodynamic parameters at various points throughout the stage. Some static pressures are sensed at more than one point around the circumference at the same axial location and are either manifolded together or mathematically averaged to obtain a single measurement at the axial station. The specific instrumentation used is summarized in Table 1.

a. Temperature Measurements

(1) Location

A total of eighty-nine thermocouples are used to sense aerodynamic temperature within the compressor. Nine are mounted in the vane leading edges and eighty are located in ten discharge-plane rakes. The vane leading edge and rake mounted thermocouples are of the slot vented type shown in Figure 3. The discharge-plane rakes each have eight sensors, spaced at centers of equal area radially, while the rakes are uniformly distributed around the circumference and spaced to divide a single exit vane passage into ten equal parts. The nine stator leading edge thermocouple probes are distributed on two vanes; one having four sensors and the other having five. The sensors are uniformly spaced to radially divide the area between the hub and case into nine equal parts and are aligned with the anticipated pitch angle of the flow.

(2) Calibration

All thermocouples were fabricated from shielded three-eighths percent chromel-constantan (type E) wire. Sample thermocouples, constructed in the same manner as those mounted in the rakes and probes, were sequentially taken along the wire rolls at the start, in between, and at the end of each length of wire

used. An initial calibration of these samples was made using as standards a water triple point apparatus and two metal melting point baths (one each of indium and tin).

The absolute accuracy of the temperature standards, manufactured by the Yellow Springs Instrument Company, Yellow Springs, Ohio, are 0 degrees Celcius for the water triple point and less than 0.0015 degrees Celcius for the two metal melting point furnaces. It should be noted that each of these values are "defining points" on the International Practical Temperature Scale of 1968. The small error associated with the metal melt points can be attributed to slight differences between the ones used at this facility and the similar systems employed at the National Bureau of Standards which uses the freeze points rather than the melting points of the same metals. Stem conduction errors for thermocouples calibrated in these furnaces are so small as to be immeasurable because the actual junction is located several hundred wire diameters within the furnace.

All thermocouples are connected to Kaye Co. electronic ice points used as the 0 degrees Celcius reference and have no intermediate metals in the circuit. The individual outputs are carried to the computer input circuitry via copper twinax conductors.

During experimental data reduction, the calibration data are used to construct a potential difference (NBS potential minus observed potential at the calibration temperatures) verses

observed potential curve. The raw data are then converted into engineering units by utilizing the calibration curve to establish a corrected value of the potential with which to enter the NBS reference tables. Although the thermocouples were referenced to 32 degrees Fahrenheit, this value can vary as long as the reference temperature is stable during a data scan (a small fraction of one second). The accuracy of the temperature measurements have been determined to be no worse than approximately plus or minus 1/4 degree Fahrenheit, excluding any recovery factor correction.

b. Pressure Measurements

(1) Location

A total of one hundred and twenty-five pressures are measured in the vehicle flowpath; thirty-six static pressures and eighty-nine total pressures. All of the thirty-six static taps are distributed on the compressor flowpath liners; twenty-four taps are located on the case and twelve are located on the hub. In all, casing static pressure measurements are made at fifteen axial locations (some of the measurements are averaged from multiple taps distributed uniformly around the circumference); twelve of these are located over the rotor tip, starting approximately 0.50 inch axially forward of the leading edge and following at 0.25 inch axial increments downstream. The twelve hub static taps are distributed at three axial locations; one located in the gap between the rotor disc and the stator hub and the other two downstream of the stator exit.

Nine total pressure probes are mounted on the leading edge of two stator vanes, four probes on one vane and five on the other vane. The probes are located at the same radii as the stator leading edge total temperature probes and aligned with the anticipated pitch angle of the flow. All total pressure probes are of the Kiel stagnation tube design. The discharge-plane rakes each have eight probes, each at the same radius as the discharge-plane total temperature probes. discharge-plane total pressure rakes are also uniformly distributed around the circumference and spaced to divide a single exit vane passage into ten equal parts.

Located in conjunction with the static pressure taps placed over the rotor blade tips are twelve XTS-type Kulite dynamic pressure transducers. These transducers are recessed slightly in the METCO 601 (polyester aluminum) blade tip rub shroud on the casing adjacent to the rotor tip to prevent damage by a minor rotor rub. The transducers were referenced to local atmospheric pressure.

(2) Calibration

The pressure data acquisition system consists of ten ZOC modules ("ZOC" is an acronym of the Scanivalve Corporation, San Diego, California for "Zero, Operate, and Calibrate;" each module contains sixteen individually accessible transducers), a calibration unit, and a system microprocessor. Each ZOC module contains a pneumatic switching device which permits the calibration pressure selected by the calibration unit to be supplied to all

transducers in the module simultaneously. Three accurately measured (through independent high-accuracy sensors described below) calibration pressures (nominally 9 psia, atmospheric, and 15 psig) are recorded by the system during each data scan. The non-atmospheric calibration pressures are supplied by Ametek Model PK-30 self-regulating, primary deadweight type, pressure standards. The 9 psia pressure standard is enclosed in a sealed container which is kept at 100-200 microns Hg absolute pressure. Atmospheric pressure is used to correct to 15 psig calibration pressure to an absolute value. The three calibration pressures are monitored and recorded using a SONIX (Pressure Systems Incorporated, Hampton, Virginia) transducer and display unit. The SONIX transducer, model PS1050, has a pressure range of 4-50 psi with an achievable accuracy of plus or minus 0.01 percent of full scale over the full pressure range and a temperature range of -25 to 70 degrees Celcius. During a pressure calibration data scan (for this test, every data scan included pressure calibration data), outputs from the SONIX system were recorded and used to create calibration curves for all ZOC transducers.

The basic ZOC pressure scanning system is different from the single transducer/multi-port scanning valve system used previously. The ZOC system dedicates a pressure transducer to each data channel and provides a sensor output to the host computer several times per second. A controller automatically switches all ZOC modules from "operate" to "calibrate" and switches the calibration pressures during each data scan. The time required to record a test point which includes pressure calibration data takes

less than one minute. Temperature stability of the ZOC modules is maintained thru use of individual warm water constant temperature insulating jackets. Since the calibration pressures, supplied by low-flow dead weight testers, are switched into a common manifold, the bulk of this time is spent waiting for pressure stabilization to occur. Stabilization is determined by the host computer based on calibration manifold pressure readings given by the SONIX transducers. The acquisition of experimental data (excluding pressure calibration data) takes less than 2 seconds and is done at the beginning of a scan. This allows the test article operating point to be changed before the entire data scan is completed. By combining the time required for calibration data collection with the time required for test article thermodynamic stabilization, a greater number of test points for a given length of time can be accomplished.

c. Data Acquisition System

Test article performance and calibration data are collected by the Data Acquisition System (DAS). The DAS is comprised of a MODCOMP MODACS digital and analog I/O subsystem, a MODCOMP ATC communications I/O subsystem, and a high frequency analog data recording subsystem, all controlled by a host computer. The host computer is a MODCOMP Classic II/15 16-bit microprocessor with 512 kbytes of memory. Additional peripherals include 40 mB of disk space, a magnetic tape drive, a high speed line printer, a system console, and two user consoles. The operating system is MODCOMP's real-time, multi-tasking MAX IV OS.

The MODACS is a modular I/O system configured for the facility's specific needs. The information which passes through the system includes thermocouple voltage input, test article rpm input, control I/O for the tape search unit and pulse processing unit of the analog recording subsystem, channel select for analog tape digitization, and voltage output for speed control and performance map display.

The ATC is a serial communications device for up to 12 RS-232 and 4 current loop terminal-type devices. Five devices are currently connected to the ATC, including two user consoles, the ZOC pressure data acquisition subsystem, the SONIX pressure data acquisition subsystem, and a local area network port.

The high frequency analog recording subsystem consists of a Bell and Howell model VR-3700B 14-track analog tape deck, a Datachron model 3030 tape search unit, a Honeywell model SAI-48 Correlator and Signal Averager, and a custom pulse processing box. This system is used to record and digitize output from Kulite dynamic pressure transducers and blade-mounted strain gages.

All DAS software was developed in-house and is comprised of a group of tasks, the vast majority of which was written in FORTRAN IV, with the remainder written in MODCOMP Assembler language. Capabilities include real-time update of test article performance parameters, automated data recording, and DAS health monitoring. The DAS, software, and all pressure and temperature

measurement systems employed in these tests are new and the subject of a detailed accuracy and reliability analysis and report to be published at a later date.

4. TEST FACILITY INSTRUMENTATION

a. Rotor Speed

A Bentley Model 306 transducer senses six grooves machined into the gearbox/rotor driveshaft coupling. The output is fed into a Model 3115 proximitor for signal conditioning. The proximitor signal is a train of pulses having a repetition rate corresponding to rotor RPM/10. This repetition rate is directly recorded by the DAS. An Airpax Model Tachtrol 3 tachometer (Airpax Division of North American Phillips, Ft. Lauderdale, Florida) provides a visual indication of rotor speed accurate to ten RPM. The tachometer also includes an adjustable speed limiting switch as a safety feature.

b. Mass Flow

The inlet flow is metered through a 30-inch Universal Venturi Tube manufactured by B.I.F. Industries with a 17.400-inch throat. Meter accuracy has been calibrated to plus or minus one-half percent by the manufacturer. Static pressure taps are located both in the throat and in the inlet cavity.

c. Inlet (Plenum) Total Pressure and Temperature

Compressor inlet total pressure is assumed equal to plenum static pressure just downstream of the last screen. Four static pressure taps are manifolded into two pressure sources and recorded on two separate ZOC channels. At maximum flow rate, the error is no worse than 0.003 psi, verified by calibration. Inlet total temperature is sensed by nine bare junction thermocouples located in the same axial plane as the pressure taps at three different radii in the plenum. The thermocouples are supported on two cables stretched across the inlet plenum.

d. Relative Humidity

A Foxboro Dewcel Model 2711TG-K222 was mounted in the inlet stack to monitor humidity. This device continuously measures the moisture content of the air by sensing the temperature at which the partial pressure of its water vapor is equal to the water vapor pressure of a saturated salt solution. The humidity is acquired by the DAS as a thermocouple output for every test point and subsequently treated in the data reduction program.

SECTION IV

TEST PROCEDURE AND DATA REDUCTION

1. TEST PROCEDURE

Test data were taken generally in order of decreasing speed, with several different compressor throttle settings being tested at each speed, generally in order of increasing throttle. Data were collected generally during two separate test periods (usually on two different days); one period with one throttle cover plate installed to get the high-flow end of the speed lines and another period with four throttle cover plates installed to get the mid-flow and low-flow end of the speed lines and the surge line (see the description of the facility throttle in the previous section). Data were usually taken at 100, 95, 90, 80, 60, and 40% of design speed; for some configurations, data were also taken at 70 and 50% of design speeds. Data were taken at the high speeds first to avoid the high cooling water temperatures experienced during periods of limited cooling facility capacity and the need to share cooling water with other facilities. Typical test periods were two to three hours in duration with as many as 50-60 data points being collected during the period.

For each speed line, test data were acquired at 10-12 throttle configurations (open, partially closed, with one or four throttle cover plates installed), some with an open surge valve. Although the open surge valve and/or one throttle cover plate configuration produced a slight asymmetry in throttling, the increased mass flow

this permitted expanded the operating range which could be mapped to a useful degree. For each speed line, the throttle setting (with four throttle cover plates installed) which induced stall was determined; several throttle settings in the operating range were then selected to complete the mapping of the speed line. Of the test data collected, seven test points which best described each speed line were selected after preliminary data reduction to be analyzed in more detail (and reported in this document). Multiple test points at the same conditions were acquired on different days to assure data integrity and repeatability; only one of the test points will be reported.

All test data were collected at some degree of depressed inlet pressure; however, all data were corrected to standard inlet conditions as reported herein. The degree to which the inlet pressure was depressed was based on two criteria: first, the ability of the depression system to keep up with small leaks into the many joints associated with the closed loop and second, the limited power output of the drive motor and maximum allowable time the motor could be operated with elevated motor winding temperatures. The elevated power requirements for the drive motor at 90-100% of design speed caused the motor windings to overheat. To permit adequate test time at these speeds to complete each survey, it was necessary to depress the inlet pressure to decrease the power requirements. More depression was required as the speed increased; minimum inlet pressure experienced was approximately 7-8 psia. Since the depression system is passive and operates by opening a bleed valve in the facility throttle, the amount of

depression achieved is determined by the length of time the bleed valve is open, the size of the bleed tube carrying the bleed air outside the test chamber, and the pressure difference between the throttle inlet pressure and atmospheric pressure. As the compressor speed decreases, the compressor total pressure ratio decreases (at constant throttle setting) and the inlet pressure increases until the exit pressure (at the throttle inlet) reaches a point where the bleed flow equals the combined air flow leaking into the facility flowpath joints (where outside atmospheric pressure is greater than the inside flowpath pressure). At the lower compressor speeds, however, the requirement for a depressed inlet pressure is not so great since the power requirements are reduced. A test procedure was adopted such that compressor inlet conditions and selected compressor instrumentation were monitored to assure that all test conditions had stabilized before data were collected, especially after any compressor speed change.

A nine-character test identification number was assigned by the DAS to each test point recorded in the format "XXYYZZAAA." Here "XX" is a two digit number indicating the year; "88" for 1988, etc. "YY" is a two digit number indicating the month; "01" for January, "02" for February, etc. "ZZ" is a two digit number indicating the day of the month; "01" for the first day, "02" for the second day, etc. "AAA" is a three digit number indicating the test point collected on that day; "001" for the first point, "002" for the second point, etc. Hence, for example, the thirteenth test point collected on 26 November 1987 would have a test point identification number as follows: 871126013. During each data scan,

a total of up to 950 data channels were scanned and recorded by the DAS (only 310 data channels were scanned and recorded if the data scan was a non-calibration scan).

2. DATA REDUCTION - PHASE I

Phase I data reduction was accomplished using the computer program similar to the one described in Reference 4 ("TESCOM Single-Stage Configuration Performance Data Reduction," April 1981). This computer program converts the raw data into engineering units, groups and displays the acquired data in a readable format, provides an initial analysis of compressor performance, and prepares an output of data required for the phase II aerodynamic analysis. Some of the features of the phase I data reduction program (named "DTREDIM") are as follows:

a. On-line thermocouple calibration data were available and this data was utilized in the conversion of the thermocouple outputs into engineering units.

b. On-line pressure transducer (steady state) calibration data were available and these data were utilized in the conversion of the transducer outputs into engineering units.

c. Temperature effects were considered in calculating the gas mixture (air plus water vapor) thermodynamic properties.

d. Corrections were made to measured compressor temperatures and pressures, facility flowrate, and rotor wheel speed to correspond to standard inlet conditions of temperature and pressure.

e. Corrections were made to the stage exit measured temperatures and pressures to account for both recovery and Mach number effects.

f. Completed arithmetic averages of various quantities (where multiple measurements of the same parameter existed), such as plenum pressure and temperature, venturi inlet and throat pressures, and some static pressures.

g. Completed circumferential mass-averages of stage exit total pressures and temperatures at the same radii.

Selected phase I analysis outputs for the test points at 90, 95, and 100% speeds are presented in Appendix A.

3. DATA REDUCTION - PHASE II

a. Basic Program Description

Phase II reduction of the test data was performed using the computer program named "PERCH" and described in Reference 5 ("Multistage Compressor Test Data Analysis Computer Program," July 1983). This computer program provides a detailed aerodynamic

analysis of the test compressor stage, utilizing the geometry of the stage and the phase I output data as inputs. Analysis of each test point is performed individually, although any number of test points may be analyzed in one computer execution.

The system of equations incorporated into the phase II computer program includes a full treatment of the axisymmetric equations of motion of an inviscid fluid, including blade-force terms, and the assumption of a thermally-perfect gas as the working fluid. The equations are solved in finite difference form by the streamline curvature method. Wake and boundary layer blockages, flow deviation, and/or work distributions within blade rows are either calculated or input as a user option in the computer program.

The phase II computer program was developed for the routine analysis of multi-stage variable geometry axial flow fan and compressor test data. The purpose of the program is to determine details of the flow within a compressor from test measurements, a description of the compressor geometry, and, when necessary, correlations of blade row performance. As a minimum, the program has the capability of analyzing up to 3 stages plus an inlet guide vane using up to 30 computing stations. However, the internal storage algorith does not limit any individual quantity, so that more than 3 stages can be accommodated if needed. The program has the ability to:

(1) Read airfoil coordinates and compute basic airfoil parameters such as thickness, angles, etc., after resetting and/or cambering.

(2) Accept test data and other aerodynamic parameters in a wide variety of forms.

(3) Output details of the blade geometries, the flow field within the compressor, and blade and stage performance, plus data suitable for generating a wide variety of plots.

b. Across-Blade Analysis

Phase II across-blade analysis was performed for each test point on all speedlines. The computing station geometry for the across-blade analysis is shown in Figure 4. Note that computing stations may be radial, slanted, or curvilinear. The computing stations are defined in Table 2, and the conditions for analysis are defined in Table 3. Note in particular that the blockages were iteratively determined at the blade edges and in the exit where experimental casing static pressures could be matched by the calculated values. Elsewhere, blockages were either specified (input, constant valued) or linearly interpolated between the values calculated (or specified). Also, exit plane peak total pressures were used to determine the rotor exit total pressure distribution and exit plane total temperatures were used to

determine the rotor exit total temperature distribution, rather than using the measured stator leading edge total pressures and temperatures.

c. Thru-Blade Analysis

To obtain a more detailed picture of the flow within the compressor stage, three test points were chosen for thru-blade analysis, all at design speed: the test point nearest the design (operating) point, the test point with maximum stage efficiency, and the test point with maximum stage pressure ratio. The more detailed analysis involved the introduction of four additional computing stations within the rotor. The thru-blade analysis computing station geometry is shown in Figure 5, the computing stations are defined in Table 4, and the conditions for analysis are defined in Table 5. Note in particular that the blockages were either calculated to match measured casing static pressures or linearly interpolated between calculated values at the rotor internal computing stations. The decision to interpolate blockage rather than match casing static pressure at some computing stations was made as the result of the calculated distributions of work, deviation, and blockage. Attempting to calculate blockages to match measured static pressures at every computing station produced implausible distributions of either or both blockage and deviation, unless unlikely work distributions were specified. The best overall result was to interpolate blockage at some rotor internal computing stations, which produced smooth distributions of the stated parameters. One possibility is that the casing static pressures may

have been disrupted by local disturbances, such as shock interactions with the casing or blade surface boundary layers; the casing static pressures might, therefore, not represent a true measure of the flow characteristics across the entire rotor annulus. Indeed, the degree of casing static pressure disruption varies with the amount of throttling (comparing the rotor casing static pressure distributions for the three test points analyzed, all at different throttle settings), which has some bearing on the location and strength of the rotor blade-to-blade passage shock at the rotor tip.

Convergence of the final thru-blade solutions were based on satisfying the following criteria:

(1) The specified flow was passed through the stage.

(2) Experimental casing static pressure values, linearly interpolated to determine the values at the computing station casing axial locations, were matched at the specified stations.

(3) The computed distribution of the casing static pressure smoothly represented the measured casing static pressure distribution.

(4) Reasonable axial distributions of axial distributions of blockage, work (total enthalpy for the rotor), and deviation were achieved.

The fourth criteria was achieved by analytically specifying a smooth distribution of work (total enthalpy) through (from leading to trailing edge) and across (from hub to tip) the rotor. The axial distribution of work along a streamline was specified as a combination of a quarter-sine wave function and a linear function (a coefficient value of 1.0 defines the function to be all quarter-sine wave and a value of 0.0 defines the function to be all linear). The coefficient was specified at three different exit radii; near the hub, mid, and tip streamlines. The program smoothly varies the coefficient in the radial direction between the specified values. The iteration began with a specified work distribution similar to the design intent; convergence was accomplished when reasonable axial distributions of deviation along the hub, mid, and tip streamlines were achieved.

SECTION V

RESULTS

1. OVER-ALL PERFORMANCE

The mass-averaged performance of the rotor and of the complete compressor stage is tabulated in Table 6 and plotted in Figures 6 and 7. The performance indicates that the design goals were nearly achieved. At 100% design corrected speed and near the operating design point, measured corrected flow was approximately 1% below design (design flow was 61.36 lb./sec.), stage efficiency and pressure were near their design values. The compressor was throttled to stall at each corrected speed shown on the map. Seven test points were selected which best represented the full characteristic of each speed line, from full open throttle to near stall (the last test point plotted on each speed line represents the highest throttle setting that could be maintained without initiating compressor stall).

2. BLADE-ELEMENT PERFORMANCE (ACROSS-BLADE)

The radial distributions of incidence angle, relative (absolute for the stator) inlet Mach number, loss coefficient, diffusion factor, and deviation angle for both rotor and stator and the axial distributions of measured and computed static pressures for each test point are presented in Figures 8 through 143, for each data point shown on the compressor map and listed in Table 6. The plots are grouped together according to speed and presented in

order of decreasing speed; the rotor/stator parameters for all test points on the same speed line are plotted together.

3. DESIGN SPEED DETAILED THRU-BLADE RESULTS

Three test points at 100% corrected speed closest to the design (operating) point, maximum efficiency point, and maximum pressure ratio point were selected for detailed thru-blade analysis. The test point identification numbers for these points are 870901001, 870901004, and 870901005 respectively. The radial distributions of incidence angle, relative (absolute for the stator) inlet Mach number, loss coefficient, diffusion factor, and deviation angle for both rotor and stator, the axial distributions of wake/boundary-layer blockage, the thru-blade distributions of deviation and work for the rotor, and the axial distributions of measured and computed static pressure for all three test points are presented in Figures 144 through 165. The rotor/stator inlet and exit parameters for all three test points are plotted together for easier comparison. Printed outputs of the thru-blade analysis for the three test points analyzed are also presented; test point 870901001 output is presented in Appendix B, test point 870901004 in Appendix C, and test point 870901005 in Appendix D.

4. DESIGN POINT COMPARISON RESULTS

To obtain a comparison between design and experimental data, results for the thru-blade analysis of the test point closest to the design (operating) point (test point identification number

870901001) are compared with the design prediction values and are shown in Figures 166 through 169. Shown are the distributions of rotor incidence angle (Figure 166), rotor inlet relative Mach number (Figure 167), rotor exit deviation angle (Figure 168), and stator incidence angle (Figure 169).

5. BASELINE COMPARISON

To obtain a comparison between the PBS rotor configuration number 1 and the baseline performances, results for the thru-blade analyses of the test points at 100% corrected design speeds and maximum efficiency are compared in Figures 170 through 179. Shown are comparison plots of incidence angle, inlet relative (absolute for stator) Mach number, loss coefficient, diffusion factor, and deviation for both rotor and stator. For the PBS rotor configuration number 1, test point identification number 870901004 results are shown. For the baseline rotor configuration, the original test results (re-run through the same phase II thru-blade analysis as the PBS configurations) for test point identification number 780222026 (designated HTFC, for "High Thru-Flow Compressor," configuration number 7) are shown.

SECTION VI

CONCLUSIONS

There are obviously many differences between the design predictions and test results and between the baseline test results and PBS configuration number 1 test results. In other technical reports yet to be printed, there will also be many differences indicated between the test results for the other PBS configurations. The intent, however, of this report is to present the results of the investigation for PBS #1 as completely and comprehensively as possible without drawing any specific conclusions about the specific design or the overall study. Future reports will deal with summary comparisons and conclusions as the scientific community has had sufficient time to digest the wealth of information contained herein and to pass their thoughts and concerns on to the authors.

TABLE 1

PBS #1 - INSTRUMENTATION DETAILS

INST. CHAN.	THERMO. GROUP	ZOC ID.	CAL.1 CHAN.	CAL.2 CHAN.	CAL.3 CHAN.	INSTRUMENTATION MEASUREMENT LOCATION
1	1	-	-	-	-	Exit TT on R1 at 5.996
2	1	-	-	-	-	Exit TT on R1 at 6.387
3	1	-	-	-	-	Exit TT on R1 at 6.755
4	1	-	-	-	-	Exit TT on R1 at 7.104
5	1	-	-	-	-	Exit TT on R1 at 7.437
6	1	-	-	-	-	Exit TT on R1 at 7.756
7	1	-	-	-	-	Exit TT on R1 at 8.062
8	1	-	-	-	-	Exit TT on R1 at 8.356
9	1	-	-	-	-	Exit TT on R15 at 5.996
10	1	-	-	-	-	Exit TT on R15 at 6.387
11	1	-	-	-	-	Exit TT on R15 at 6.755
12	1	-	-	-	-	Exit TT on R15 at 7.104
13	1	-	-	-	-	Exit TT on R15 at 7.437
14	1	-	-	-	-	Exit TT on R15 at 7.756
19	1	-	-	-	-	Exit TT on R15 at 8.062
20	1	-	-	-	-	Exit TT on R15 at 8.356
21	1	-	-	-	-	32 degree ref. temp.
22	1	-	-	-	-	313 degree ref. temp.
23	1	-	-	-	-	450 degree ref. temp.
26	2	-	-	-	-	Exit TT on R5 at 5.996
27	2	-	-	-	-	Exit TT on R5 at 6.387
28	2	-	-	-	-	Exit TT on R5 at 6.755
29	2	-	-	-	-	Exit TT on R5 at 7.104
30	2	-	-	-	-	Exit TT on R5 at 7.437
31	2	-	-	-	-	Exit TT on R5 at 7.756
32	2	-	-	-	-	Exit TT on R5 at 8.062
33	2	-	-	-	-	Exit TT on R5 at 8.356
34	2	-	-	-	-	Exit TT on R13 at 5.996
35	2	-	-	-	-	Exit TT on R13 at 6.387
36	2	-	-	-	-	Exit TT on R13 at 6.755
37	2	-	-	-	-	Exit TT on R13 at 7.104
38	2	-	-	-	-	Exit TT on R13 at 7.437
39	2	-	-	-	-	Exit TT on R13 at 7.756
40	2	-	-	-	-	Exit TT on R13 at 8.062
41	2	-	-	-	-	Exit TT on R13 at 8.356
42	2	-	-	-	-	Exit TT on R3 at 5.996
43	2	-	-	-	-	Exit TT on R3 at 6.387
44	2	-	-	-	-	Exit TT on R3 at 6.755
45	2	-	-	-	-	Exit TT on R3 at 7.104
46	2	-	-	-	-	Exit TT on R3 at 7.437
47	2	-	-	-	-	Exit TT on R3 at 7.756
48	2	-	-	-	-	Exit TT on R3 at 8.062
49	2	-	-	-	-	Exit TT on R3 at 8.356
51	2	-	-	-	-	Exit TT on R7 at 5.996

TABLE 1 Continued

PBS #1 - INSTRUMENTATION DETAILS

INST. CHAN.	THERMO. GROUP	ZOC ID.	CAL.1 CHAN.	CAL.2 CHAN.	CAL.3 CHAN.	INSTRUMENTATION MEASUREMENT LOCATION
52	2	-	-	-	-	Exit TT on R7 at 6.387
53	2	-	-	-	-	Exit TT on R7 at 6.755
54	2	-	-	-	-	Exit TT on R7 at 7.104
55	2	-	-	-	-	Exit TT on R7 at 7.437
56	2	-	-	-	-	Exit TT on R7 at 7.756
57	2	-	-	-	-	Exit TT on R7 at 8.062
58	2	-	-	-	-	Exit TT on R7 at 8.356
59	2	-	-	-	-	Exit TT on R11 at 5.996
60	2	-	-	-	-	Exit TT on R11 at 6.387
61	2	-	-	-	-	Exit TT on R11 at 6.755
62	2	-	-	-	-	Exit TT on R11 at 7.104
63	2	-	-	-	-	Exit TT on R11 at 7.437
64	2	-	-	-	-	Exit TT on R11 at 7.756
65	2	-	-	-	-	Exit TT on R11 at 8.356
66	2	-	-	-	-	Exit TT on R11 at 8.062
67	2	-	-	-	-	Exit TT on R9 at 5.996
68	2	-	-	-	-	Exit TT on R9 at 6.387
69	2	-	-	-	-	Exit TT on R9 at 6.755
70	2	-	-	-	-	Exit TT on R9 at 7.104
71	2	-	-	-	-	Exit TT on R9 at 7.437
72	2	-	-	-	-	Exit TT on R9 at 7.756
73	2	-	-	-	-	Exit TT on R9 at 8.062
74	2	-	-	-	-	Exit TT on R9 at 8.356
76	2	-	-	-	-	Exit TT on R17 at 5.996
77	2	-	-	-	-	Exit TT on R17 at 6.387
78	2	-	-	-	-	Exit TT on R17 at 6.755
79	2	-	-	-	-	Exit TT on R17 at 7.104
80	2	-	-	-	-	Exit TT on R17 at 7.437
81	2	-	-	-	-	Exit TT on R17 at 7.756
82	2	-	-	-	-	Exit TT on R17 at 8.062
83	2	-	-	-	-	Exit TT on R17 at 8.356
84	2	-	-	-	-	Stator LE TT at 8.125
85	2	-	-	-	-	Exit TT on R19 at 8.062
86	2	-	-	-	-	Exit TT on R19 at 7.756
87	2	-	-	-	-	Exit TT on R19 at 7.437
88	2	-	-	-	-	Exit TT on R19 at 7.104
89	2	-	-	-	-	Exit TT on R19 at 6.755
90	2	-	-	-	-	Exit TT on R19 at 6.387
91	2	-	-	-	-	Exit TT on R19 at 5.996
92	2	-	-	-	-	Exit TT on R19 at 8.356
93	2	-	-	-	-	Stator LE TT at 6.250
94	2	-	-	-	-	Stator LE TT at 7.750
95	2	-	-	-	-	Stator LE TT at 5.875
96	2	-	-	-	-	Stator LE TT at 7.375

TABLE 1 Continued

PBS #1 - INSTRUMENTATION DETAILS

INST. CHAN.	THERMO. GROUP	ZOC ID.	CAL.1 CHAN.	CAL.2 CHAN.	CAL.3 CHAN.	INSTRUMENTATION MEASUREMENT LOCATION
97	2	-	-	-	-	Stator LE TT at 7.000
98	2	-	-	-	-	Stator LE TT at 5.125
99	-	-	-	-	-	Rotor RPM
100	2	-	-	-	-	Stator LE TT at 6.625
101	2	-	-	-	-	Stator LE TT at 5.500
102	2	-	-	-	-	32 degree ref. temp.
103	2	-	-	-	-	313 degree ref. temp.
104	2	-	-	-	-	450 degree ref. temp.
105	3	-	-	-	-	Plenum temperature #1
106	3	-	-	-	-	Plenum temperature #2
108	3	-	-	-	-	Plenum temperature #3
109	3	-	-	-	-	Plenum temperature #4
110	3	-	-	-	-	Plenum temperature #5
111	3	-	-	-	-	Plenum temperature #6
112	3	-	-	-	-	Plenum temperature #7
113	3	-	-	-	-	Plenum temperature #8
117	3	-	-	-	-	Plenum temperature #9
118	3	-	-	-	-	Dewcel temperature #10
121	3	-	-	-	-	ZOC module #1 temp.
122	3	-	-	-	-	ZOC module #2 temp.
123	3	-	-	-	-	ZOC module #3 temp.
124	3	-	-	-	-	ZOC module #4 temp.
125	3	-	-	-	-	ZOC module #5 temp.
126	3	-	-	-	-	ZOC module #6 temp.
127	3	-	-	-	-	ZOC module #7 temp.
128	3	-	-	-	-	ZOC module #8 temp.
129	3	-	-	-	-	ZOC module #9 temp.
130	3	-	-	-	-	ZOC module #10 temp.
151	-	1A1	311	471	631	Exit PT on R2 at 5.996
152	-	2A1	312	472	632	OD PS at -0.900 (#1)
153	-	3A1	313	473	633	Exit PT on R6 at 5.996
154	-	4A1	314	474	634	Exit PT on R10 at 5.996
155	-	5A1	315	475	635	Exit PT on R14 at 5.996
156	-	6A1	316	476	636	Exit PT on R18 at 5.996
157	-	7A1	317	477	637	ID PS at -5.125 (#1)
158	-	8A1	318	478	638	OD PS at -8.571
159	-	9A1	319	479	639	Plenum pressure #1
160	-	10A1	320	480	640	Venturi throat #5
161	-	1A2	321	481	641	Exit PT on R2 at 6.387
162	-	2A2	322	482	642	OD PS at -9.000 (#2)
163	-	3A2	323	483	643	Exit PT on R6 at 6.387
164	-	4A2	324	484	644	Exit PT on R10 at 6.387
165	-	5A2	325	485	645	Exit PT on R14 at 6.387
166	-	6A2	326	486	646	Exit PT on R18 at 6.387

TABLE 1 Continued

PBS #1 - INSTRUMENTATION DETAILS

INST. CHAN.	THERMO. GROUP	ZOC ID.	CAL.1 CHAN.	CAL.2 CHAN.	CAL.3 CHAN.	INSTRUMENTATION MEASUREMENT LOCATION
167	-	7A2	327	487	647	ID PS at -5.125 (#2)
168	-	8A2	328	488	648	OD PS at -8.318
169	-	9A2	329	489	649	Venturi throat (#1)
170	-	10A2	330	490	650	Venturi throat (#6)
171	-	1A3	331	491	651	Exit PT on R2 at 6.755
172	-	2A3	332	492	652	OD PS at -0.900 (#3)
173	-	3A3	333	493	653	Exit PT on R6 at 6.755
174	-	4A3	334	494	654	Exit PT on R10 at 6.755
175	-	5A3	335	495	655	Exit PT on R14 at 6.755
176	-	6A3	336	496	656	Exit PT on R18 at 6.755
177	-	7A3	337	497	657	ID PS at -5.125 (#3)
178	-	8A3	338	498	658	OD PS at -8.065
179	-	9A3	339	499	659	Venturi inlet (#3)
180	-	10A3	340	500	660	Venturi throat (#7)
181	-	1A4	341	501	661	Exit PT on R2 at 7.104
182	-	2A4	342	502	662	OD PS at -0.900 (#4)
183	-	3A4	343	503	663	Exit PT on R6 at 7.104
184	-	4A4	344	504	664	Exit PT on R10 at 7.104
185	-	5A4	345	505	665	Exit PT on R14 at 7.104
186	-	6A4	346	506	666	Exit PT on R18 at 7.104
187	-	7A4	347	507	667	ID PS at -5.125 (#4)
188	-	8A4	348	508	668	OD PS at -7.811
189	-	9A4	349	509	669	Venturi inlet (#1)
190	-	10A4	350	510	670	Venturi throat (#8)
191	-	1A5	351	511	671	Exit PT on R2 at 7.437
192	-	2A5	352	512	672	OD PS at -1.650 (#1)
193	-	3A5	353	513	673	Exit PT on R6 at 7.437
194	-	4A5	354	514	674	Exit PT on R10 at 7.437
195	-	5A5	355	515	675	Exit PT on R14 at 7.437
196	-	6A5	356	516	676	Exit PT on R18 at 7.437
197	-	7A5	357	517	677	Stator LE PT at 5.125
198	-	8A5	358	518	678	OD PS at -7.558
199	-	9A5	359	519	679	Atmos. pressure (#3)
200	-	10A5	360	520	680	Venturi throat (#9)
201	-	1A6	361	521	681	Exit PT on R2 at 7.756
202	-	2A6	362	522	682	OD PS at -1.650 (#2)
203	-	3A6	363	523	683	Exit PT on R6 at 7.756
204	-	4A6	364	524	684	Exit PT on R10 at 7.756
205	-	5A6	365	525	685	Exit PT on R14 at 7.756
206	-	6A6	366	526	686	Exit PT on R18 at 7.756
207	-	7A6	367	527	687	
208	-	8A6	368	528	688	OD PS at -7.304
209	-	9A6	369	529	689	Atmos. pressure (#1)
210	-	10A6	370	530	690	Venturi throat (#10)

TABLE 1 Continued

PBS #1 - INSTRUMENTATION DETAILS

INST. CHAN.	THERMO. GROUP	ZOC ID.	CAL.1 CHAN.	CAL.2 CHAN.	CAL.3 CHAN.	INSTRUMENTATION MEASUREMENT LOCATION
211	-	1A7	371	531	691	Exit PT on R2 at 8.062
212	-	2A7	372	532	692	OD PS at -1.650 (#3)
213	-	3A7	373	533	693	Exit PT on R6 at 8.062
214	-	4A7	374	534	694	Exit PT on R10 at 8.062
215	-	5A7	375	535	695	Exit PT on R14 at 8.062
216	-	6A7	376	536	696	Exit PT on R18 at 8.062
217	-	7A7	377	537	697	
218	-	8A7	378	538	698	OD PS at -7.051
219	-	9A7	379	539	699	Venturi throat (#3)
220	-	10A7	380	540	700	Venturi throat (#11)
221	-	1A8	381	541	701	Exit PT on R2 at 8.356
222	-	2A8	382	542	702	OD PS at -1.650 (#4)
223	-	3A8	383	543	703	Exit PT on R6 at 8.356
224	-	4A8	384	544	704	Exit PT on R10 at 8.356
225	-	5A8	385	545	705	Exit PT on R14 at 8.356
226	-	6A8	386	546	706	Exit PT on R18 at 8.356
227	-	7A8	387	547	707	
228	-	8A8	388	548	708	OD PS at -6.798
229	-	9A8	389	549	709	Atmos. pressure (#4)
230	-	10A8	390	550	710	Venturi throat (#12)
231	-	1B1	391	551	711	Exit PT on R20 at 5.996
232	-	2B1	392	552	712	Stator LE PT at 8.125
233	-	3B1	393	553	713	Exit PT on R4 at 5.996
234	-	4B1	394	554	714	Exit PT on R8 at 5.996
235	-	5B1	395	555	715	Exit PT on R12 at 5.996
236	-	6B1	396	556	716	Exit PT on R16 at 5.996
237	-	7B1	397	557	717	ID PS at -0.900 (#1)
238	-	8B1	398	558	718	OD PS at -6.544
239	-	9B1	399	559	719	Plenum pressure (#2)
240	-	10B1	400	560	720	Atmos. pressure (#7)
241	-	1B2	401	561	721	Exit PT on R20 at 6.387
242	-	2B2	402	562	722	Stator LE PT at 7.750
243	-	3B2	403	563	723	Exit PT on R4 at 6.387
244	-	4B2	404	564	724	Exit PT on R8 at 6.387
245	-	5B2	405	565	725	Exit PT on R12 at 6.387
246	-	6B2	406	566	726	Exit PT on R16 at 6.387
247	-	7B2	407	567	727	ID PS at -0.900 (#2)
248	-	8B2	408	568	728	OD PS at -6.291
249	-	9B2	409	569	729	Venturi throat (#2)
250	-	10B2	410	570	730	Atmos. pressure (#8)
251	-	1B3	411	571	731	Exit PT on R20 at 6.755
252	-	2B3	412	572	732	Stator LE PT at 7.375
253	-	3B3	413	573	733	Exit PT on R4 at 6.755
254	-	4B3	414	574	734	Exit PT on R8 at 6.755

TABLE 1 Continued

PBS #1 - INSTRUMENTATION DETAILS

INST. CHAN.	THERMO. GROUP	ZOC ID.	CAL.1 CHAN.	CAL.2 CHAN.	CAL.3 CHAN.	INSTRUMENTATION MEASUREMENT LOCATION
255	-	5B3	415	575	735	Exit PT on R12 at 6.755
256	-	6B3	416	576	736	Exit PT on R16 at 6.755
257	-	7B3	417	577	737	ID PS at -0.900 (#3)
258	-	8B3	418	578	738	OD PS at -6.037
259	-	9B3	419	579	739	Venturi throat (#4)
260	-	10B3	420	580	740	Atmos. pressure (#9)
261	-	1B4	421	581	741	Exit PT on R20 at 7.104
262	-	2B4	422	582	742	Stator LE PT at 7.000
263	-	3B4	423	583	743	Exit PT on R4 at 7.104
264	-	4B4	424	584	744	Exit PT on R8 at 7.104
265	-	5B4	425	585	745	Exit PT on R12 at 7.104
266	-	6B4	426	586	746	Exit PT on R16 at 7.104
267	-	7B4	427	587	747	ID PS at -0.900 (#4)
268	-	8B4	428	588	748	OD PS at -5.784
269	-	9B4	429	589	749	Venturi inlet (#2)
270	-	10B4	430	590	750	Atmos. pressure (#10)
271	-	1B5	431	591	751	Exit PT on R20 at 7.437
272	-	2B5	432	592	752	Stator LE PT at 6.625
273	-	3B5	433	593	753	Exit PT on R4 at 7.437
274	-	4B5	434	594	754	Exit PT on R8 at 7.437
275	-	5B5	435	595	755	Exit PT on R12 at 7.437
276	-	6B5	436	596	756	Exit PT on R16 at 7.437
277	-	7B5	437	597	757	ID PS at -1.650 (#1)
278	-	8B5	438	598	758	OD PS at -8.400 (#1)
279	-	9B5	439	599	759	Atmos. pressure (#5)
280	-	10B5	440	600	760	Atmos. pressure (#11)
281	-	1B6	441	601	761	Exit PT on R20 at 7.756
282	-	2B6	442	602	762	Stator LE PT at 6.250
283	-	3B6	443	603	763	Exit PT on R4 at 7.756
284	-	4B6	444	604	764	Exit PT on R8 at 7.756
285	-	5B6	445	605	765	Exit PT on R12 at 7.756
286	-	6B6	446	606	766	Exit PT on R16 at 7.756
287	-	7B6	447	607	767	ID PS at -1.650 (#2)
288	-	8B6	448	608	768	OD PS at -8.400 (#2)
289	-	9B6	449	609	769	Atmos. Pressure (#2)
290	-	10B6	450	610	770	Atmos. pressure (#12)
291	-	1B7	451	611	771	Exit PT on R20 at 8.062
292	-	2B7	452	612	772	Stator LE PT at 5.875
293	-	3B7	453	613	773	Exit PT on R4 at 8.062
294	-	4B7	454	614	774	Exit PT on R8 at 8.062
295	-	5B7	455	615	775	Exit PT on R12 at 8.062
296	-	6B7	456	616	776	Exit PT on R16 at 8.062
297	-	7B7	457	617	777	ID PS at -1.650 (#3)
298	-	8B7	458	618	778	OD PS at -8.400 (#3)

TABLE 1 Continued

PBS #1 - INSTRUMENTATION DETAILS

INST. CHAN.	THERMO. GROUP	ZOC ID.	CAL.1 CHAN.	CAL.2 CHAN.	CAL.3 CHAN.	INSTRUMENTATION MEASUREMENT LOCATION
299	-	9B7	459	619	779	Venturi throat (#4)
300	-	10B7	460	620	780	Atmos. pressure (#13)
301	-	1B8	461	621	781	Exit PT on R20 at 8.356
302	-	2B8	462	622	782	Stator LE PT at 5.500
303	-	3B8	463	623	783	Exit PT on R4 at 8.356
304	-	4B8	464	624	784	Exit PT on R8 at 8.356
305	-	5B8	465	625	785	Exit PT on R12 at 8.356
306	-	6B8	466	626	786	Exit PT on R16 at 8.356
307	-	7B8	467	627	787	ID PS at -1.650 (#4)
308	-	8B8	468	628	788	OD PS at -8.400 (#4)
309	-	9B8	469	629	789	Venturi throat (#6)
310	-	10B8	470	630	790	Atmos. pressure (#14)

NOTE: The following instrumentation channels were erroneous and interchanged as follows:

ERRONEOUS CHANNEL	REPLACEMENT CHANNEL	TEST POINT NOS. AFFECTED
200	210	870828001-56,870901001-53
209	289	870828001-56,870901001-53
219	169	870828001-56,870901001-53
262	252	870828001-56,870901001-53
276	207	870828001-56,870901001-53
280	290	870828001-56,870901001-53
282	292	870901001-53
286	296	870828001-56
299	249	870828001-56,870901001-53
306	296	870828001-56

TABLE 2

ACROSS-BLADE ANALYSIS COMPUTING STATION GEOMETRY DEFINITION

STATION	1234567890123
ROTOR EXIT	......X......
STATOR OR IGV EXIT	........X....
INSIDE STATIONS	.....
COMPUTE STATION Z,R	.....XXXX....
APPLY AT -VT OPTION	......X......
APPLY AT -PT OPTION	......X......
FLOW (OR BLEED)	......X......
NAME (STATION)	XXXXXXXXXXXXX
NO BLADES	......X.X....
PEAK PRESSURE-PT	......X......
TOTAL PRESSURE-PT	........X....
TOTAL PRESSURE-VT	........X....
TOTAL TEMPERATURE	......X......
USE AIRFOIL	......X.X....
USE CASE SEGMENT	......X.X....
USE HUB SEGMENT	......X.X....

TABLE 3

ACROSS-BLADE ANALYSIS COMPUTING STATION INPUT DATA DEFINITION

STAT -ION	BLOCKAGE WILL BE OBTAINED FROM	--PRESSURE-- CASE STATIC	PITCH STATIC	PITCH BLOCK -AGE	HUB BK OVER PITCH	PITCH ADD. DEV.
1	INPUT			0.000	1.000	
2	INPUT			0.000	1.000	
3	INPUT			0.000	1.000	
4	INPUT			0.000	1.000	
5	INPUT			0.000	1.000	
6	CASE STATIC	10.471			1.000	
7	CASE STATIC	23.099			1.000	
8	INTERPOLATION				1.000	
9	CASE STATIC	24.222			1.000	
10	CASE STATIC	24.402			1.000	
11	CASE STATIC	24.160			1.000	
12	CASE STATIC	23.917			1.000	
13	CASE STATIC	23.674			1.000	

TABLE 4

THRU-BLADE ANALYSIS COMPUTING STATION GEOMETRY DEFINITION

STATION	12345678901234567
ROTOR EXIT	..........X.....
STATOR OR IGV EXIT	............X....
INSIDE STATIONS	......XXXX.....
COMPUTE STATION Z,R	.....XXXXXXXX....
APPLY AT -VT OPTION	..........X.....
APPLY AT -PT OPTION	..........X.....
FLOW (OR BLEED)	..........X.....
NAME (STATION)	XXXXXX....XXXXXXX
NO BLADES	..........X.X....
PEAK PRESSURE-PT	..........X.....
TOTAL PRESSURE-PT	............X....
TOTAL PRESSURE-VT	............X....
TOTAL TEMPERATURE	..........X.....
USE AIRFOIL	..........X.X....
USE CASE SEGMENT	..........X.X....
USE HUB SEGMENT	..........X.X....

TABLE 5

THRU-BLADE ANALYSIS COMPUTING STATION INPUT DATA DEFINITION

STAT -ION	BLOCKAGE WILL BE OBTAINED FROM	--PRESSURE-- CASE STATIC	PITCH STATIC	PITCH BLOCK -AGE	HUB BK OVER PITCH	PITCH ADD. DEV.
1	INPUT			0.000	1.000	
2	INPUT			0.000	1.000	
3	INPUT			0.000	1.000	
4	INPUT			0.000	1.000	
5	INPUT			0.000	1.000	
6	CASE STATIC	10.471			1.000	
7	CASE STATIC	14.747			1.000	
8	CASE STATIC	17.135			1.000	
9	INTERPOLATION				1.000	
10	INTERPOLATION				1.000	
11	CASE STATIC	23.099			1.000	
12	INTERPOLATION				1.000	
13	CASE STATIC	24.222			1.000	
14	CASE STATIC	24.402			1.000	
15	CASE STATIC	24.160			1.000	
16	CASE STATIC	23.917			1.000	
17	CASE STATIC	23.674			1.000	

TABLE 6

MASS-AVERAGED PBS #1 ROTOR AND STAGE PERFORMANCE

			ROTOR		STAGE	
TEST ID #	% SPD	FLOW (LB/SEC)	PRES RAT	EFFEN	PRES RAT	EFFEN
870828002	100	60.91	1.951	89.30	1.883	84.20
870901001	"	60.78	2.008	89.50	1.948	85.18
870901003	"	60.45	2.067	91.00	1.995	86.12
870901004	"	60.07	2.103	91.80	2.022	86.47
870901005	"	59.52	2.144	92.30	2.048	86.18
870901006	"	58.05	2.153	90.40	2.044	83.68
870901007	"	56.79	2.140	89.00	2.032	82.26
870828008	95	59.42	1.851	91.10	1.801	86.68
870828011	"	59.33	1.887	91.80	1.836	87.52
870901010	"	59.02	1.922	92.30	1.872	88.28
870901012	"	58.57	1.962	92.80	1.908	88.60
870901013	"	56.30	1.999	91.60	1.927	86.28
870901014	"	54.84	2.009	90.40	1.926	84.40
870901015	"	53.71	2.011	89.40	1.920	82.90
870828015	90	57.52	1.771	93.20	1.735	89.51
870828017	"	57.16	1.793	93.80	1.754	90.02
870828020	"	56.21	1.818	93.70	1.781	90.27
870901020	"	55.39	1.843	93.40	1.800	89.42
870901021	"	54.49	1.852	92.90	1.803	88.43
870901023	"	52.71	1.875	91.60	1.812	86.20
870901024	"	51.13	1.884	90.40	1.807	83.91
870828022	80	50.23	1.588	94.10	1.562	90.46
870828026	"	48.80	1.607	93.40	1.578	89.50
870901025	"	47.92	1.619	92.50	1.585	88.16
870901027	"	46.58	1.631	91.80	1.590	86.70
870901028	"	45.58	1.638	90.80	1.592	85.11
870901029	"	44.35	1.640	89.80	1.587	83.48
870901030	"	43.46	1.633	88.30	1.578	81.71
870828029	70	42.59	1.425	92.70	1.405	88.65
870828032	"	41.67	1.436	92.20	1.413	87.91
870828034	"	40.85	1.442	91.60	1.418	87.18
870828035	"	40.49	1.445	91.20	1.420	86.62
870901033	"	39.47	1.455	90.20	1.426	85.17
870901034	"	38.68	1.458	89.50	1.427	84.16
870901035	"	38.12	1.456	88.80	1.424	83.12
870828036	60	35.85	1.299	92.70	1.284	88.31
870828039	"	35.03	1.306	91.90	1.289	87.43
870828041	"	34.39	1.309	91.40	1.292	86.71
870901037	"	33.49	1.315	90.00	1.295	84.89
870910039	"	32.22	1.318	88.80	1.296	83.10
870901040	"	31.44	1.318	87.60	1.294	81.64
870901041	"	30.92	1.317	87.10	1.292	80.64

TABLE 6 Continued

MASS-AVERAGED PBS #1 ROTOR AND STAGE PERFORMANCE

			ROTOR		STAGE	
TEST ID #	% SPD	FLOW (LB/SEC)	PRES RAT	EFFEN	PRES RAT	EFFEN
870828043	50	29.39	1.201	92.40	1.191	88.06
870828046	"	28.75	1.205	91.60	1.194	86.99
870828049	"	28.00	1.209	90.60	1.197	85.57
870901044	"	27.22	1.212	89.40	1.198	83.90
870901045	"	26.62	1.214	88.40	1.199	82.55
870901046	"	26.04	1.215	88.20	1.198	81.88
870901047	"	25.29	1.215	86.60	1.196	79.50
870828050	40	23.29	1.124	90.60	1.117	86.09
870828053	"	22.80	1.127	90.30	1.121	85.64
870901048	"	21.86	1.130	89.40	1.122	84.40
870901050	"	21.42	1.132	87.70	1.123	82.28
870901051	"	21.23	1.132	86.40	1.123	80.93
870901052	"	20.83	1.134	86.10	1.124	80.10
870901053	"	20.26	1.135	86.50	1.123	79.51

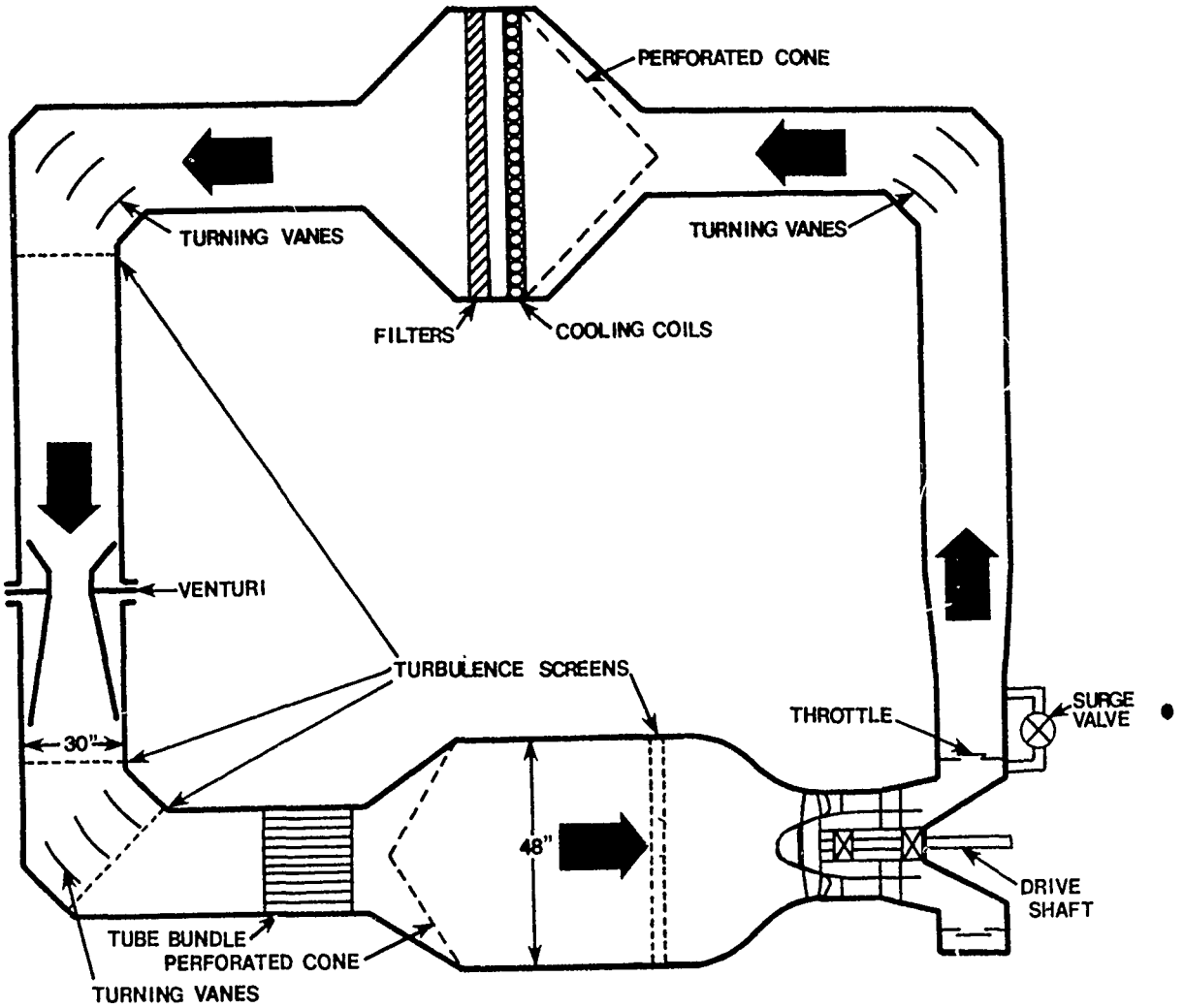
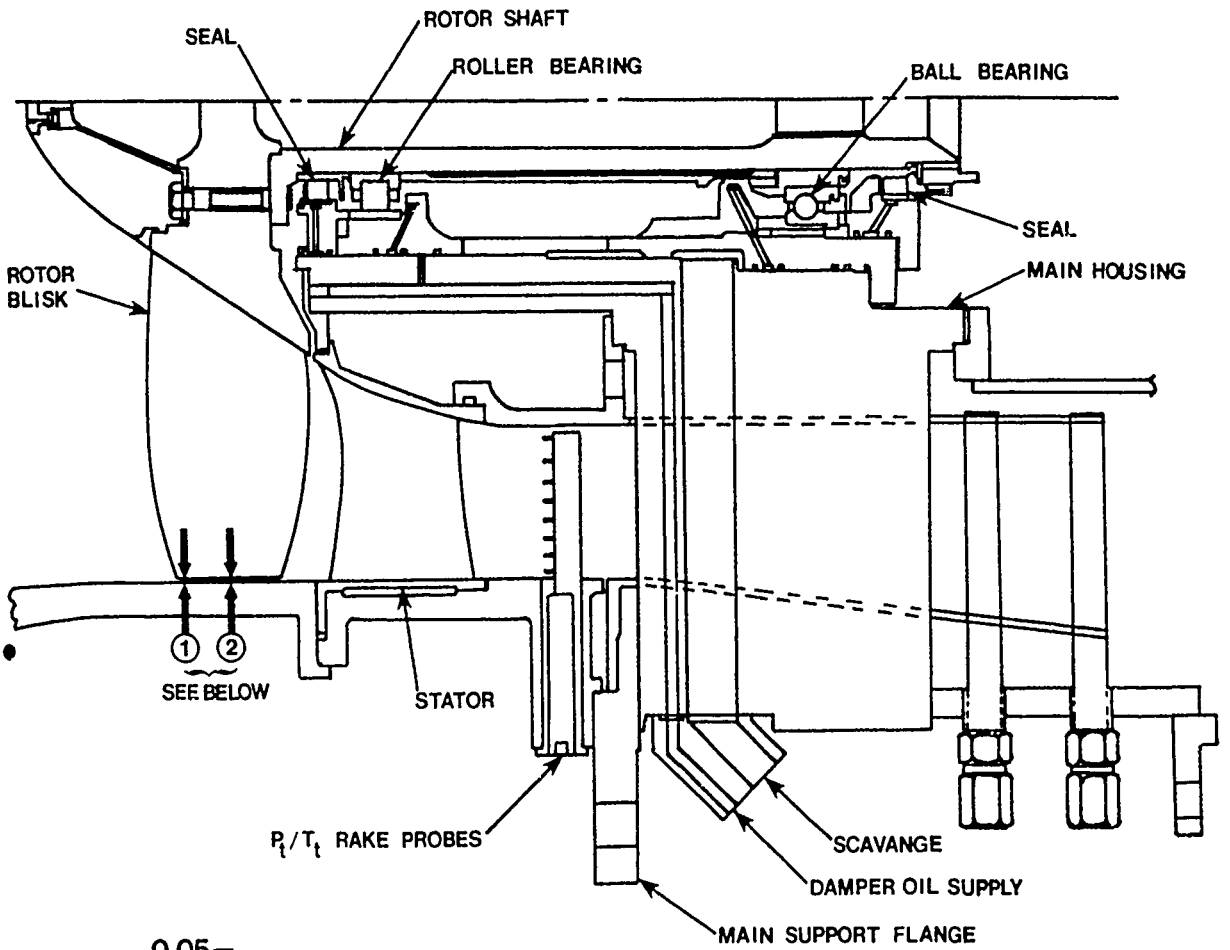


Figure 1. Schematic of 2000 HP Compressor Test Facility



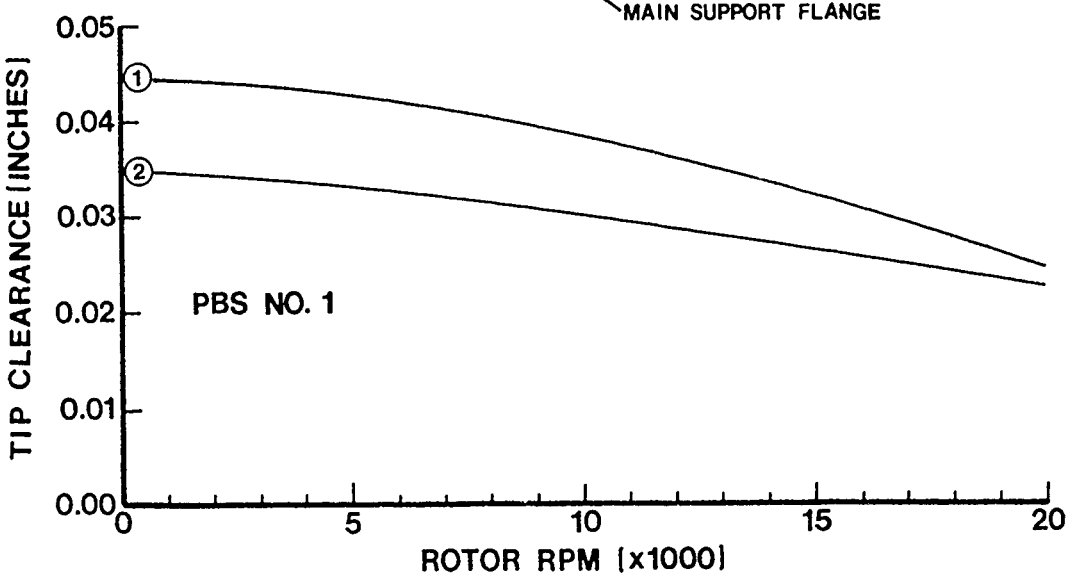


Figure 2. Cross-section of the Research Compressor

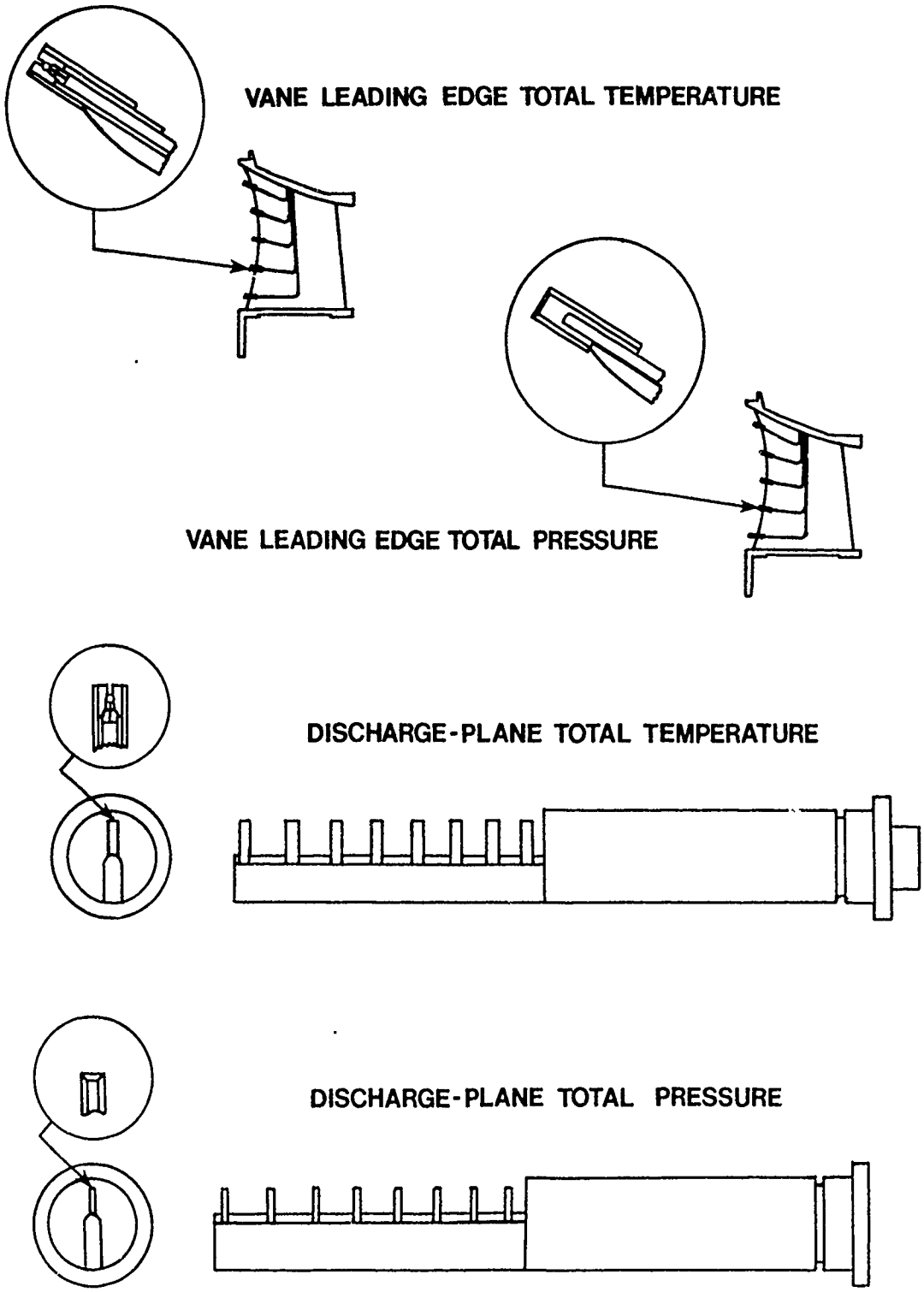


Figure 3. Vane Leading Edge and Discharge-plane Rake Instrumentation

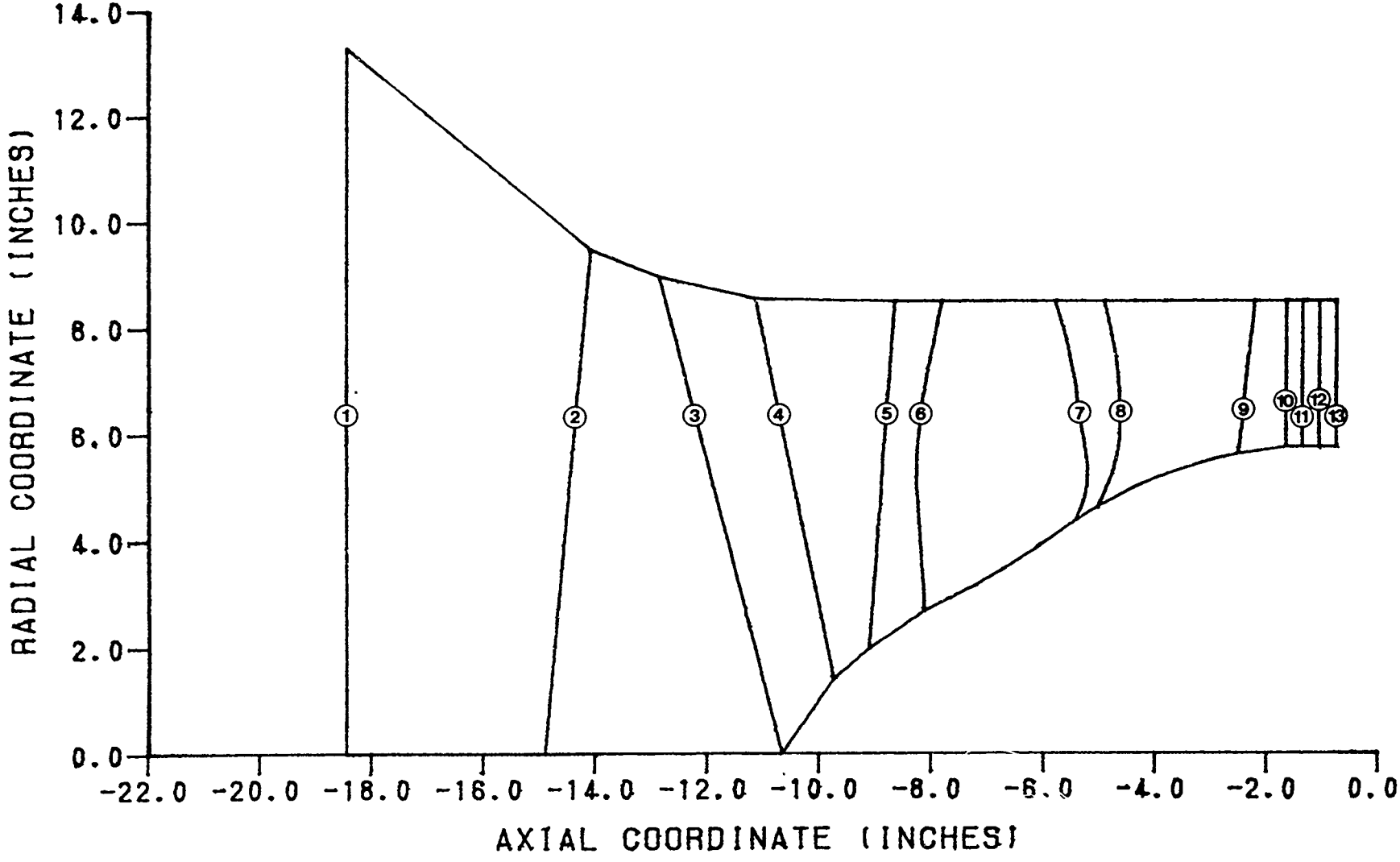


Figure 4. Across-blade Analysis Computing Station Geometry

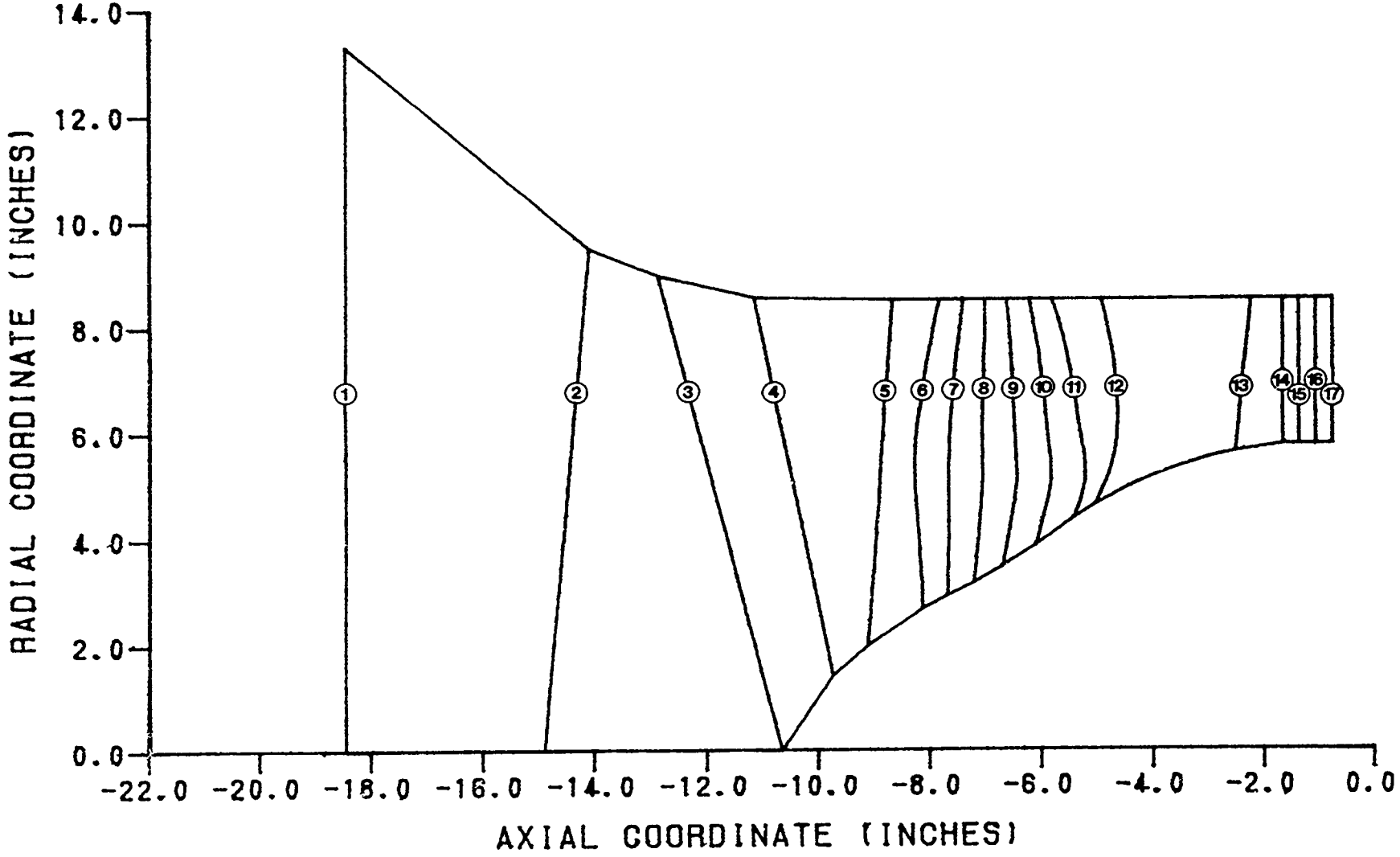


Figure 5. Thru-blade Analysis Computing Station Geometry

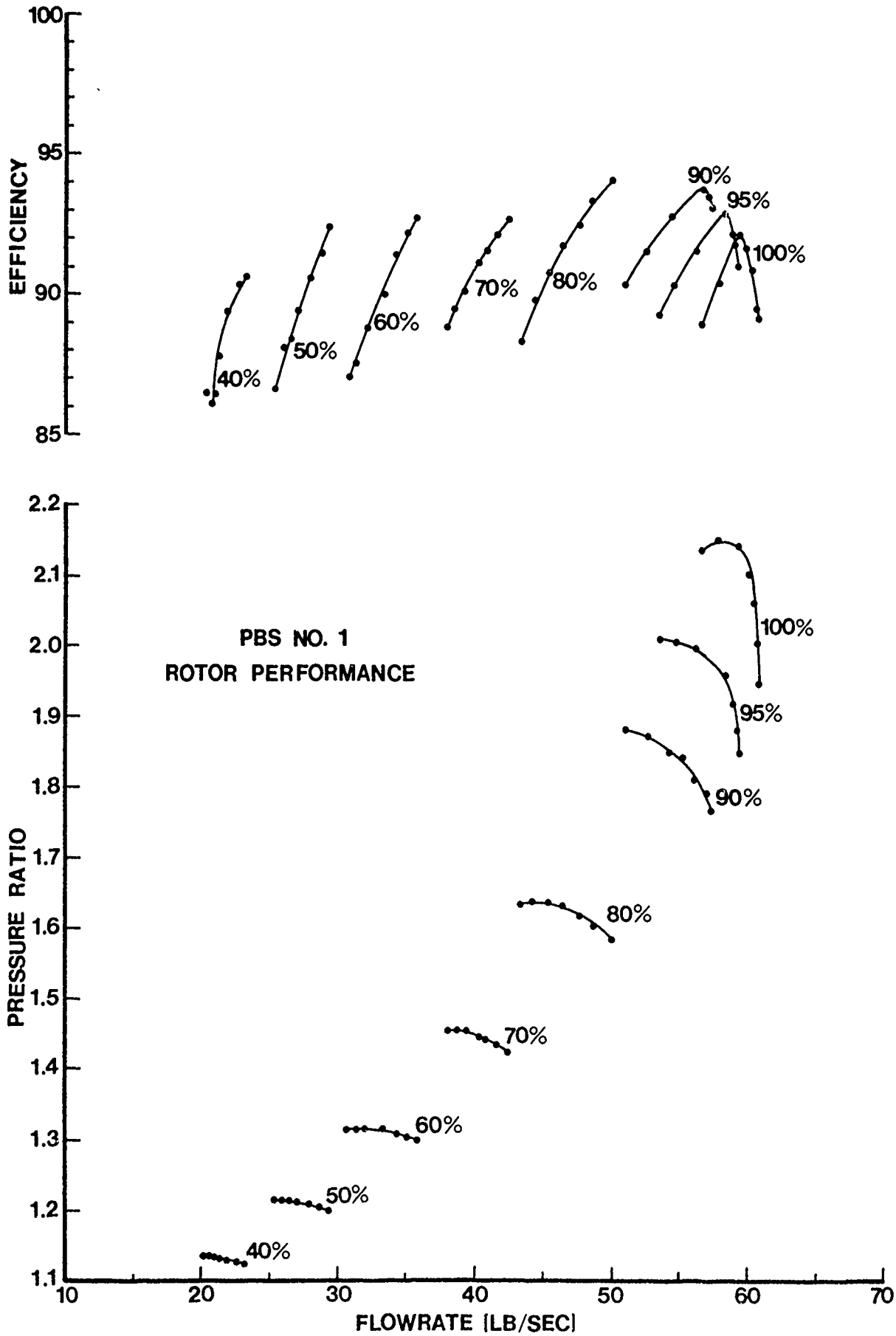


Figure 6. PBS Configuration #1 Rotor Performance

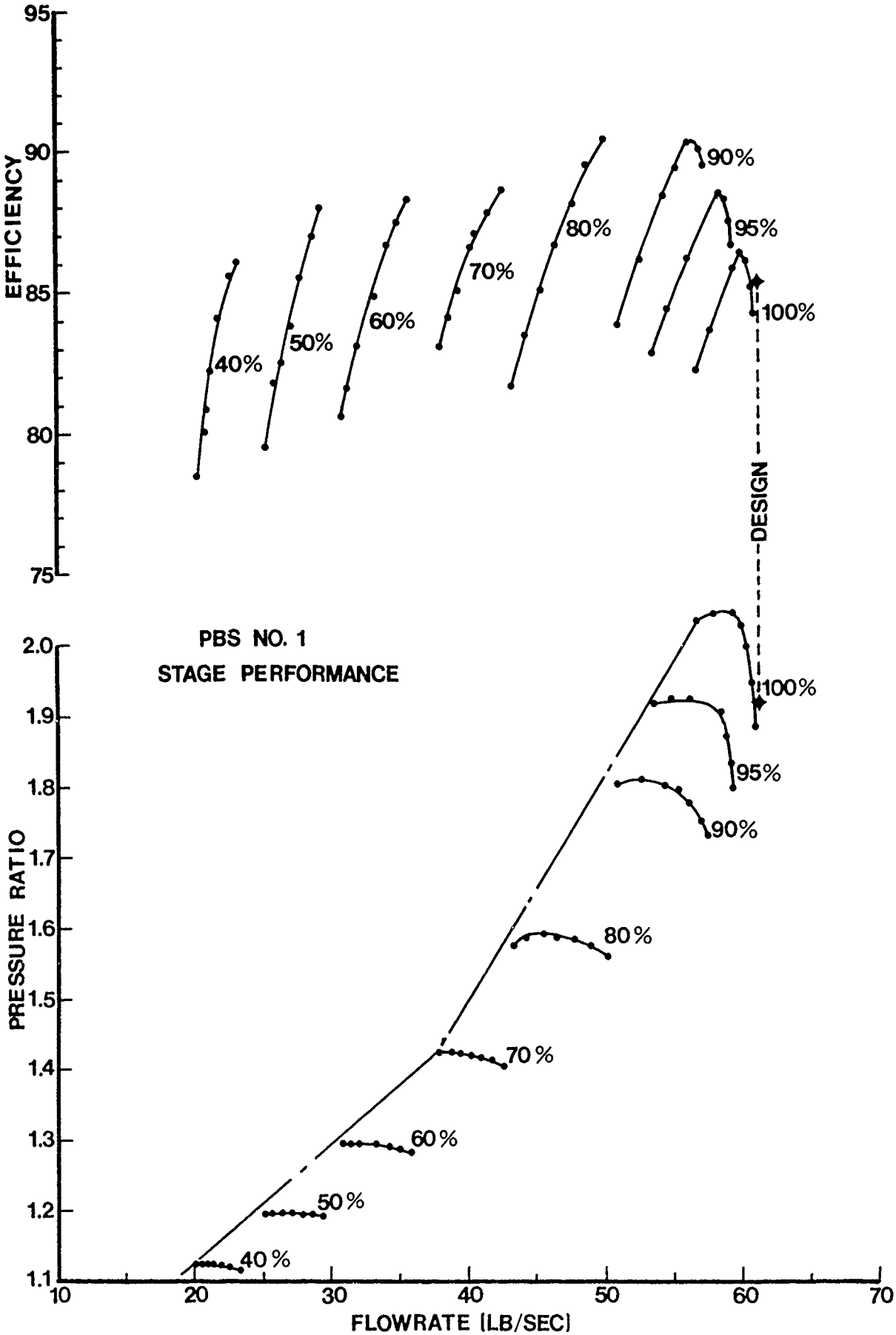


Figure 7. PBS Configuration #1 Stage Performance

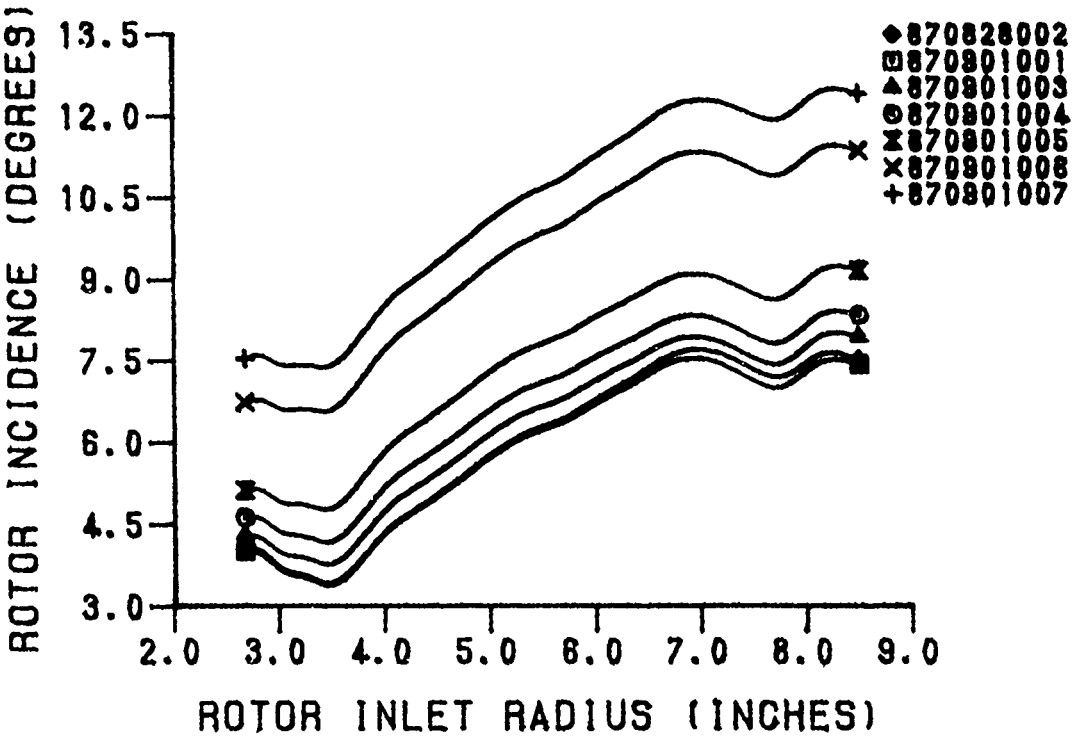


Figure 8. Rotor Incidence Angle (100% N)

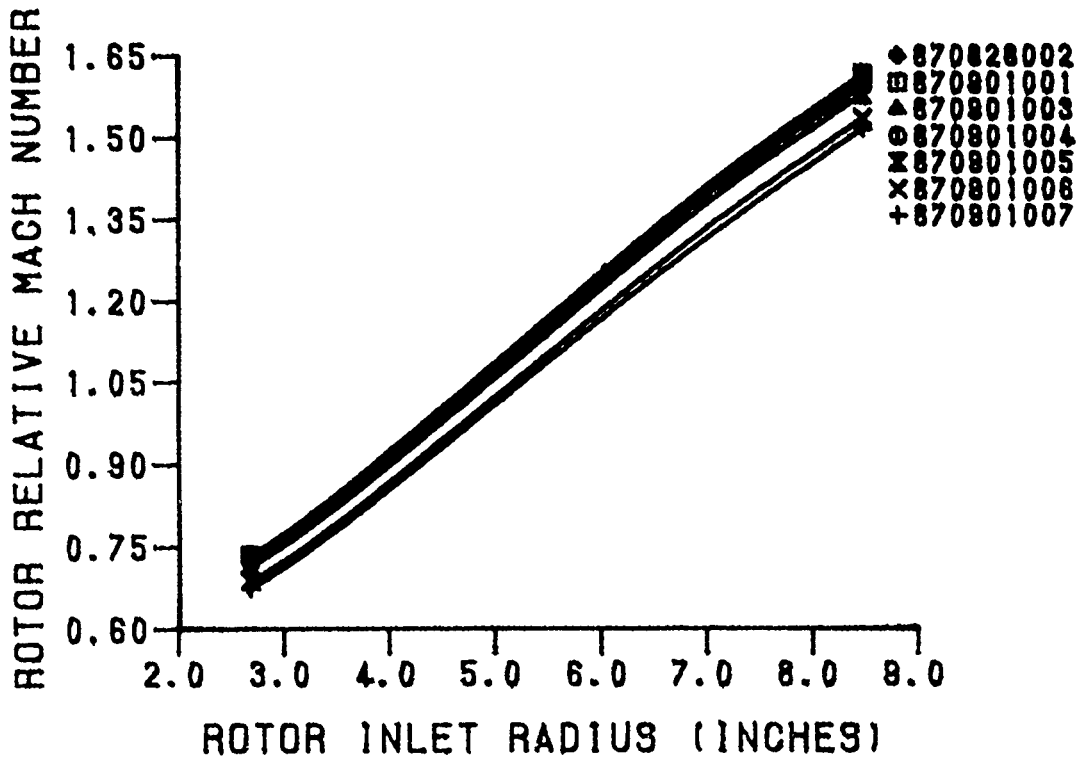


Figure 9. Rotor Relative Inlet Mach Number (100% N)

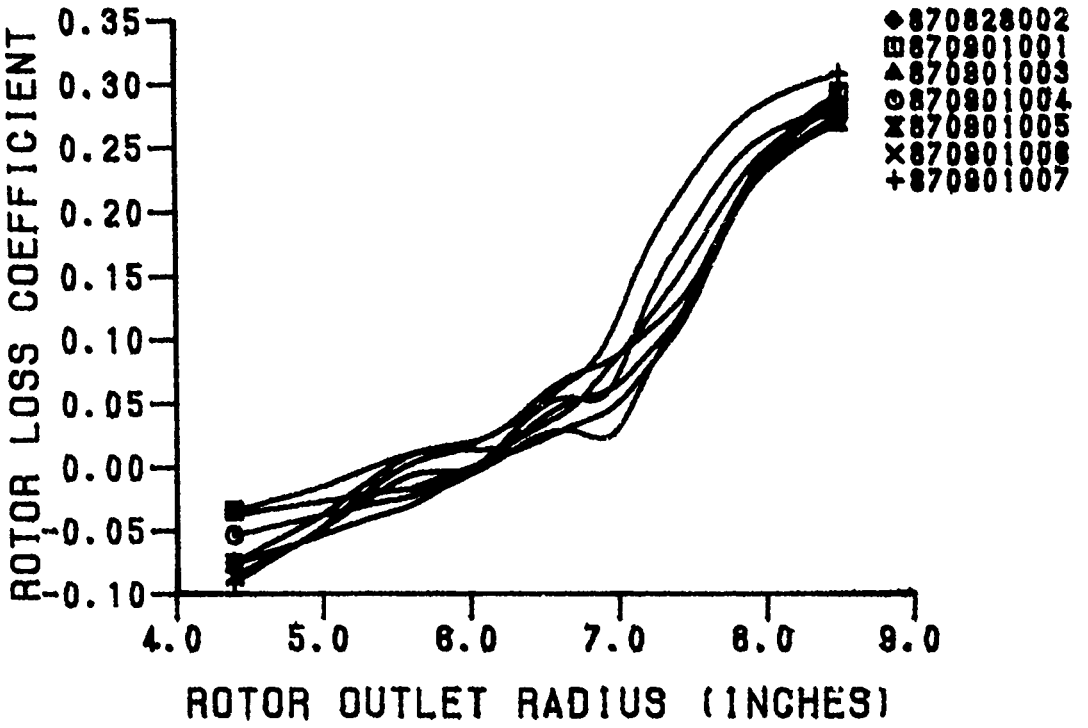


Figure 10. Rotor Loss Coefficient (100% N)

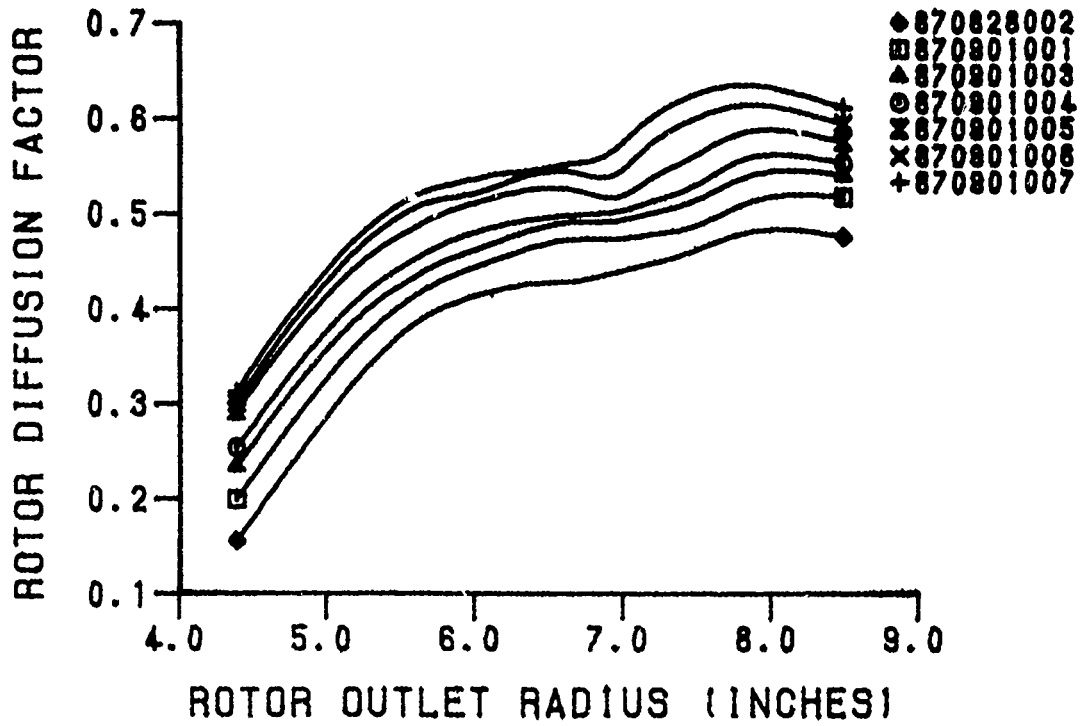


Figure 11. Rotor Diffusion Factor (100% N)

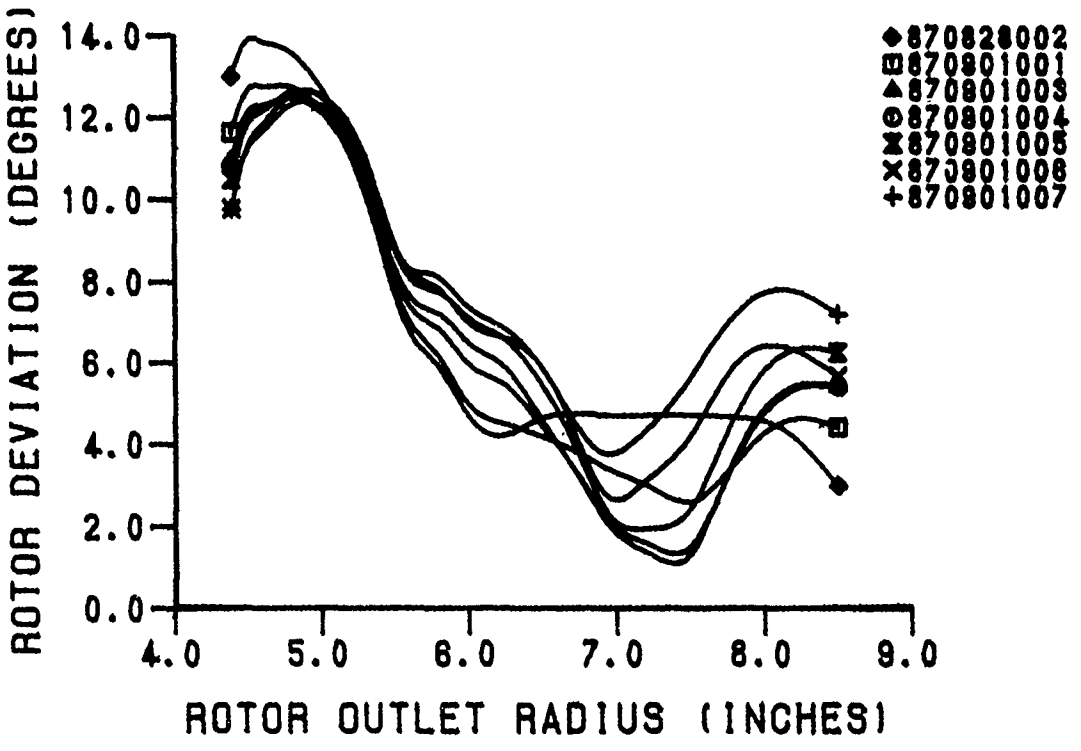


Figure 12. Rotor Deviation Angle (100% N)

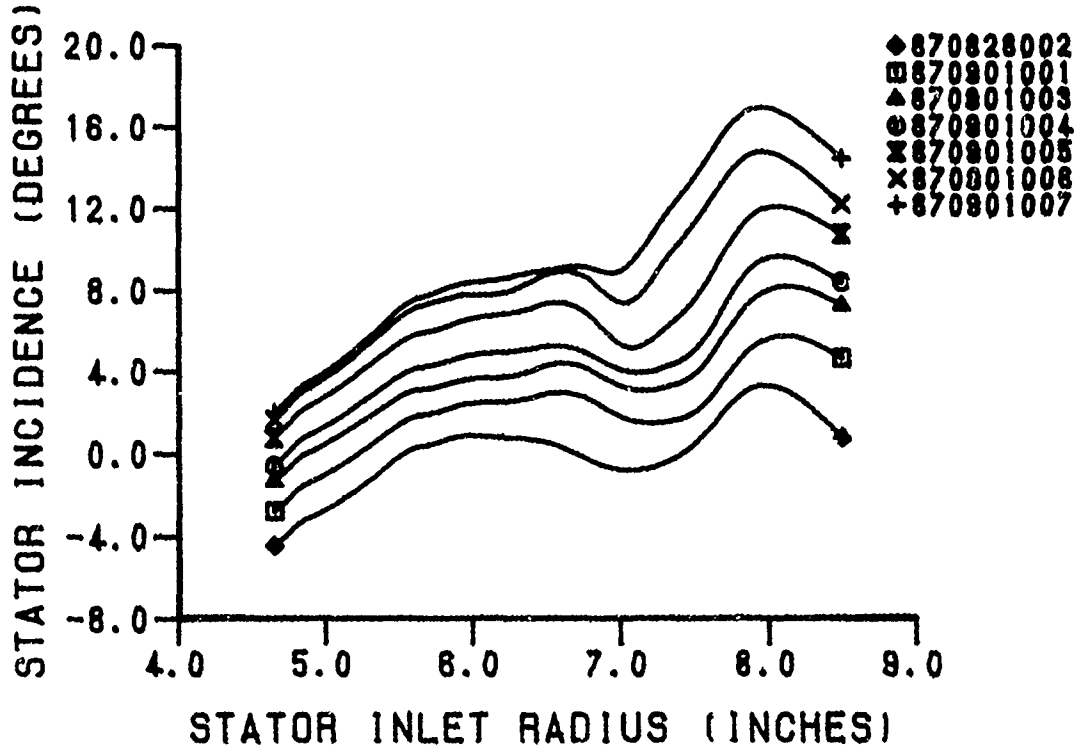


Figure 13. Stator Incidence Angle (100% N)

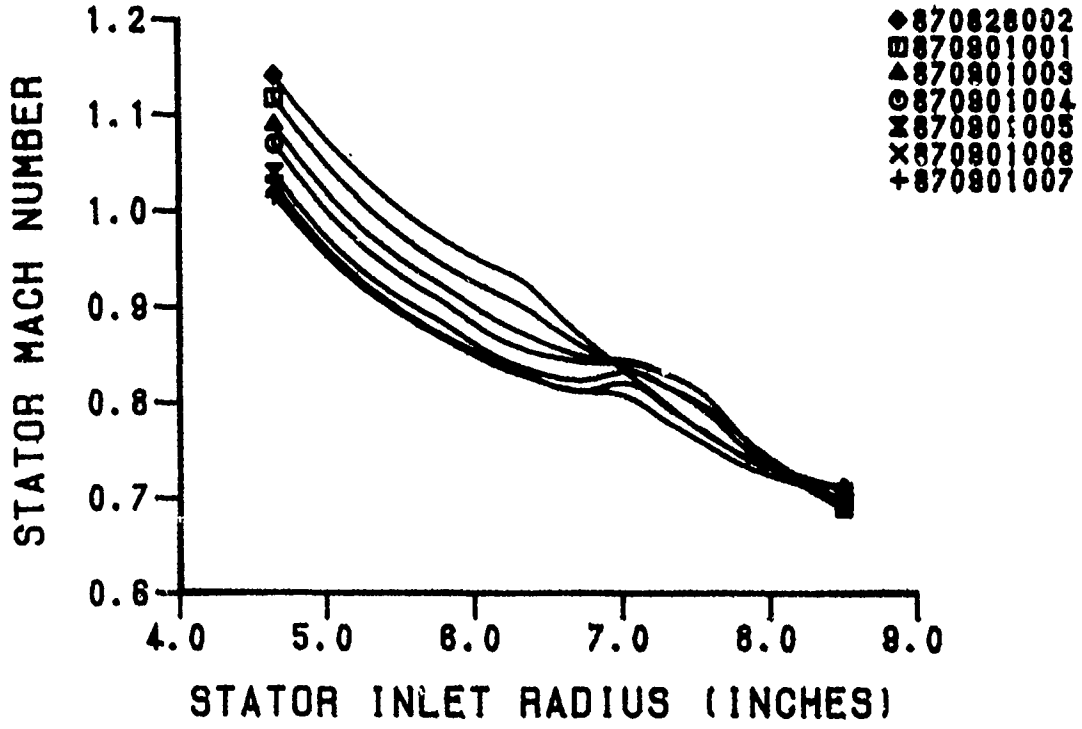


Figure 14. Stator Absolute Inlet Mach Number (100% N)

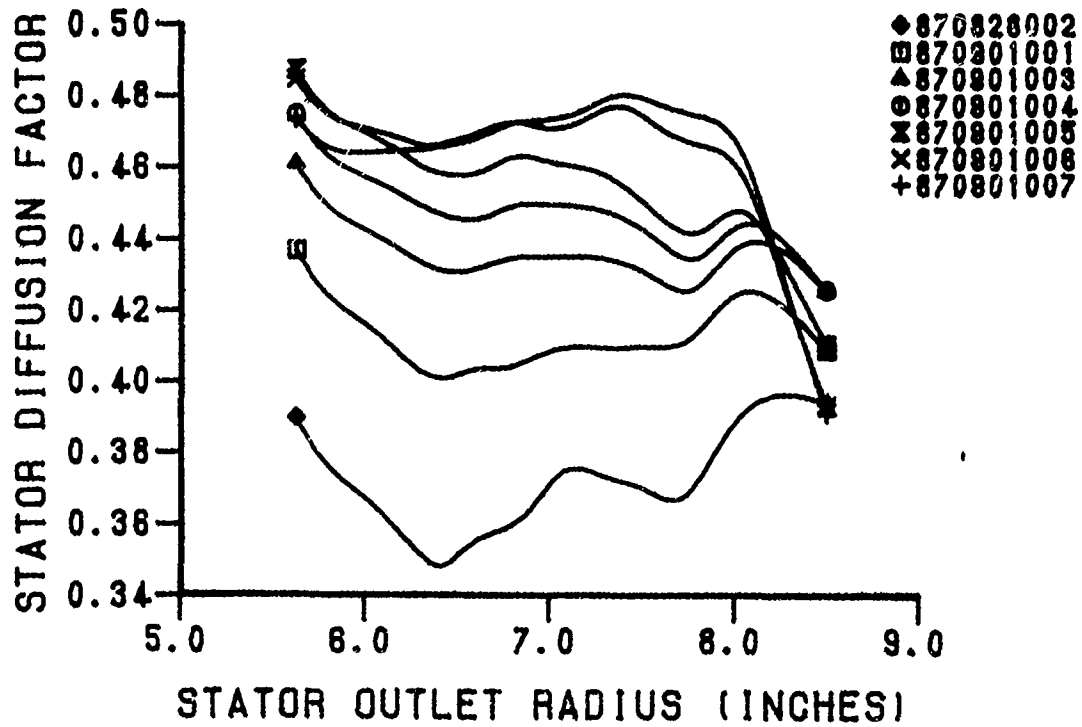


Figure 15. Stator Diffusion Factor (100% N)

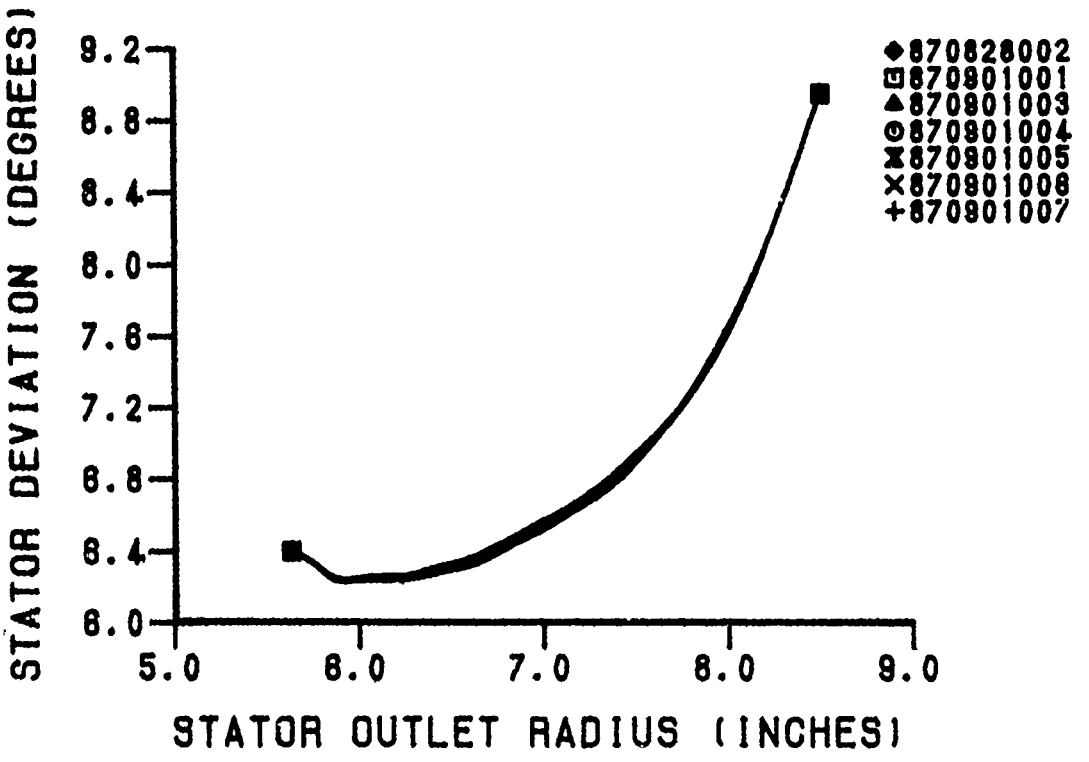


Figure 16. Stator Deviation Angle (100% N)

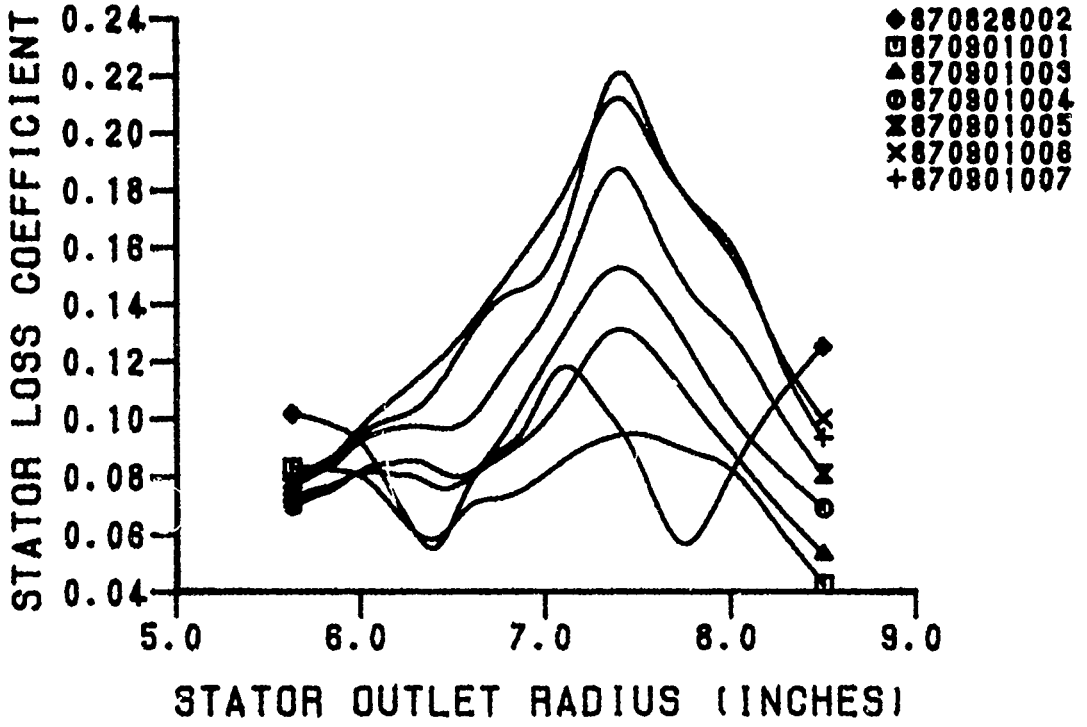


Figure 17. Stator Loss Coefficient (100% N)

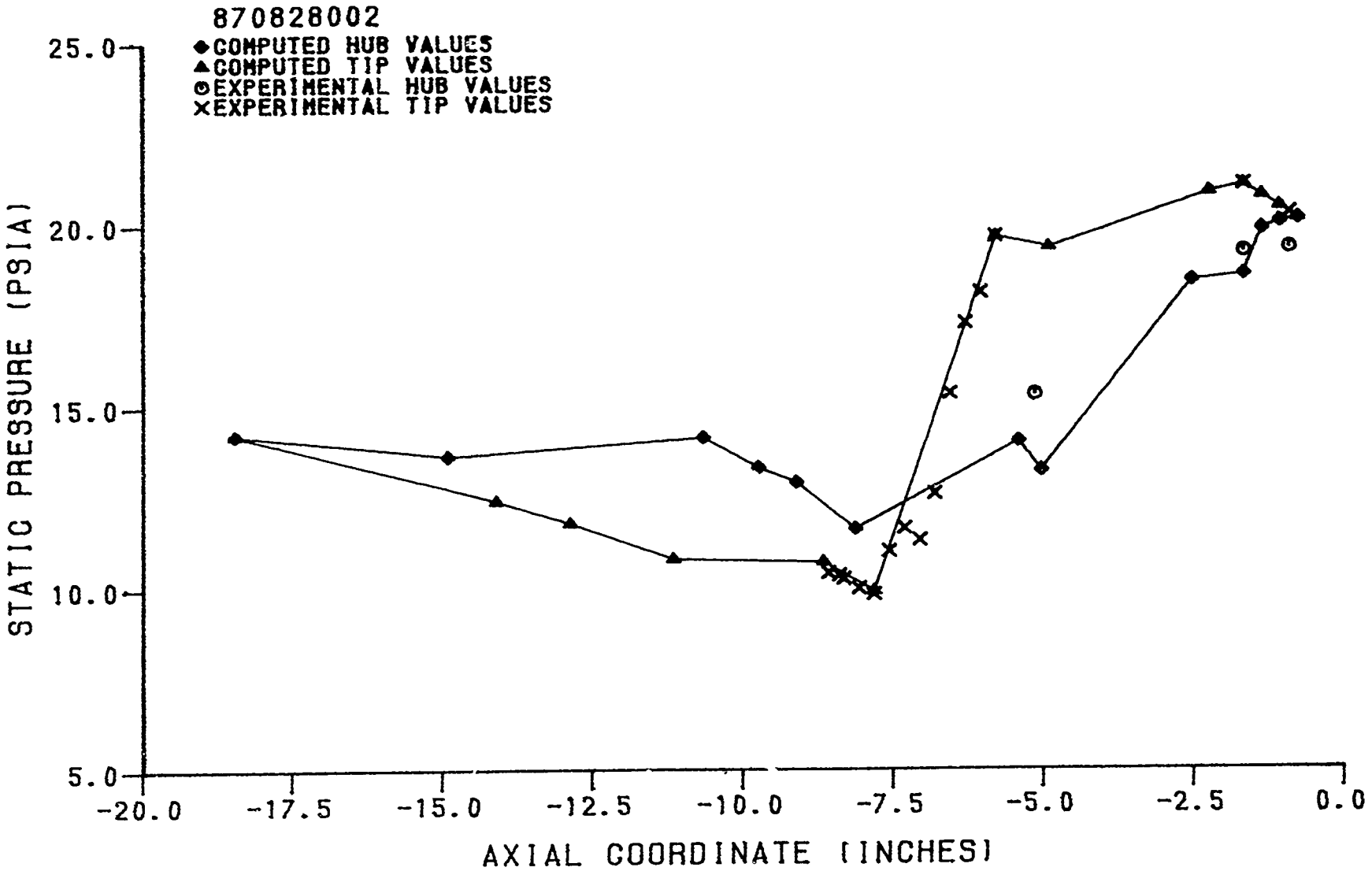


Figure 18. Static Pressure Distribution (870828002)

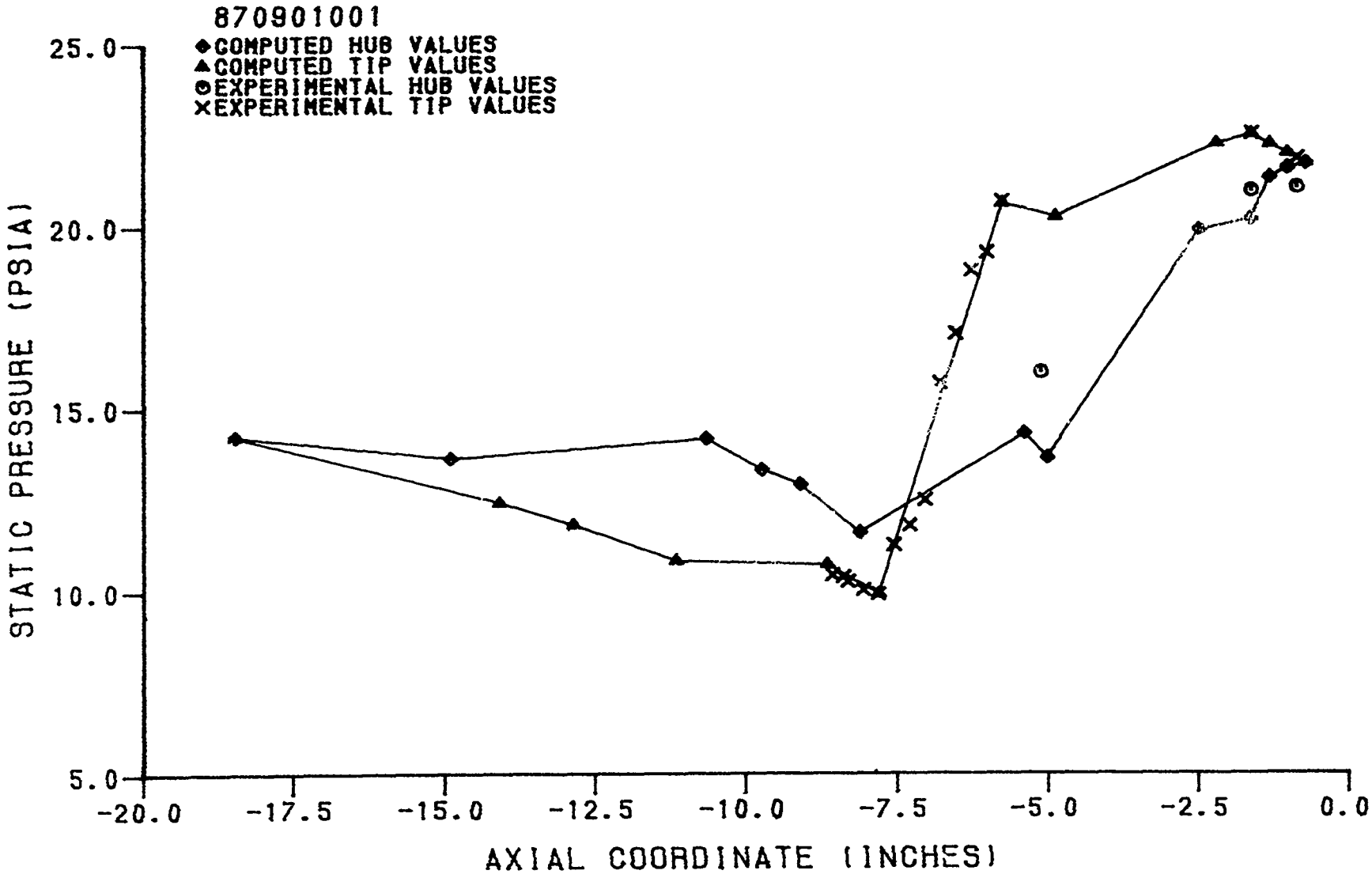


Figure 19. Static Pressure Distribution (870901001)

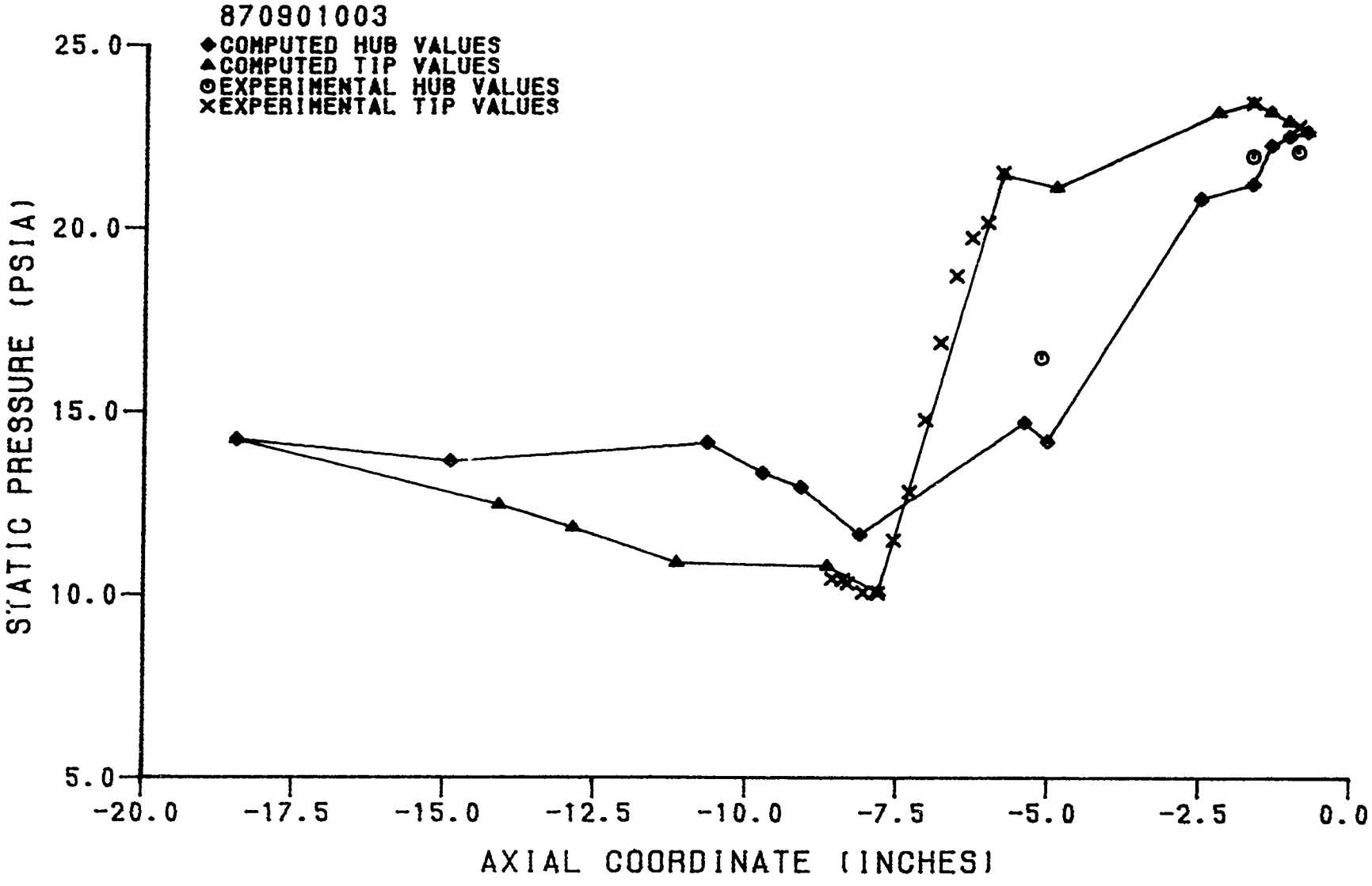


Figure 20. Static Pressure Distribution (870901003)

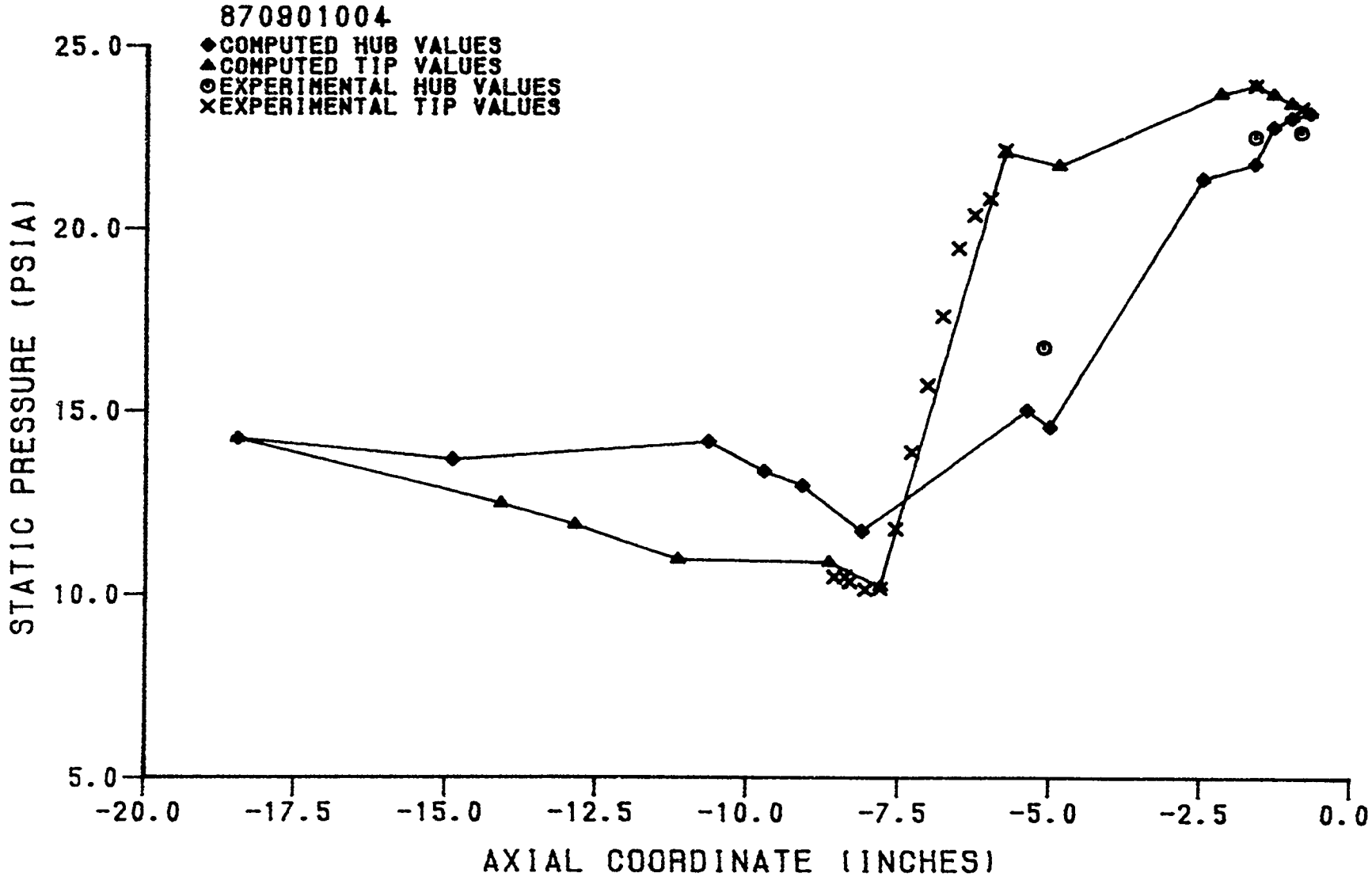


Figure 21. Static Pressure Distribution (870910004)

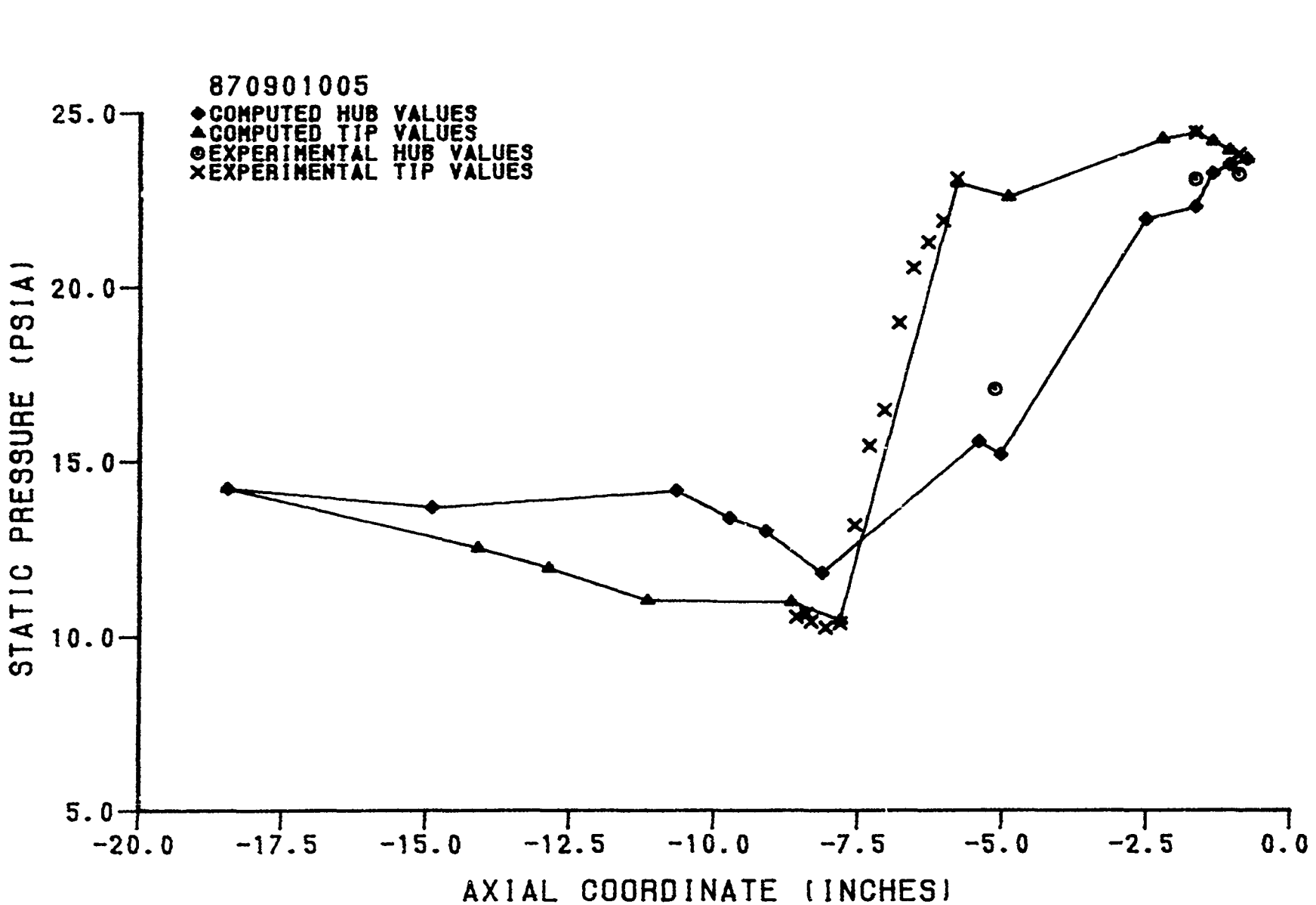


Figure 22. Static Pressure Distribution (870901005)

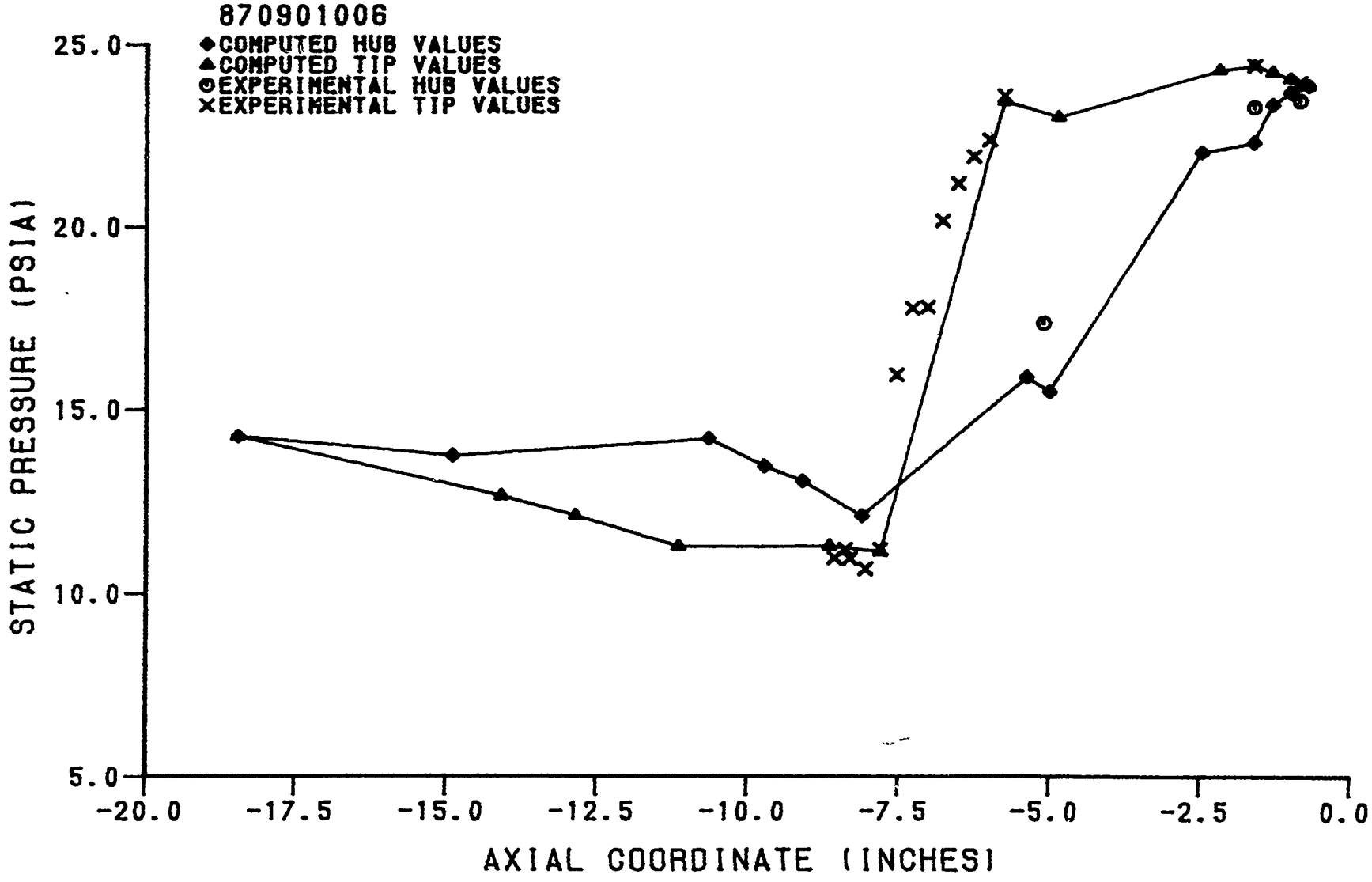


Figure 23. Static Pressure Distribution (870901006)

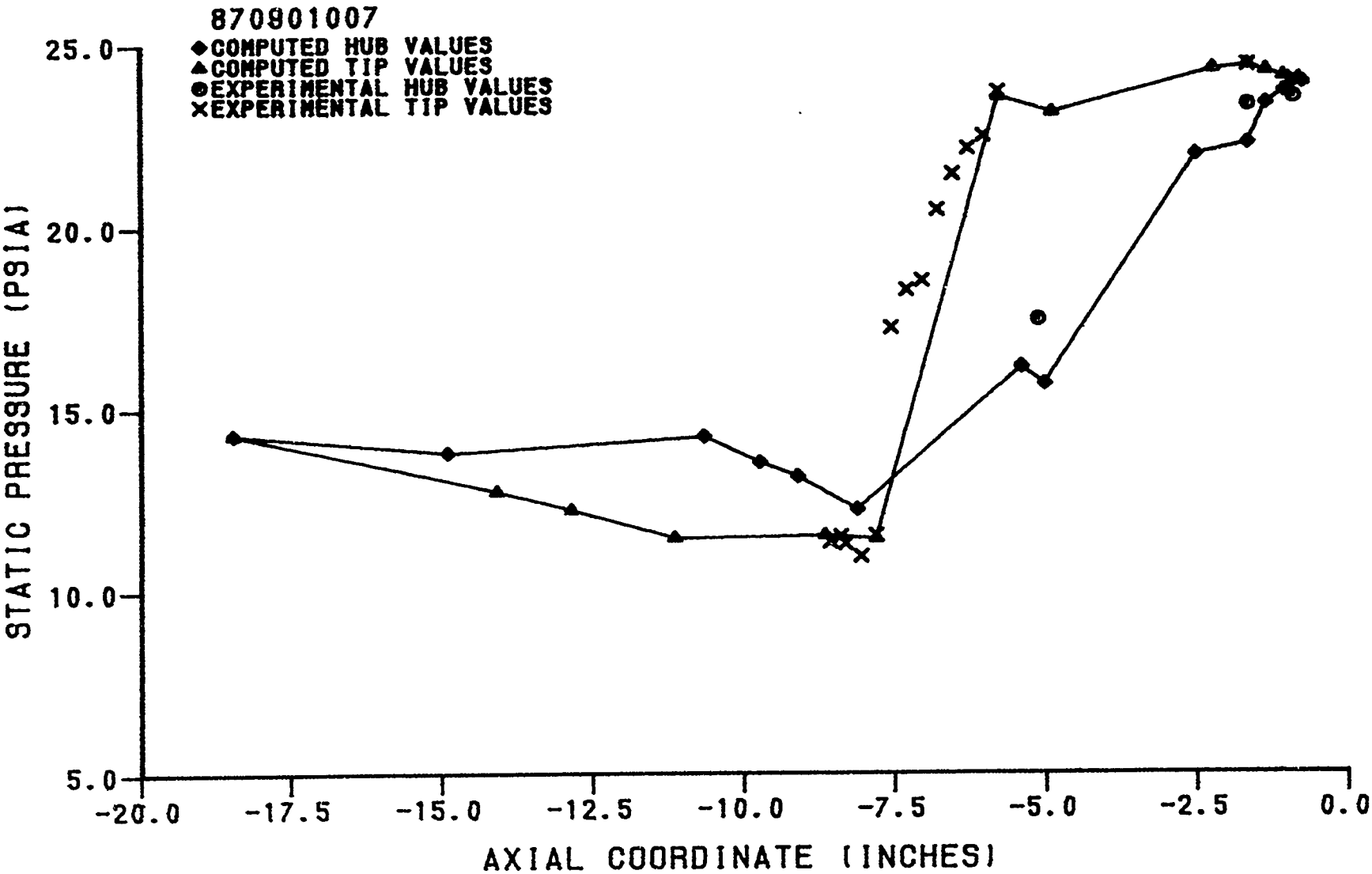


Figure 24. Static Pressure Distribution (870901007)

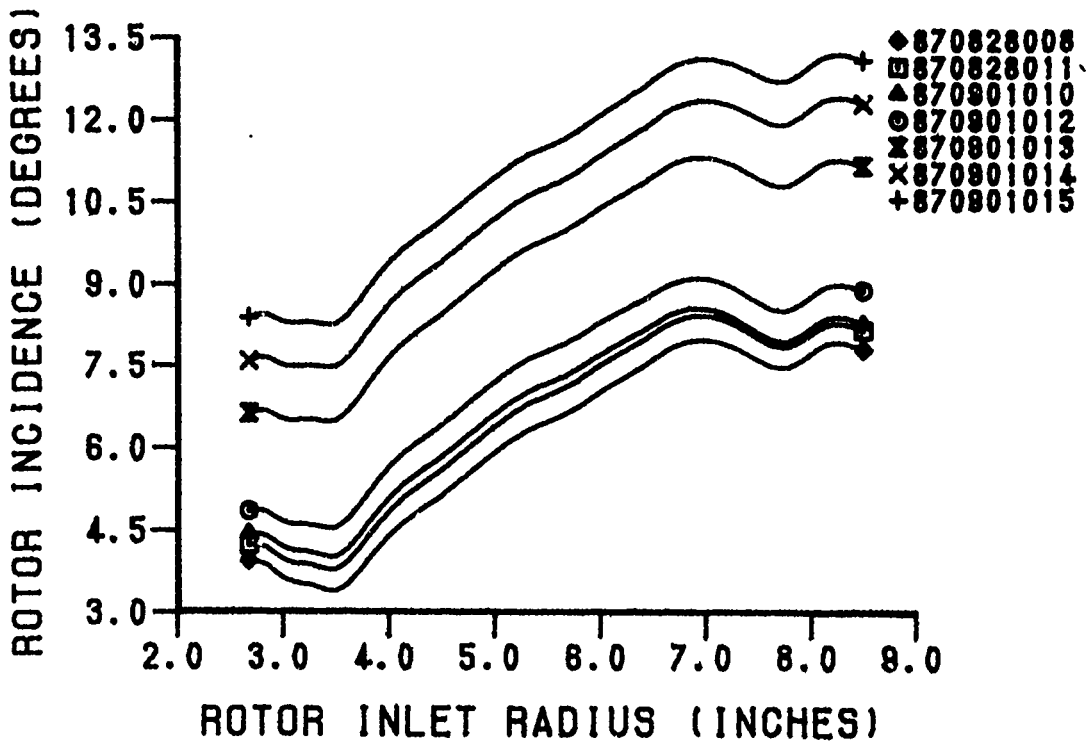


Figure 25. Rotor Incidence Angle (95% N)

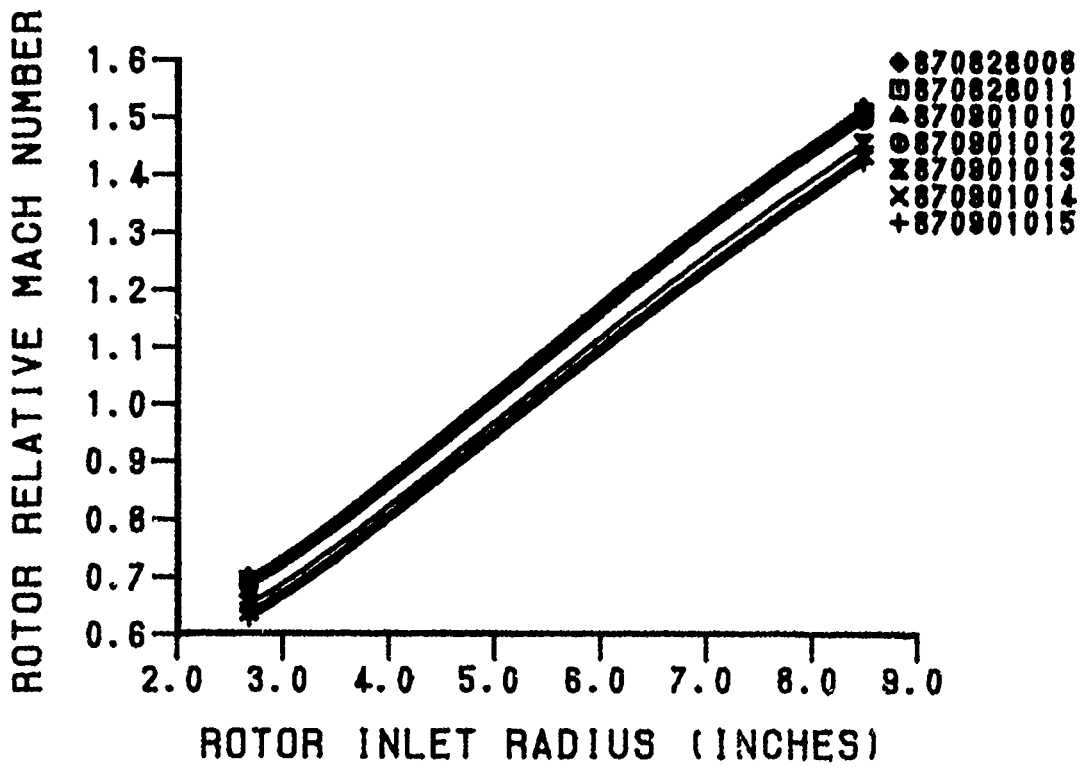


Figure 26. Rotor Relative Inlet Mach Number (95% N)

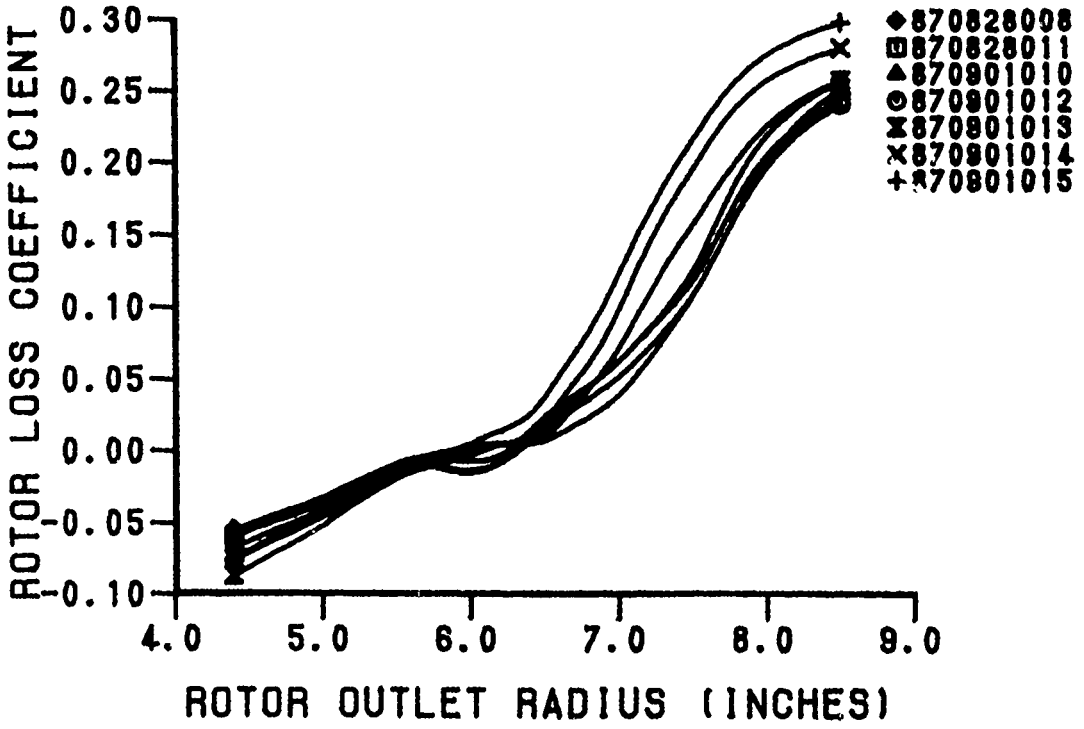


Figure 27. Rotor Loss Coefficient (95% N)

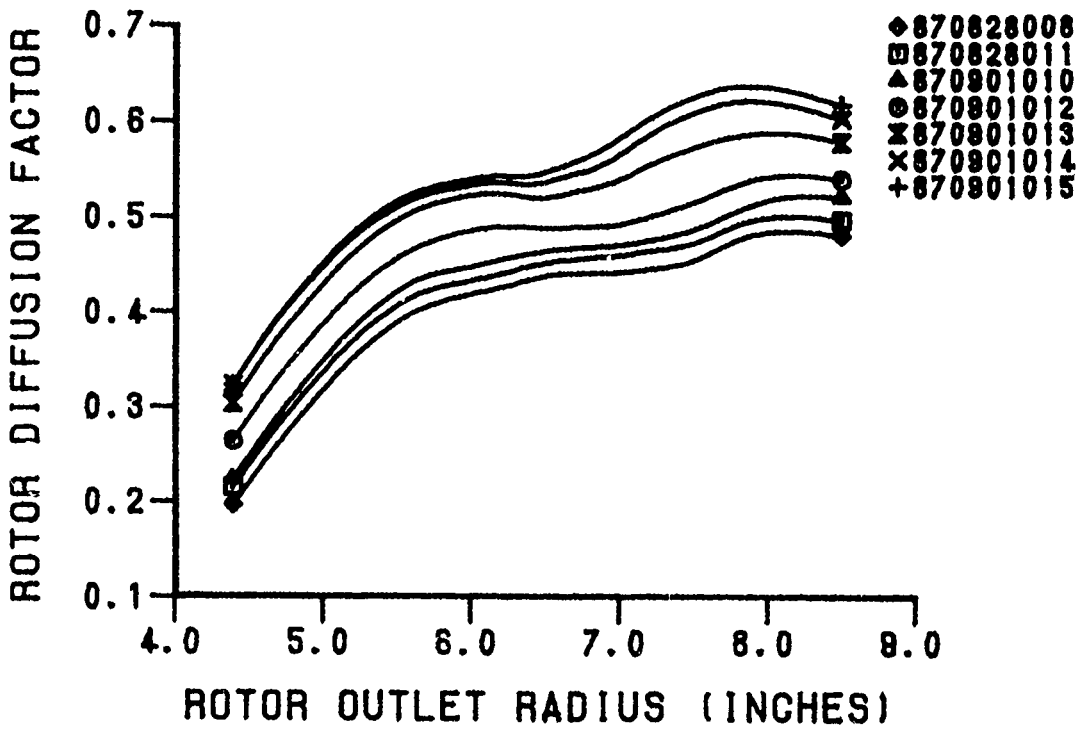


Figure 28. Rotor Diffusion Factor (95% N)

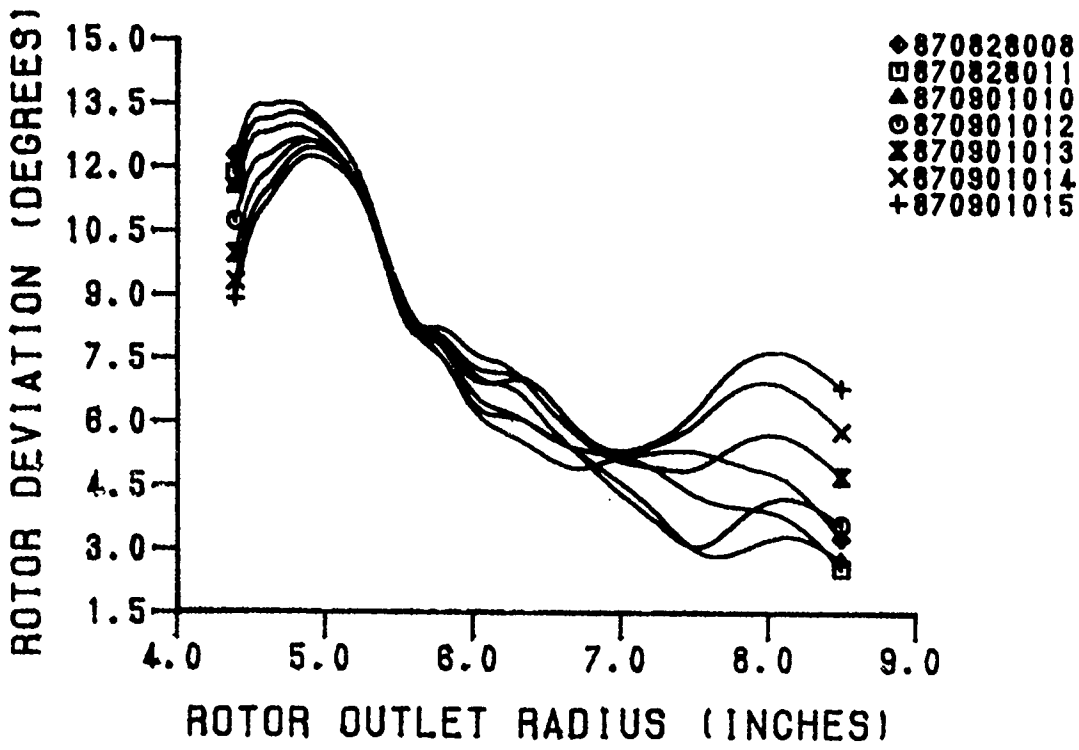


Figure 29. Rotor Deviation Angle (95% N)

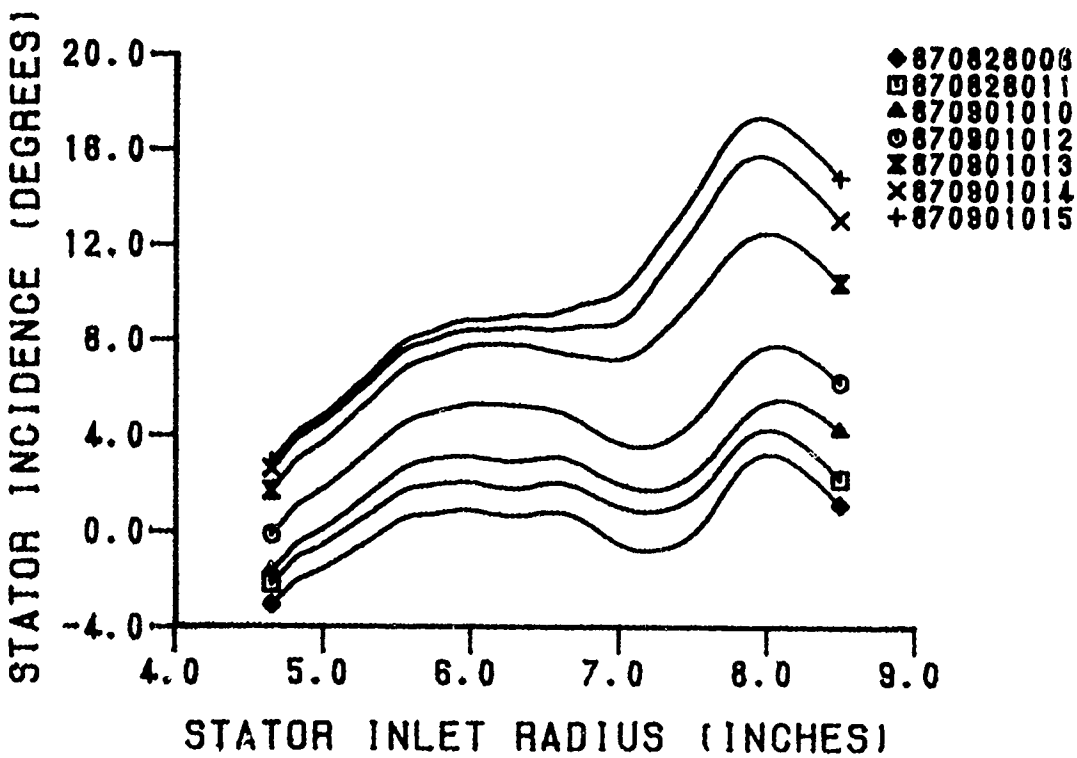


Figure 30. Stator Incidence Angle (95% N)

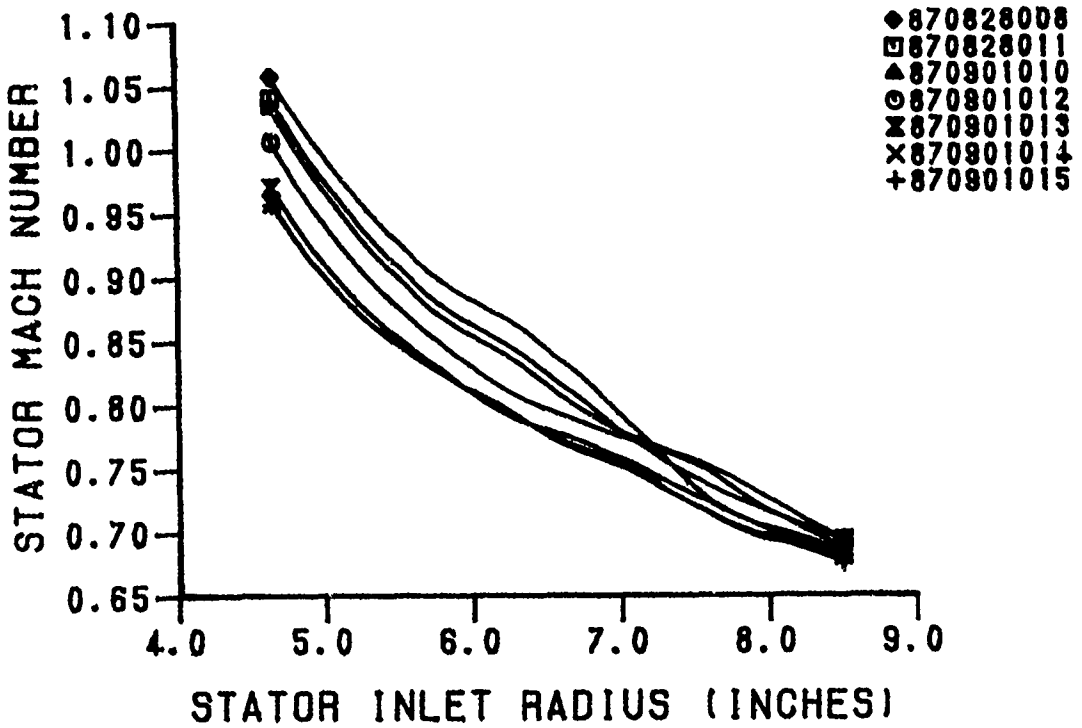


Figure 31. Stator Absolute Inlet Mach Number (95% N)

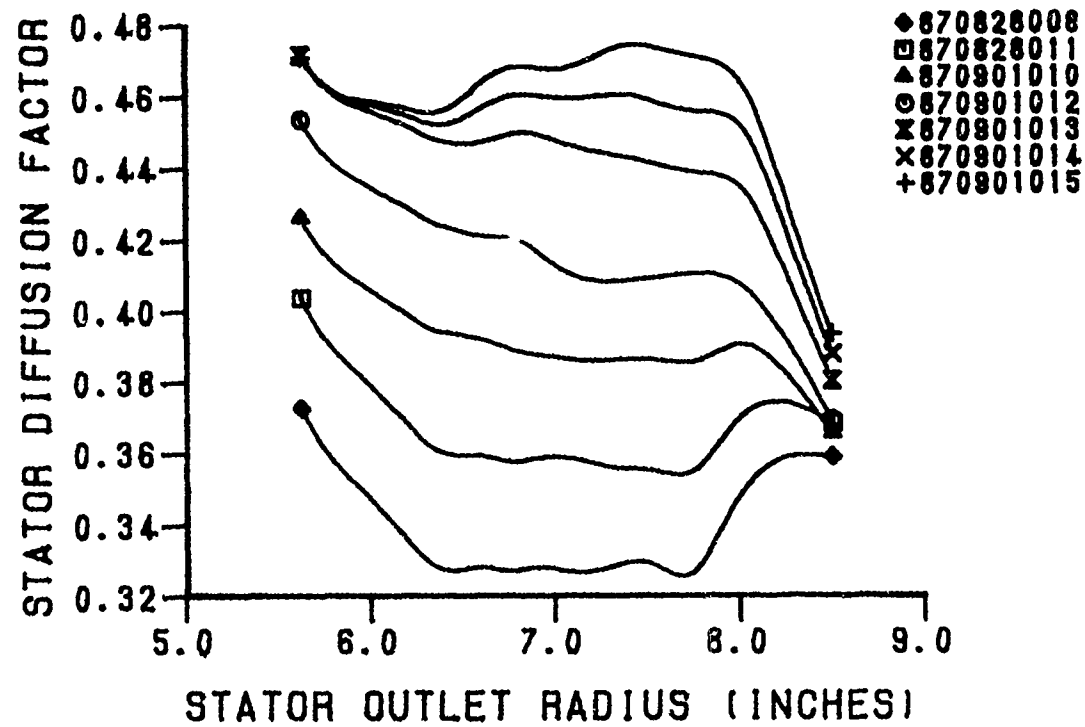


Figure 32. Stator Diffusion Factor (95% N)

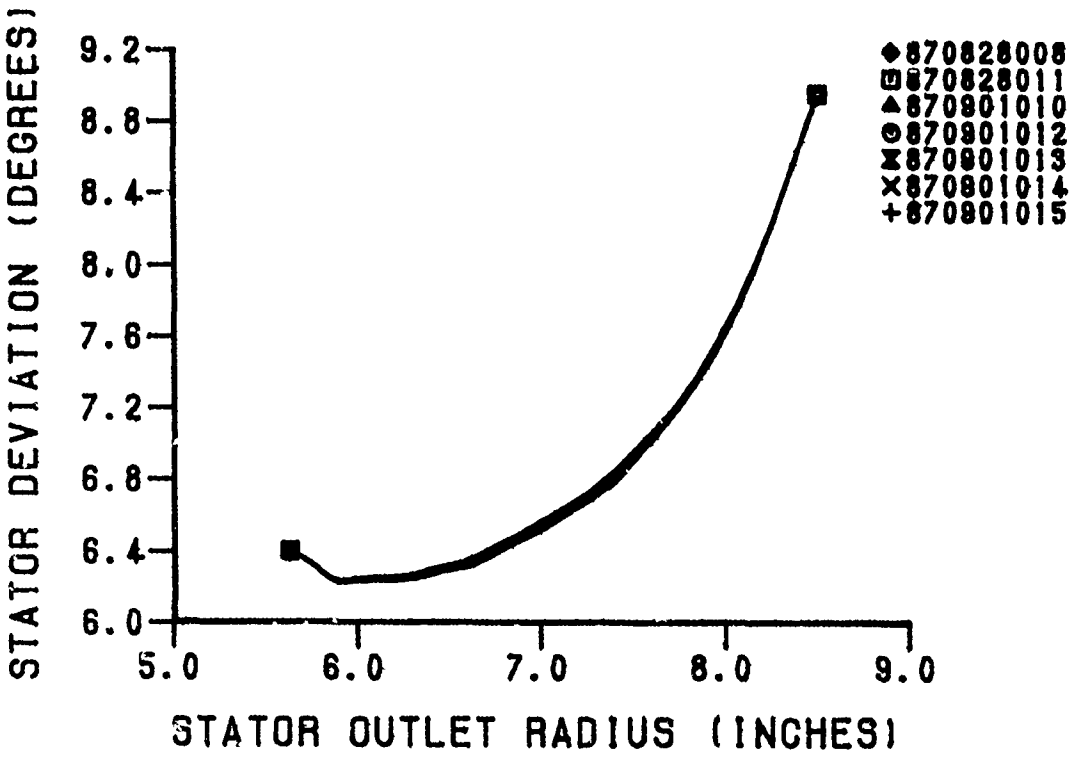


Figure 33. Stator Deviation Angle (95% N)

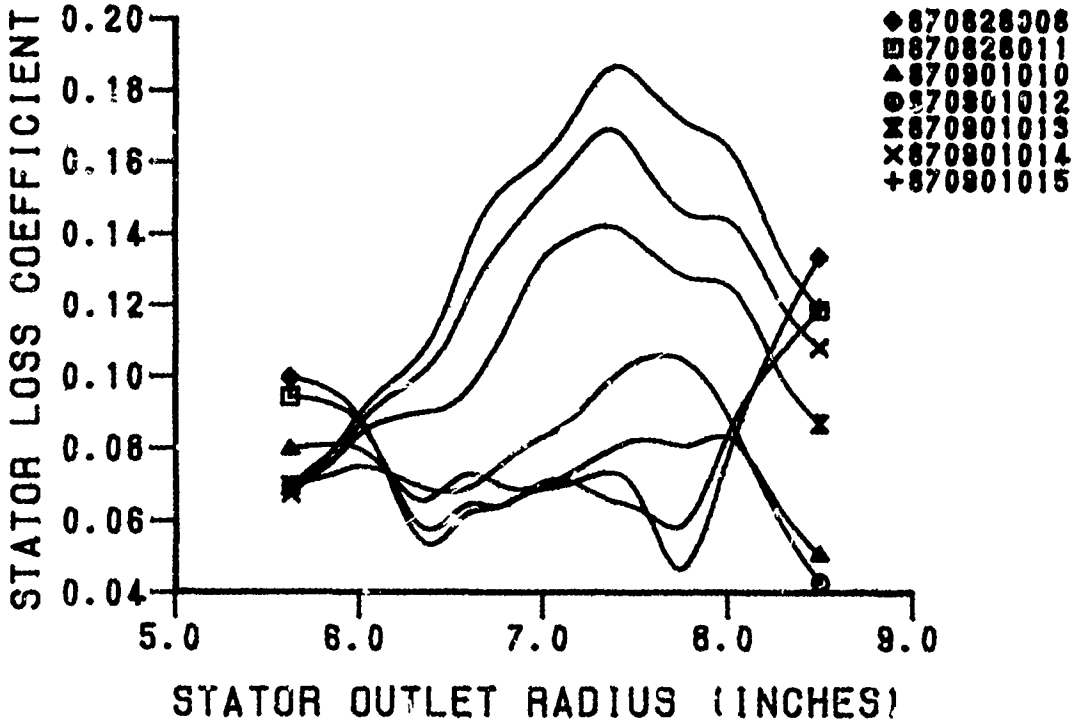


Figure 34. Stator Loss Coefficient (95% N)

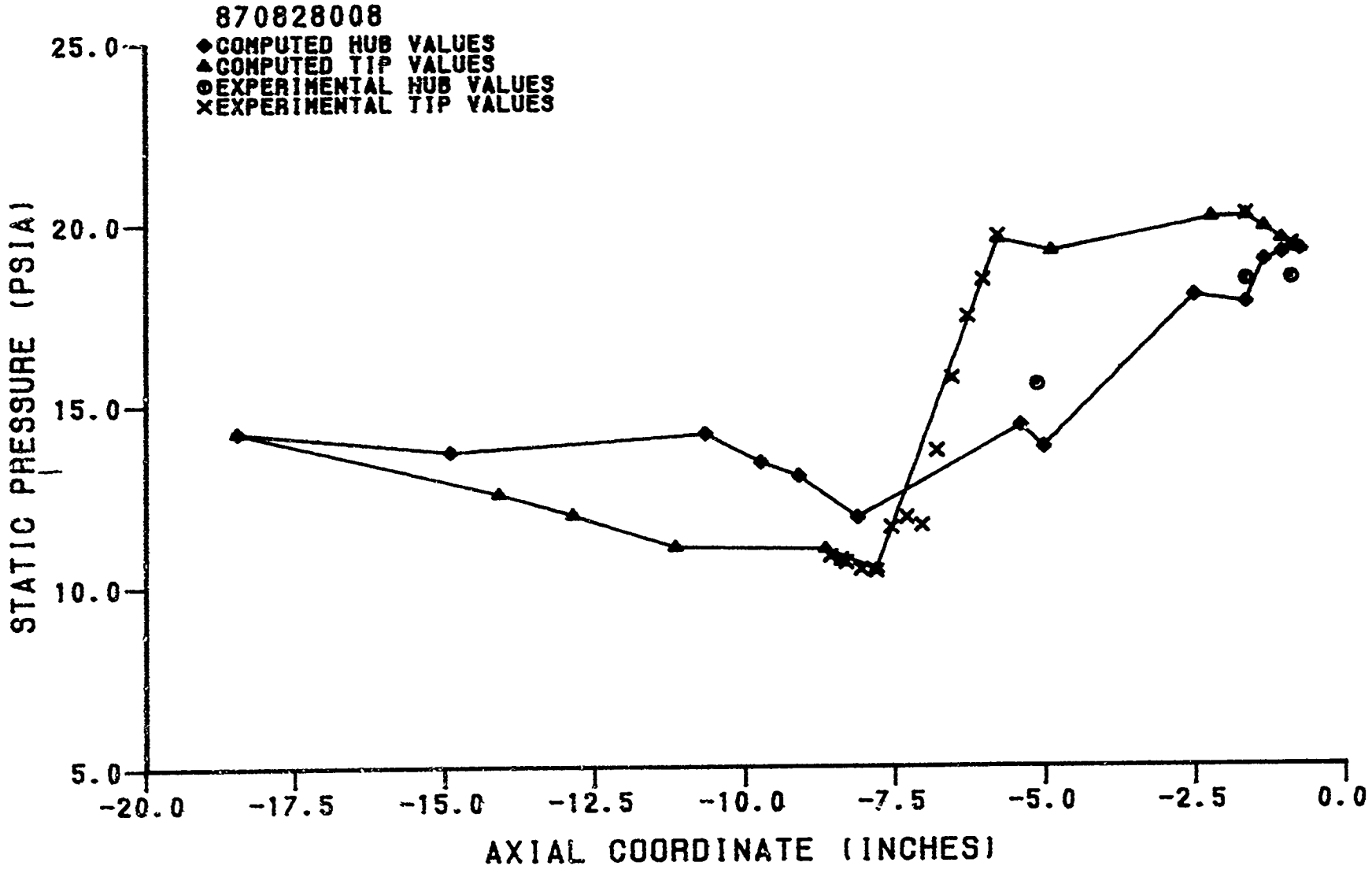


Figure 35. Static Pressure Distribution (870828008)

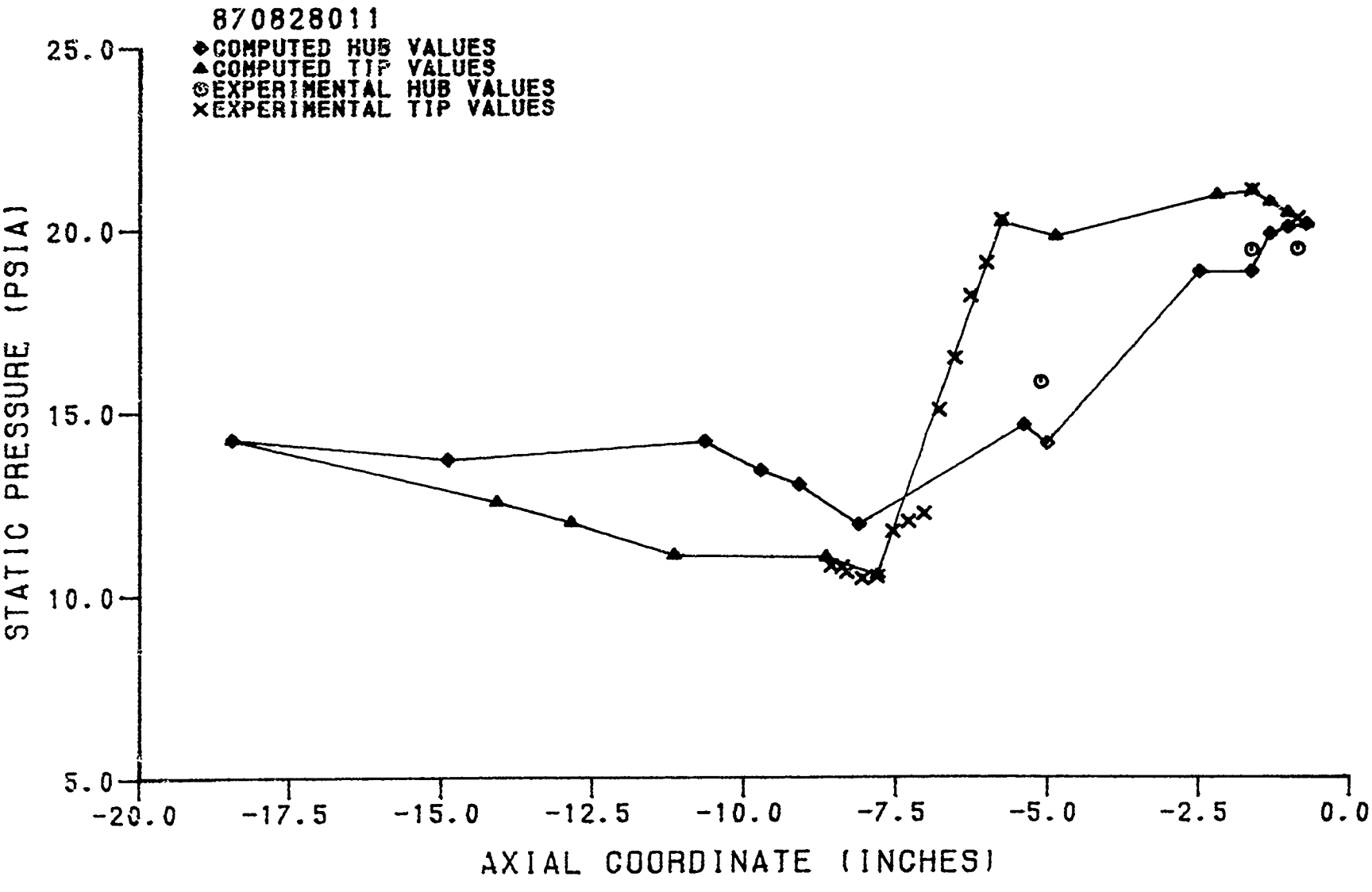


Figure 36. Static Pressure Distribution (870828011)

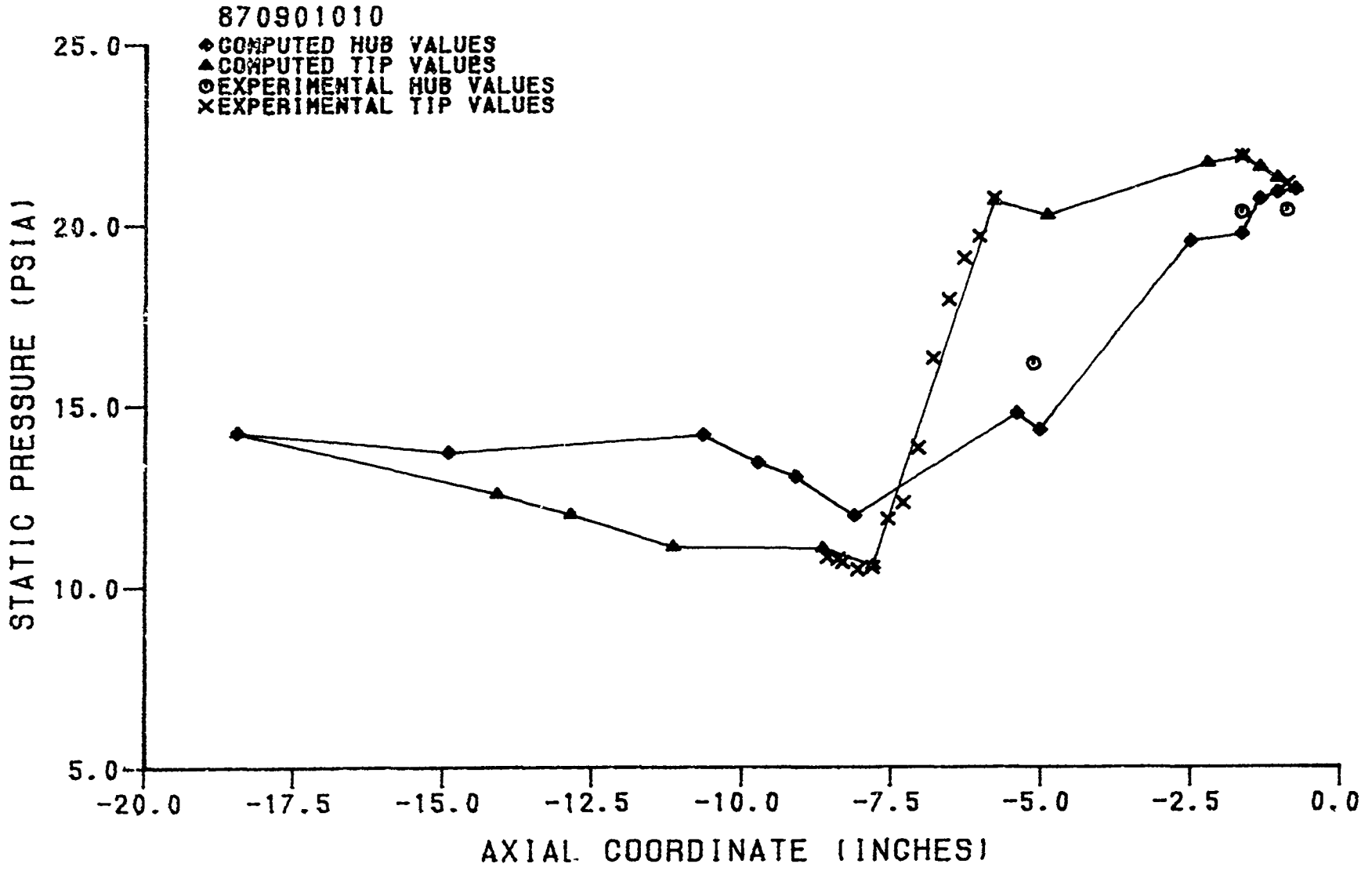


Figure 37. Static Pressure Distribution (870901010)

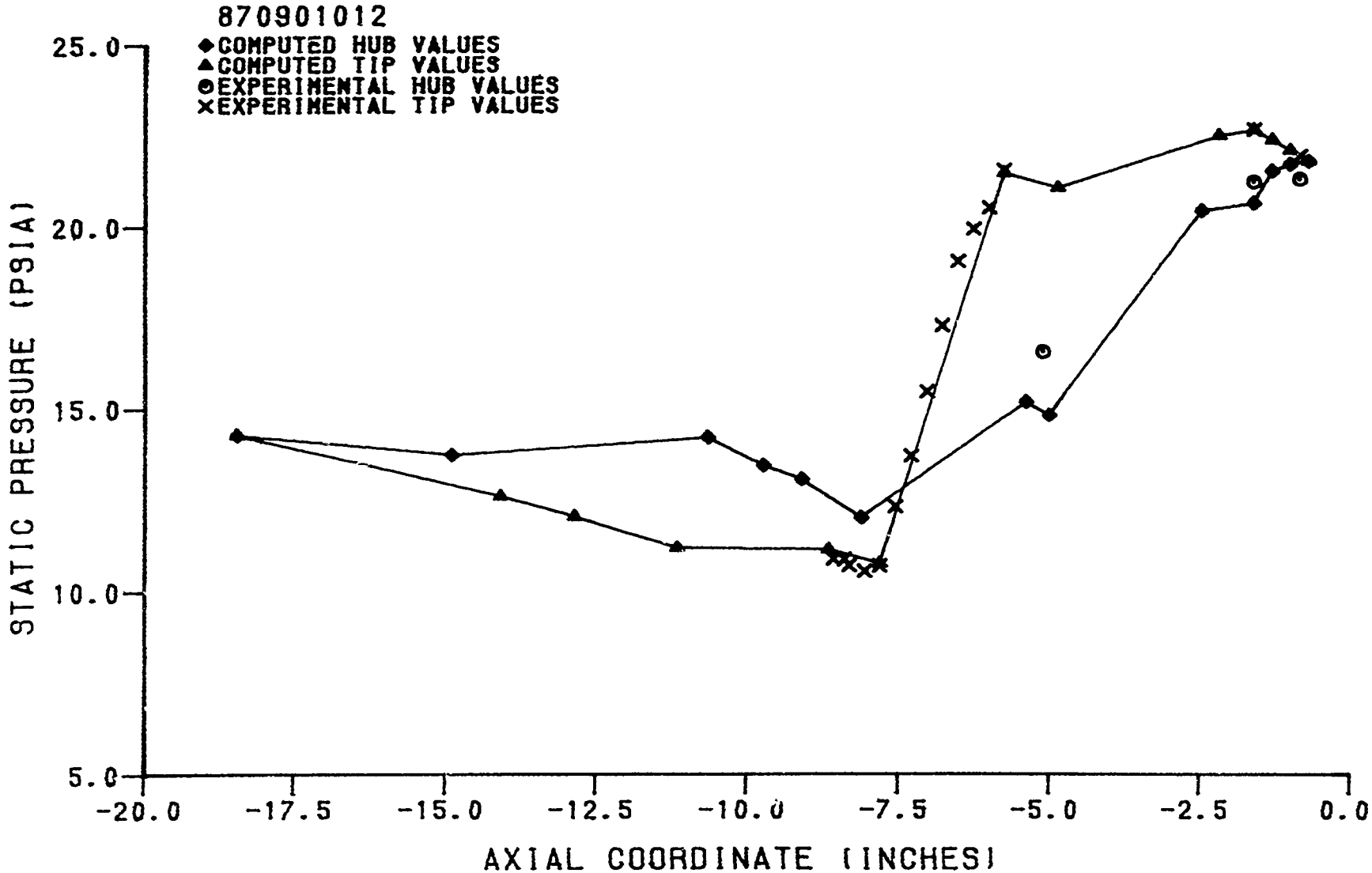


Figure 38. Static Pressure Distribution (870910012)

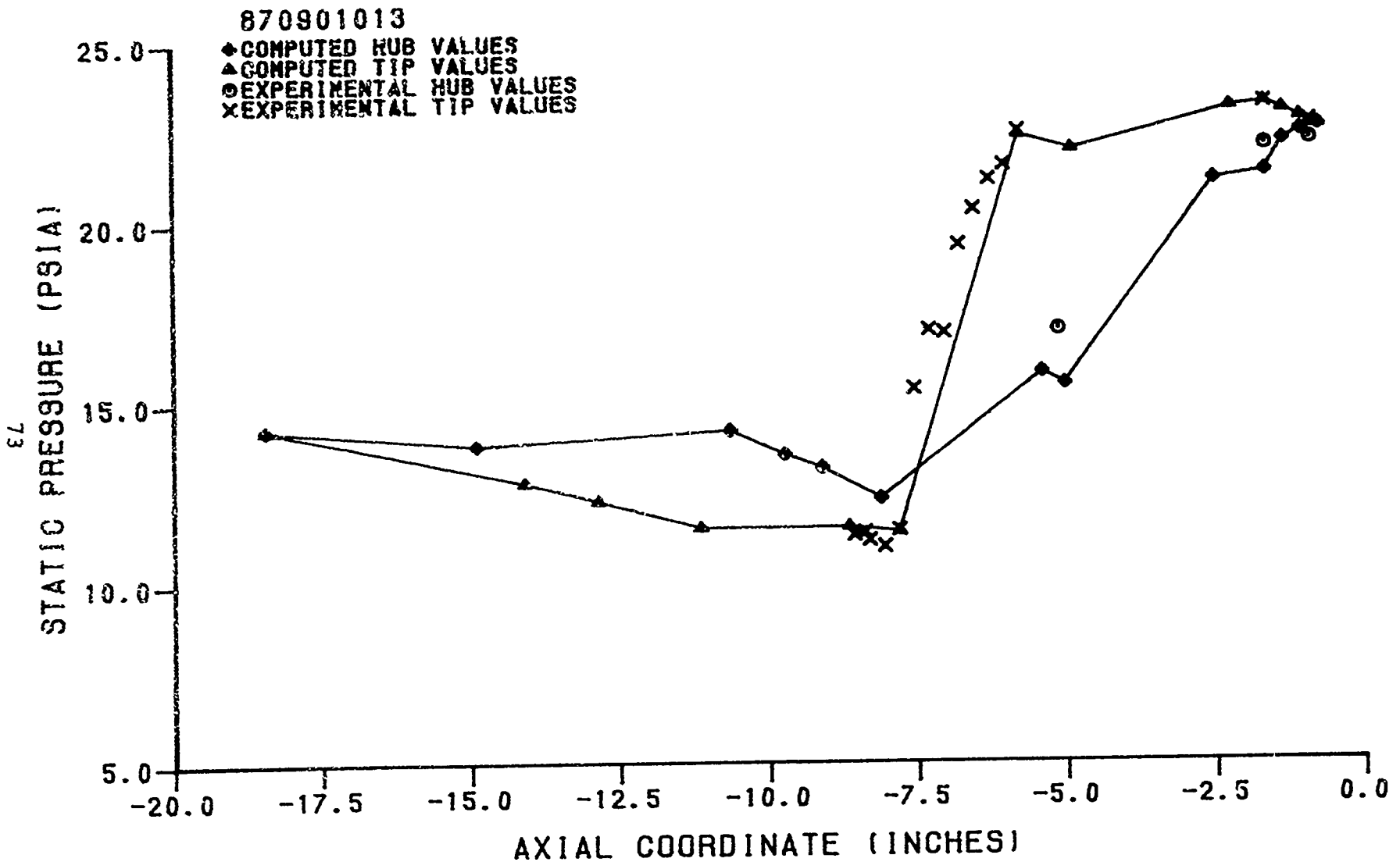


Figure 39. Static Pressure Distribution (870901013)

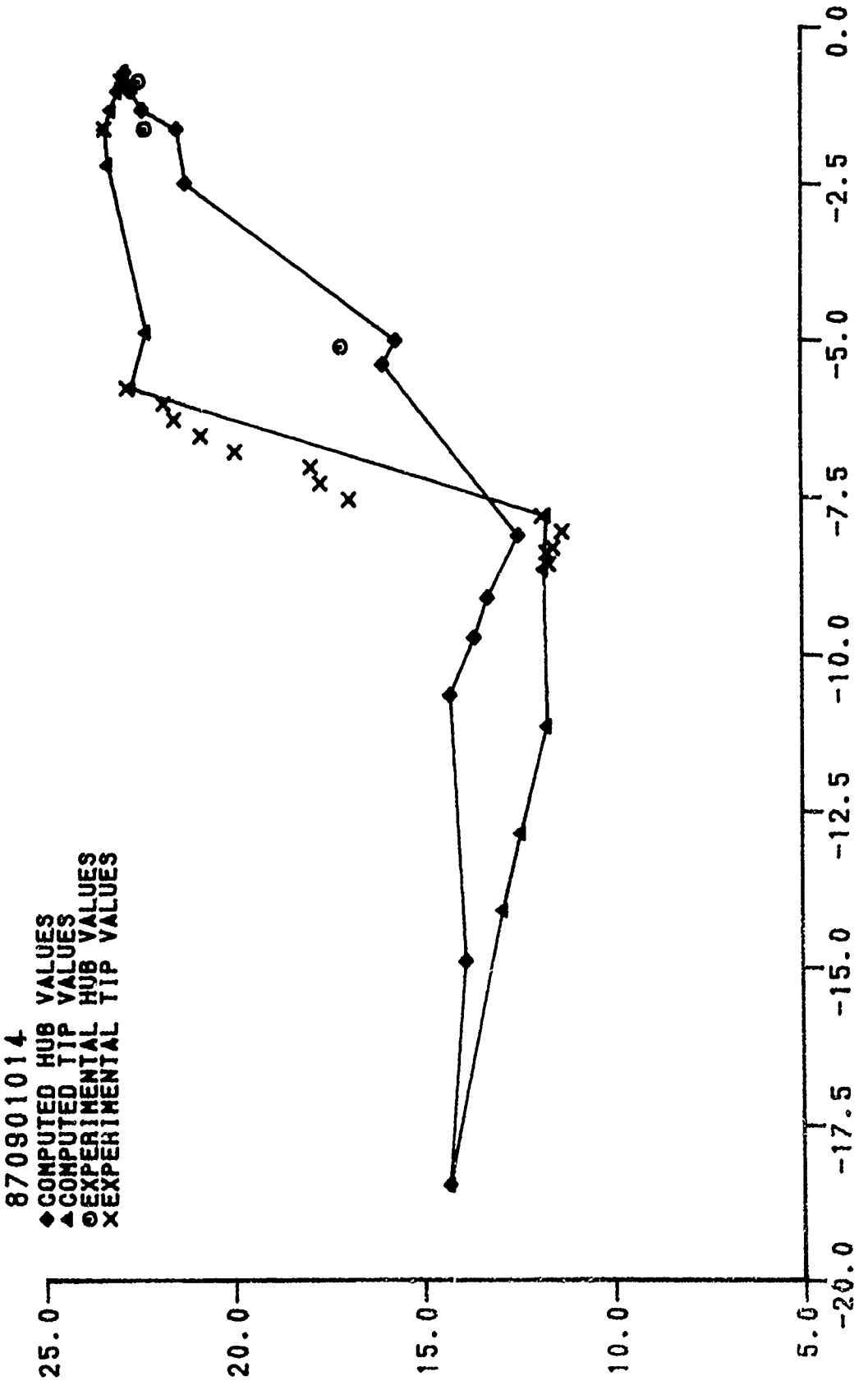


Figure 40. Static Pressure Distribution (870901014)

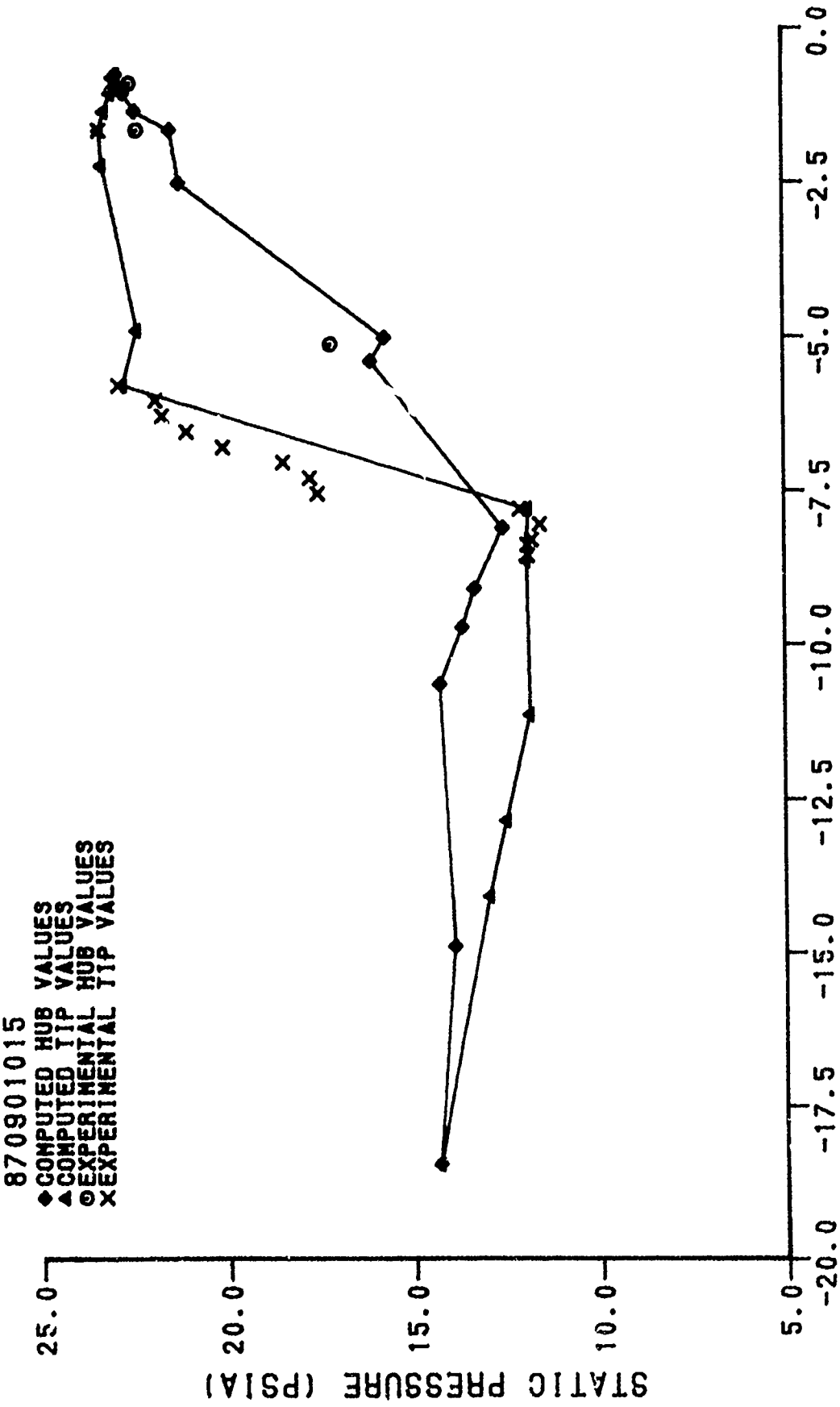


Figure 41. Static Pressure Distribution (870901015)

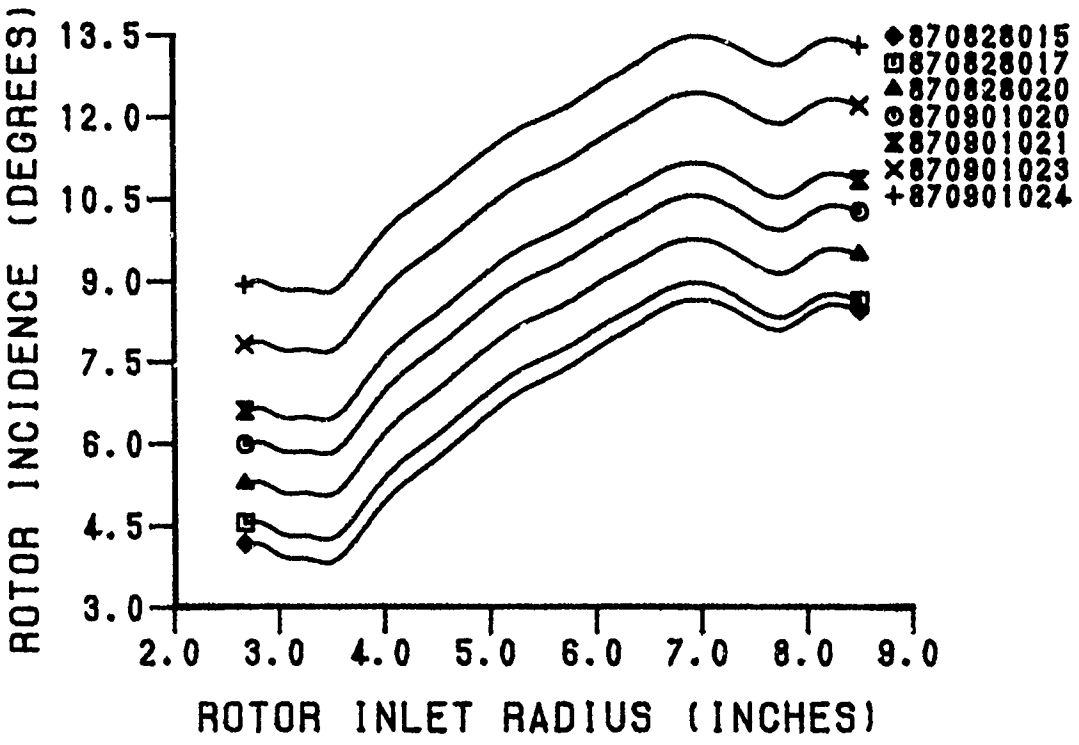


Figure 42. Rotor Incidence Angle (90% N)

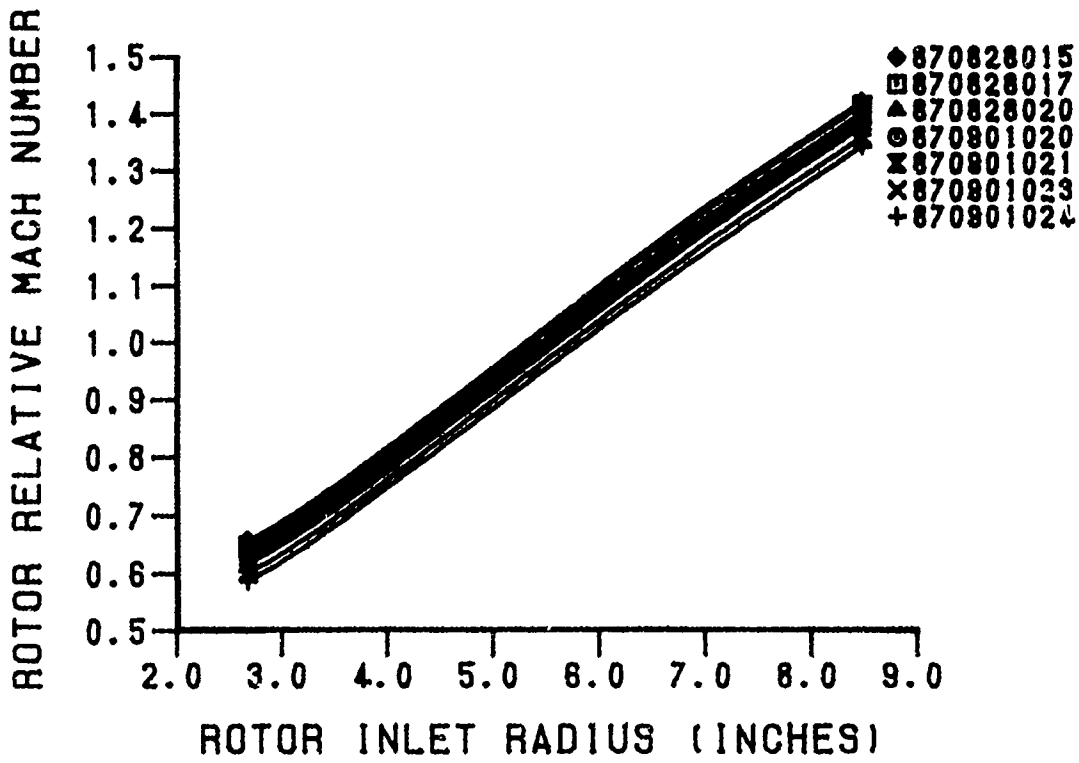


Figure 43. Rotor Relative Inlet Mach Number (90% N)

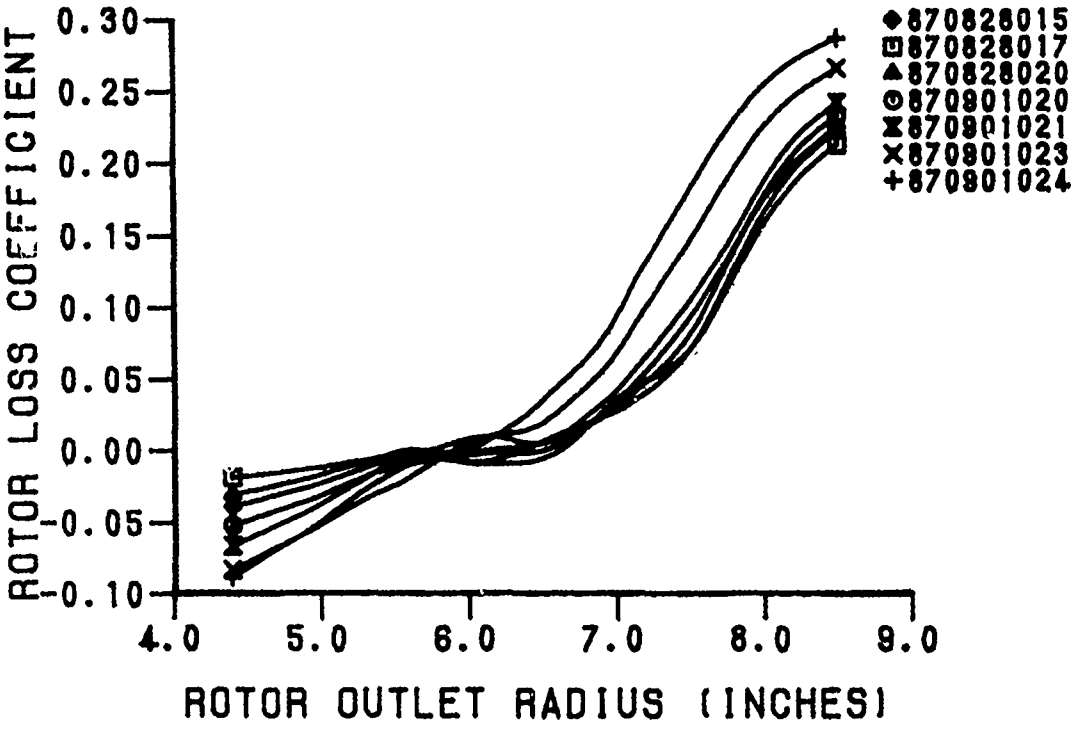


Figure 44. Rotor Loss Coefficient (90% N)

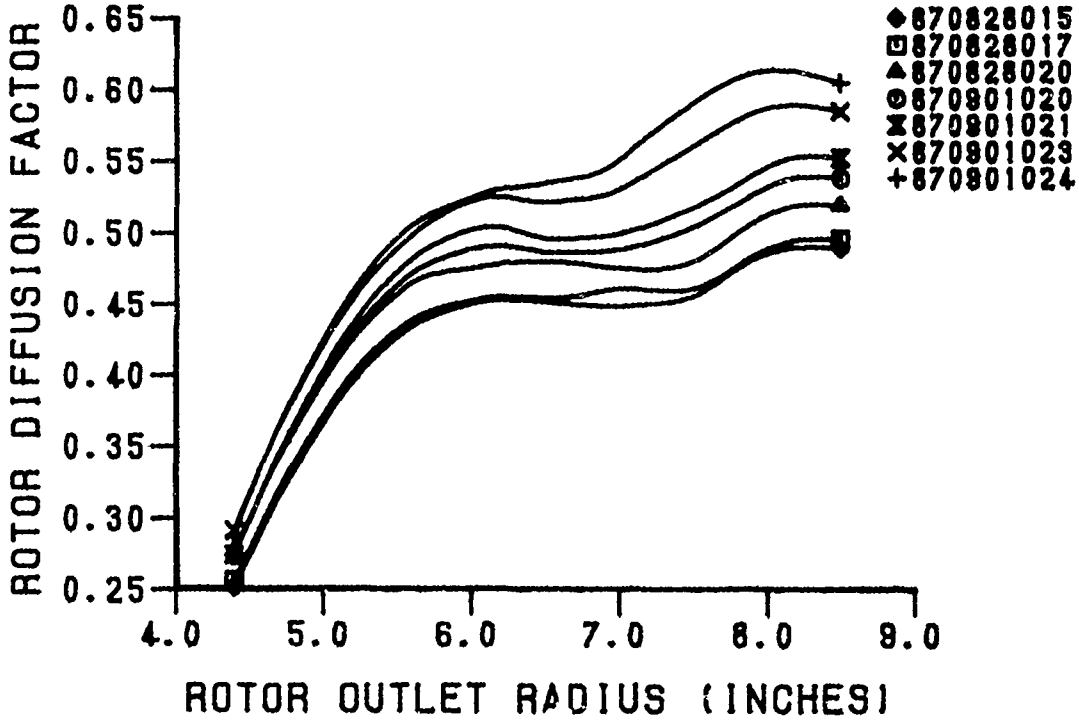


Figure 45. Rotor Diffusion Factor (90% N)

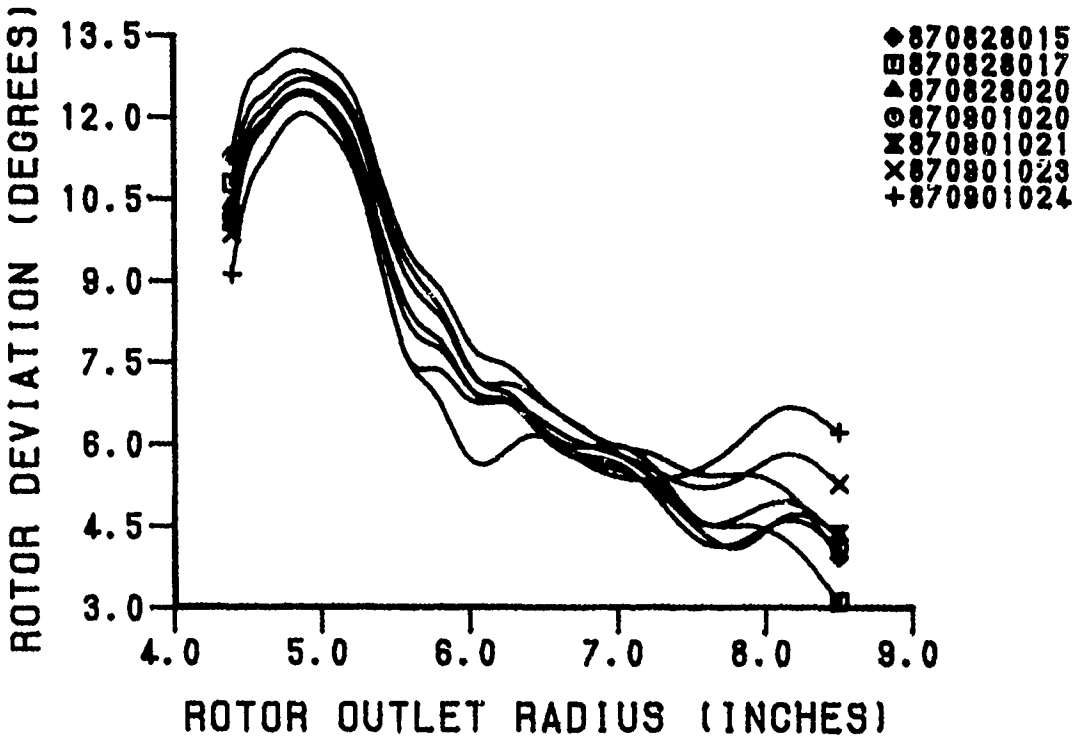


Figure 46. Rotor Deviation Angle (90% N)

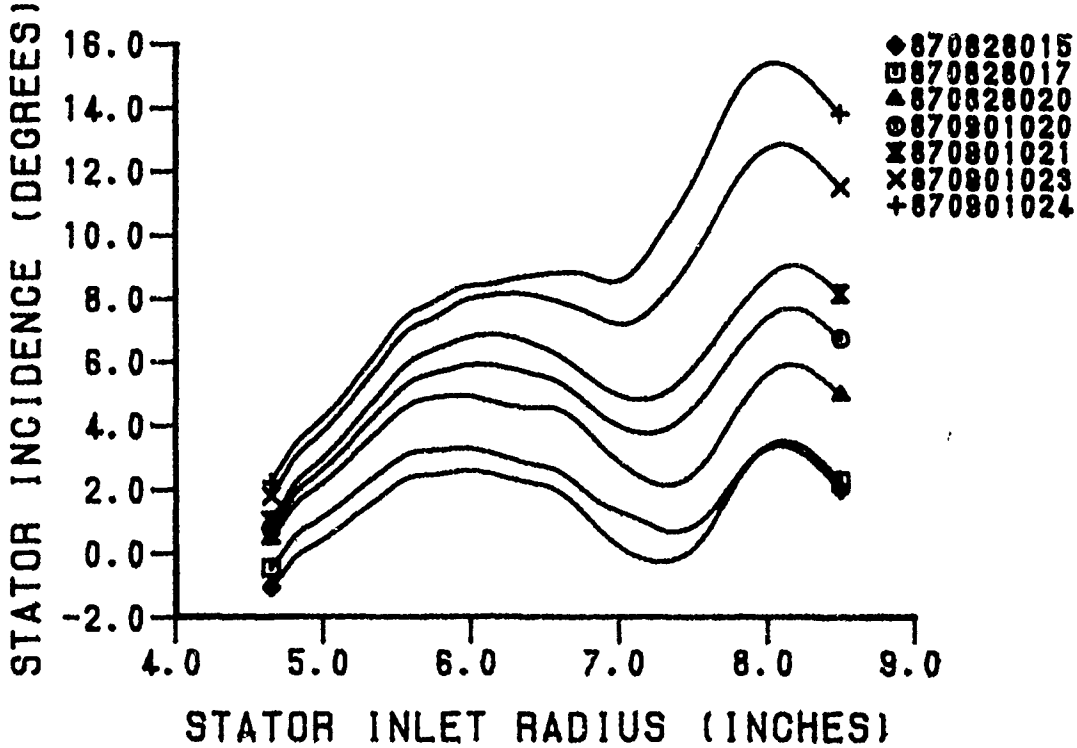


Figure 47. Stator Incidence Angle (90% N)

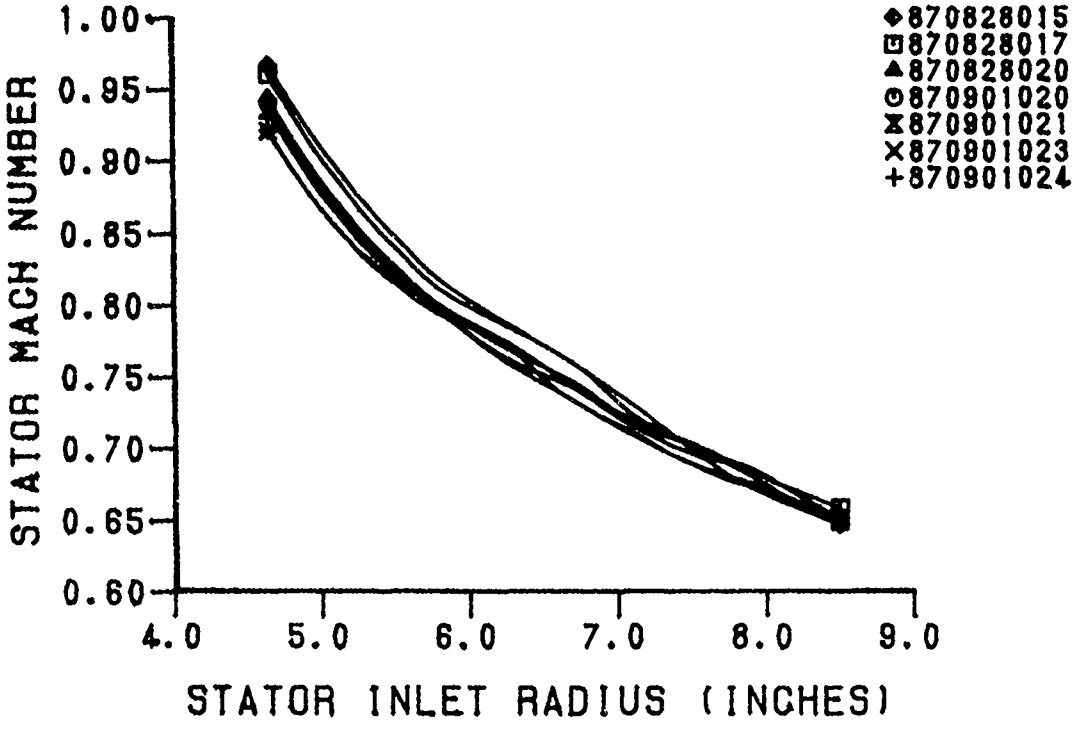


Figure 48. Stator Absolute Inlet Mach Number (90% N)

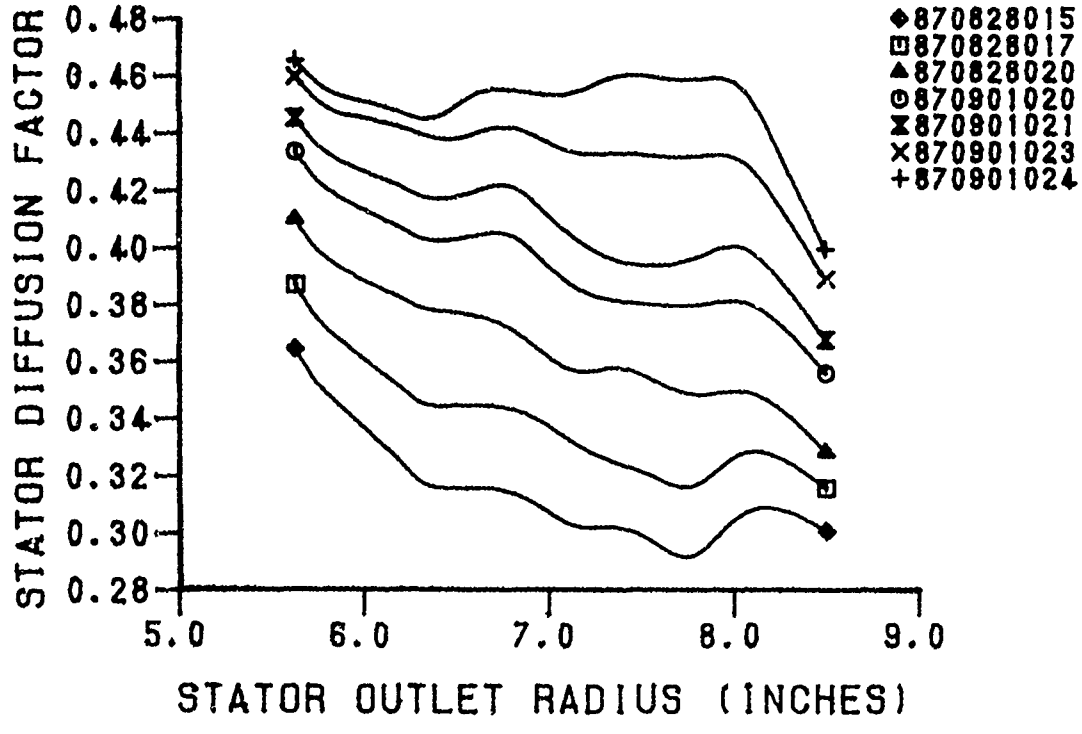


Figure 49. Stator Diffusion Factor (90% N)

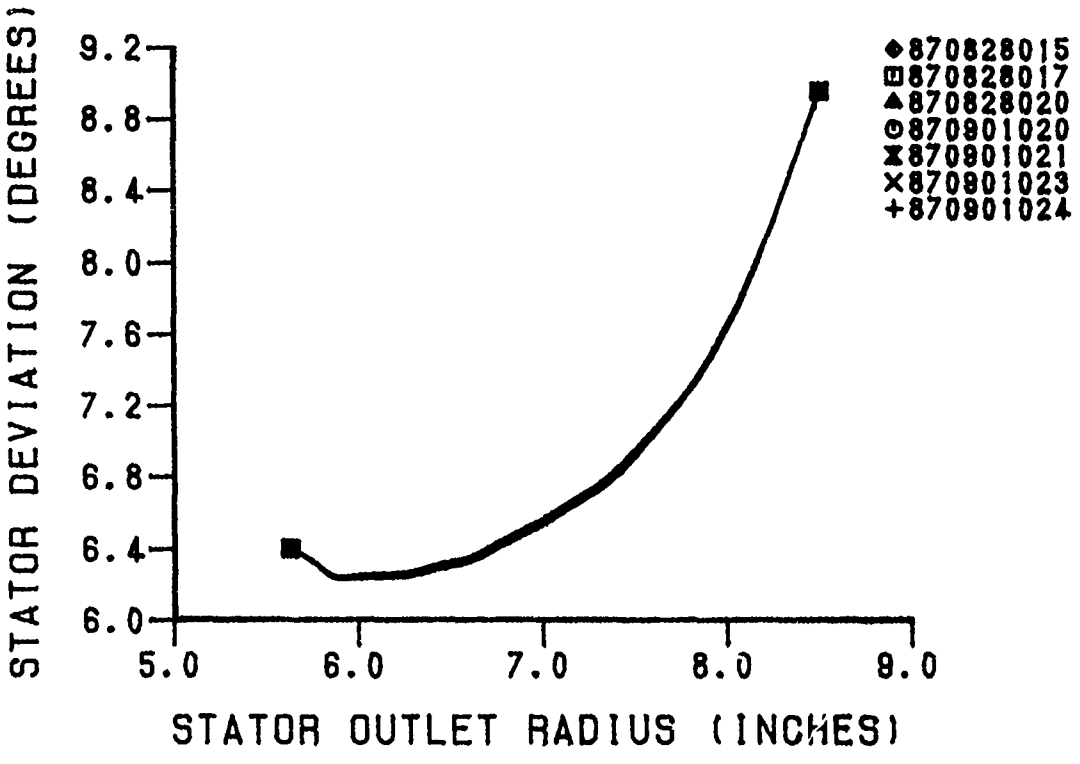


Figure 50. Stator Deviation Angle (90% N)

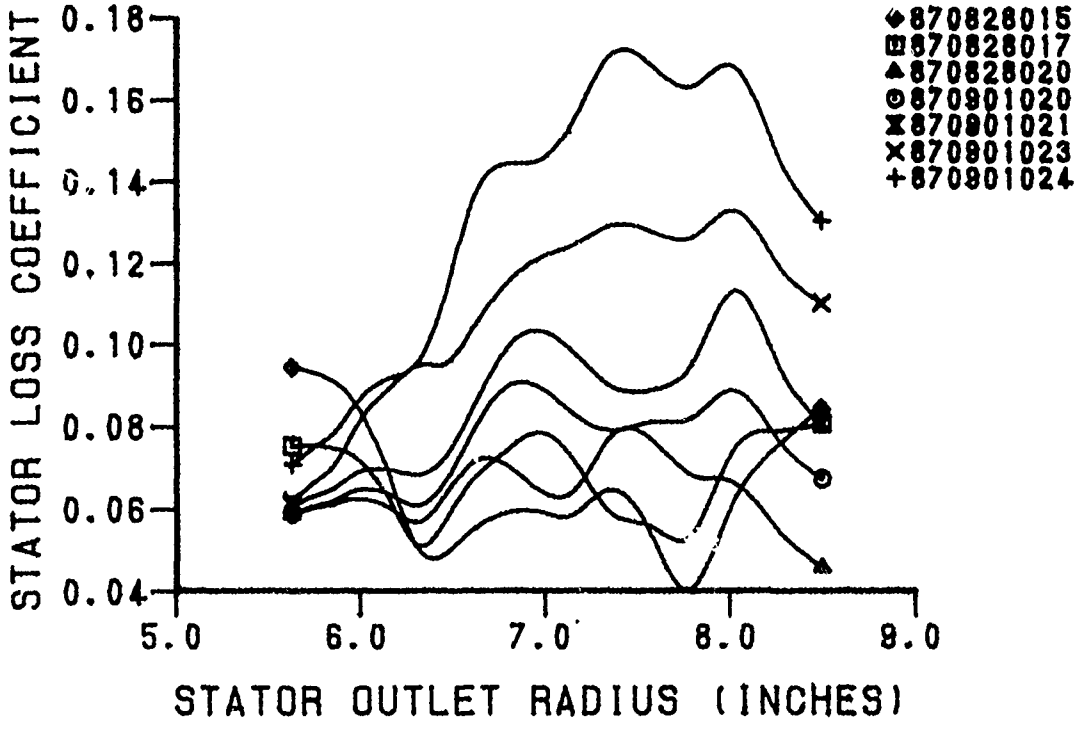


Figure 51. Stator Loss Coefficient (90% N)

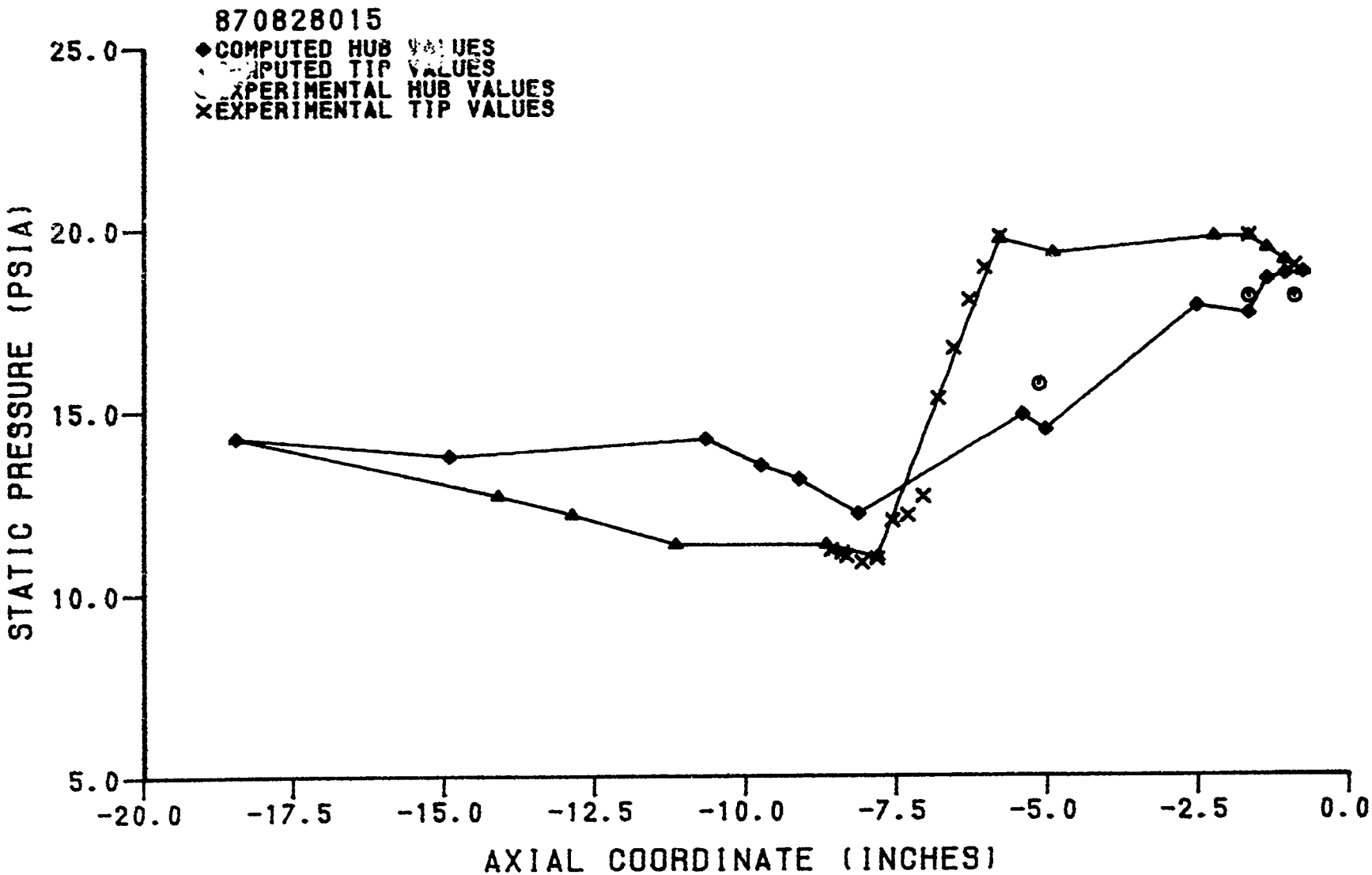


Figure 52. Static Pressure Distribution (870828015)

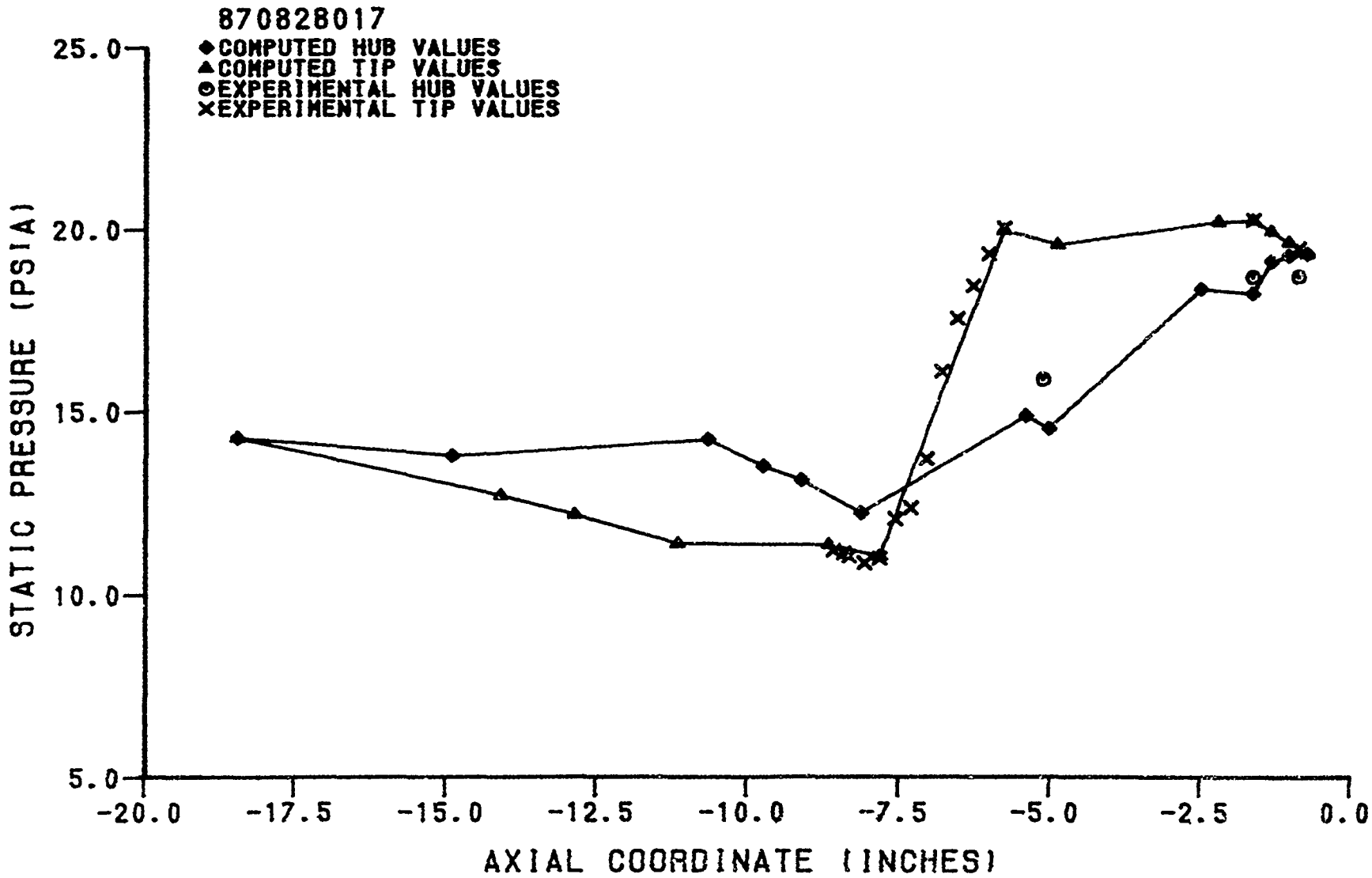


Figure 53. Static Pressure Distribution (870828017)

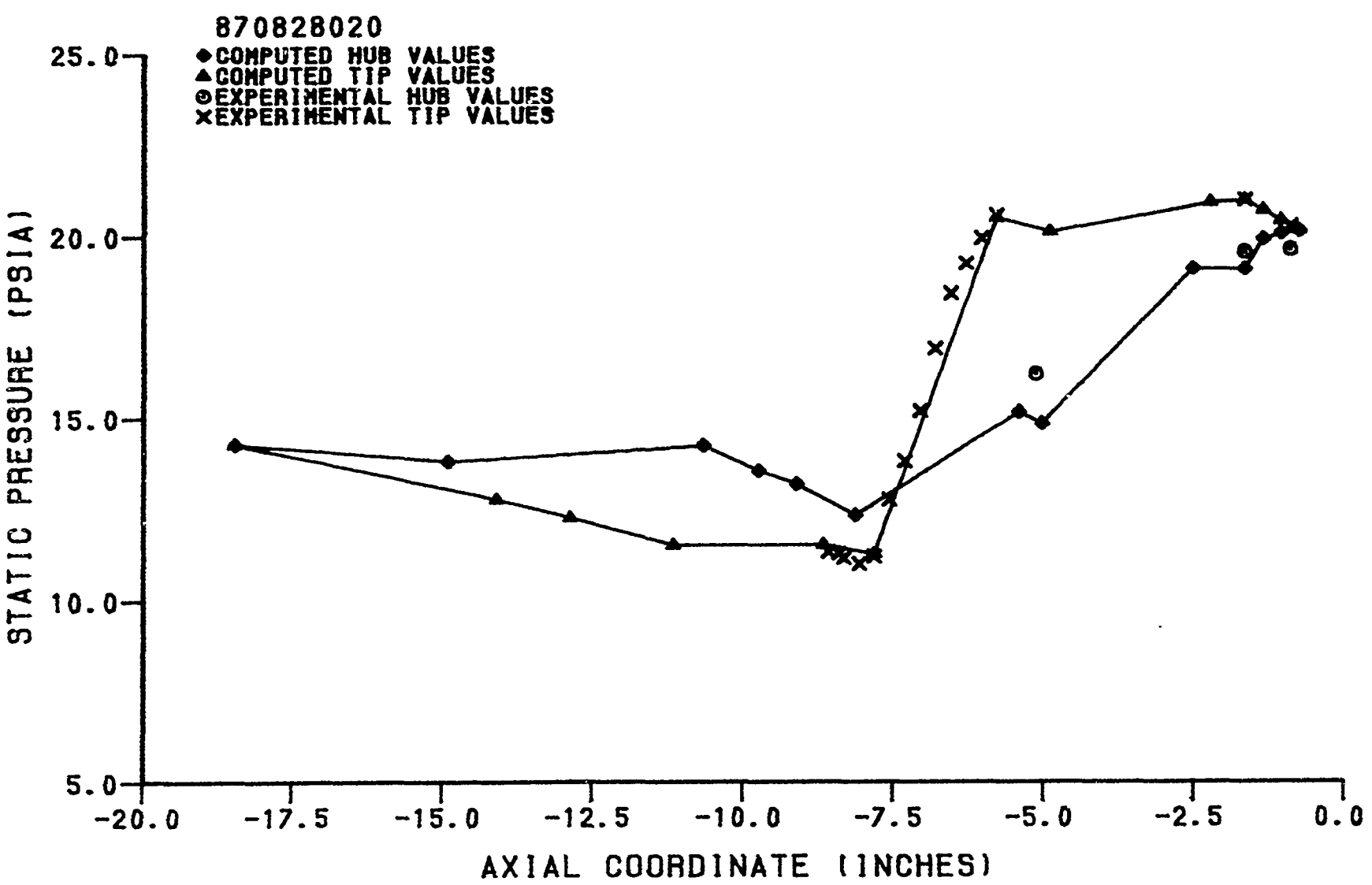


Figure 54. Static Pressure Distribution (870828020)

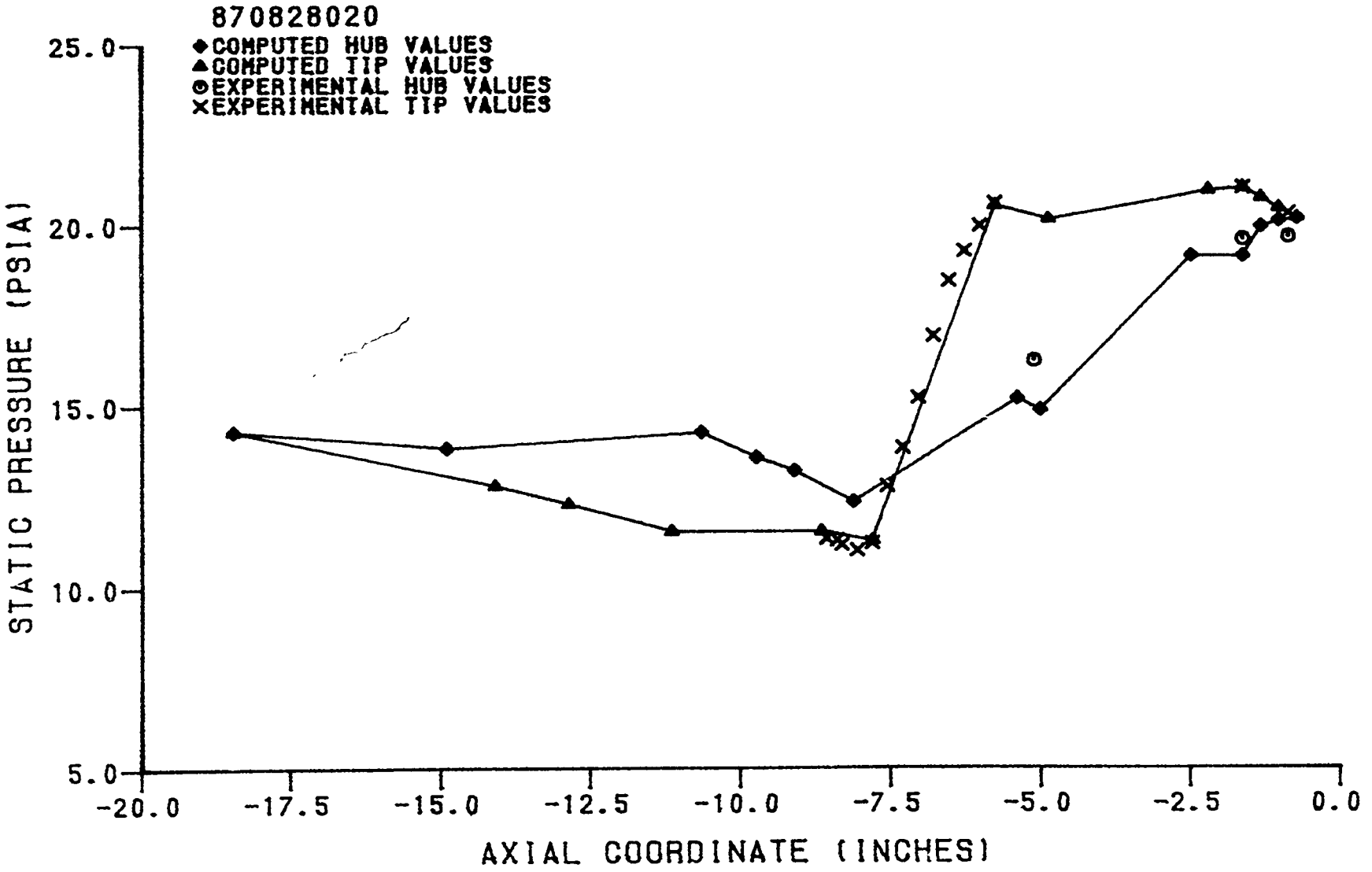


Figure 55. Static Pressure Distribution (870910020)

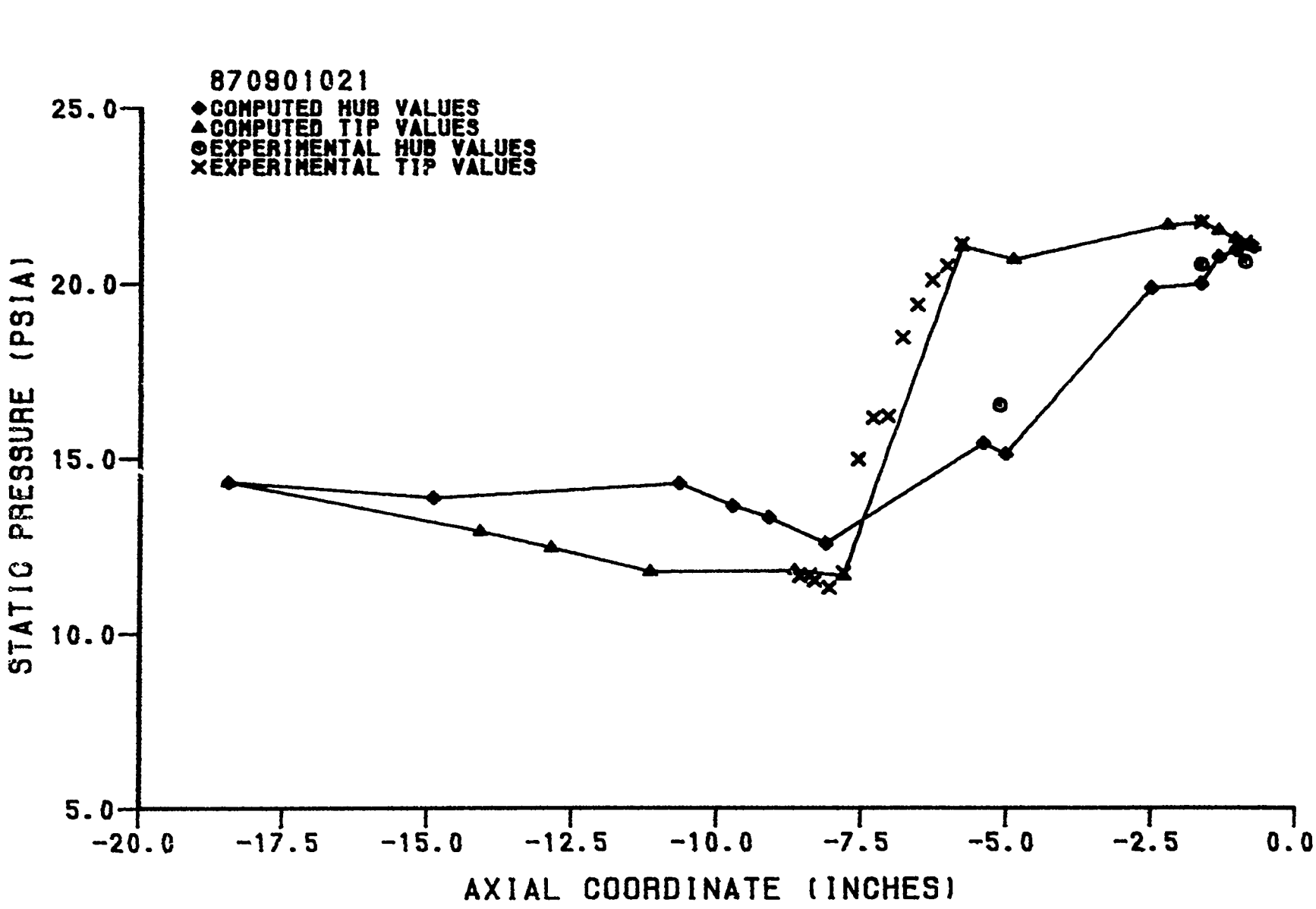


Figure 56. Static Pressure Distribution (870901021)

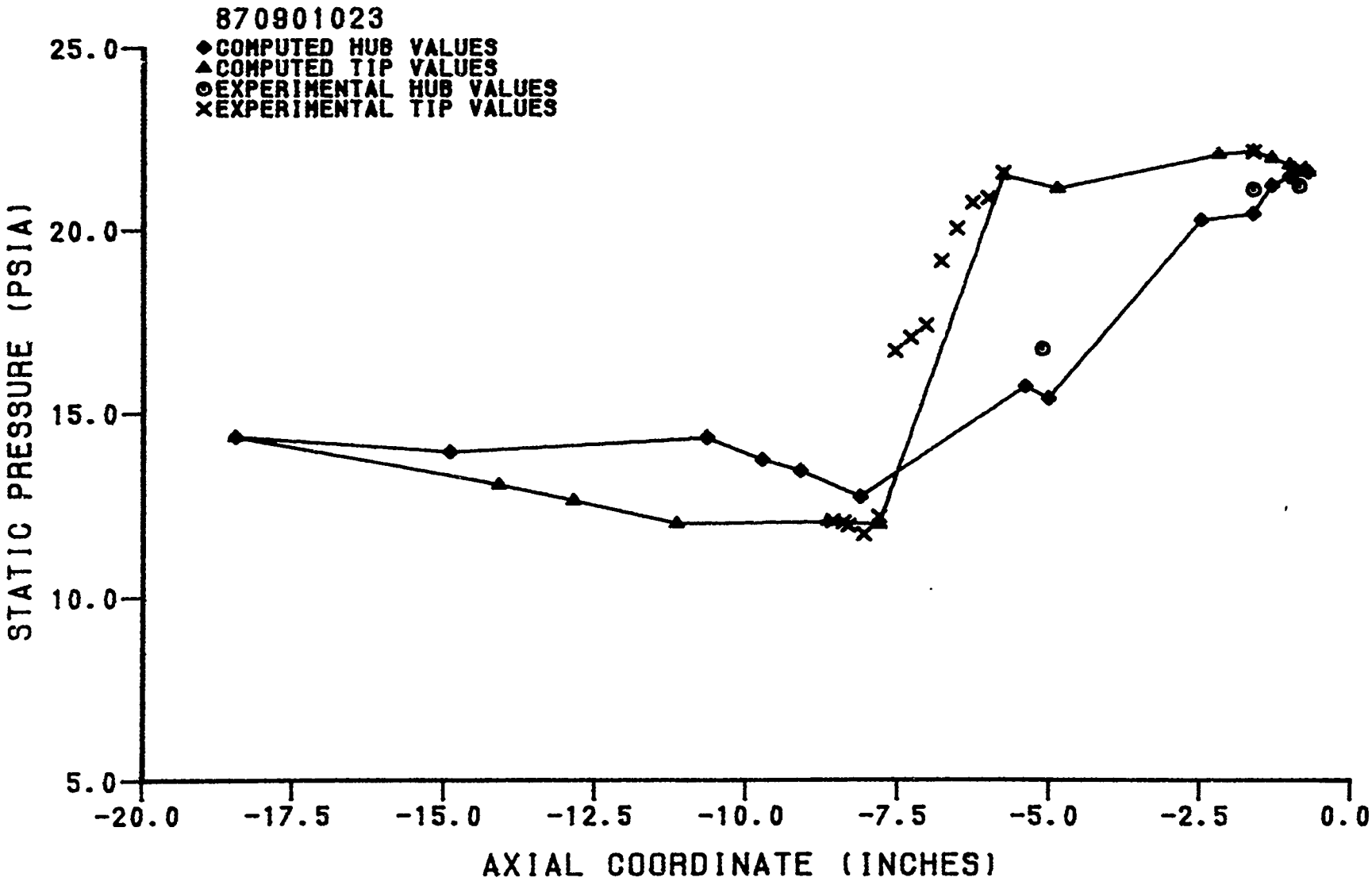


Figure 57. Static Pressure Distribution (870901023)

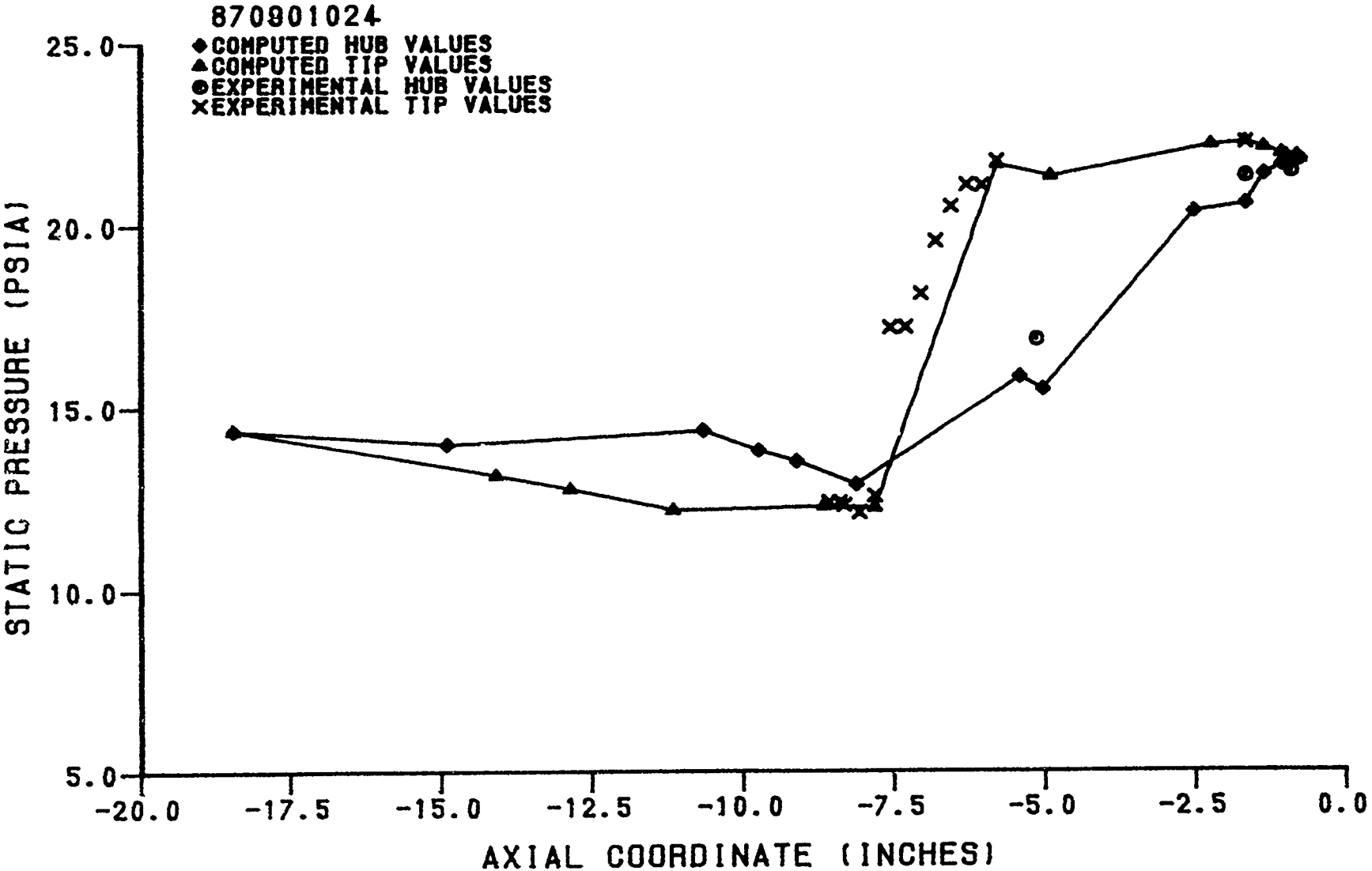


Figure 58. Static Pressure Distribution (870901024)

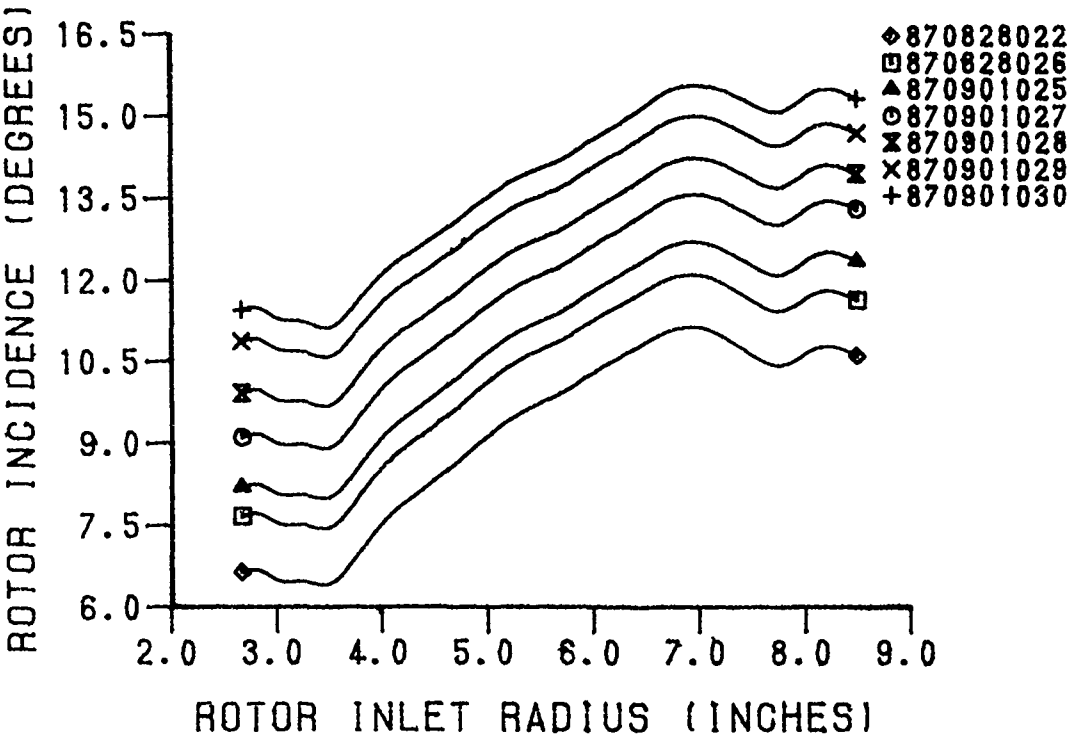


Figure 59. Rotor Incidence Angle (80% N)

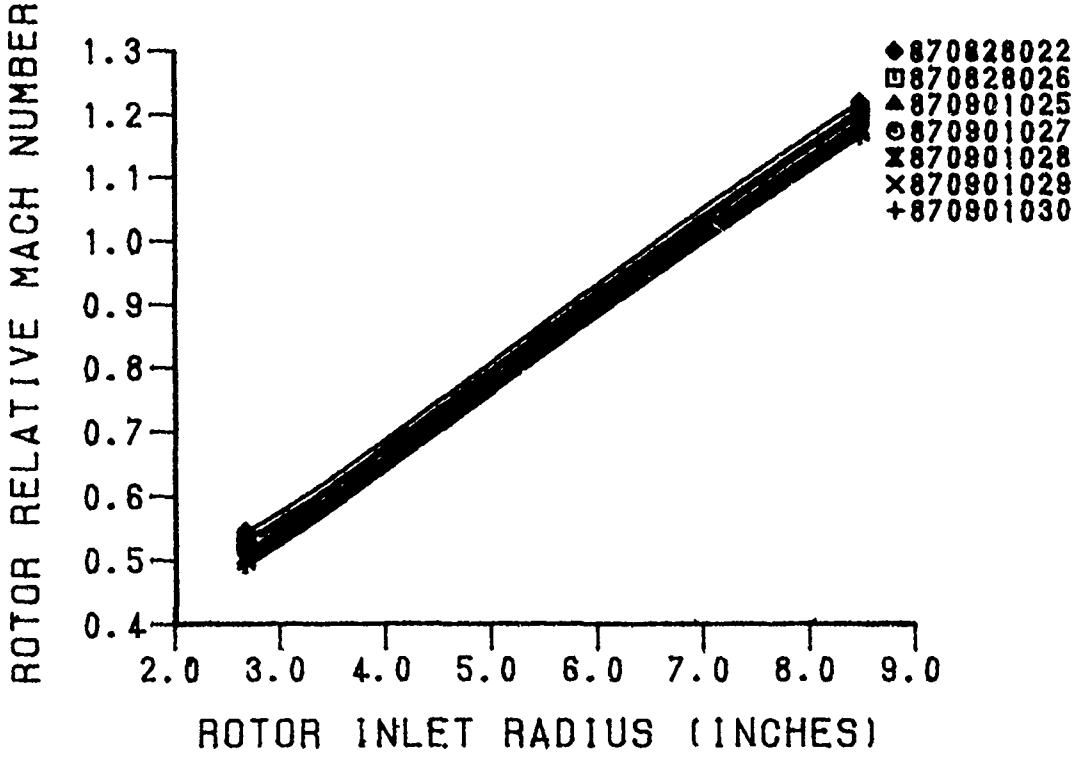


Figure 60. Rotor Relative Inlet Mach Number (80% N)

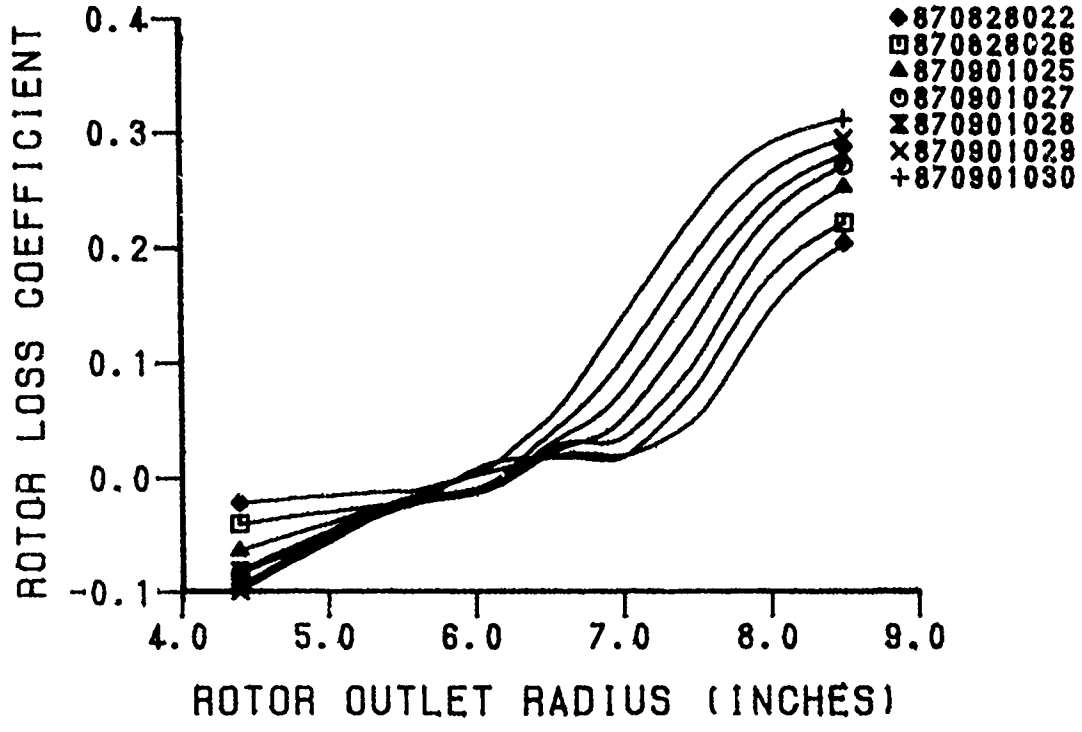


Figure 61. Rotor Loss Coefficient (80% N)

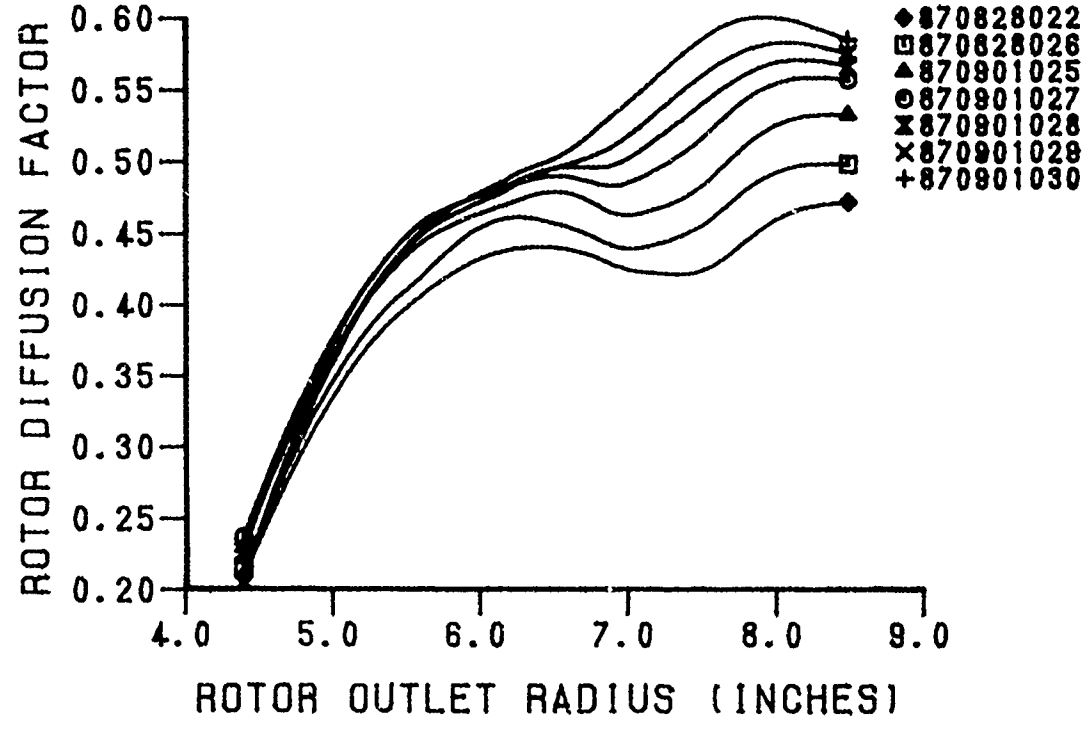


Figure 62. Rotor Diffusion Factor (80% N)

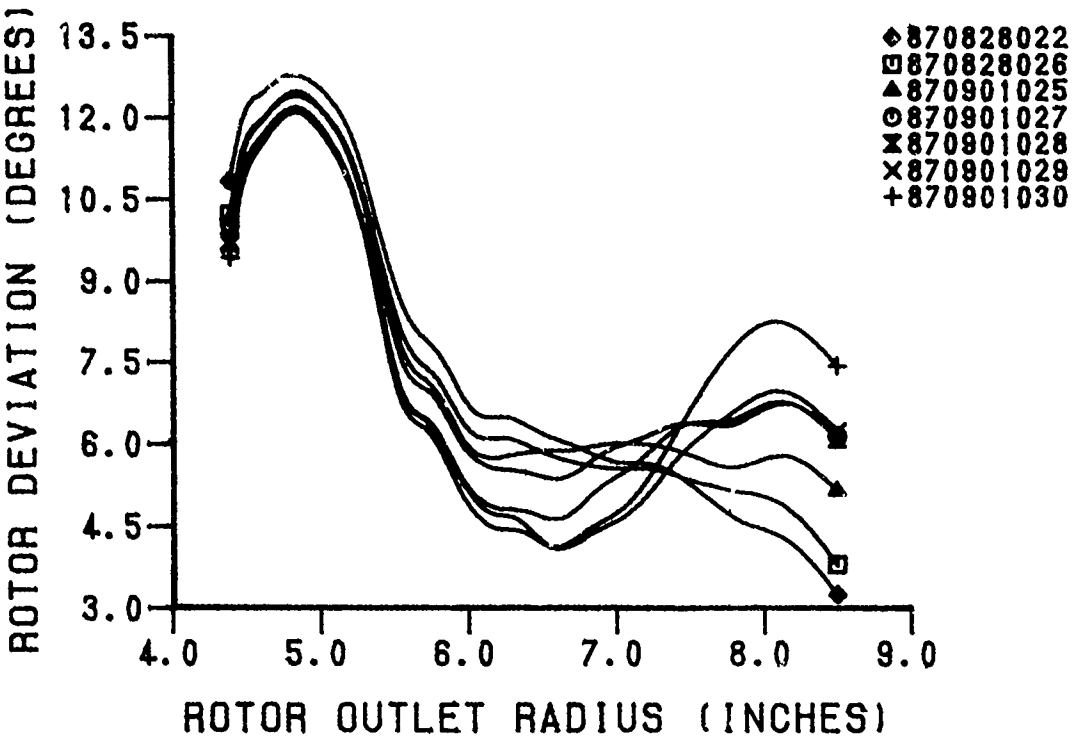


Figure 63. Rotor Deviation Angle (80% N)

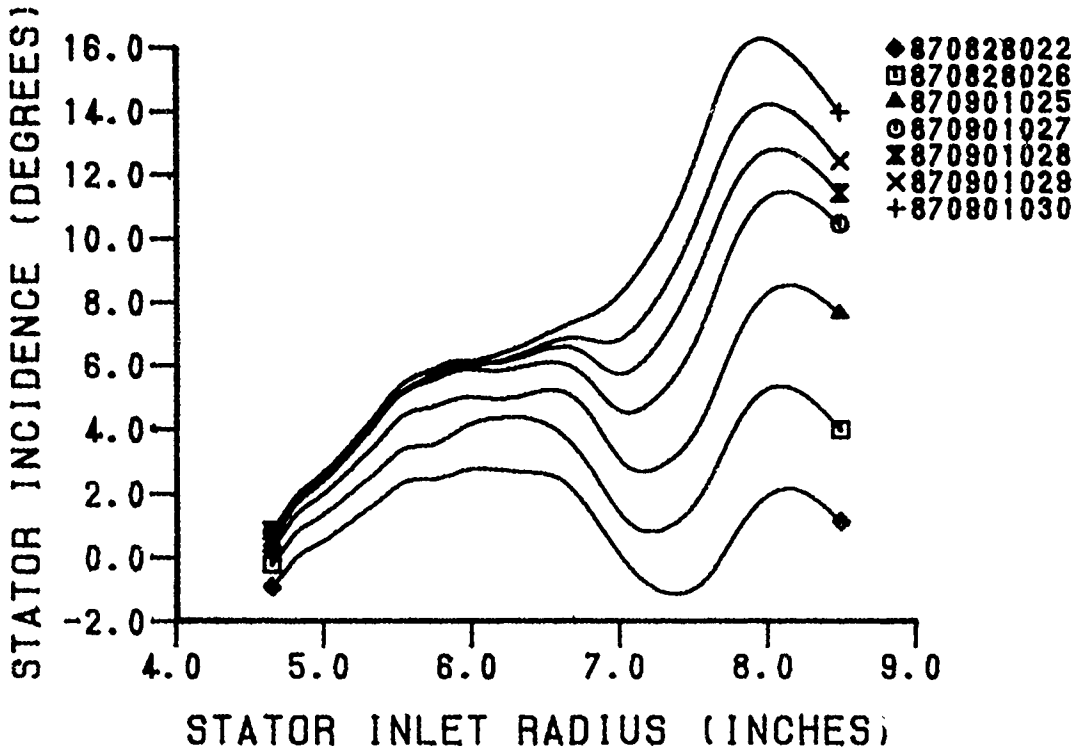


Figure 64. Stator Incidence Angle (80% N)

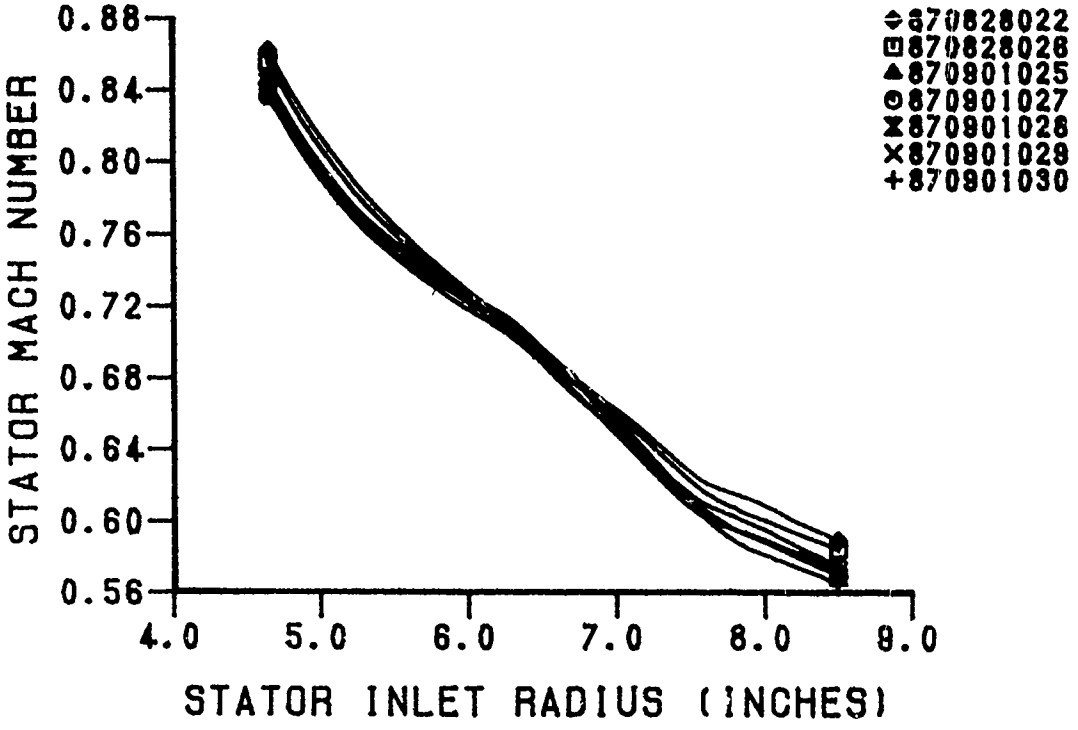


Figure 65. Stator Absolute Inlet Mach Number (80% N)

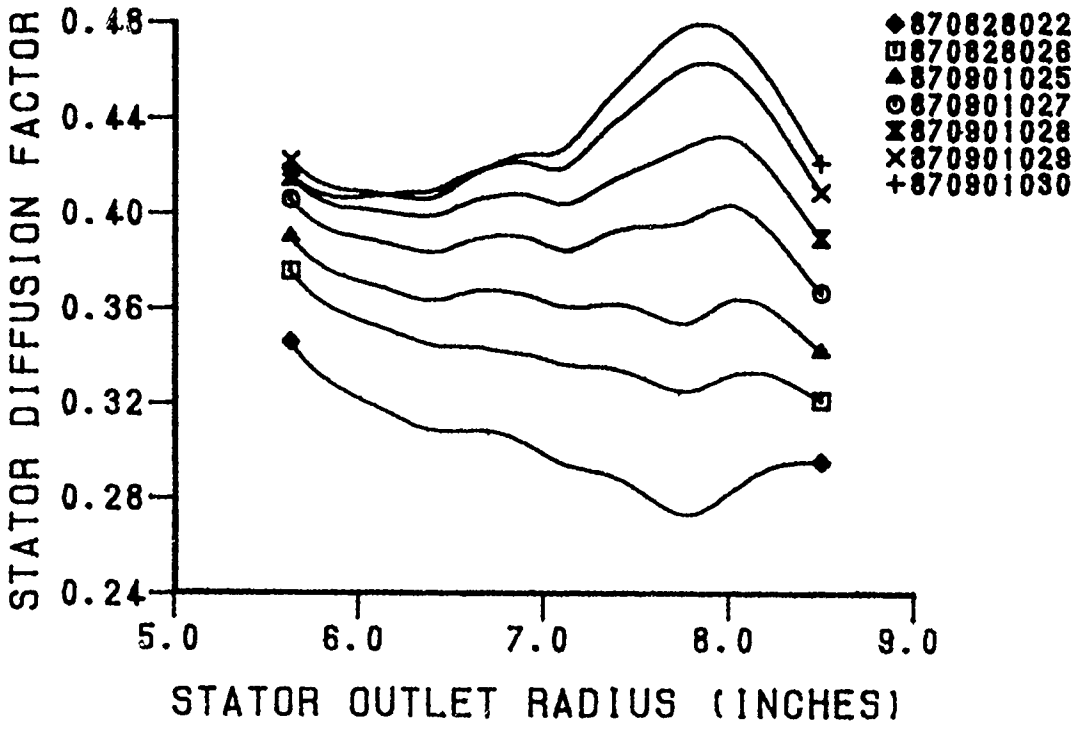


Figure 66. Stator Diffusion Factor (80% N)

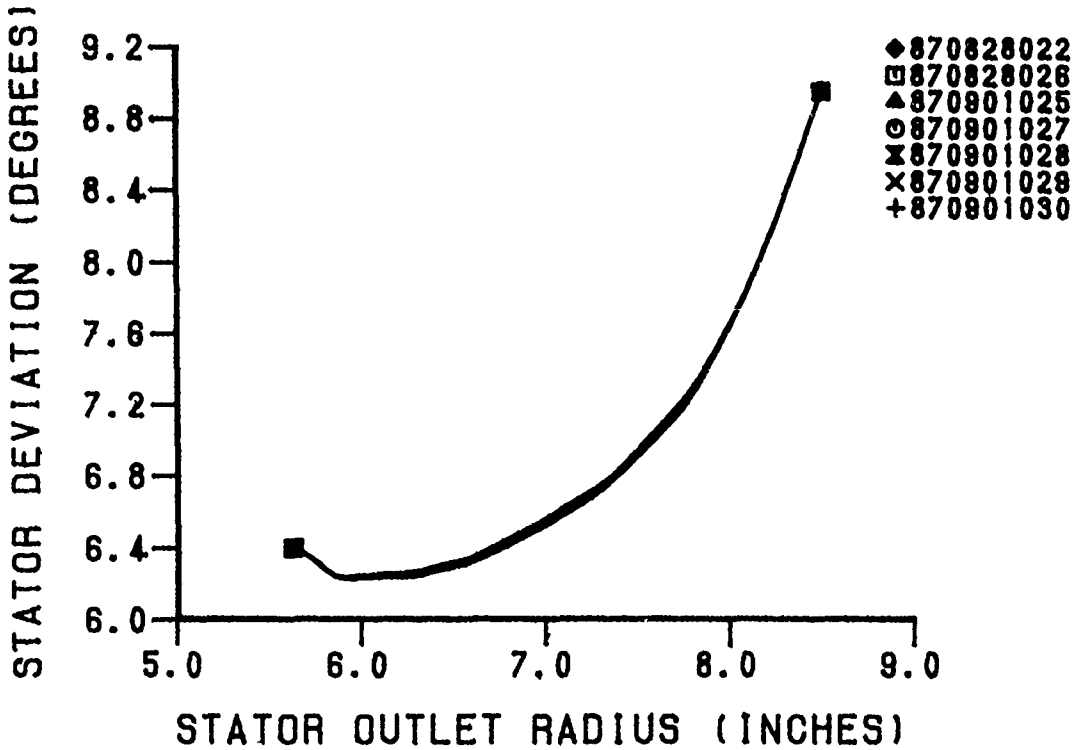


Figure 67. Stator Deviation Angle (80% N)

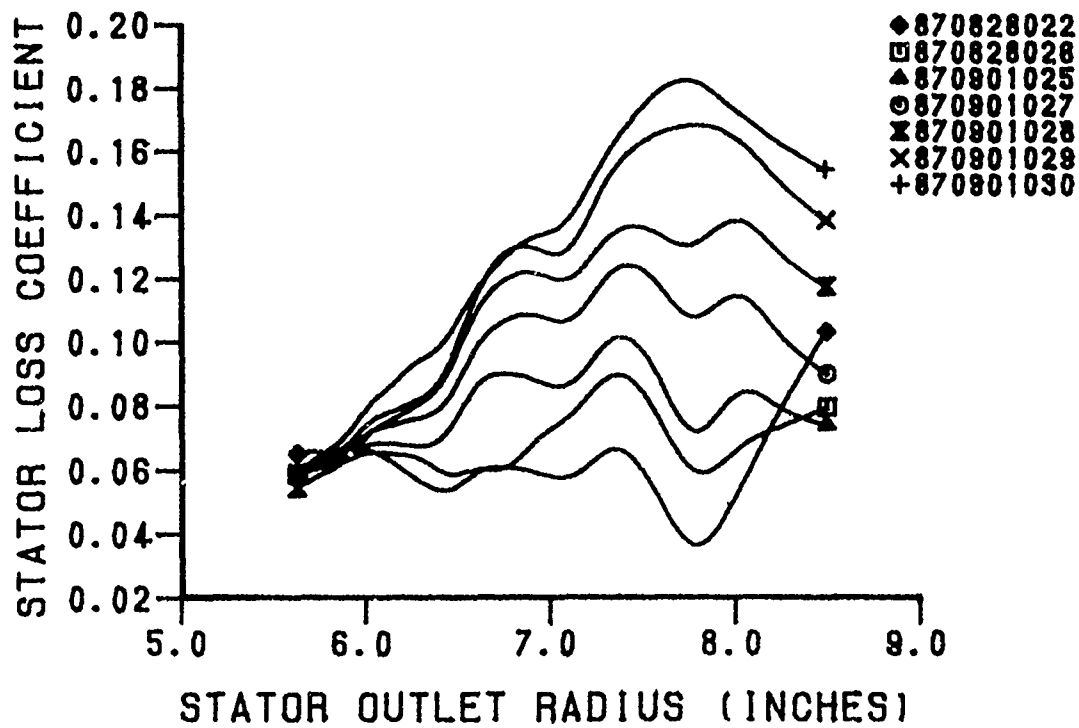


Figure 68. Stator Loss Coefficient (80% N)

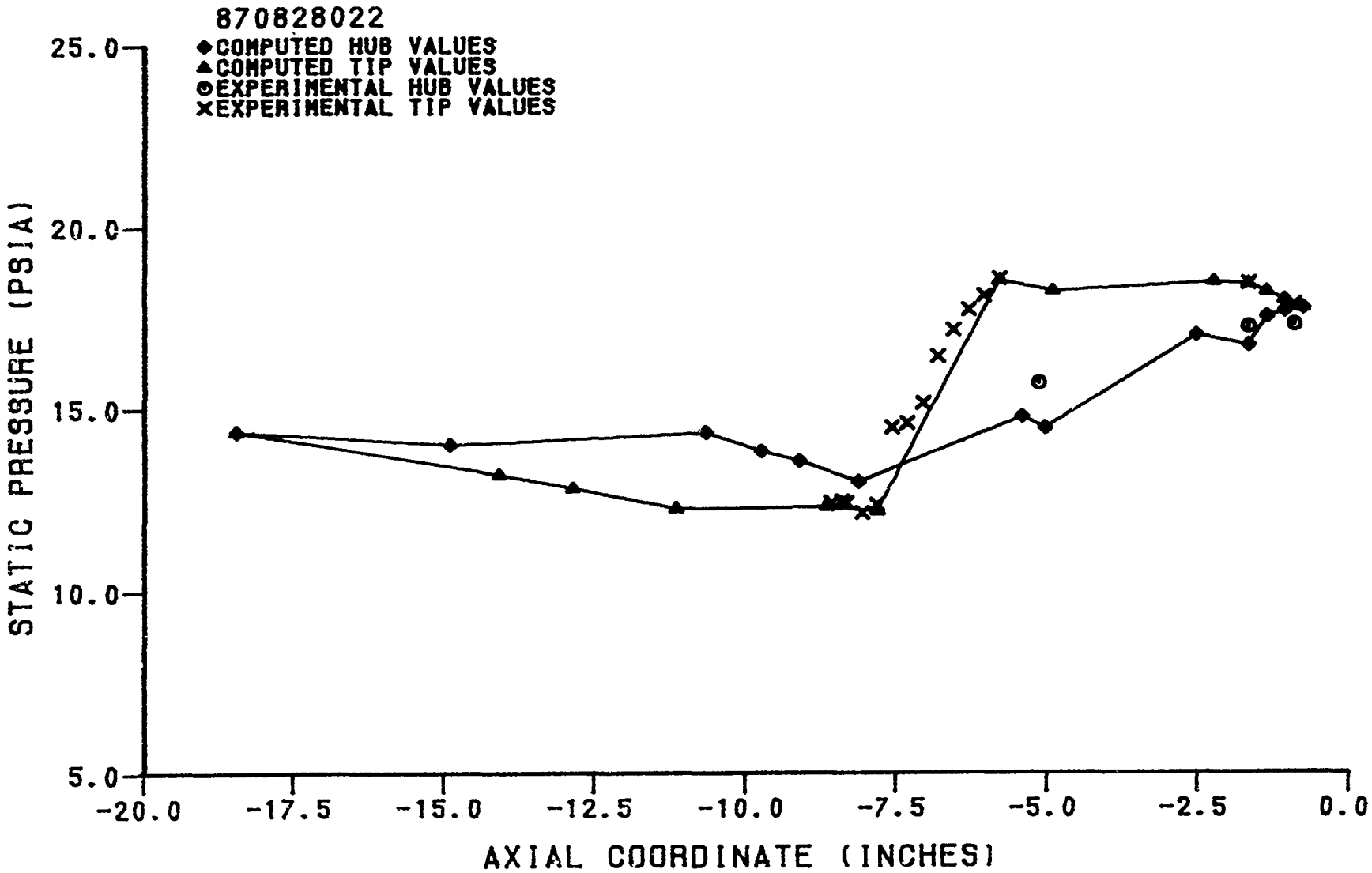


Figure 69. Static Pressure Distribution (870828022)

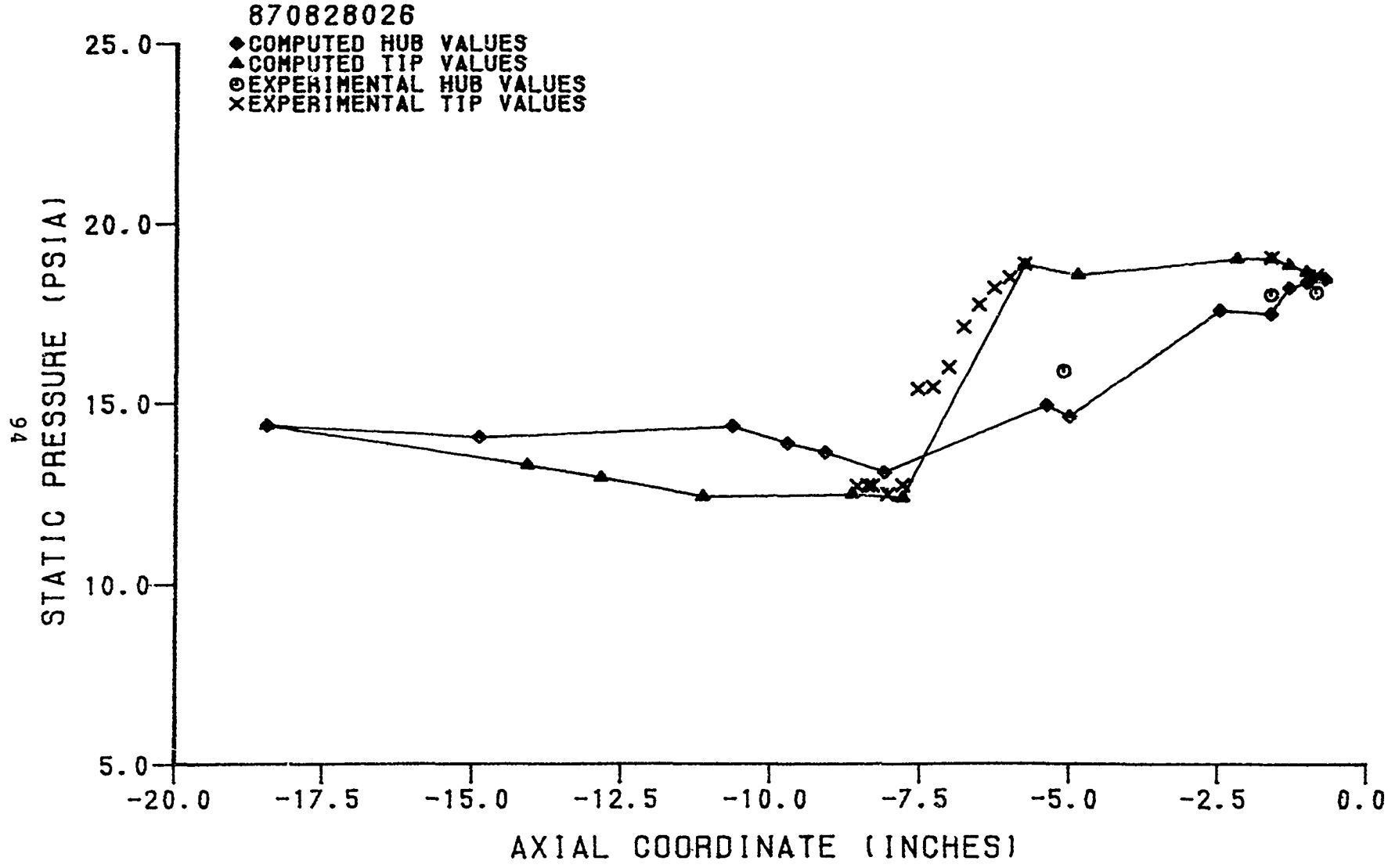


Figure 70. Static Pressure Distribution (870828026)

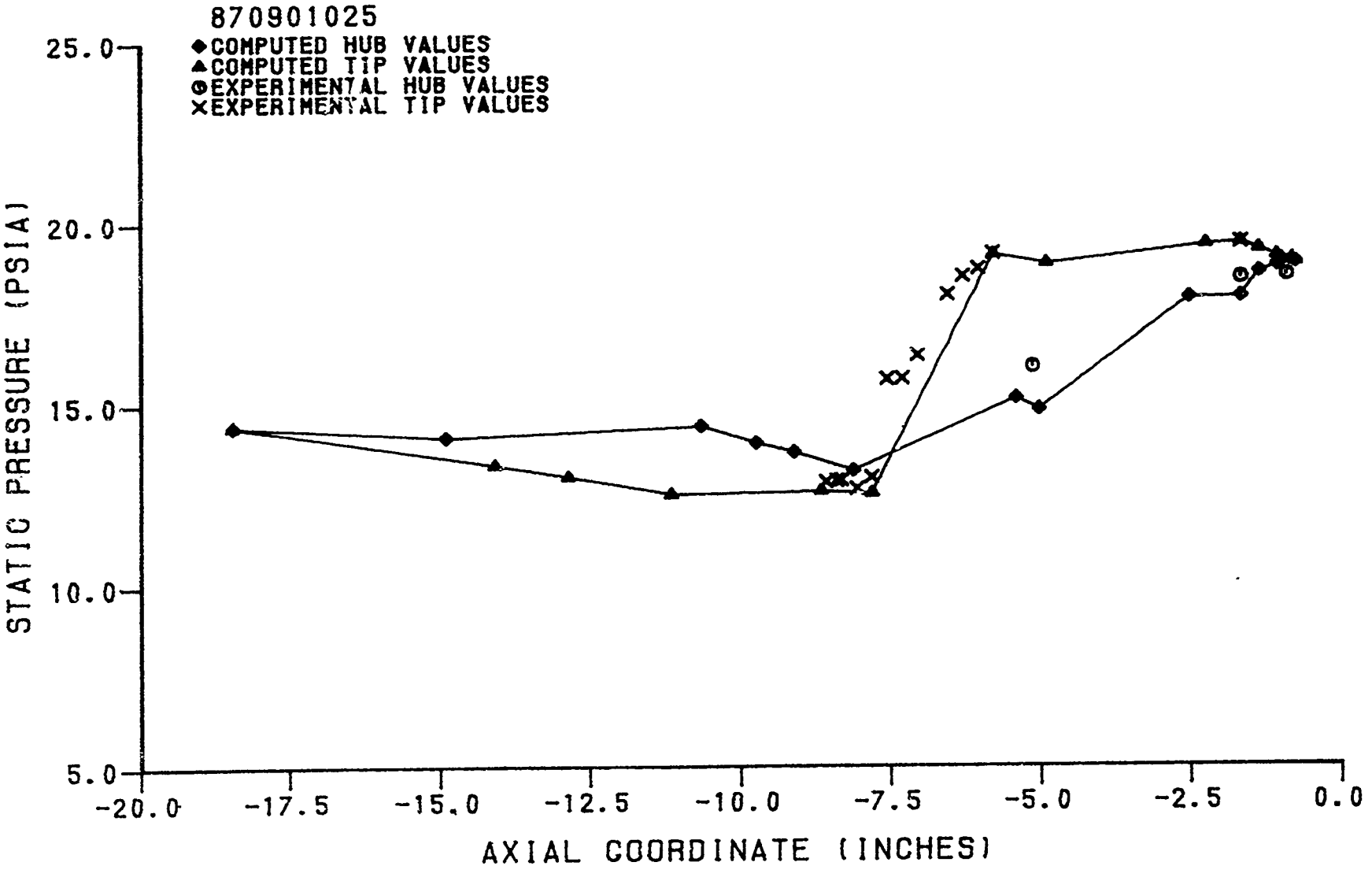


Figure 71. Static Pressure Distribution (870901025)

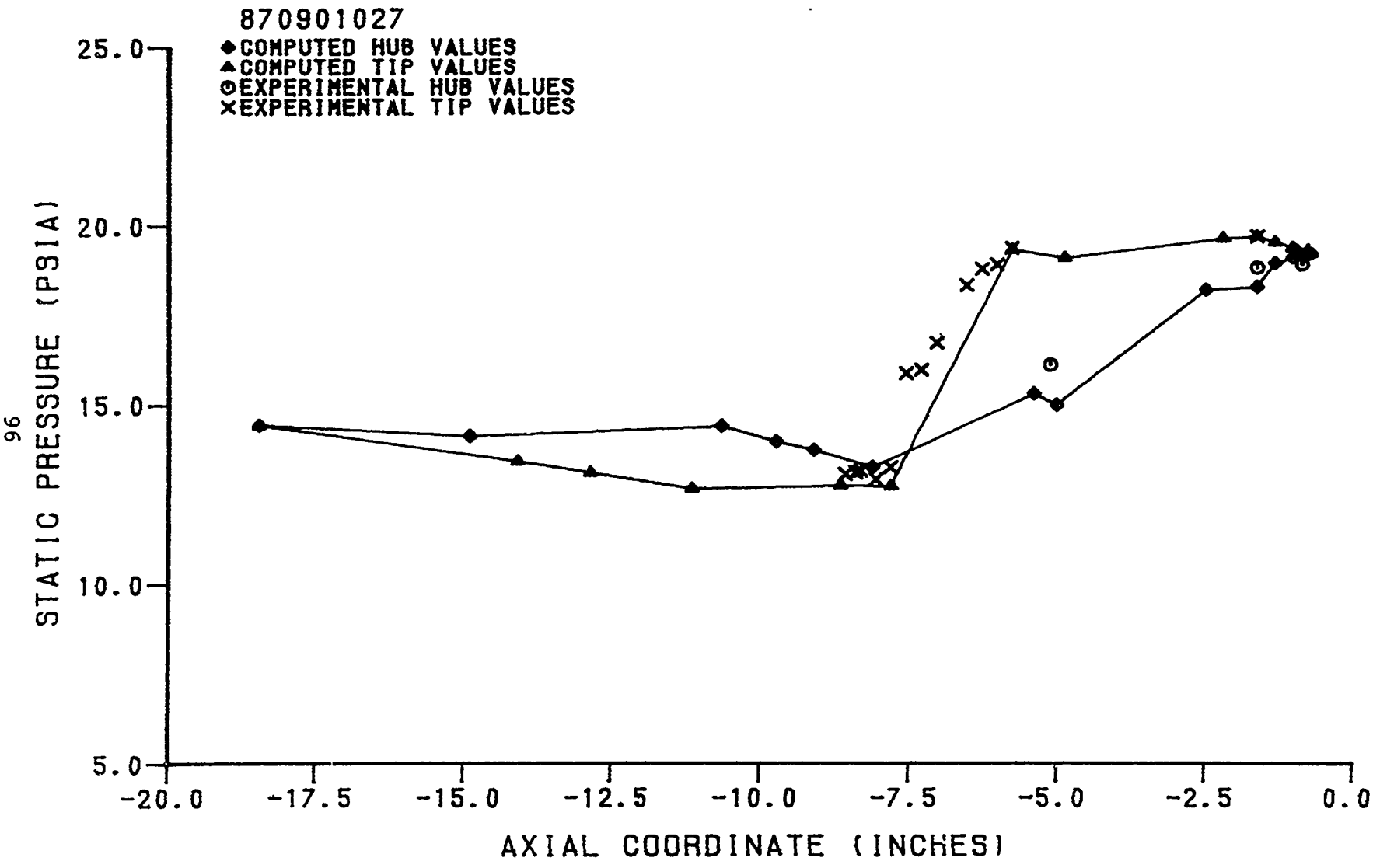


Figure 72. Static Pressure Distribution (870910027)

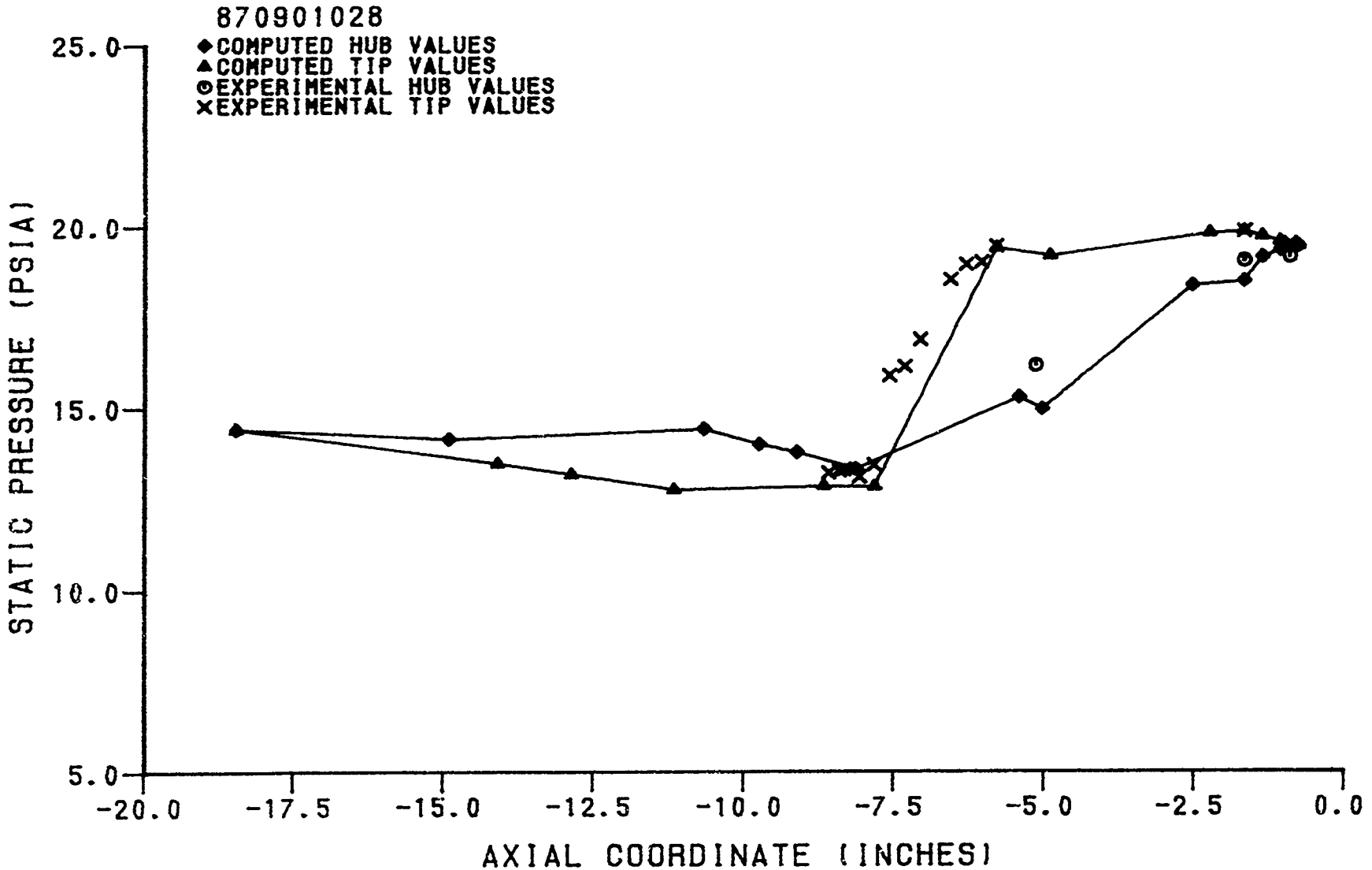


Figure 73. Static Pressure Distribution (870901028)

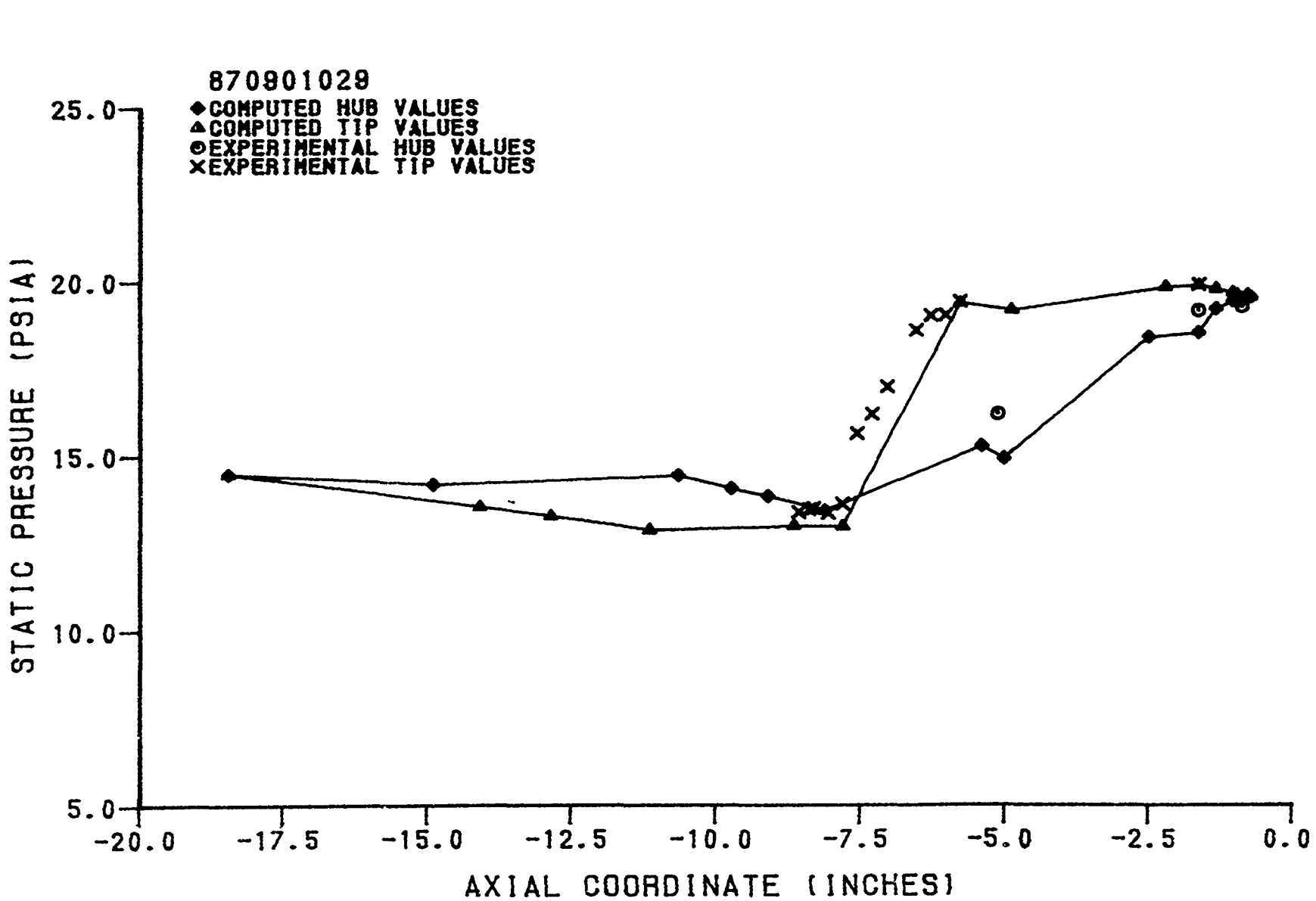


Figure 74. Static Pressure Distribution (870901029)

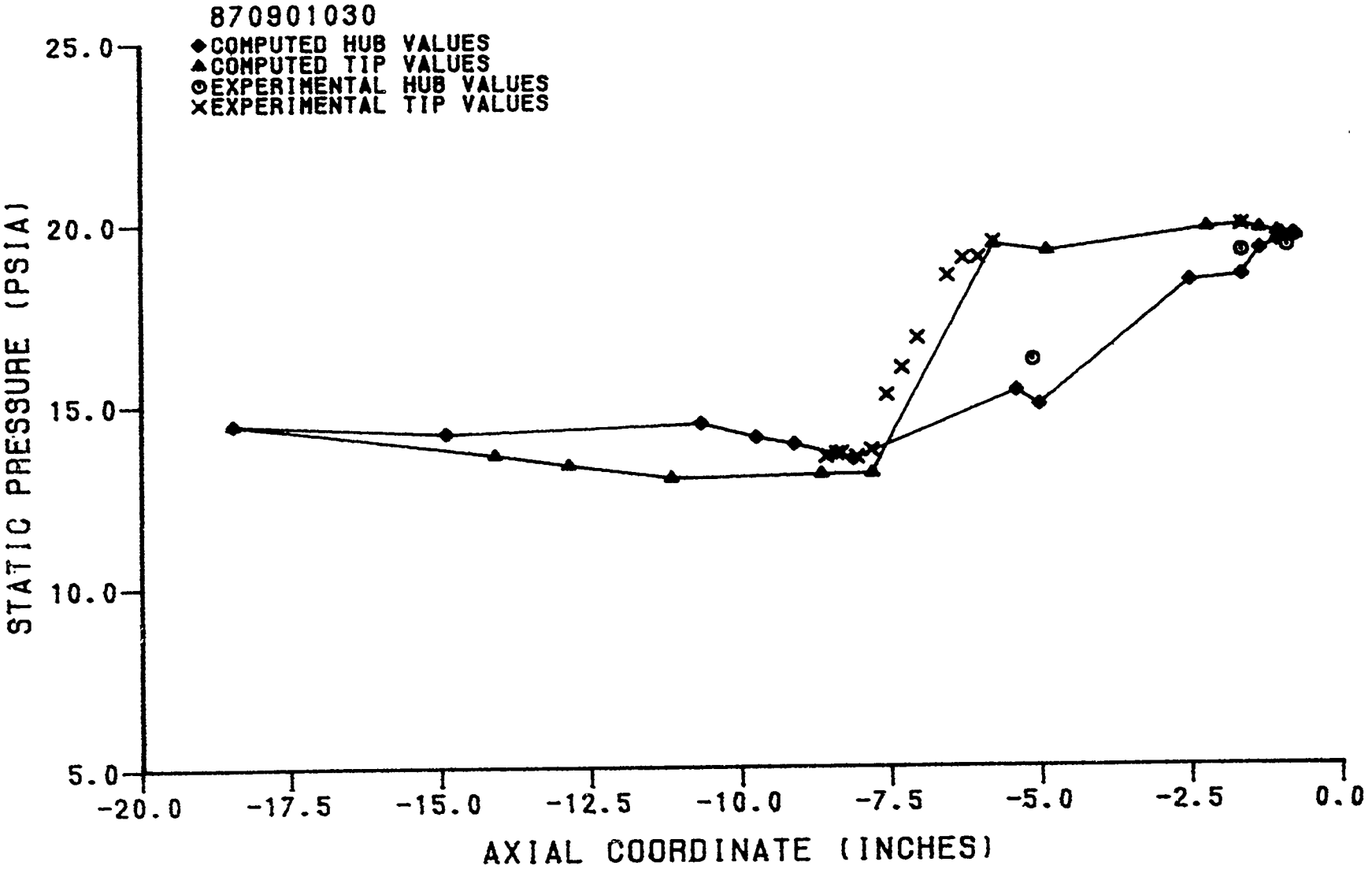


Figure 75. Static Pressure Distribution (870901030)

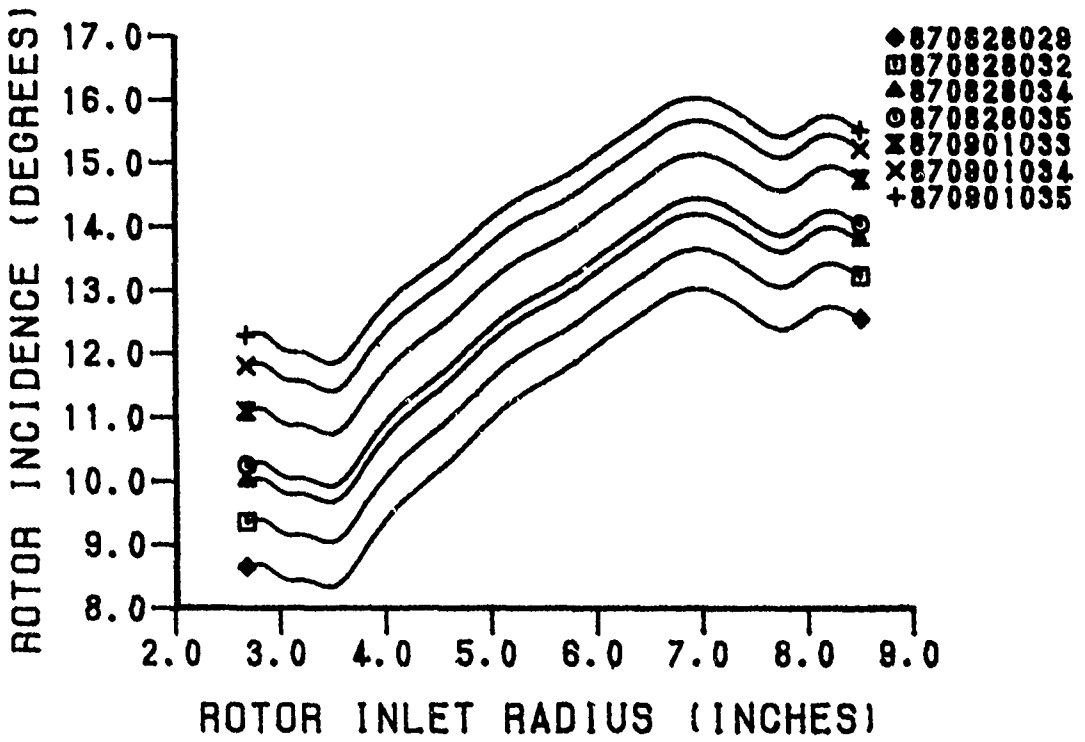


Figure 76. Rotor Incidence Angle (70% N)

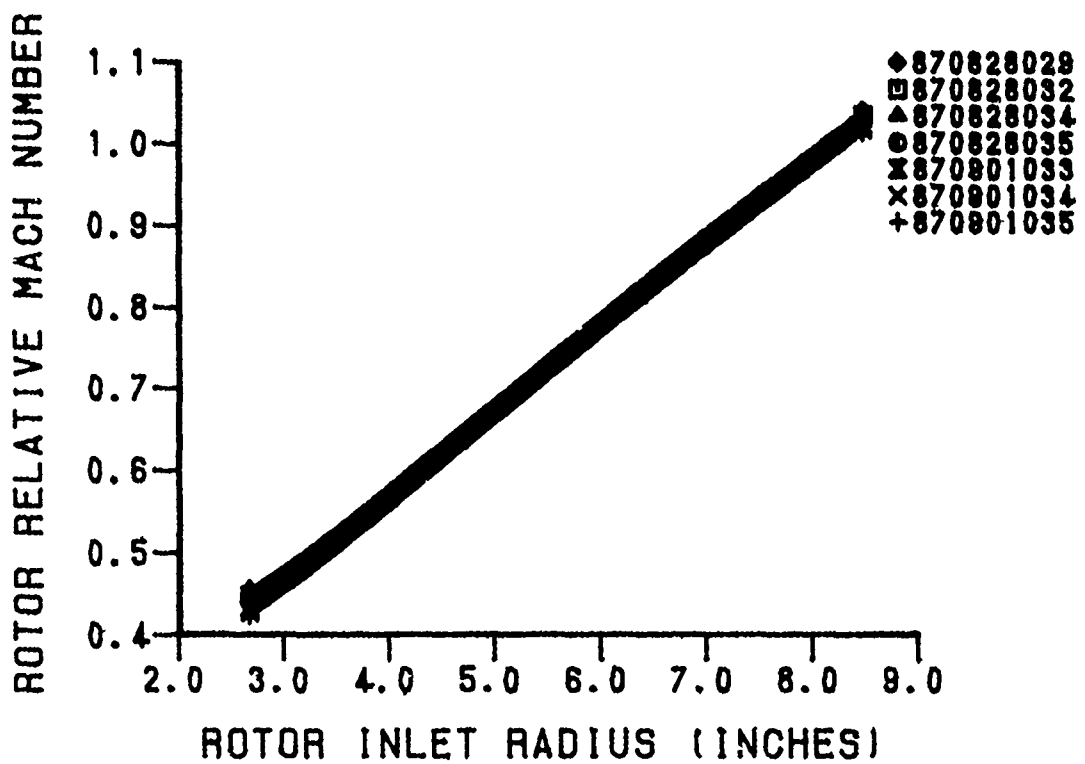


Figure 77. Rotor Relative Inlet Mach Number (70% N)

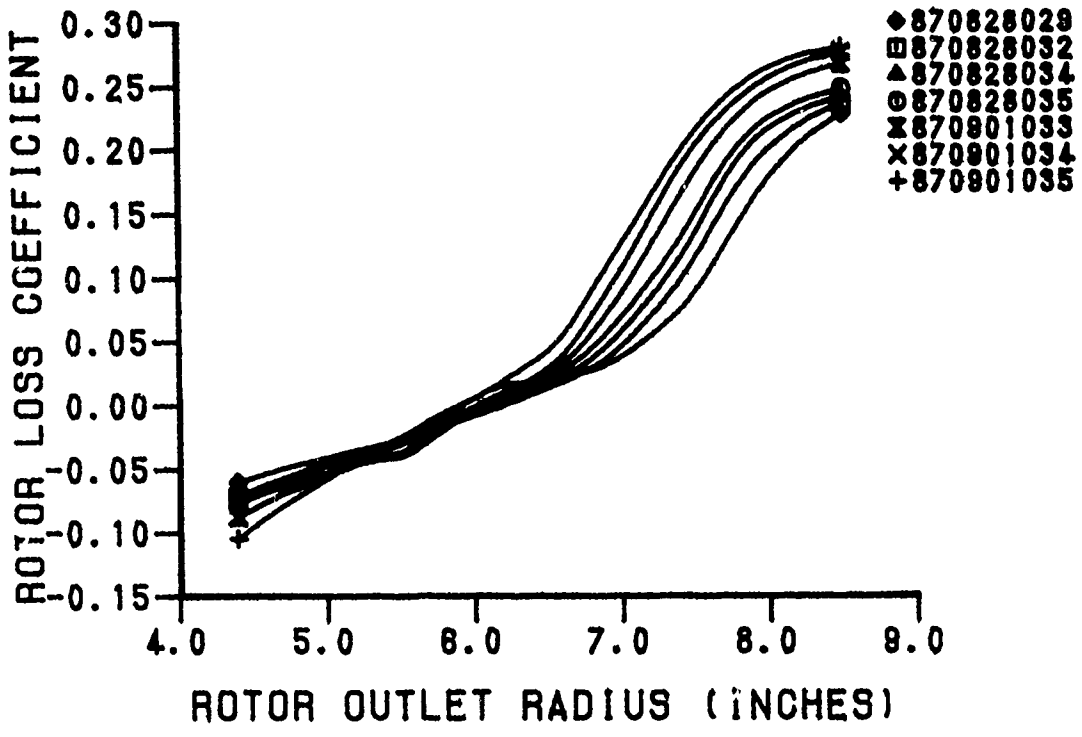


Figure 78. Rotor Loss Coefficient (70% N)

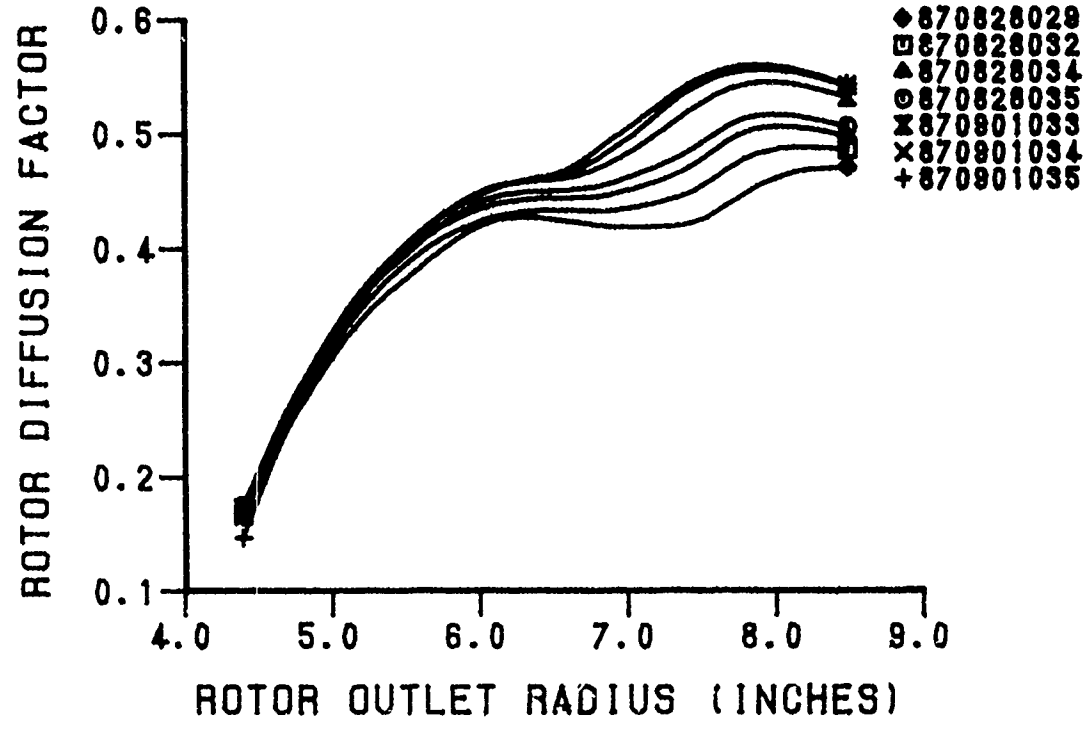


Figure 79. Rotor Diffusion Factor (70% N)

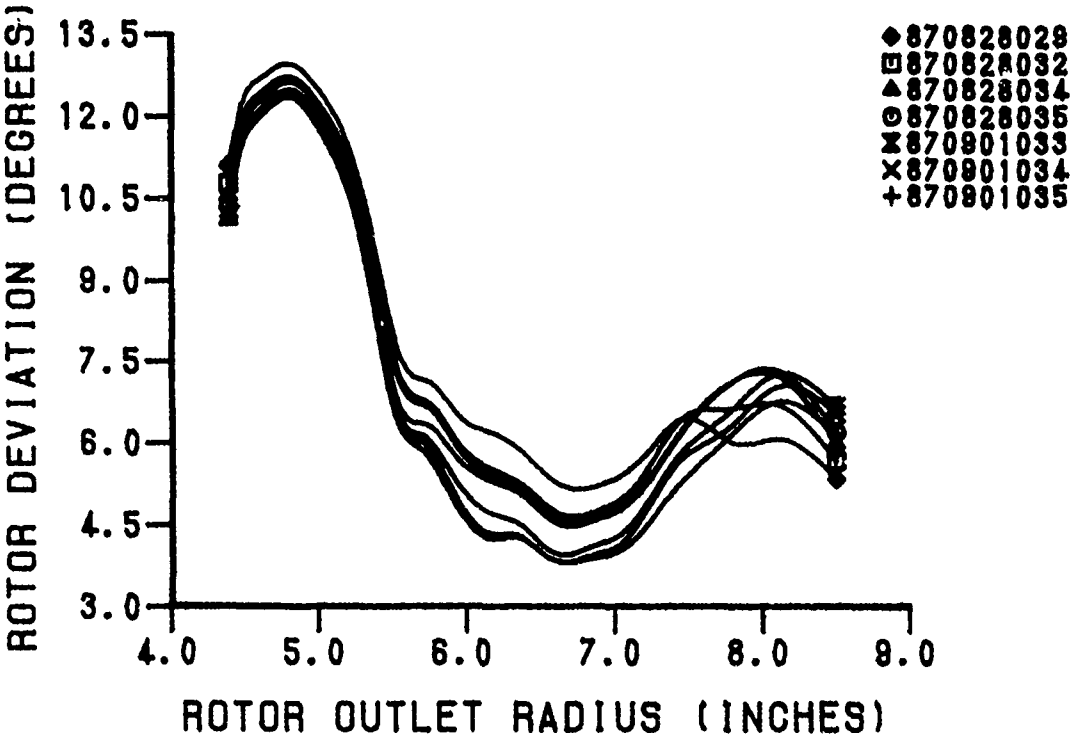


Figure 80. Rotor Deviation Angle (70% N)

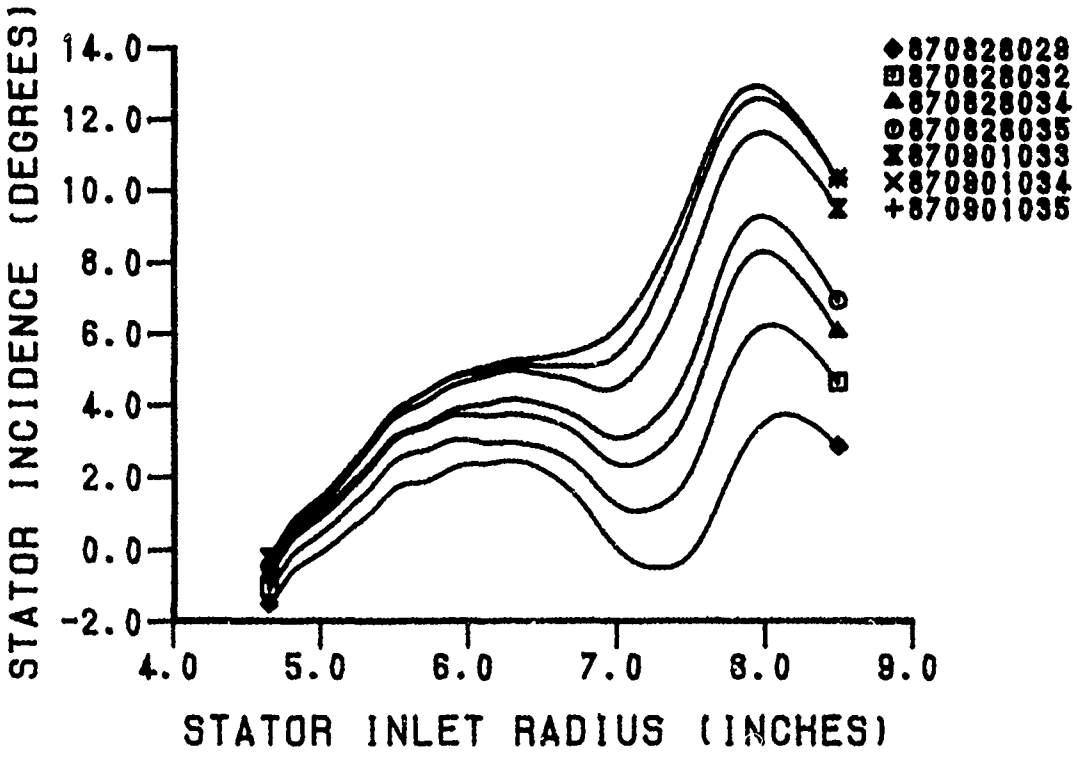


Figure 81. Stator Incidence Angle (70% N)

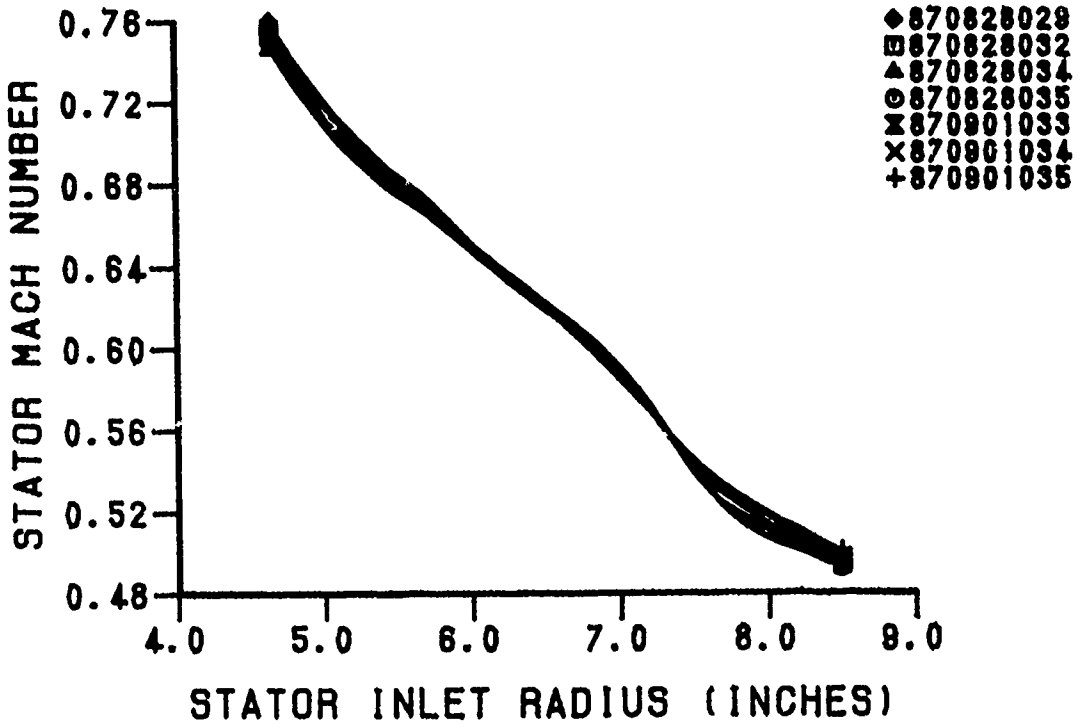


Figure 82. Stator Absolute Inlet Mach Number (70% N)

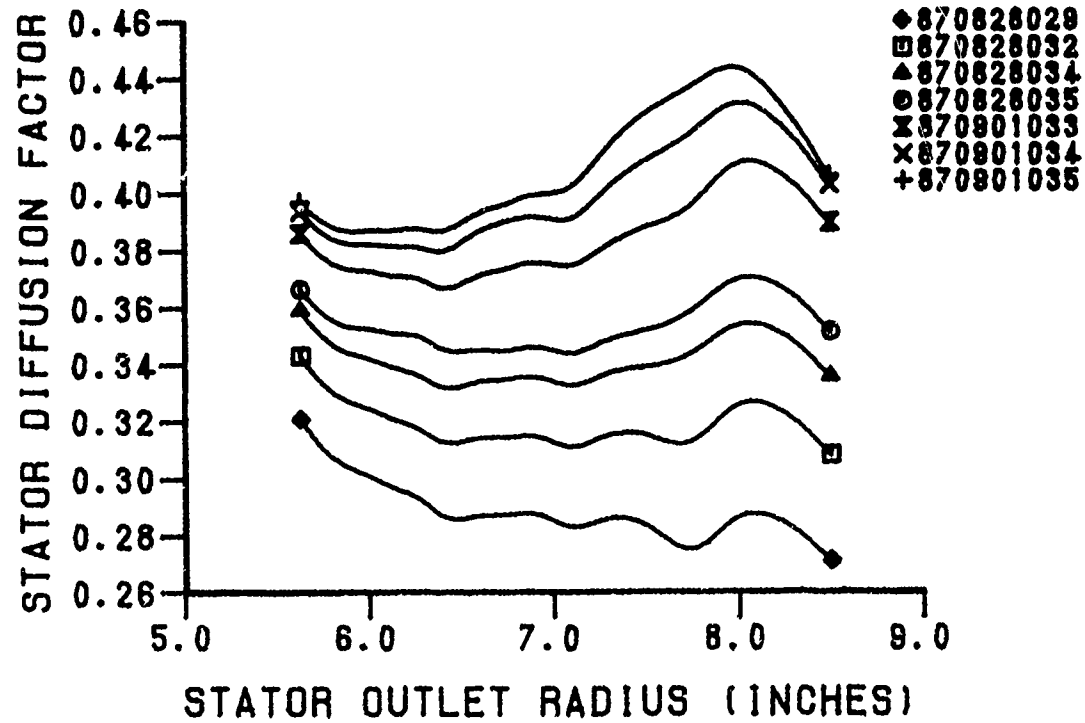


Figure 83. Stator Diffusion Factor (70% N)

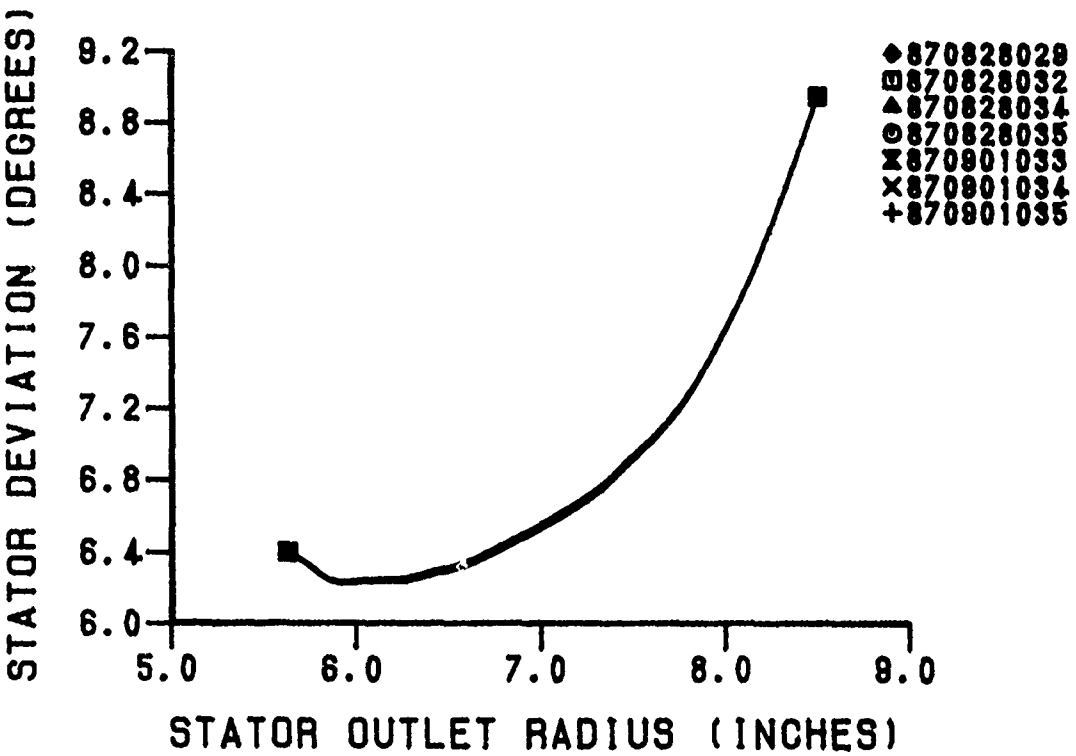


Figure 84. Stator Deviation Angle (70% N)

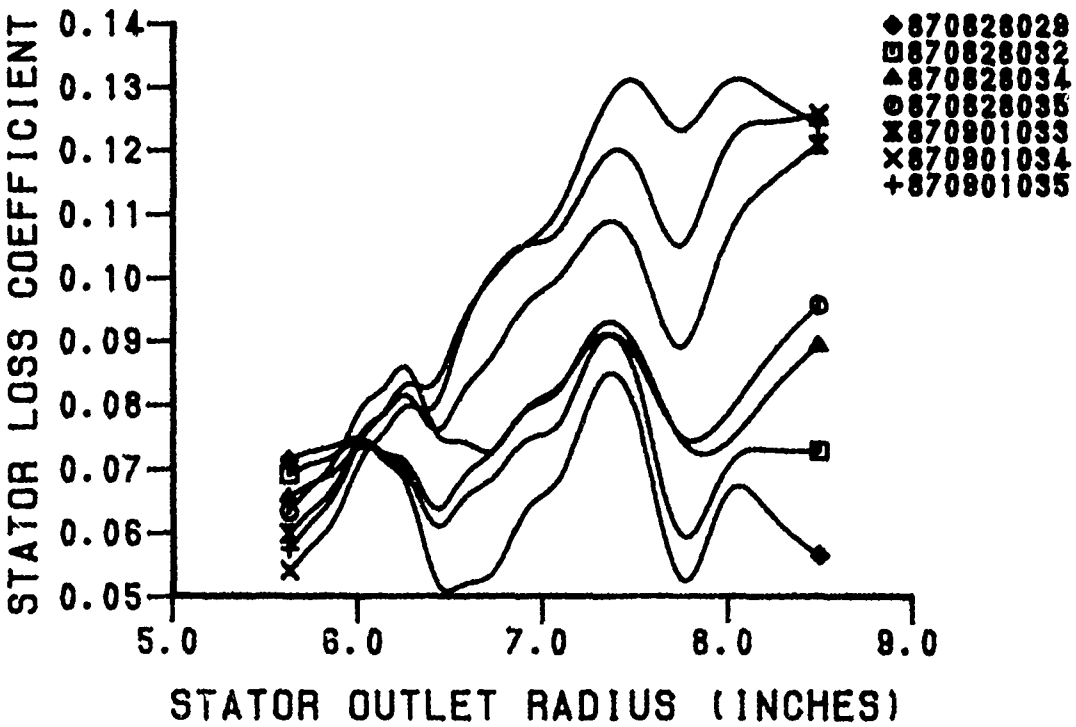


Figure 85. Stator Loss Coefficient (70% N)

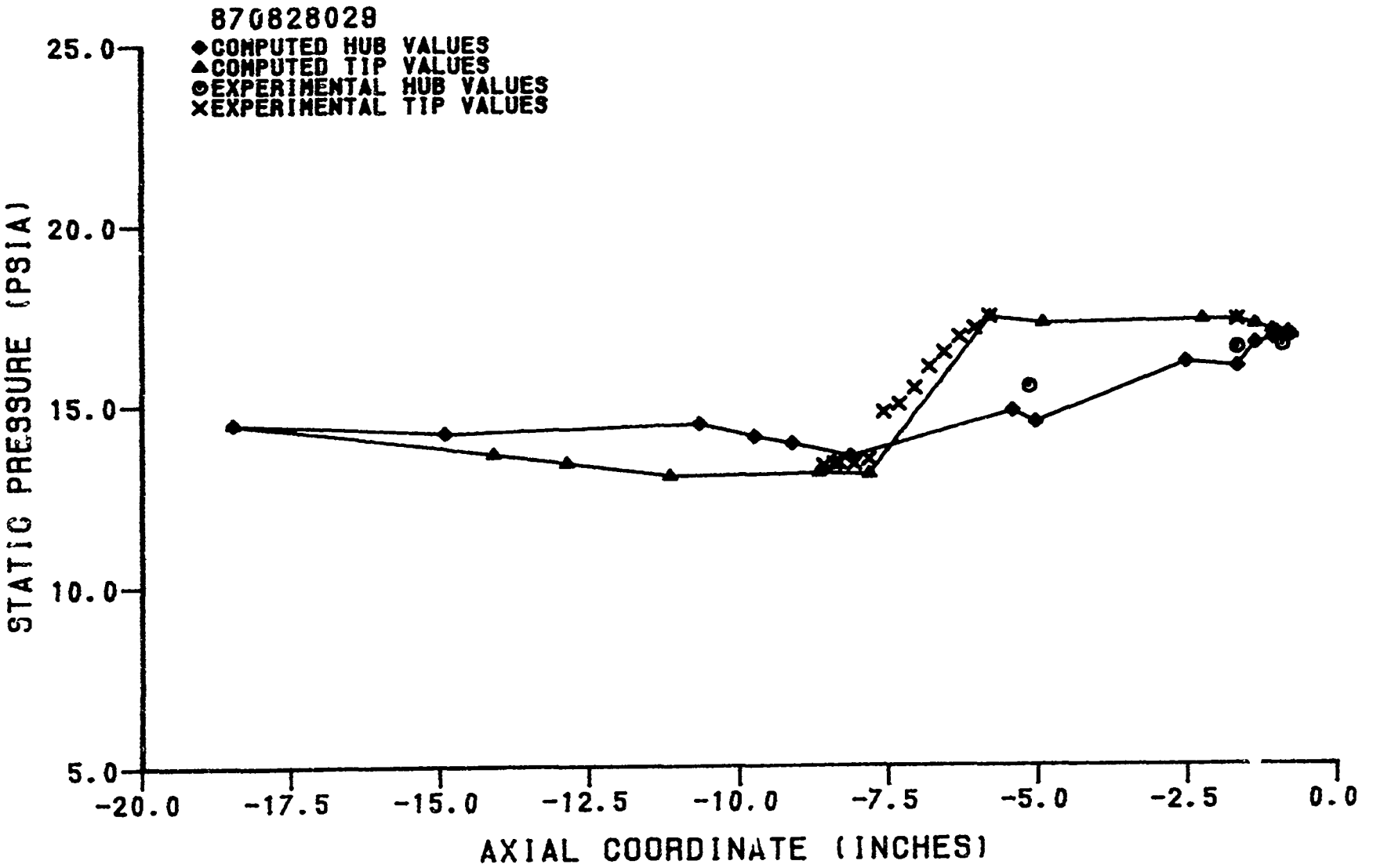


Figure 86. Static Pressure Distribution (870828029)

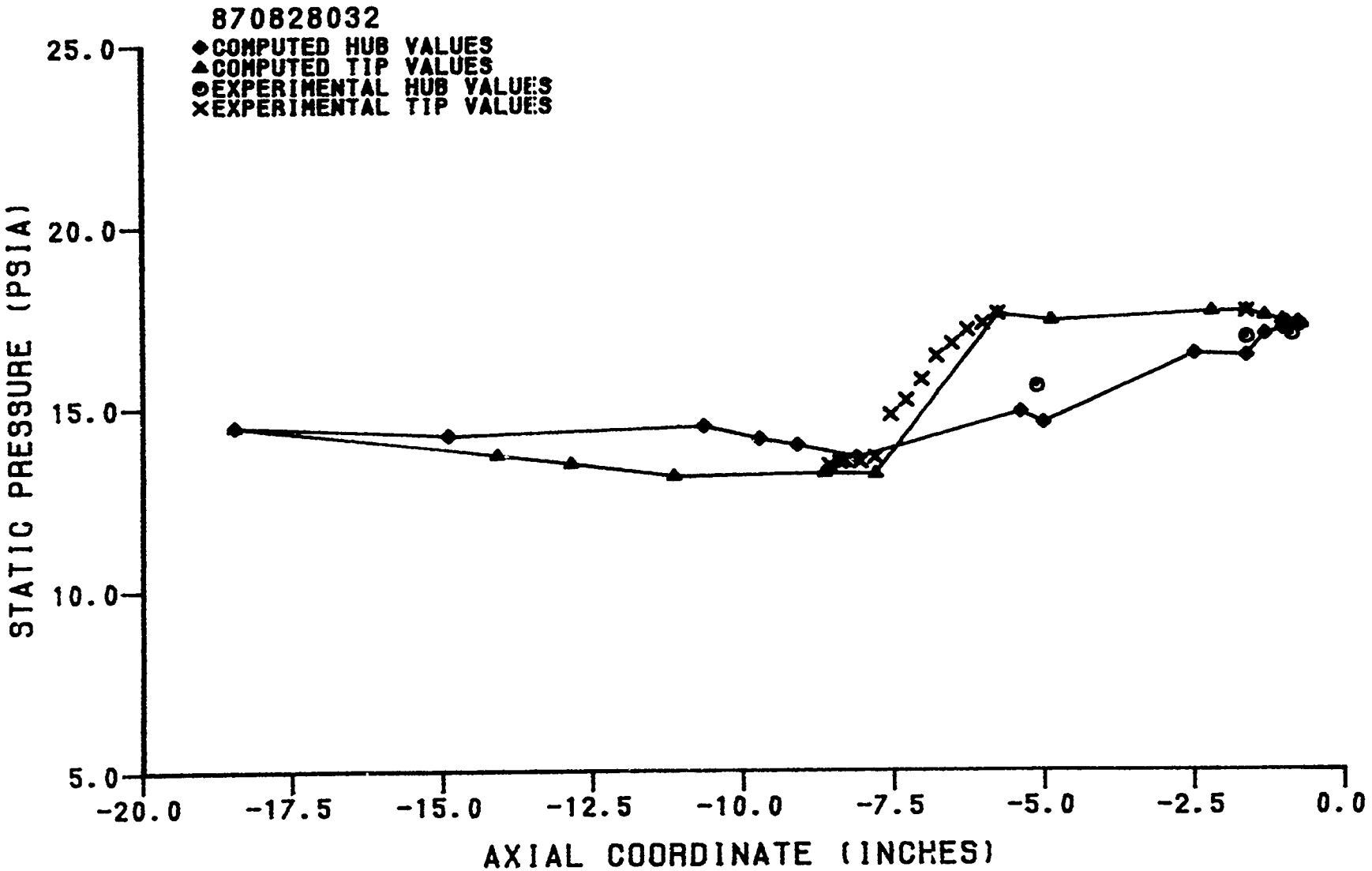


Figure 87. Static Pressure Distribution (870828032)

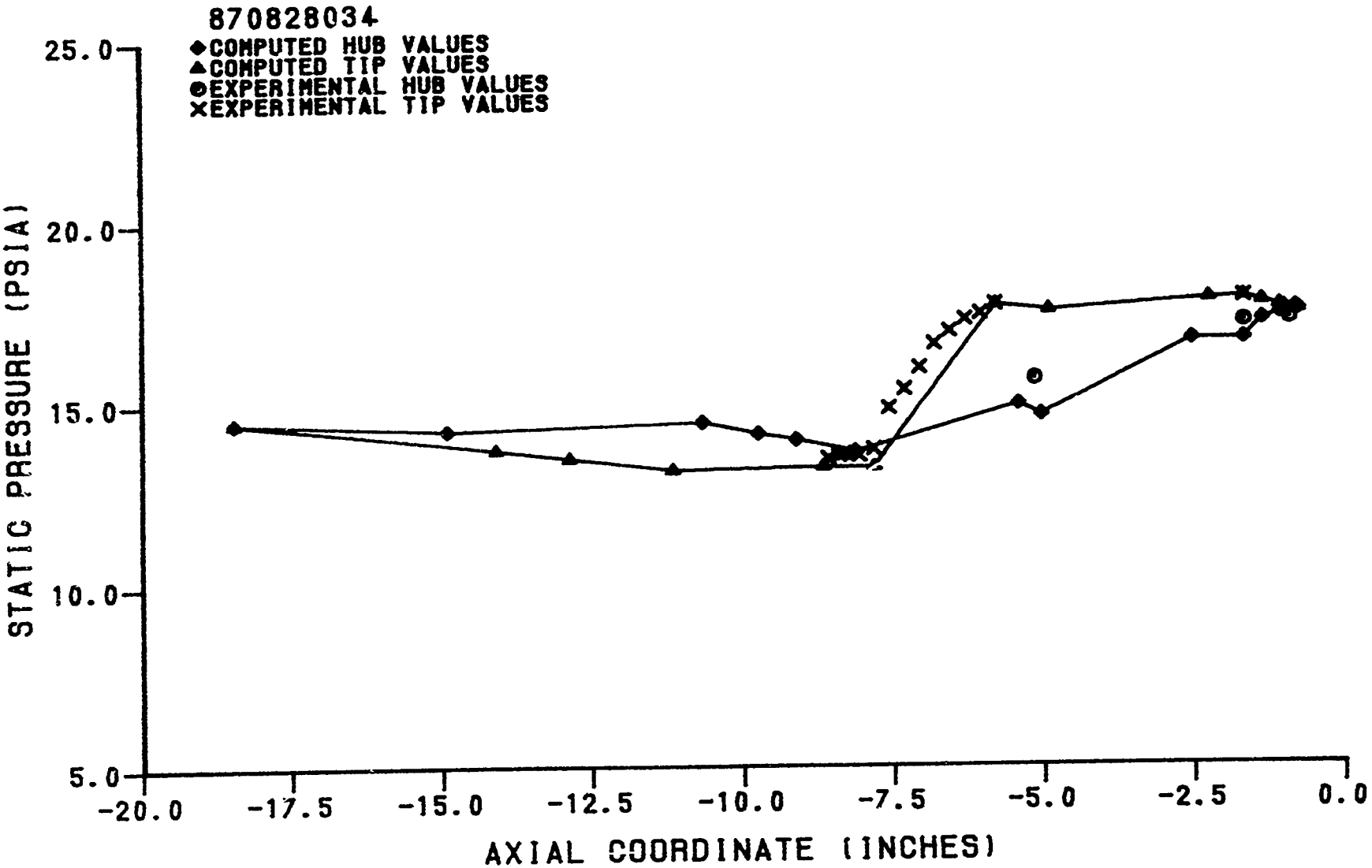


Figure 88. Static Pressure Distribution (870828034)

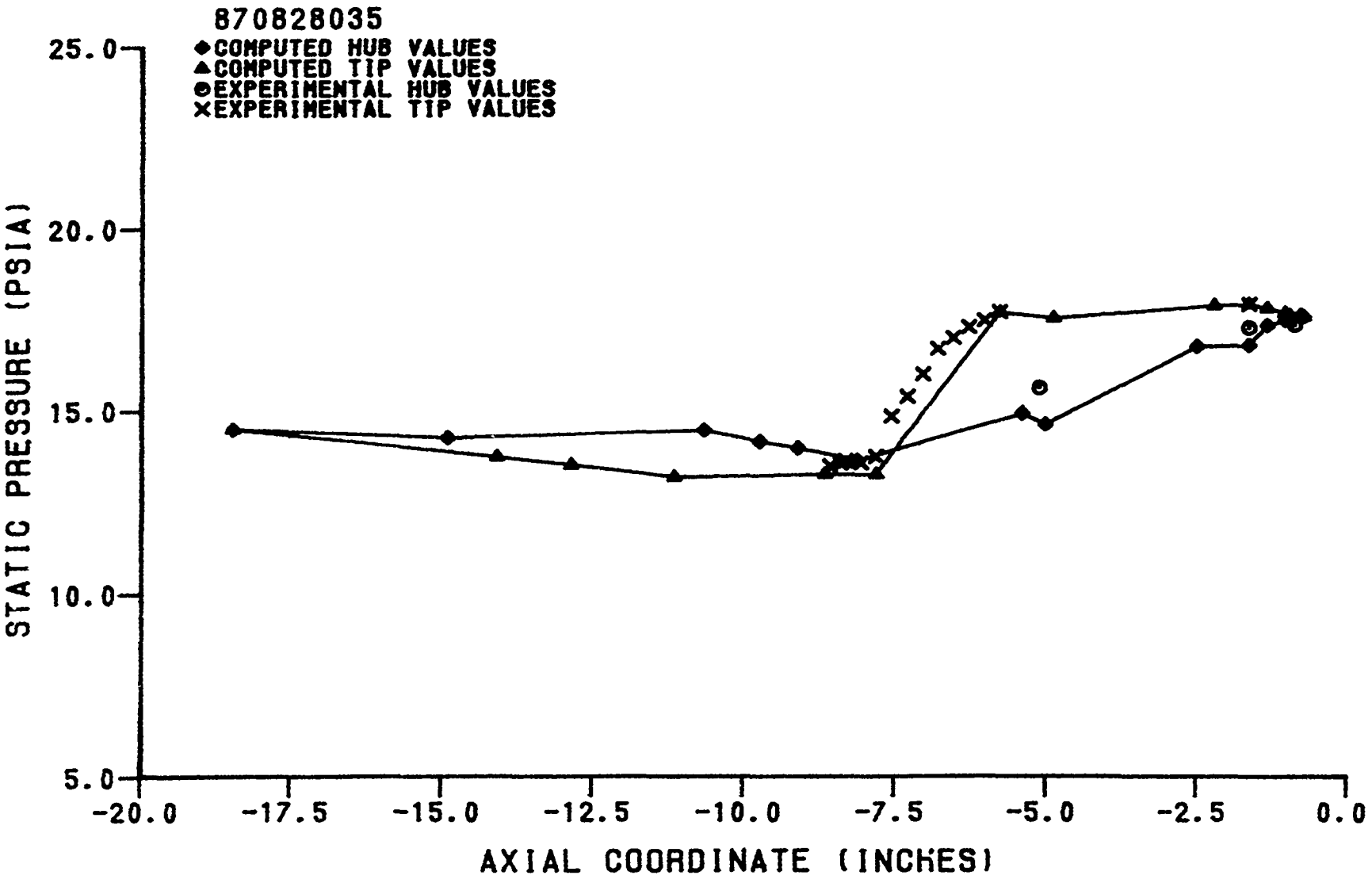


Figure 89. Static Pressure Distribution (870828035)

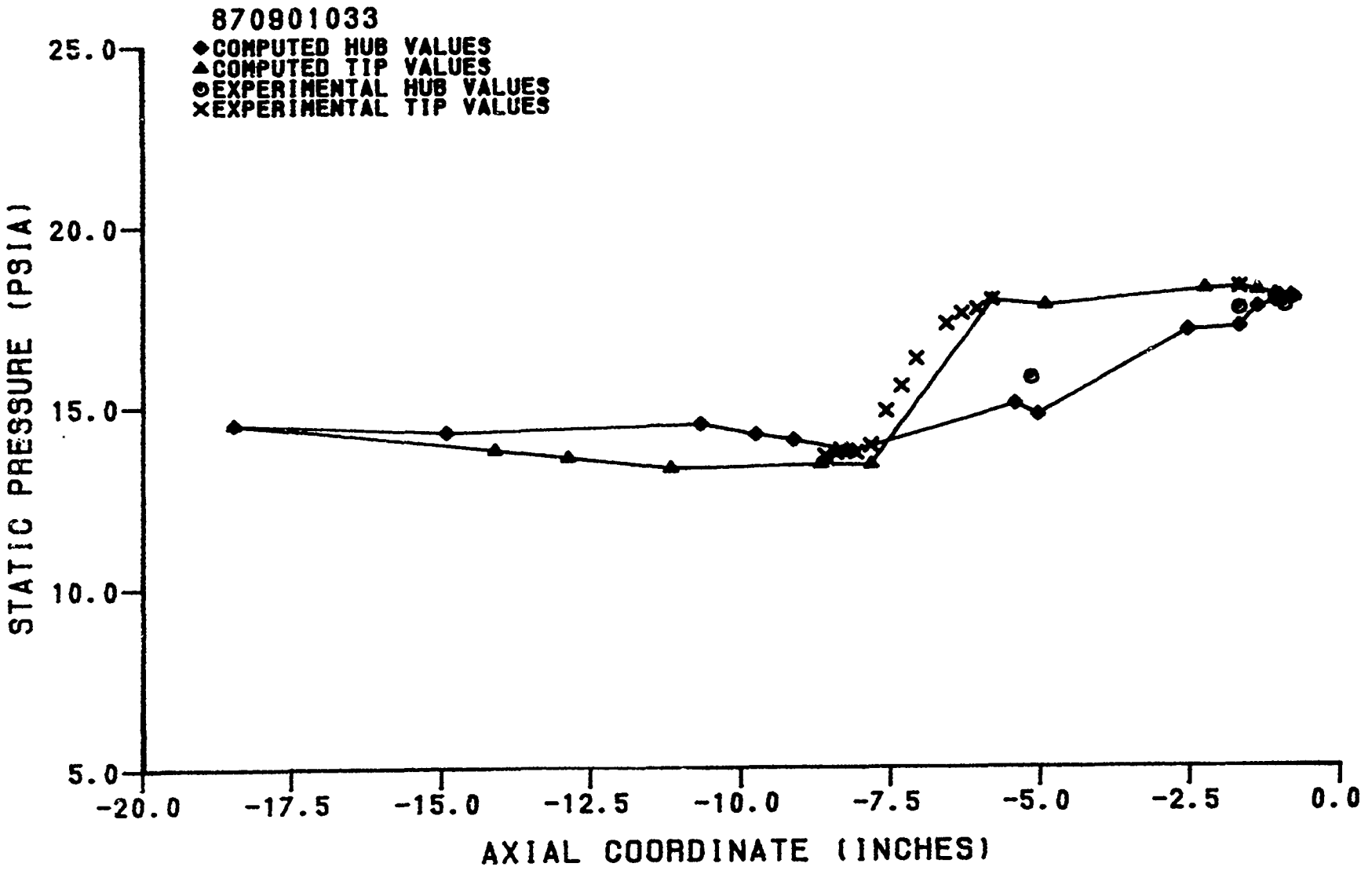


Figure 90. Static Pressure Distribution (870901033)

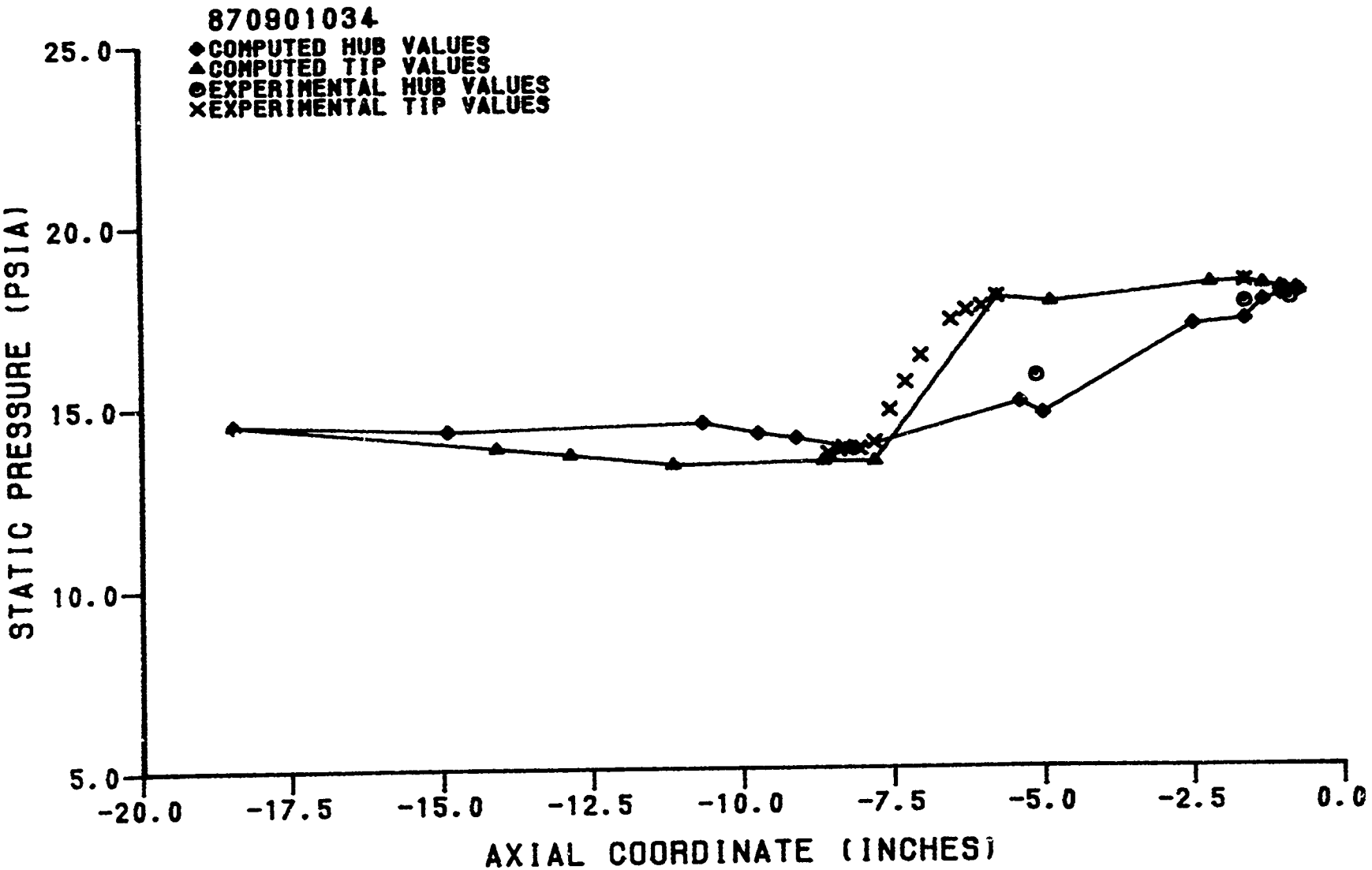


Figure 91. Static Pressure Distribution (870901034)

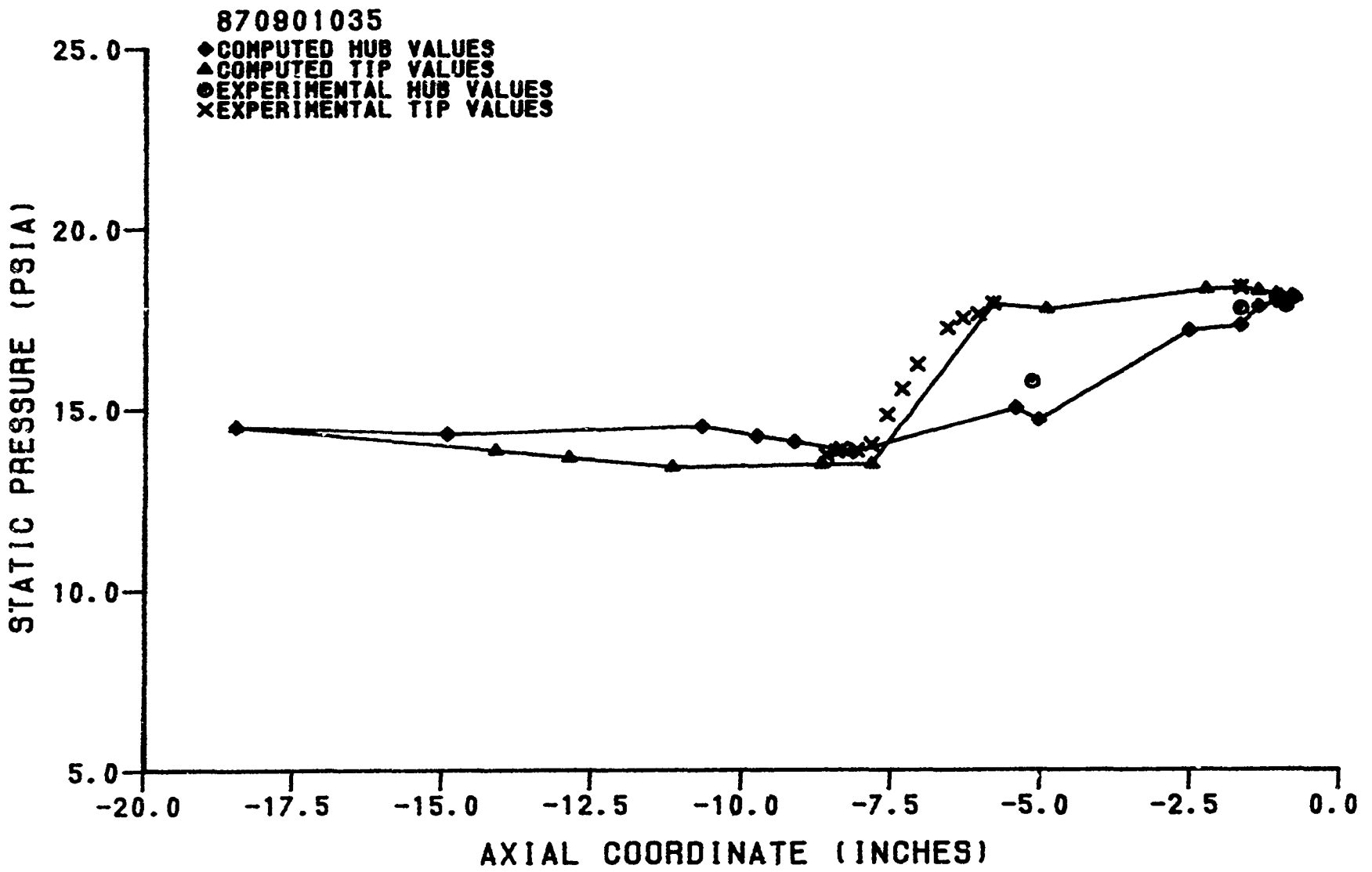


Figure 92. Static Pressure Distribution (870901035)

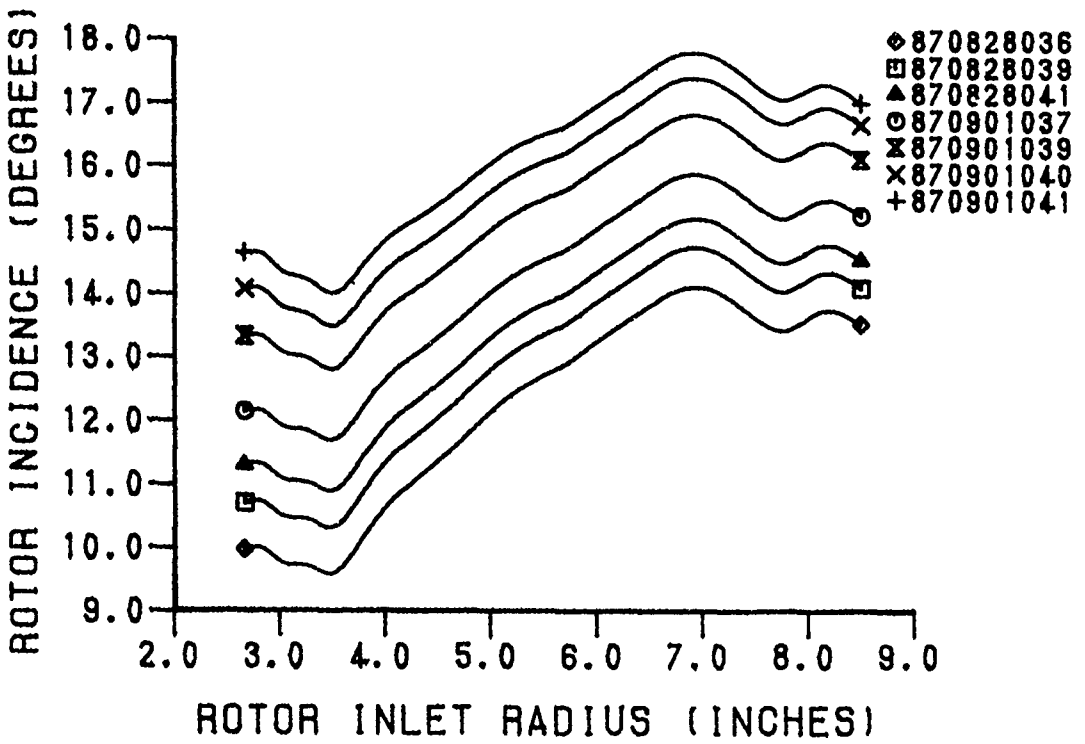


Figure 93. Rotor Incidence Angle (60% N)

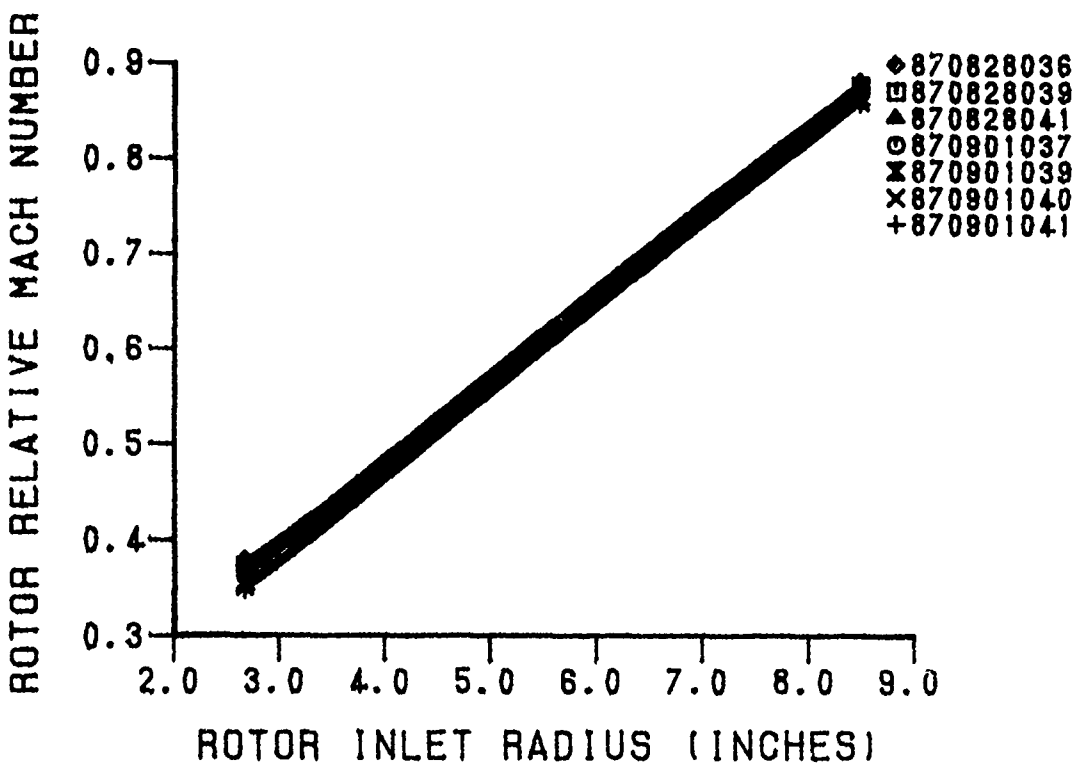


Figure 94. Rotor Relative Inlet Mach Number (60% N)

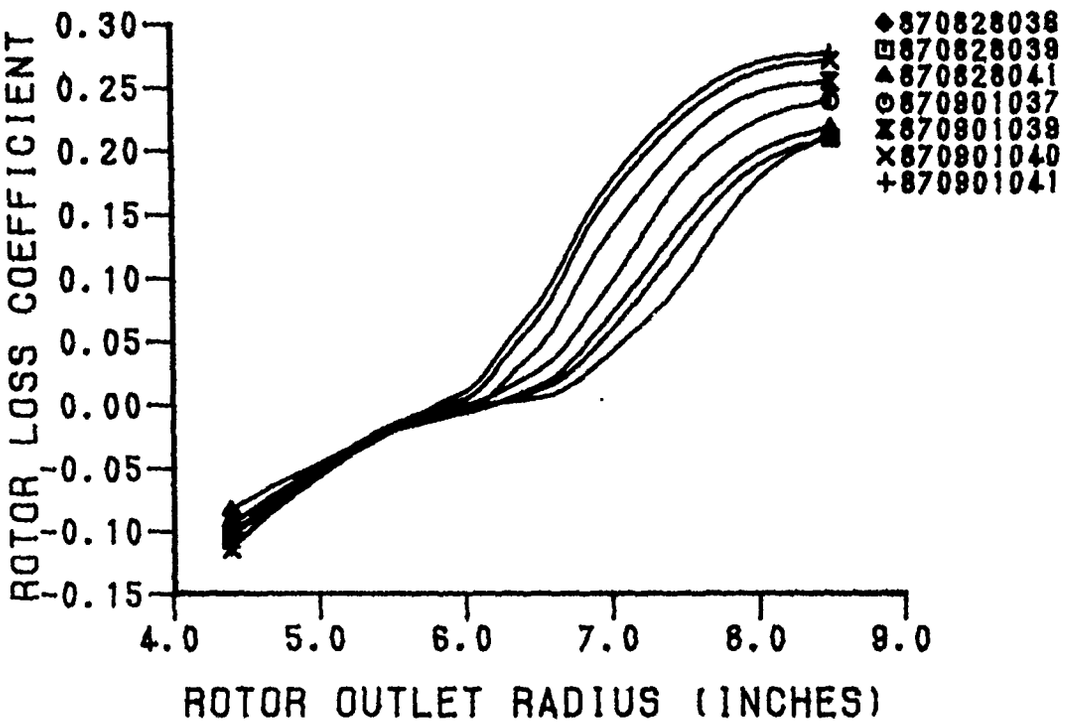


Figure 95. Rotor Loss Coefficient (60% N)

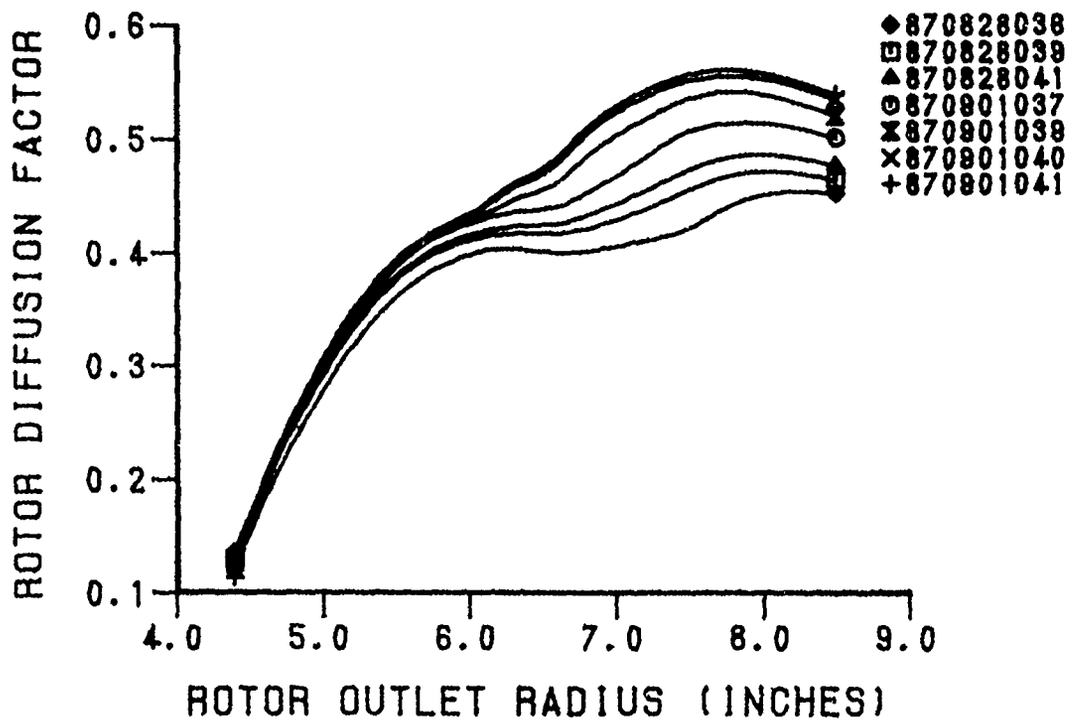


Figure 96. Rotor Diffusion Factor (60% N)

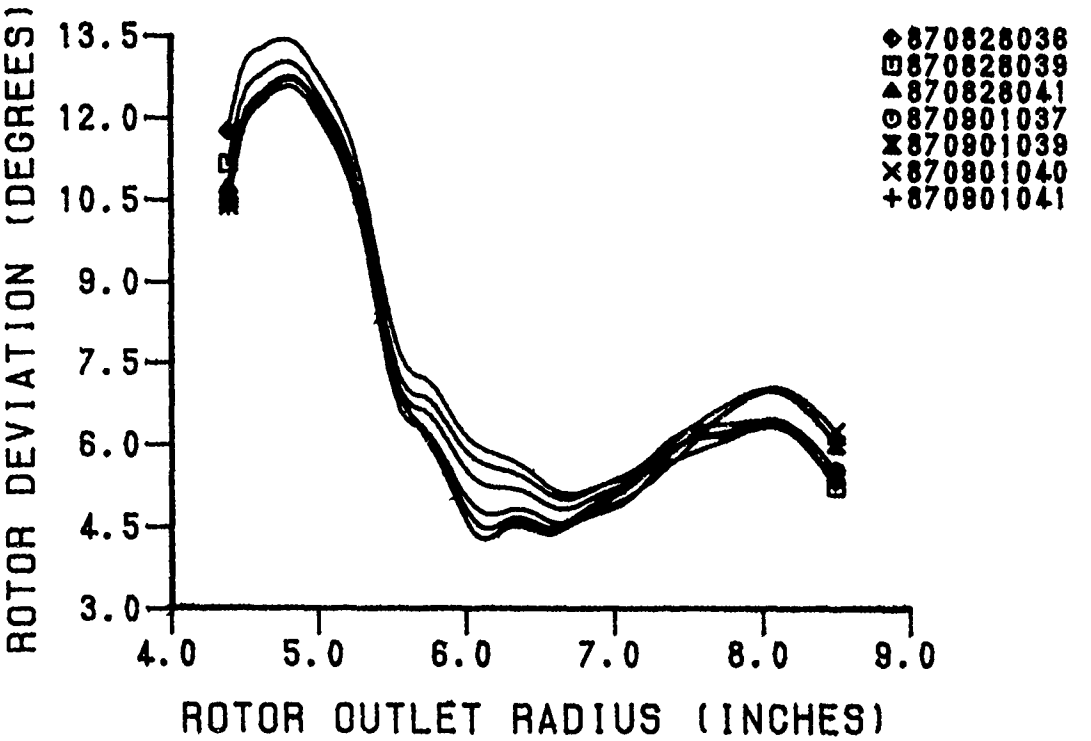


Figure 97. Rotor Deviation Angle (60% N)

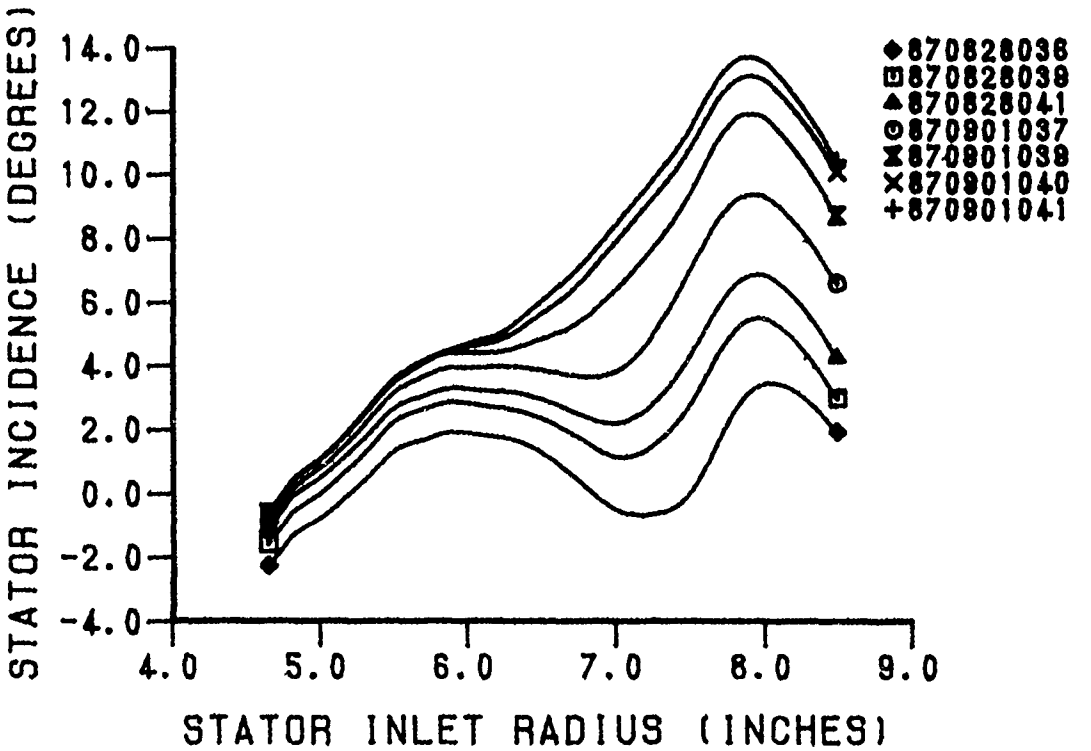


Figure 98. Stator Incidence Angle (60% N)

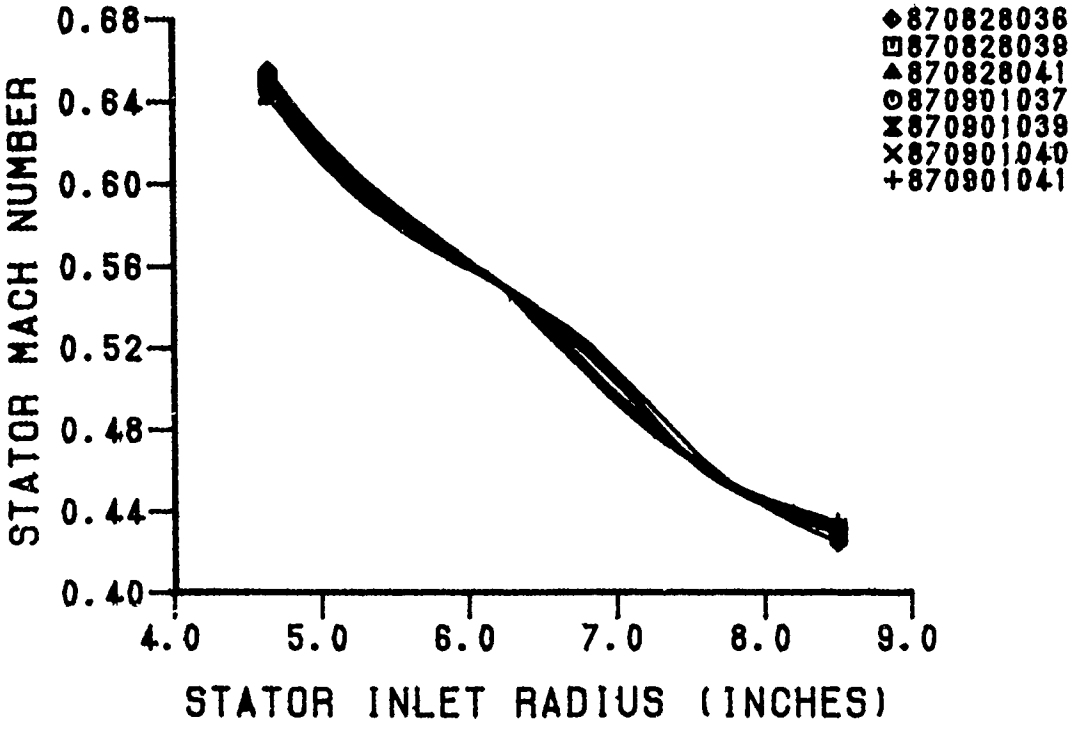


Figure 99. Stator Absolute Inlet Mach Number (60% N)

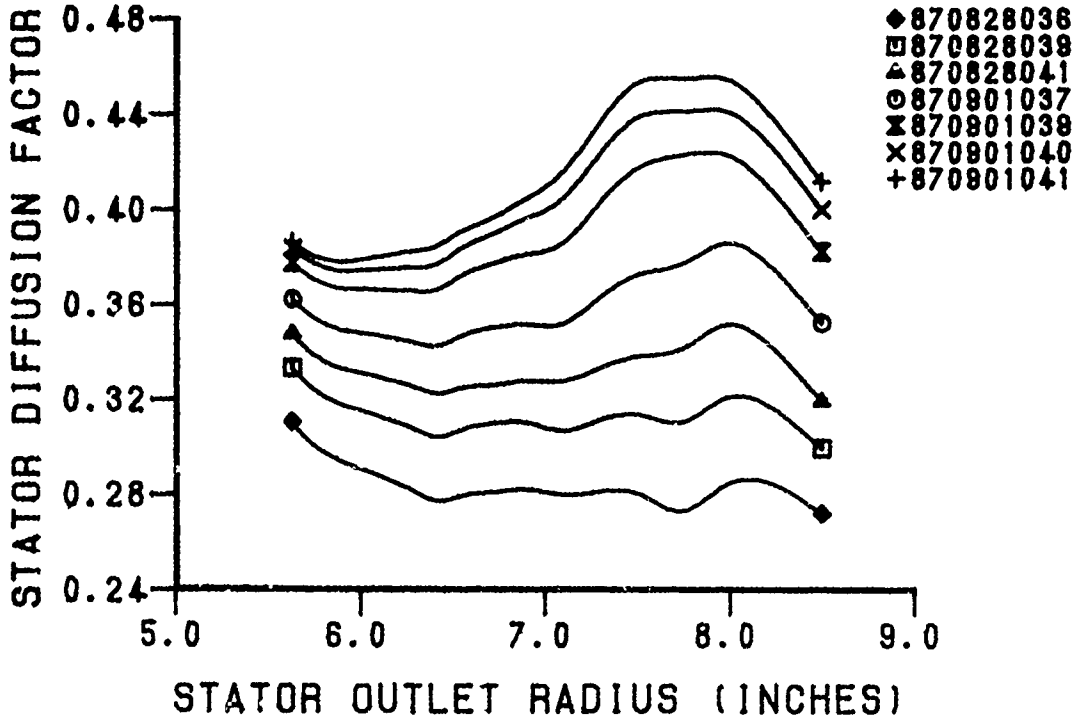


Figure 100. Stator Diffusion Factor (60% N)

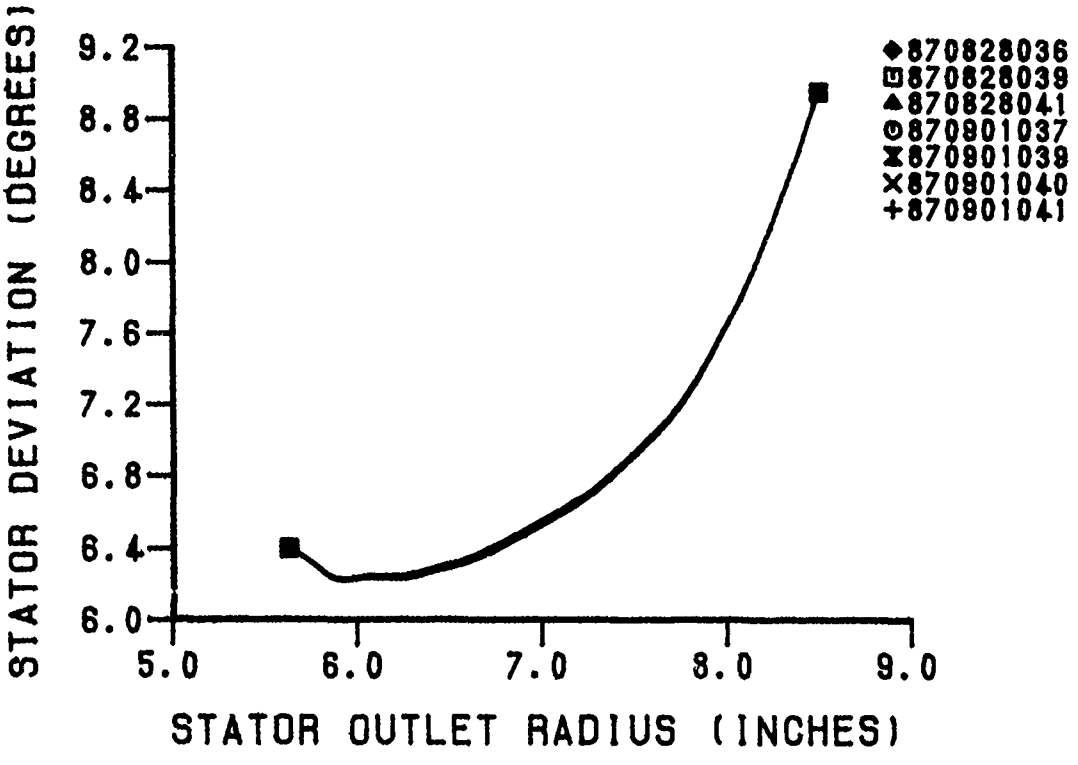


Figure 101. Stator Deviation Angle (60% N)

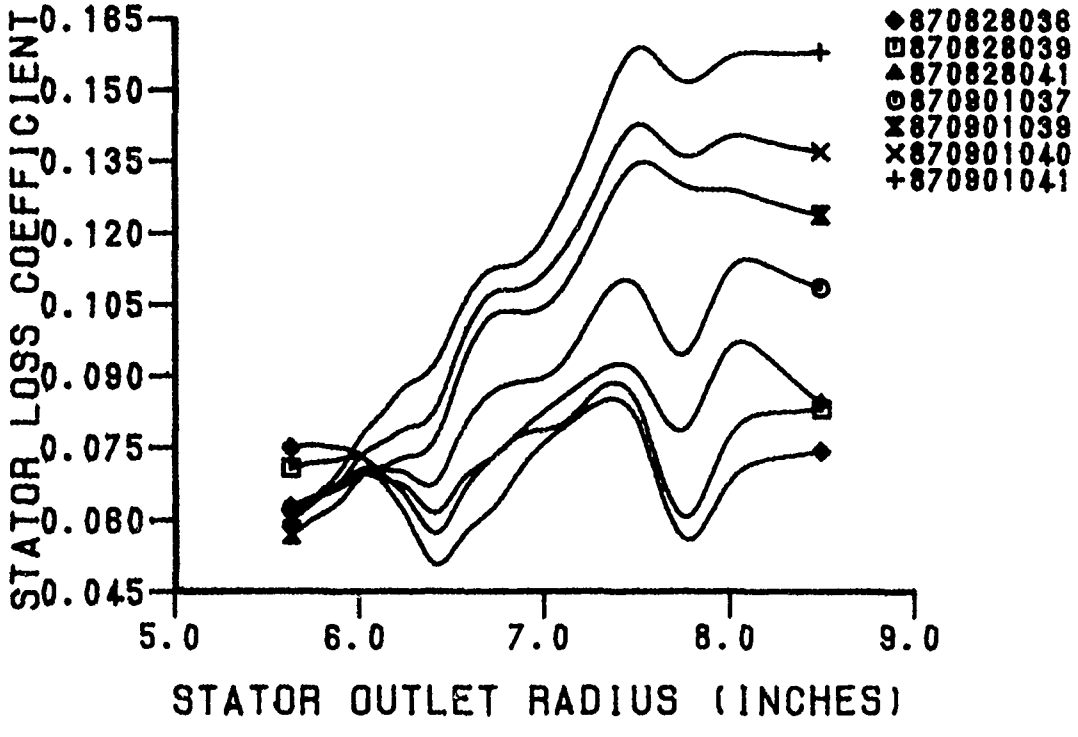


Figure 102. Stator Loss Coefficient (60% N)

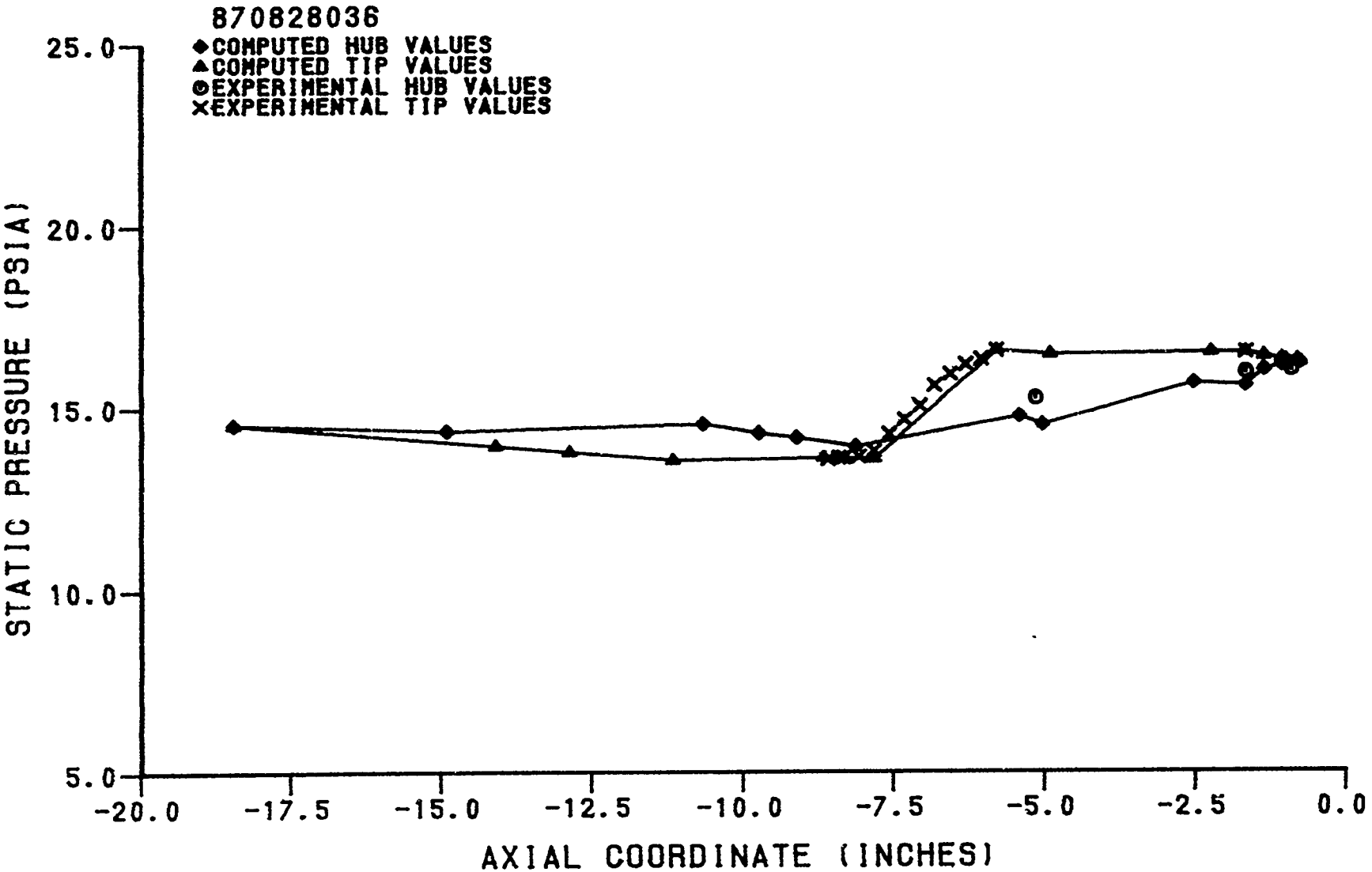


Figure 103. Static Pressure Distribution (870828036)

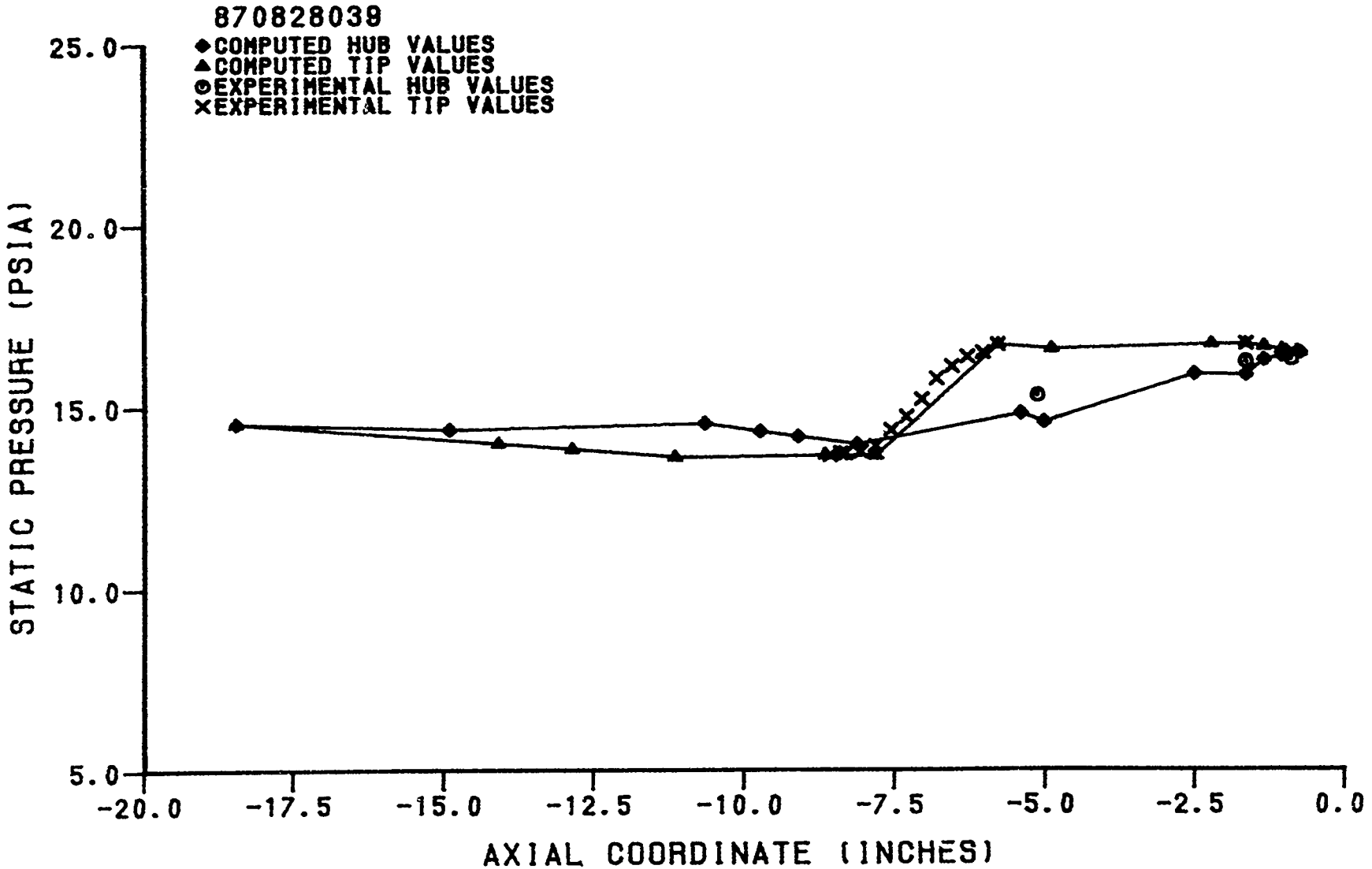


Figure 104. Static Pressure Distribution (870828039)

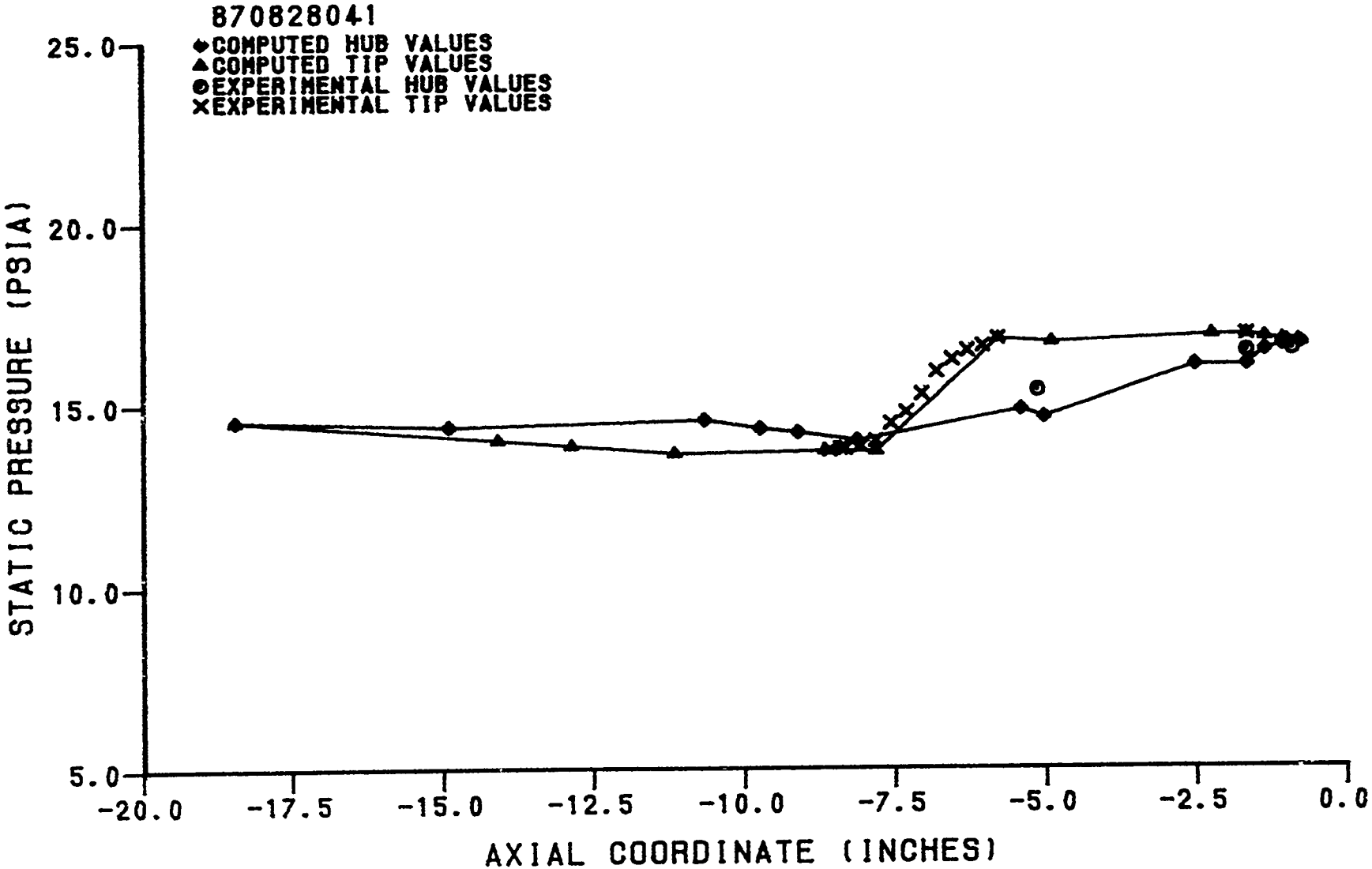


Figure 105. Static Pressure Distribution (870828041)

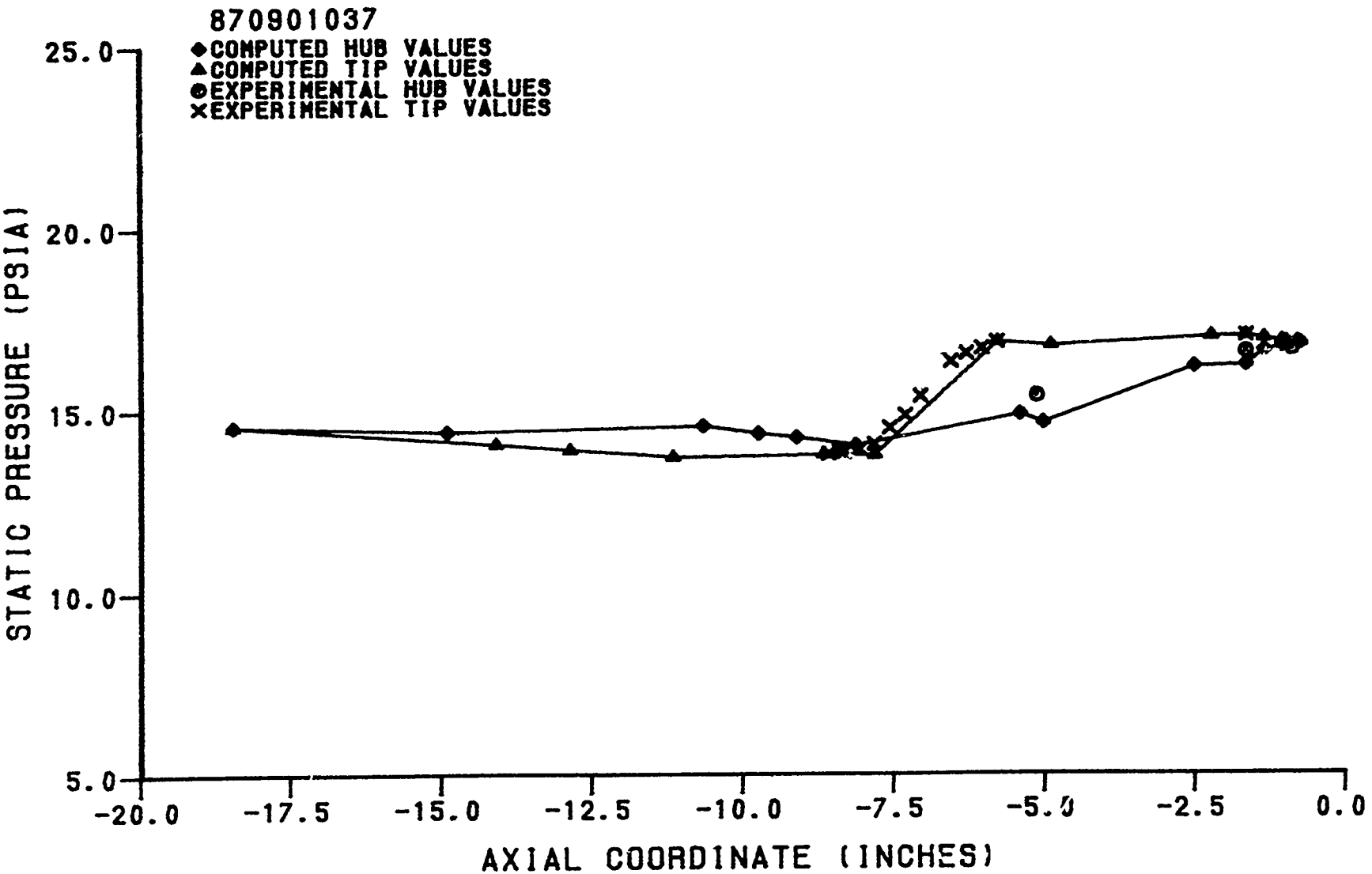


Figure 106. Static Pressure Distribution (870910037)

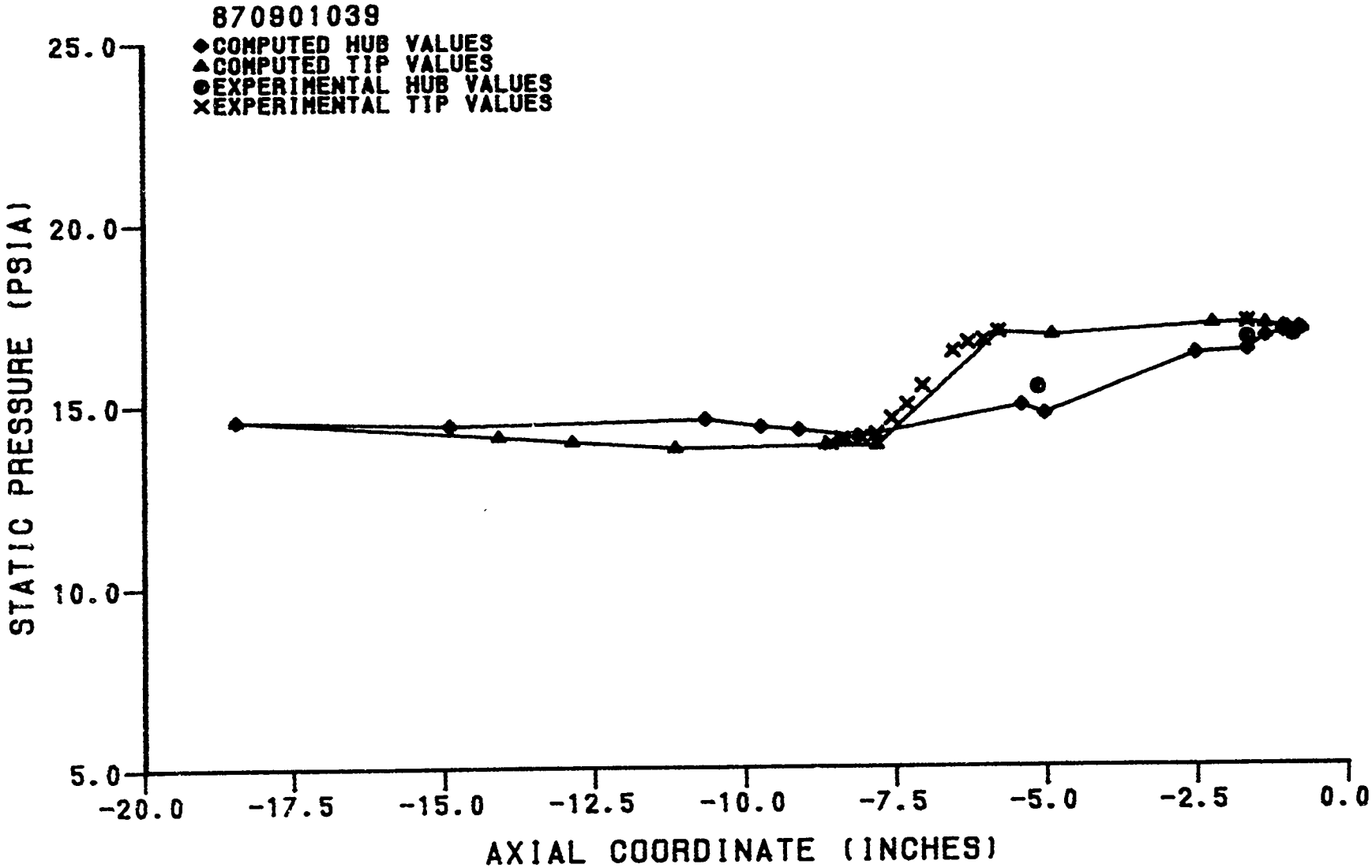


Figure 107. Static Pressure Distribution (870901039)

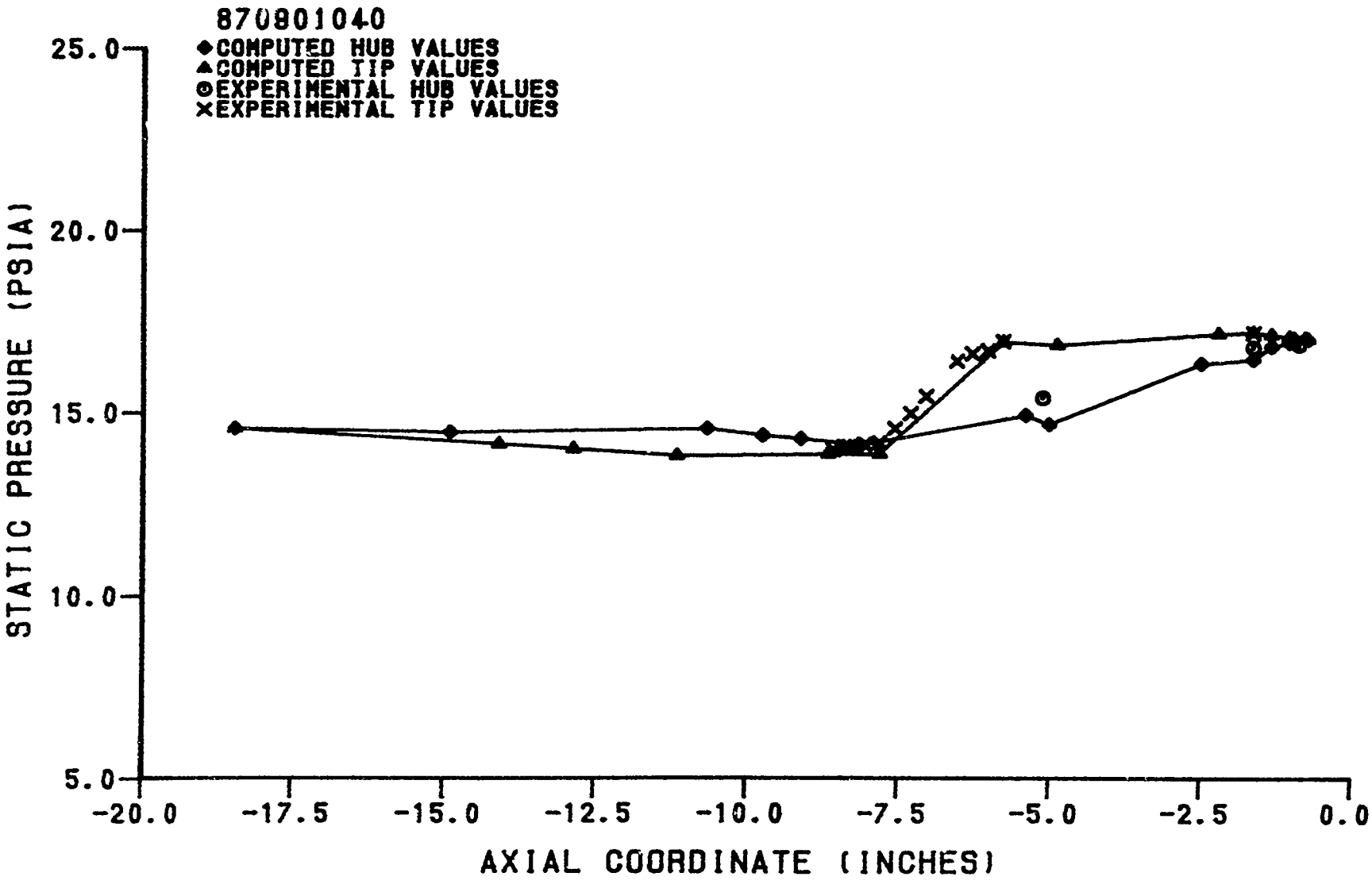


Figure 108. Static Pressure Distribution (870901040)

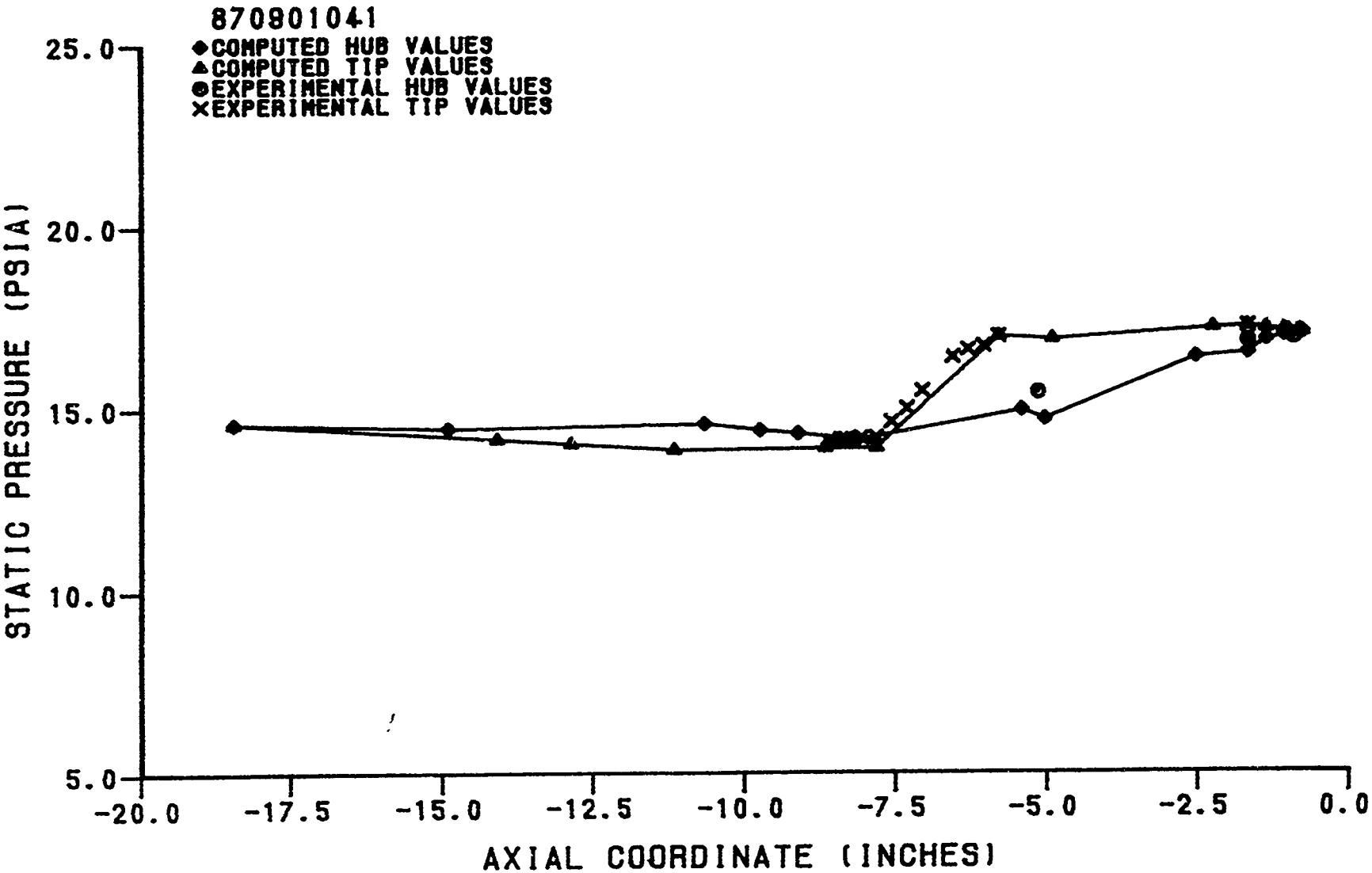


Figure 109. Static Pressure Distribution (870901041)

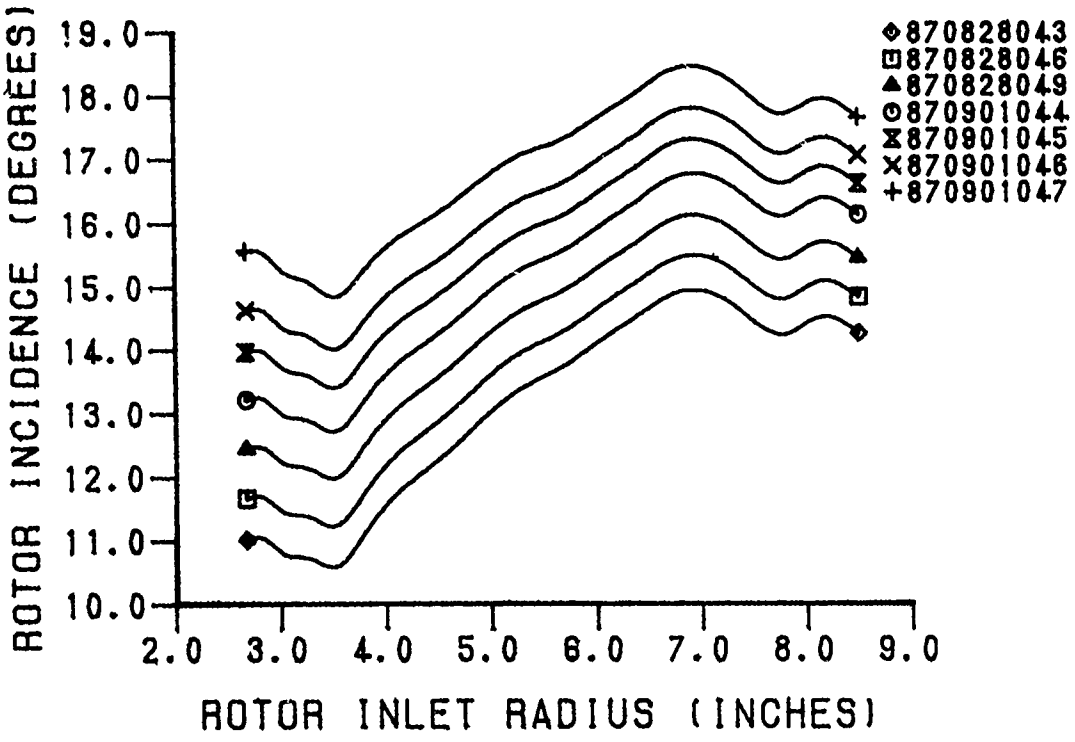


Figure 110. Rotor Incidence Angle (50% N)

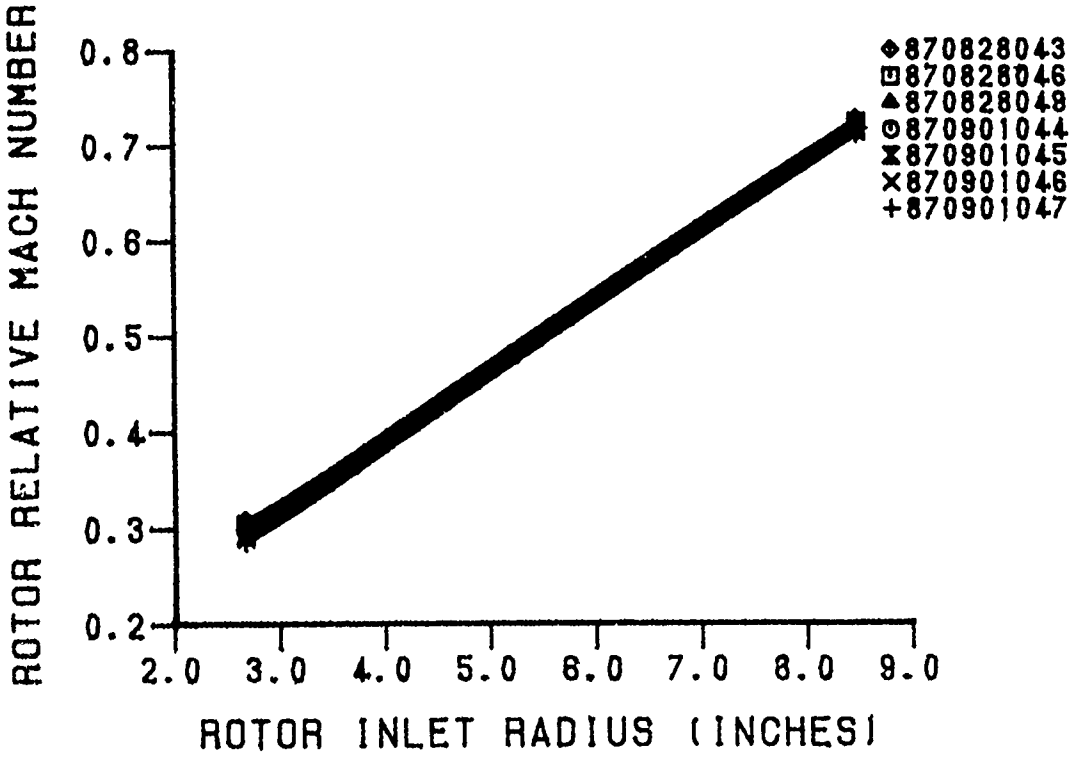


Figure 111. Rotor Relative Inlet Mach Number (50% N)

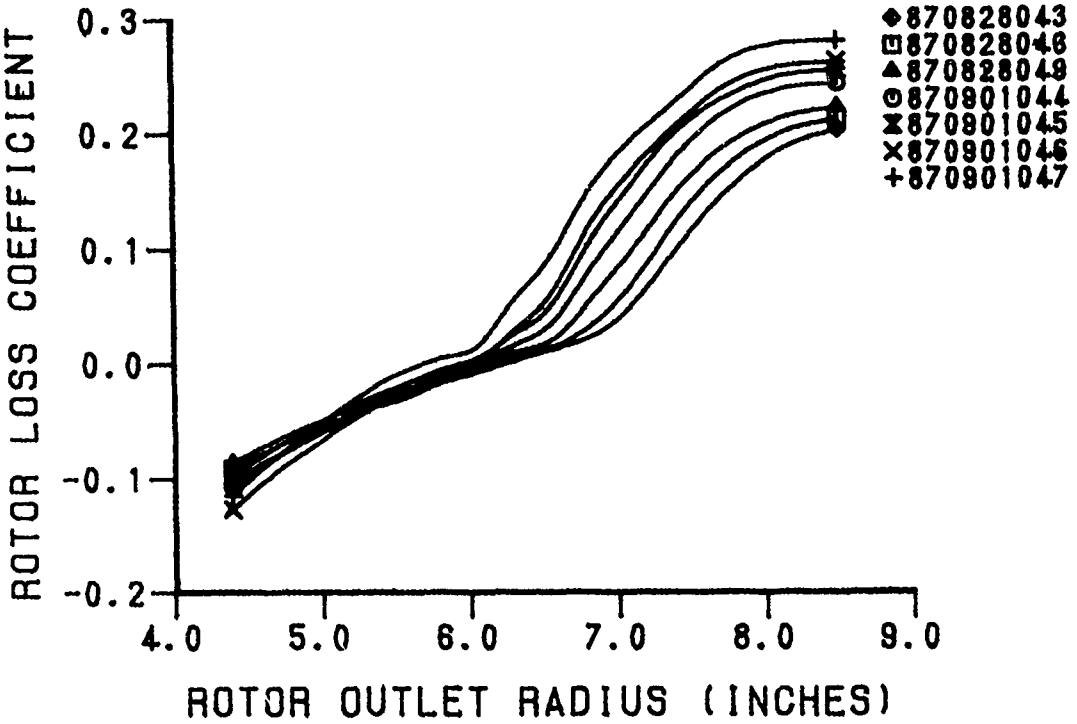


Figure 112. Rotor Loss Coefficient (50% N)

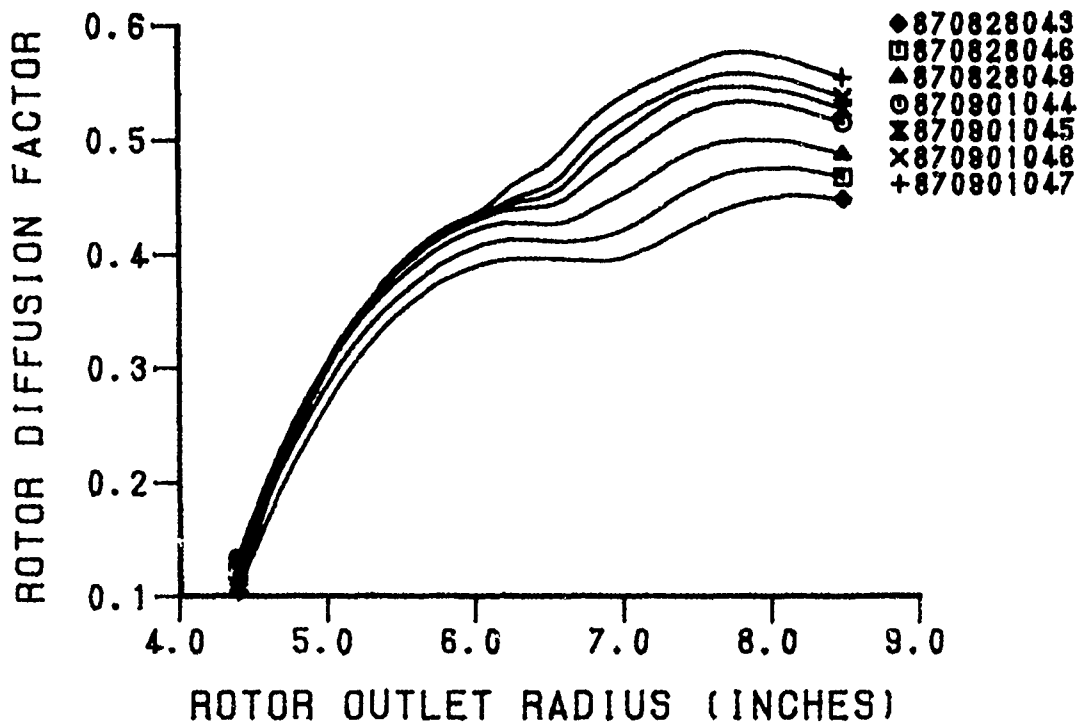


Figure 113. Rotor Diffusion Factor (50% N)

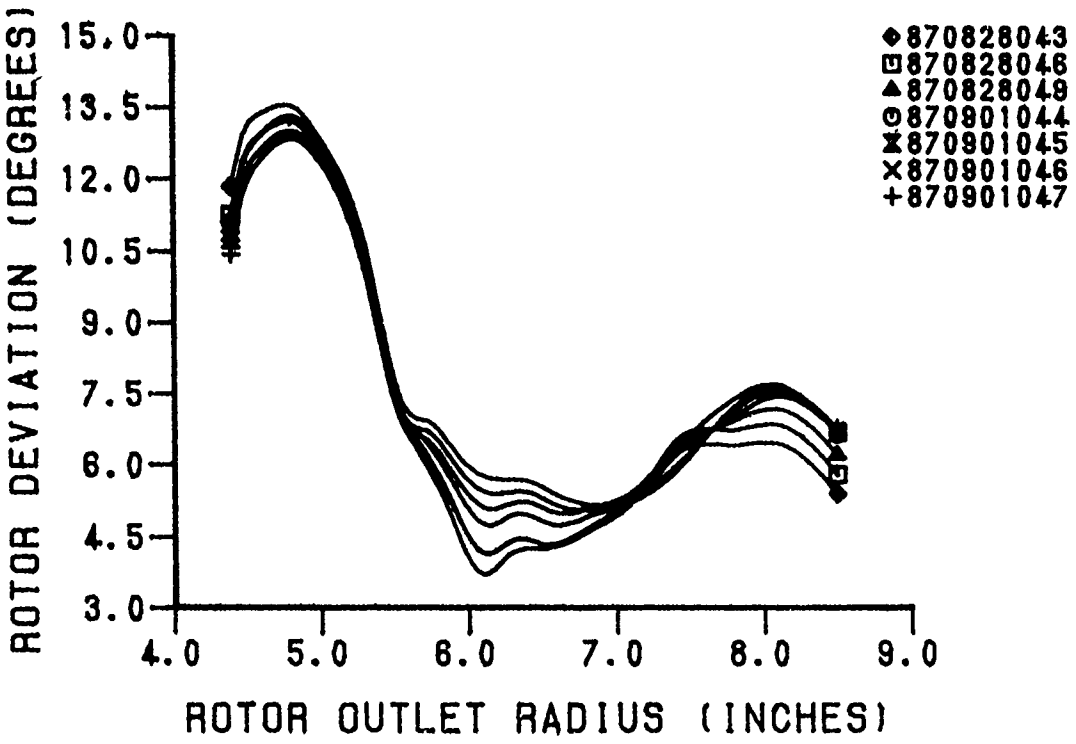


Figure 114. Rotor Deviation Angle (50% N)

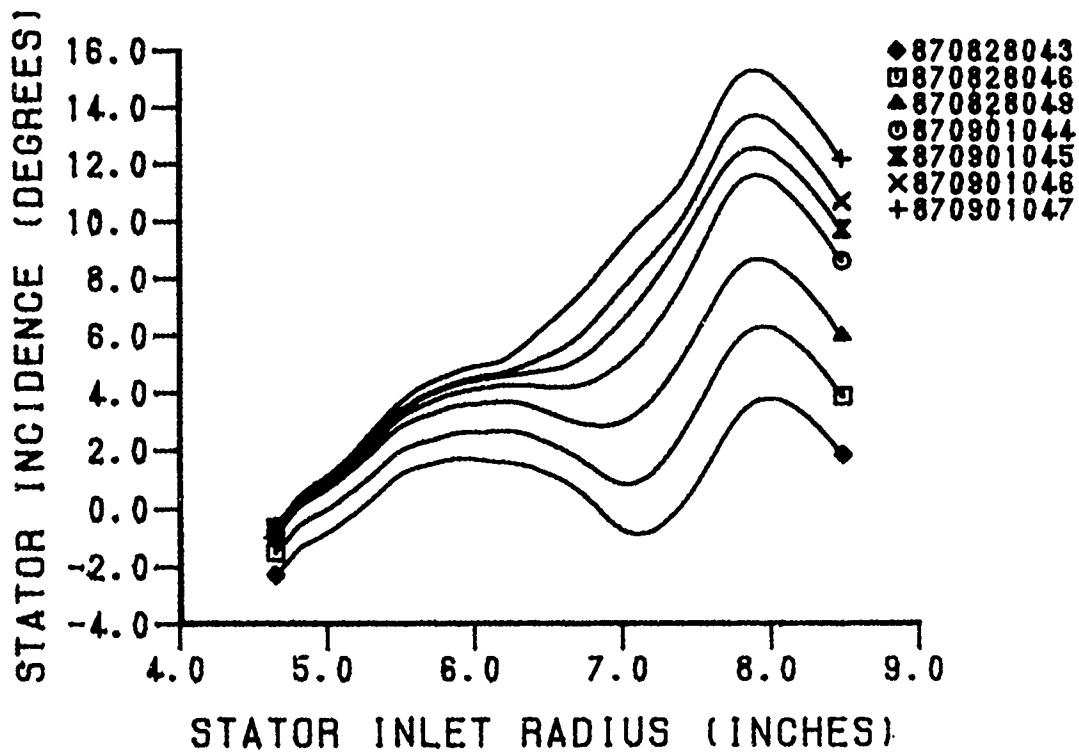


Figure 115. Stator Incidence Angle (50% N)

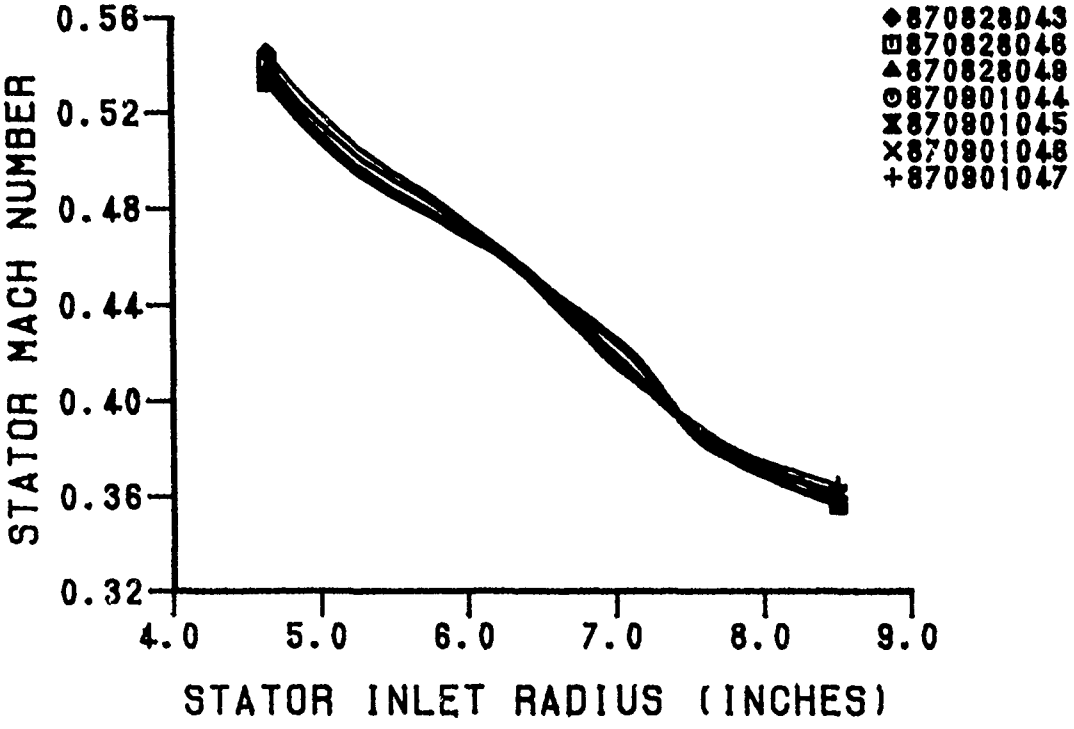


Figure 116. Stator Absolute Inlet Mach Number (50% N)

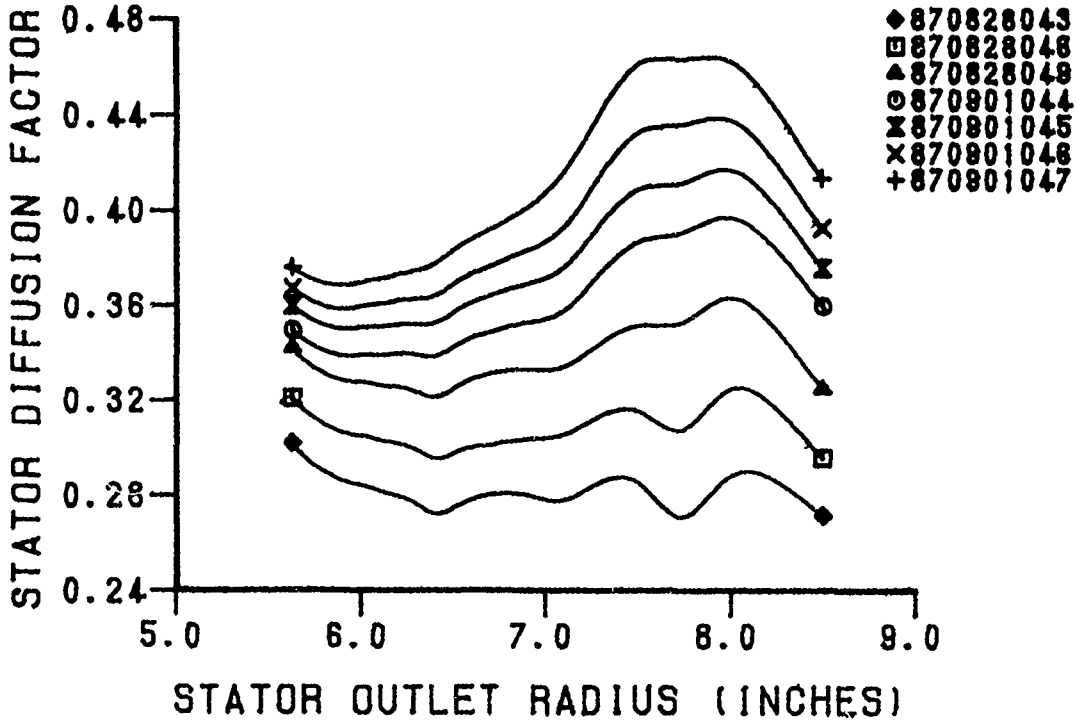


Figure 117. Stator Diffusion Factor (50% N)

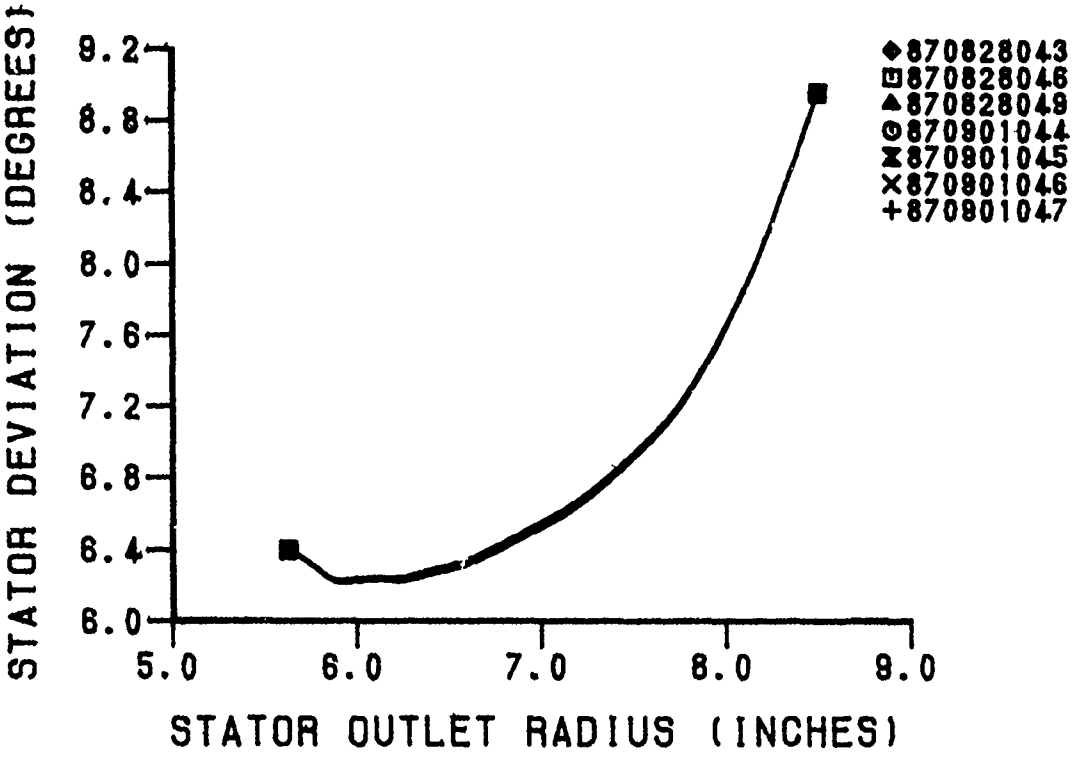


Figure 118. Stator Deviation Angle (50% N)

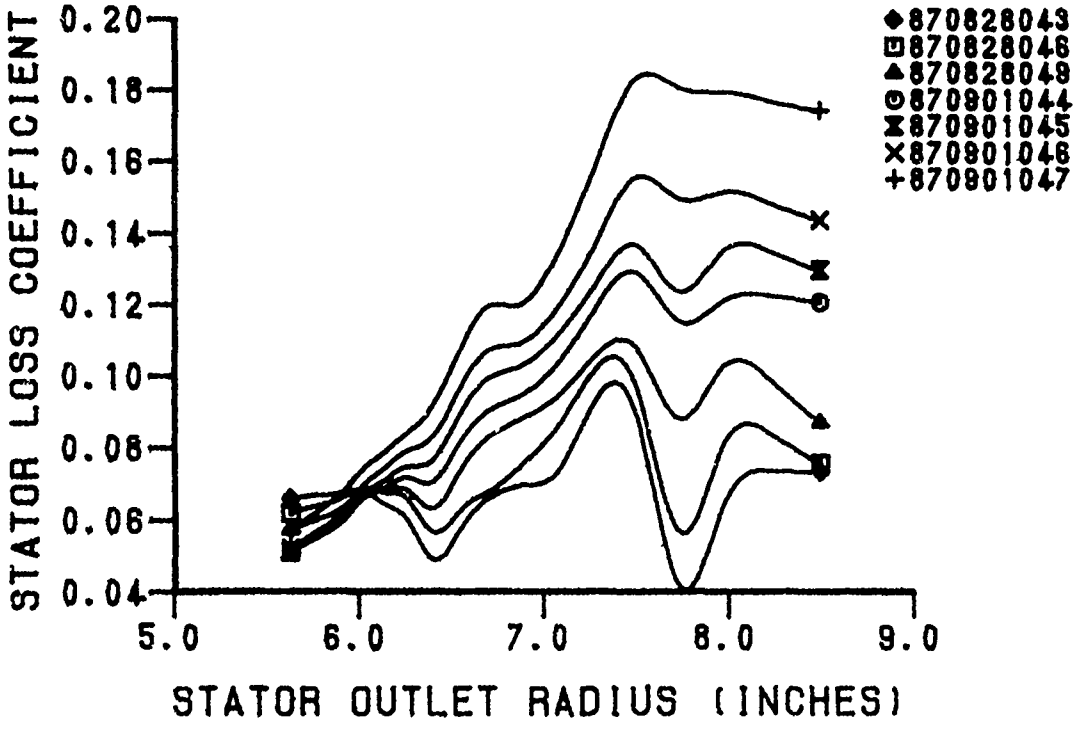


Figure 119. Stator Loss Coefficient (50% N)

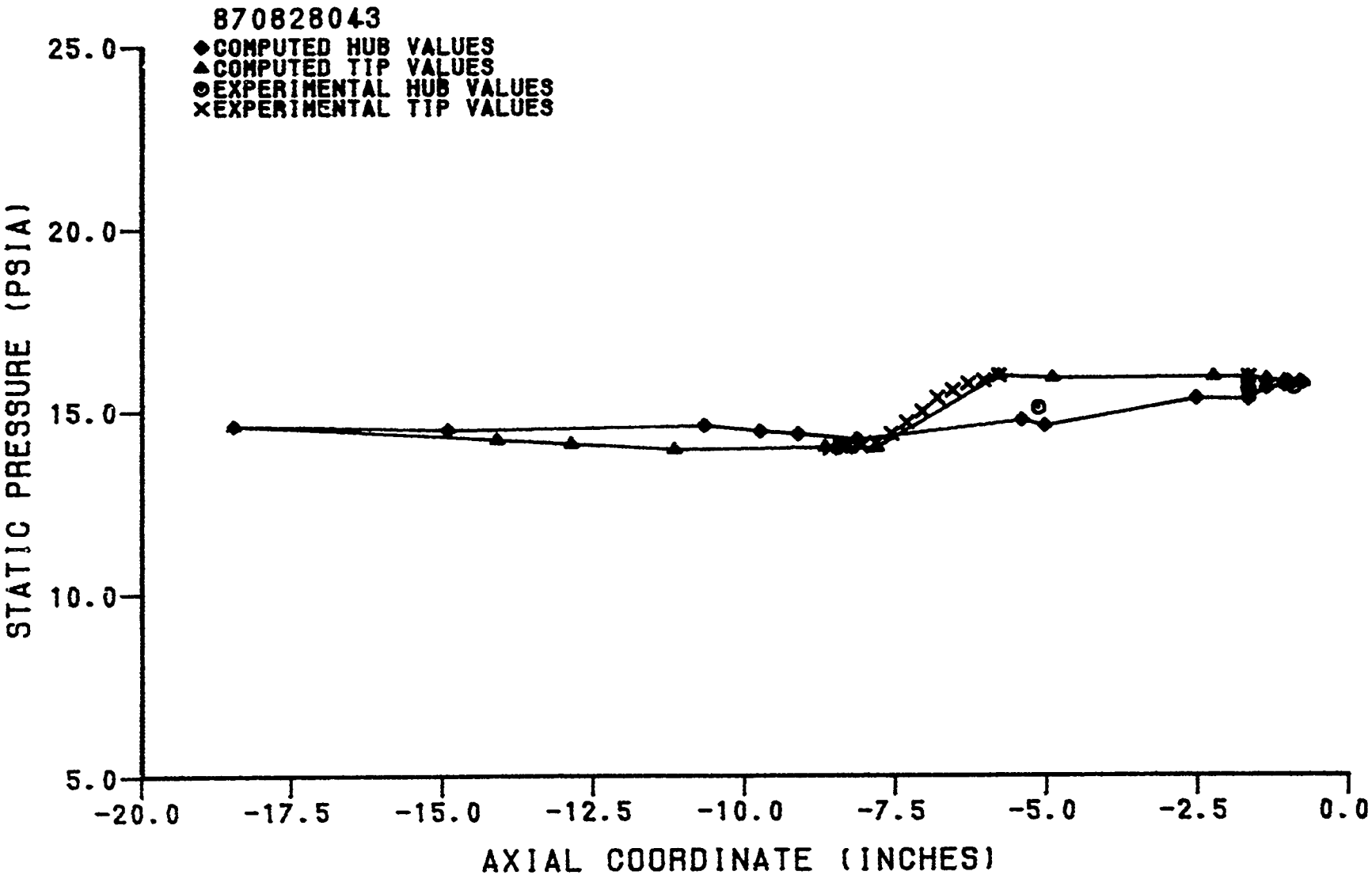


Figure 120. Static Pressure Distribution (870828043)

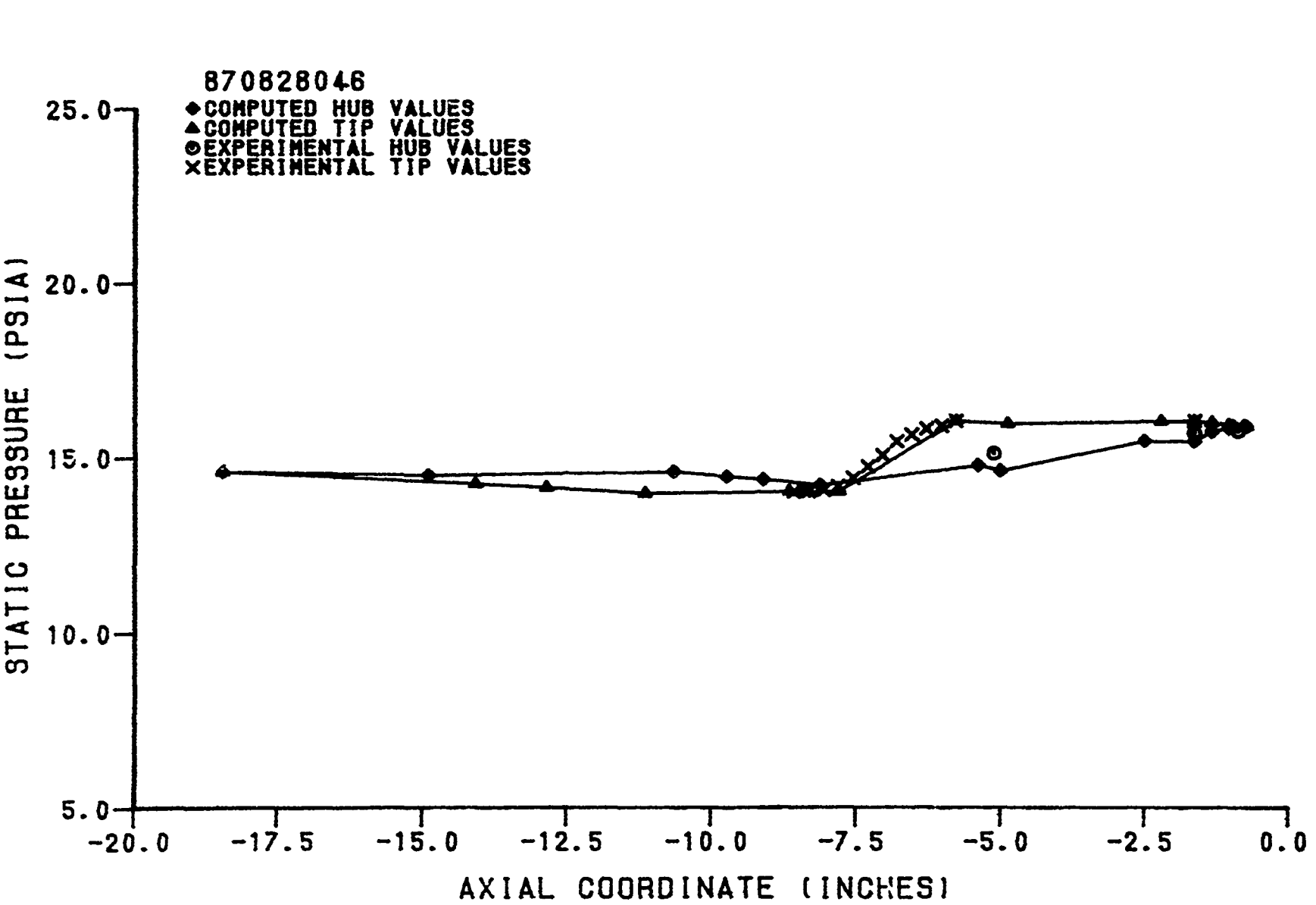


Figure 121. Static Pressure Distribution (870828046)

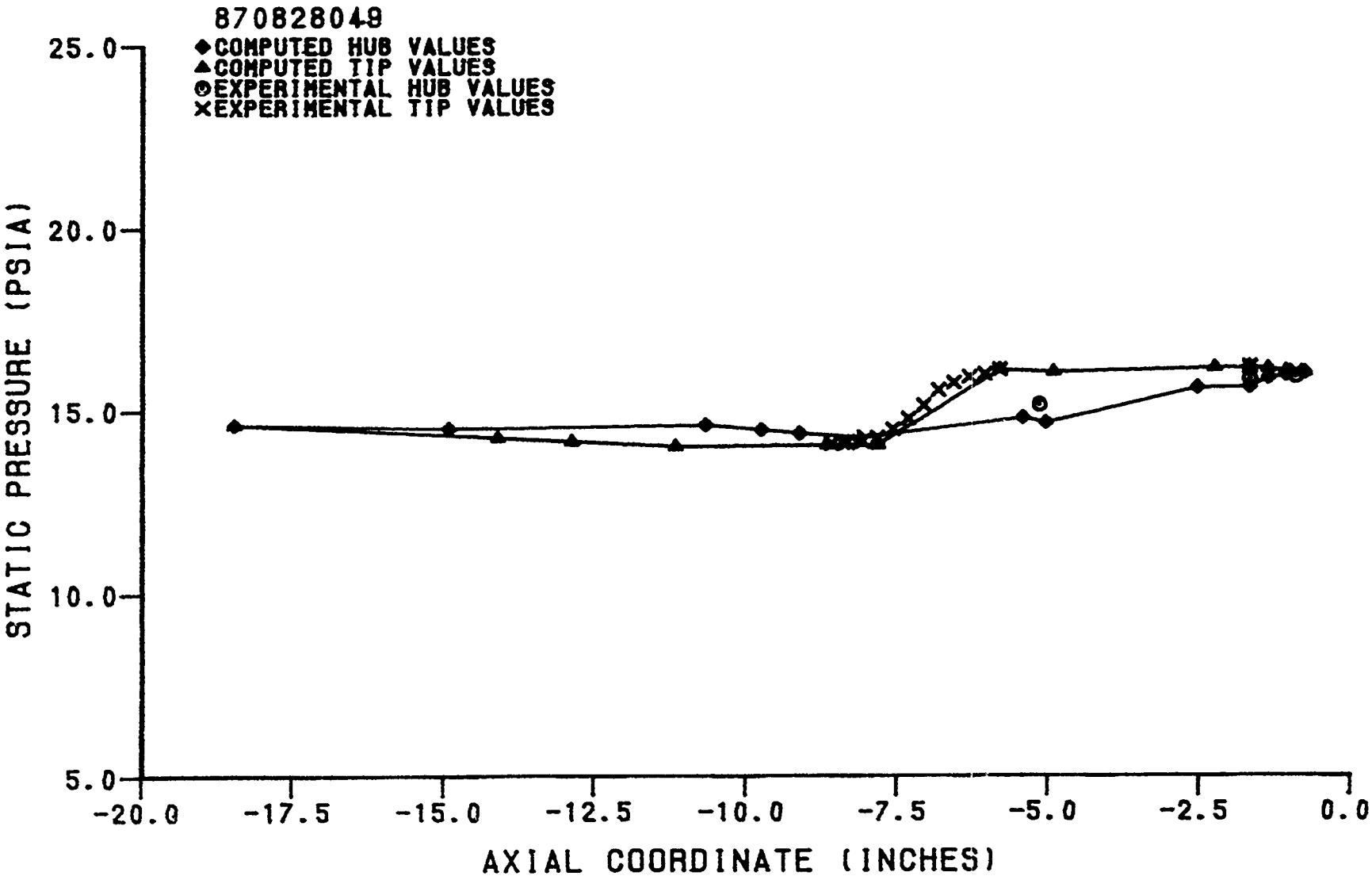


Figure 122. Static Pressure Distribution (870828049)

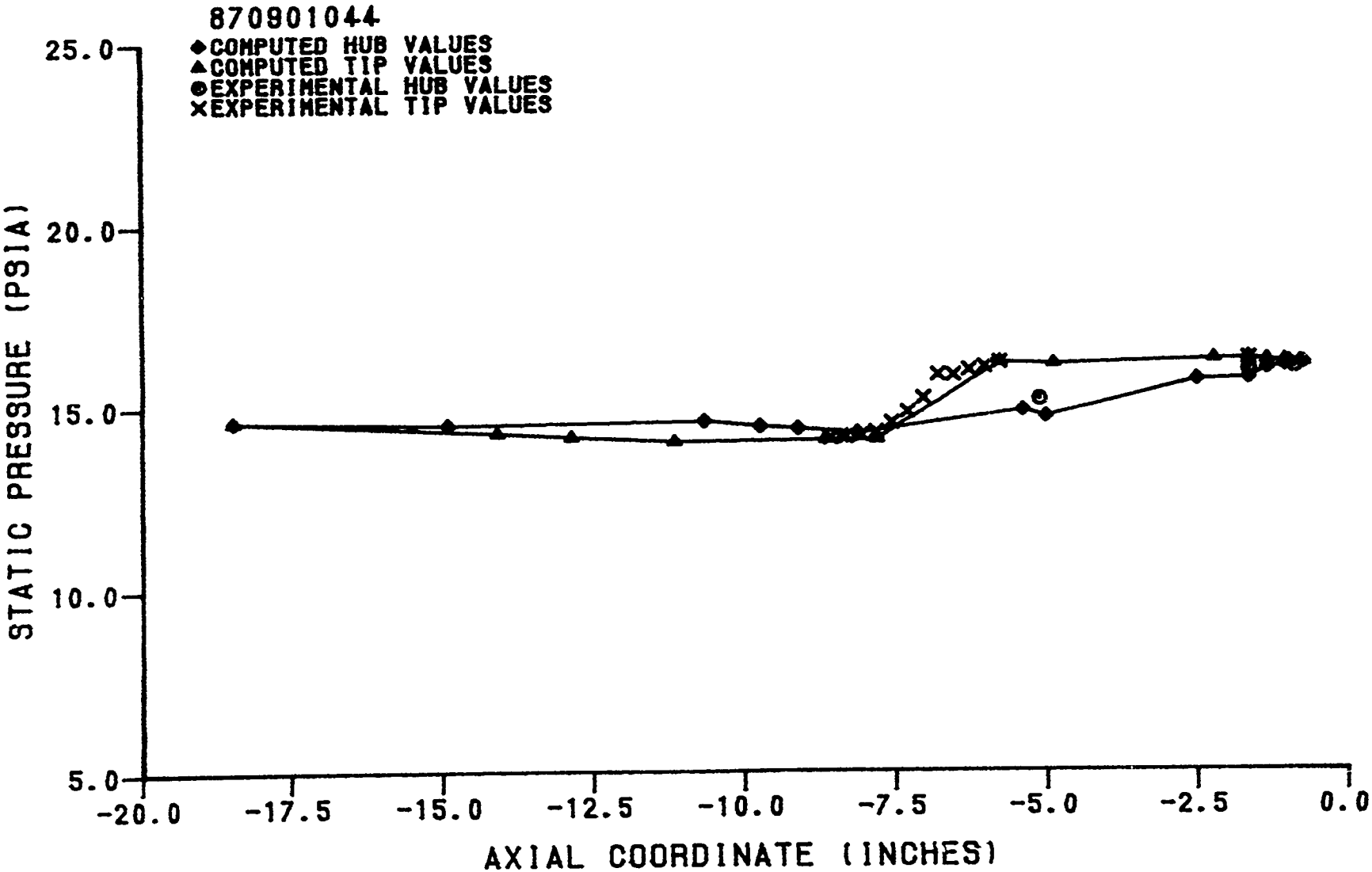


Figure 123. Static Pressure Distribution (870910044)

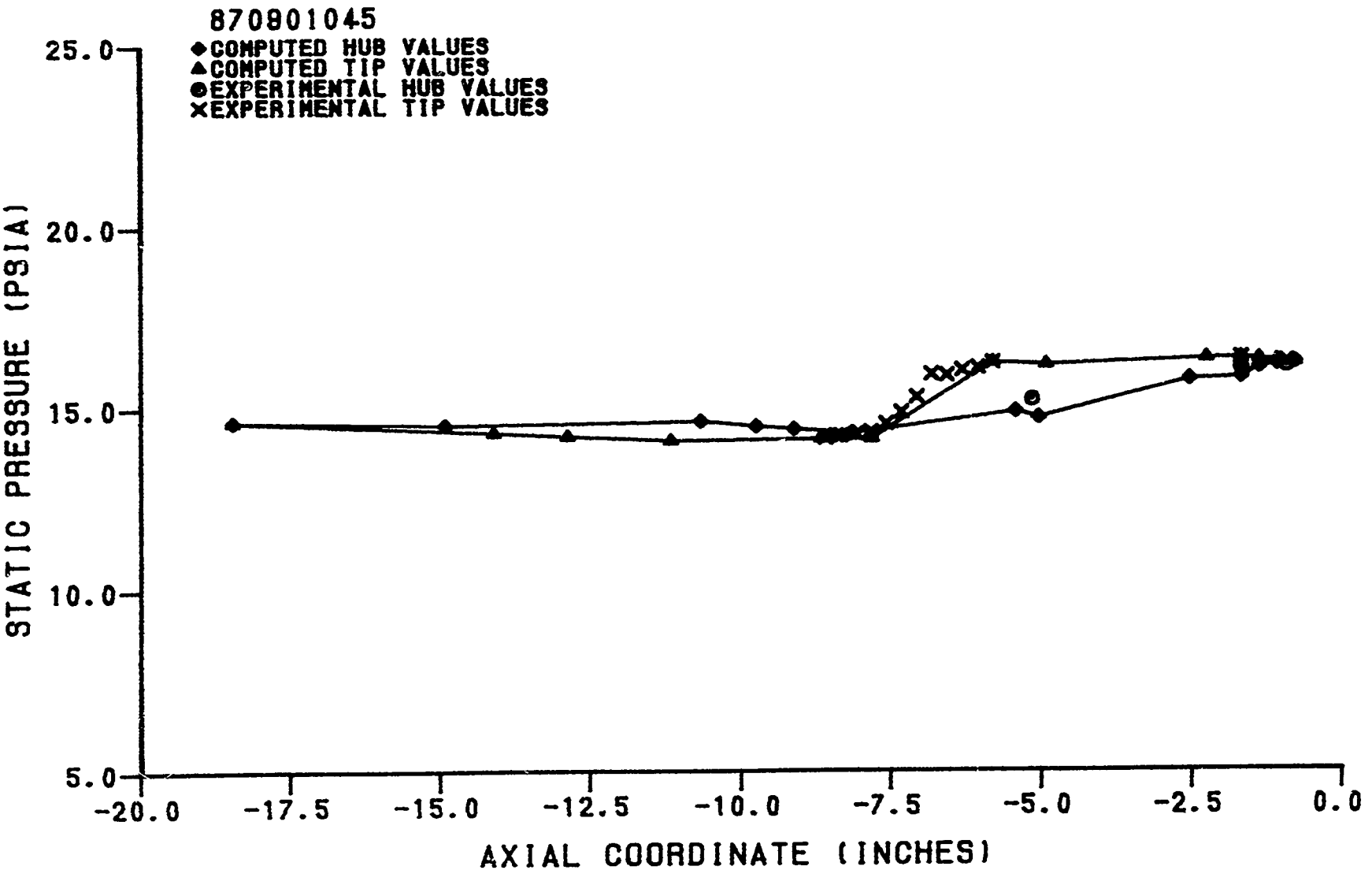


Figure 124. Static Pressure Distribution (870901045)

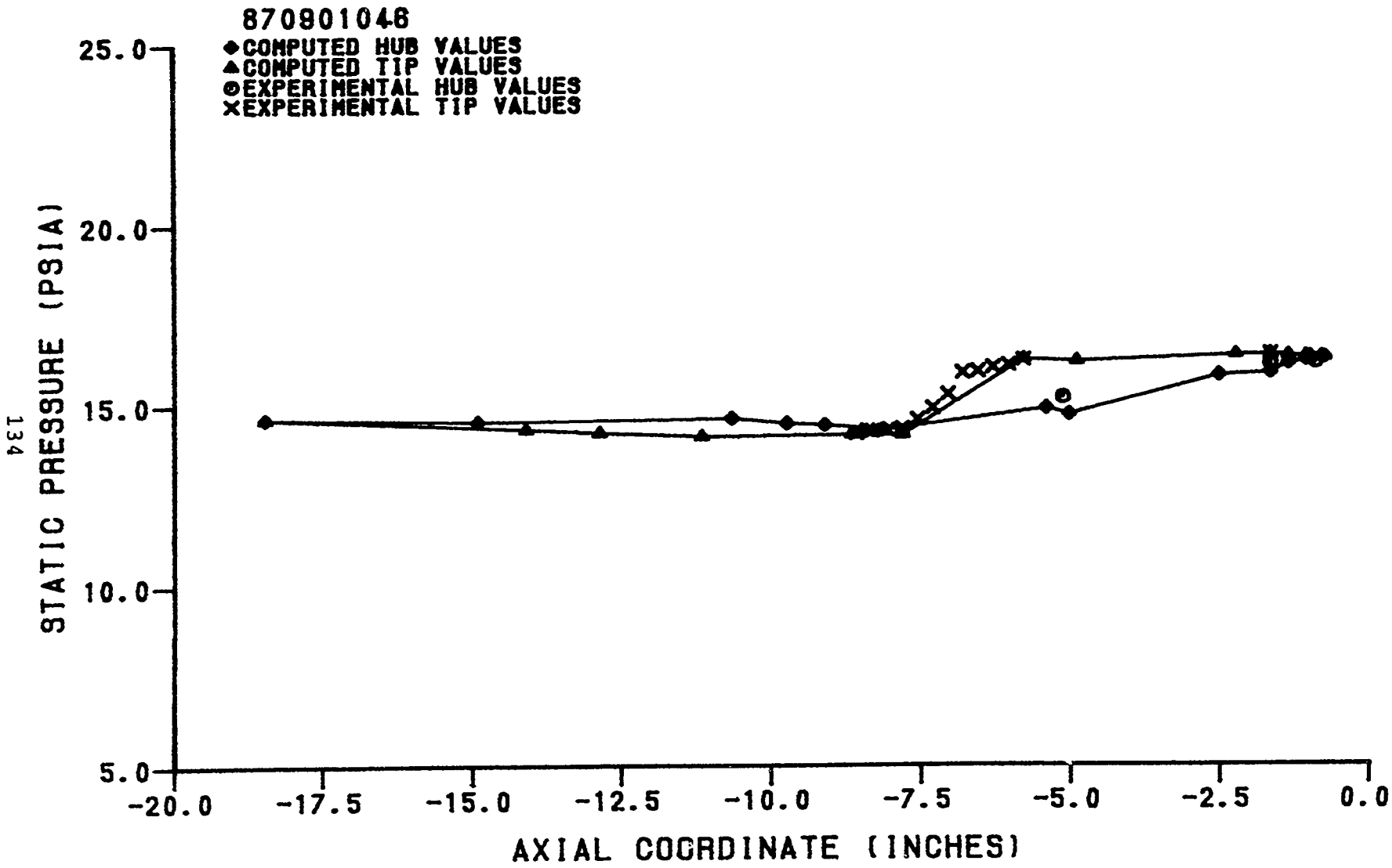


Figure 125. Static Pressure Distribution (870901046)

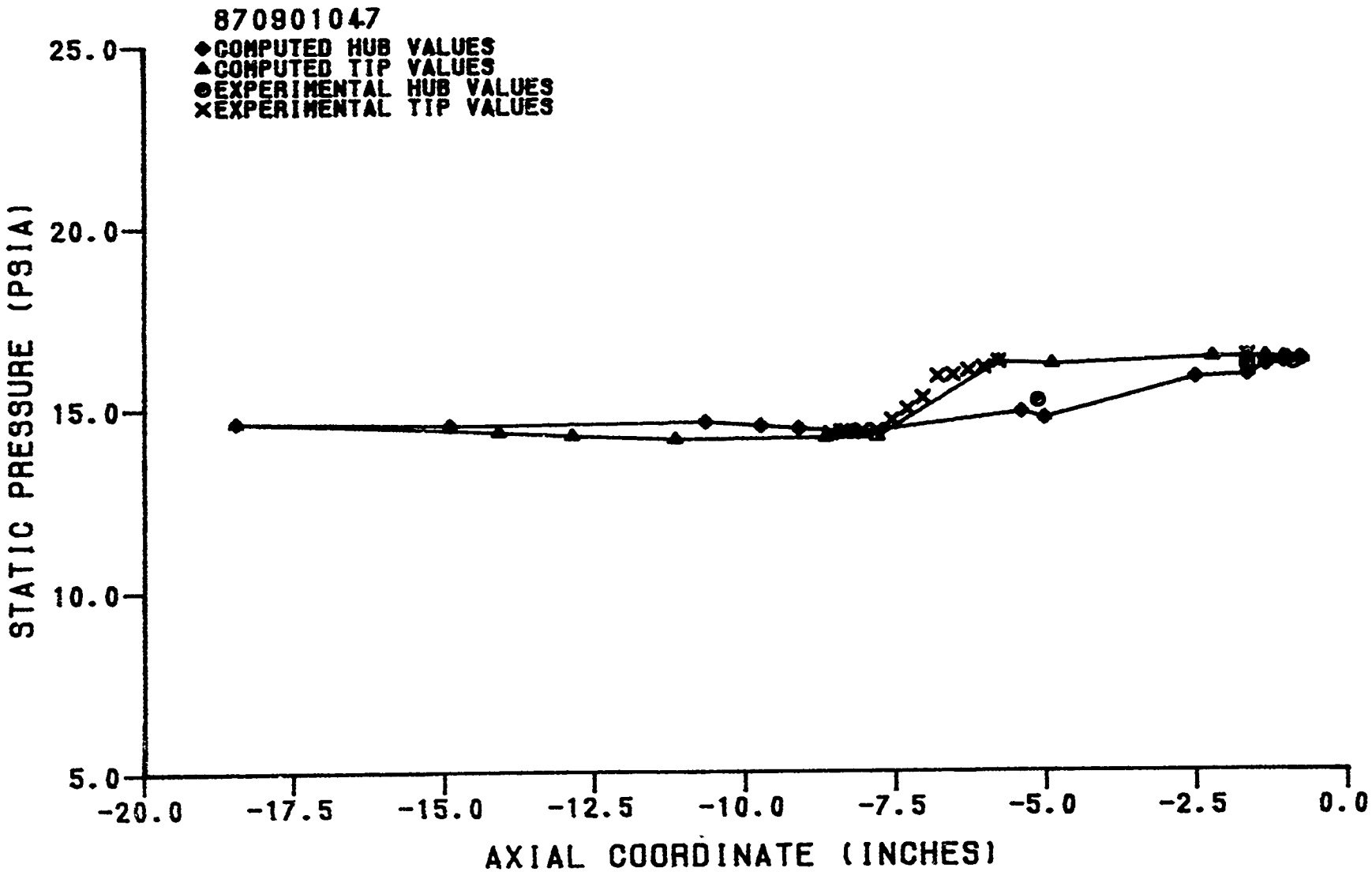


Figure 126. Static Pressure Distribution (870901047)

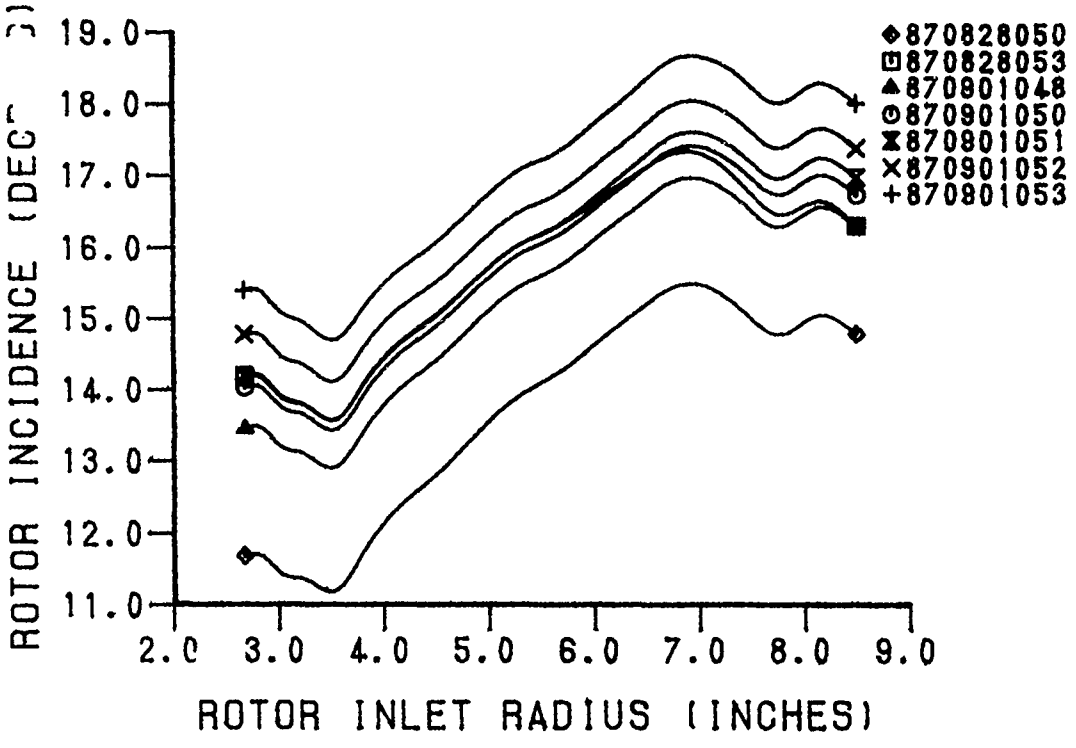


Figure 127. Rotor Incidence Angle (40% N)

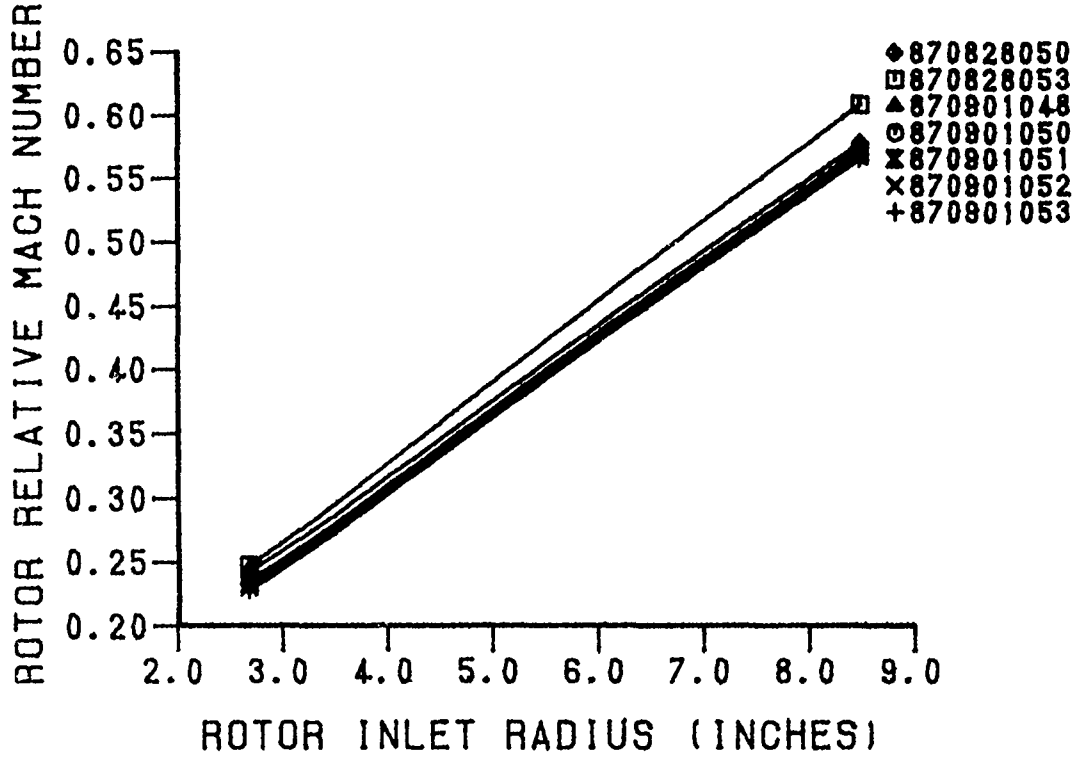


Figure 128. Rotor Relative Inlet Mach Number (40% N)

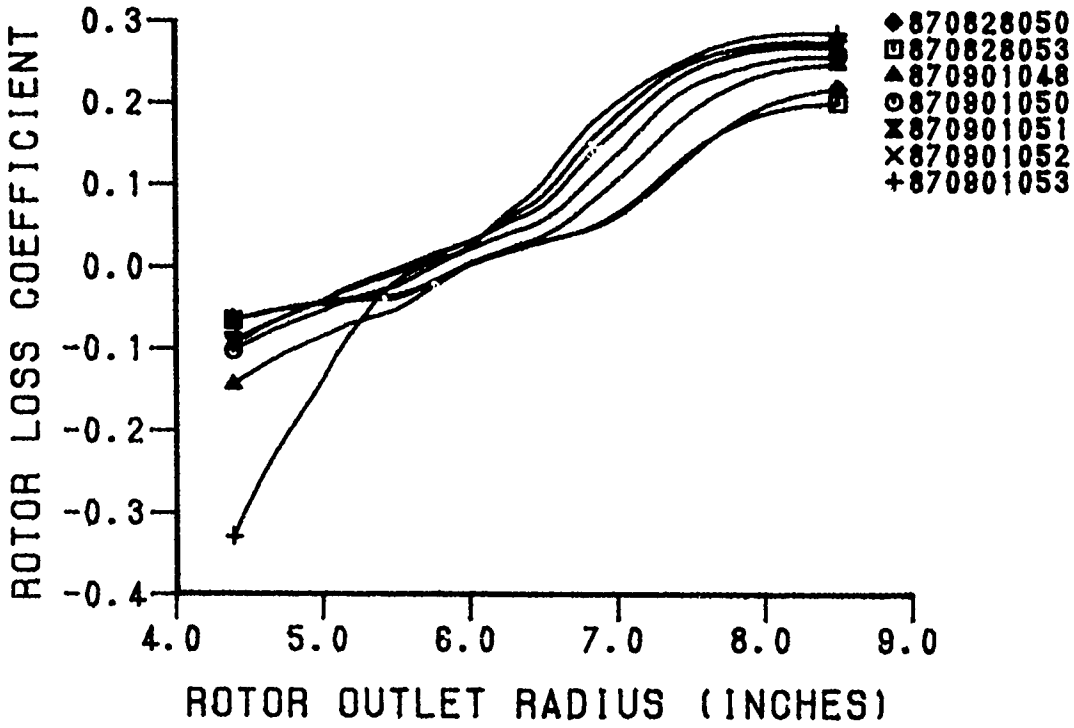


Figure 129. Rotor Loss Coefficient (40% N)

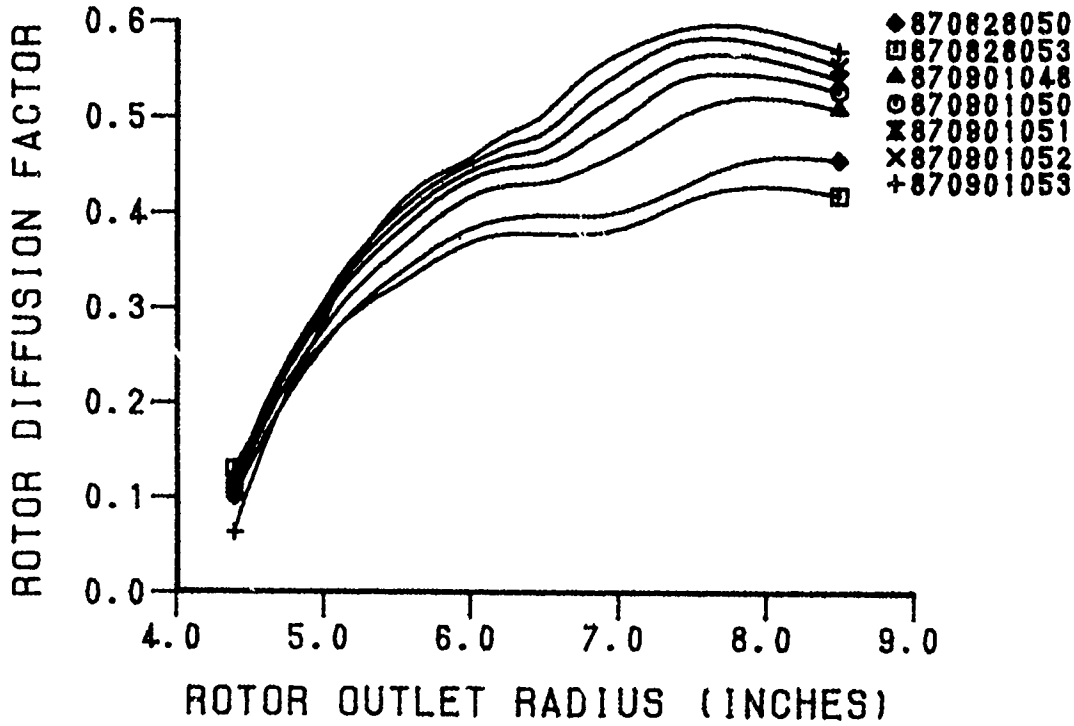


Figure 130. Rotor Diffusion Factor (40% N)

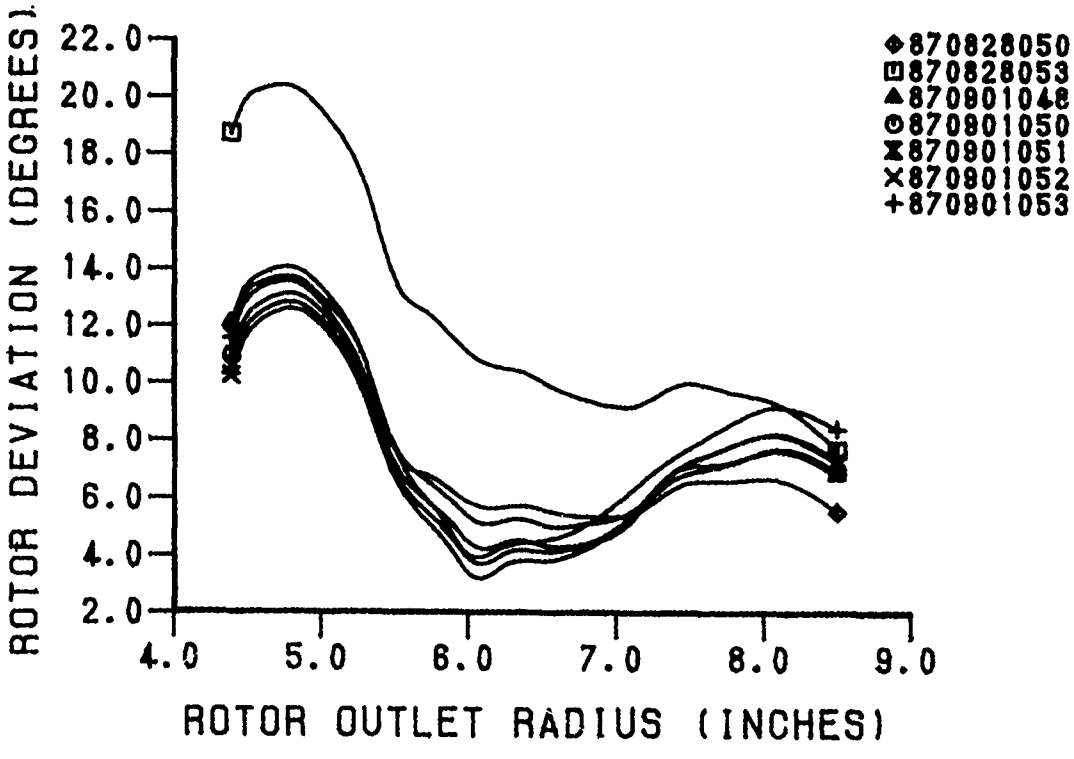


Figure 131. Rotor Deviation Angle (40% N)

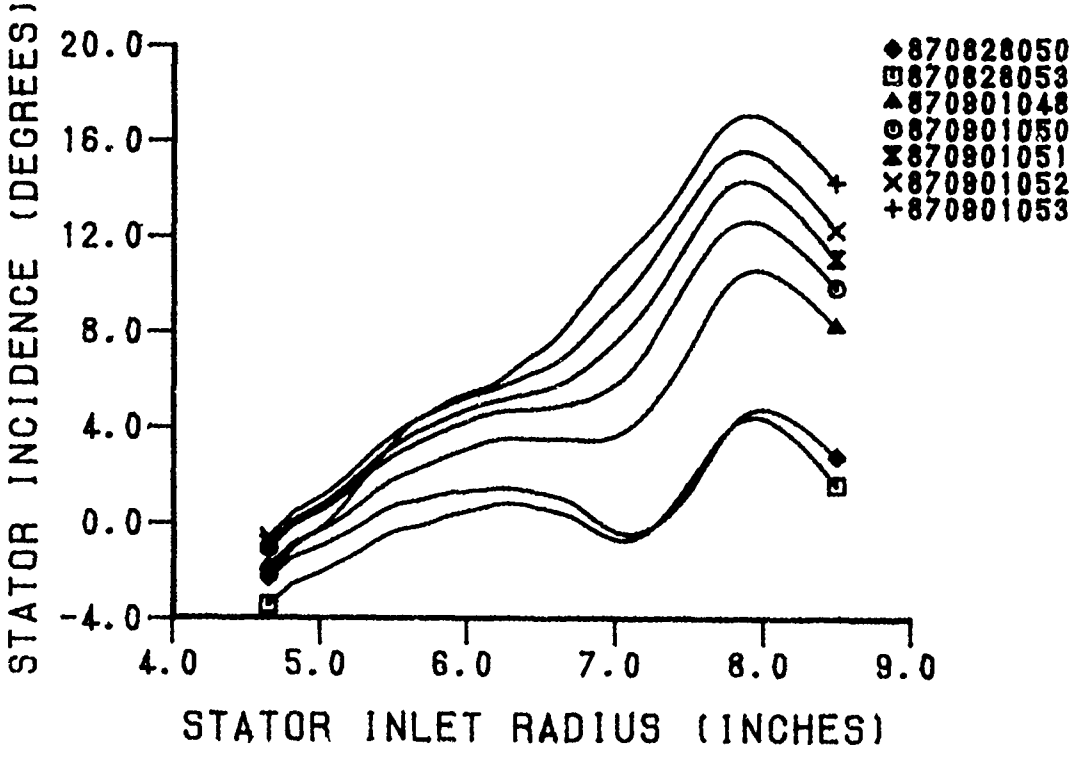


Figure 132. Stator Incidence Angle (40% N)

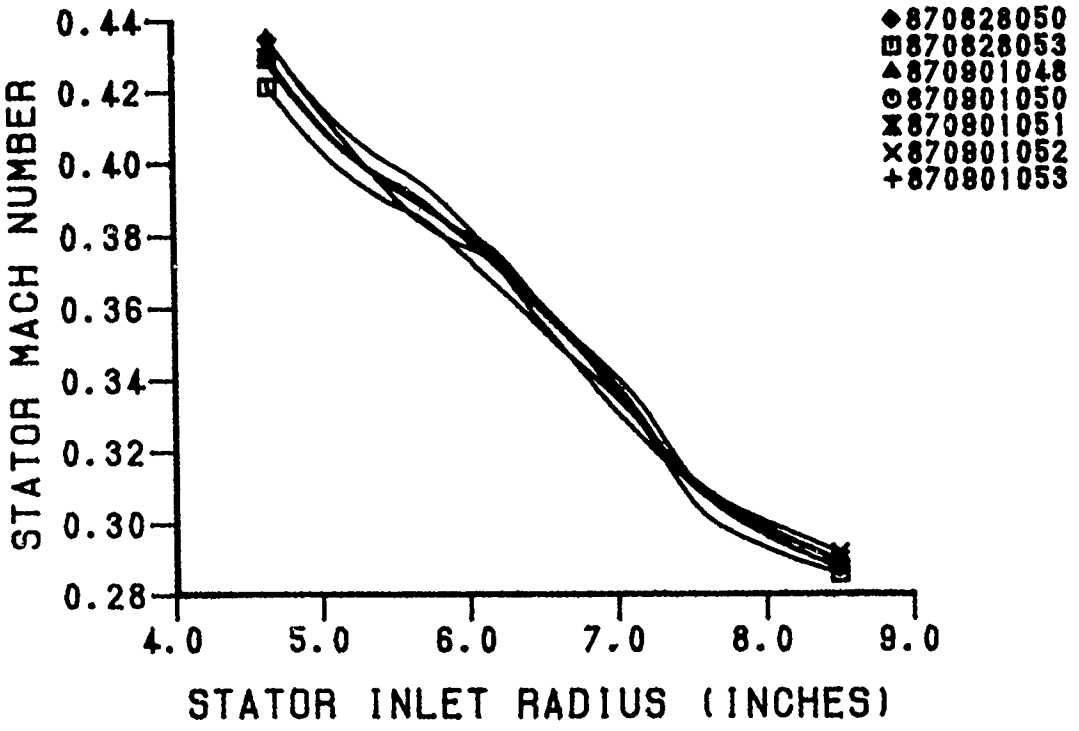


Figure 133. Stator Absolute Inlet Mach Number (40% N)

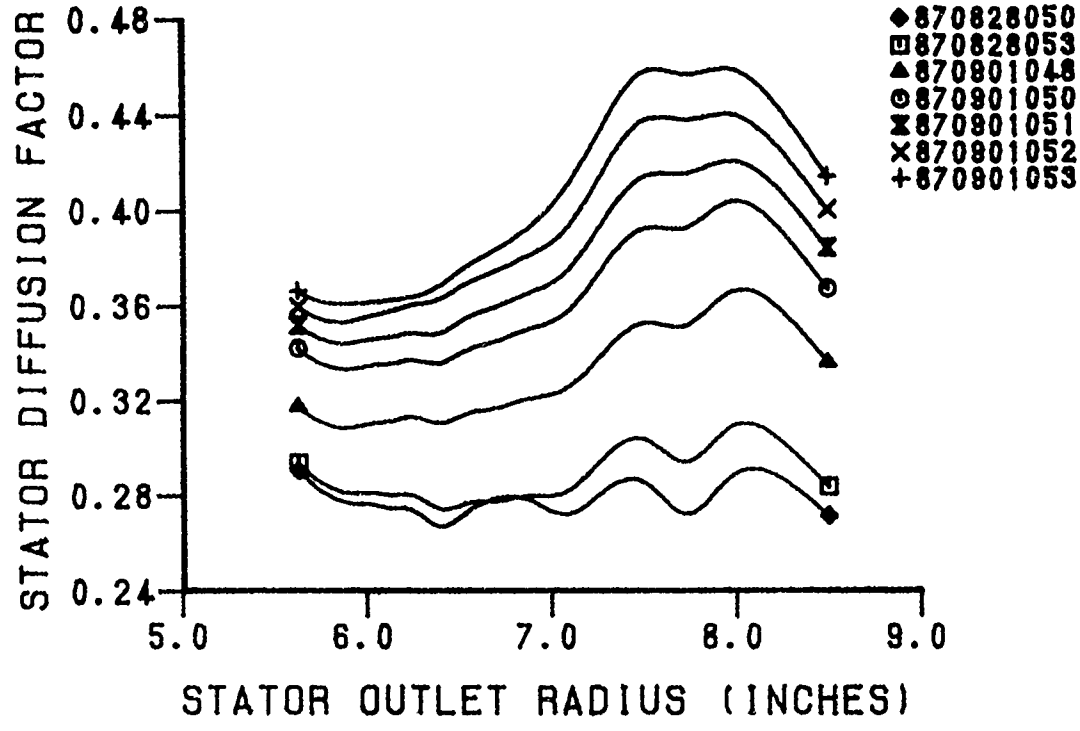


Figure 134. Stator Diffusion Factor (40% N)

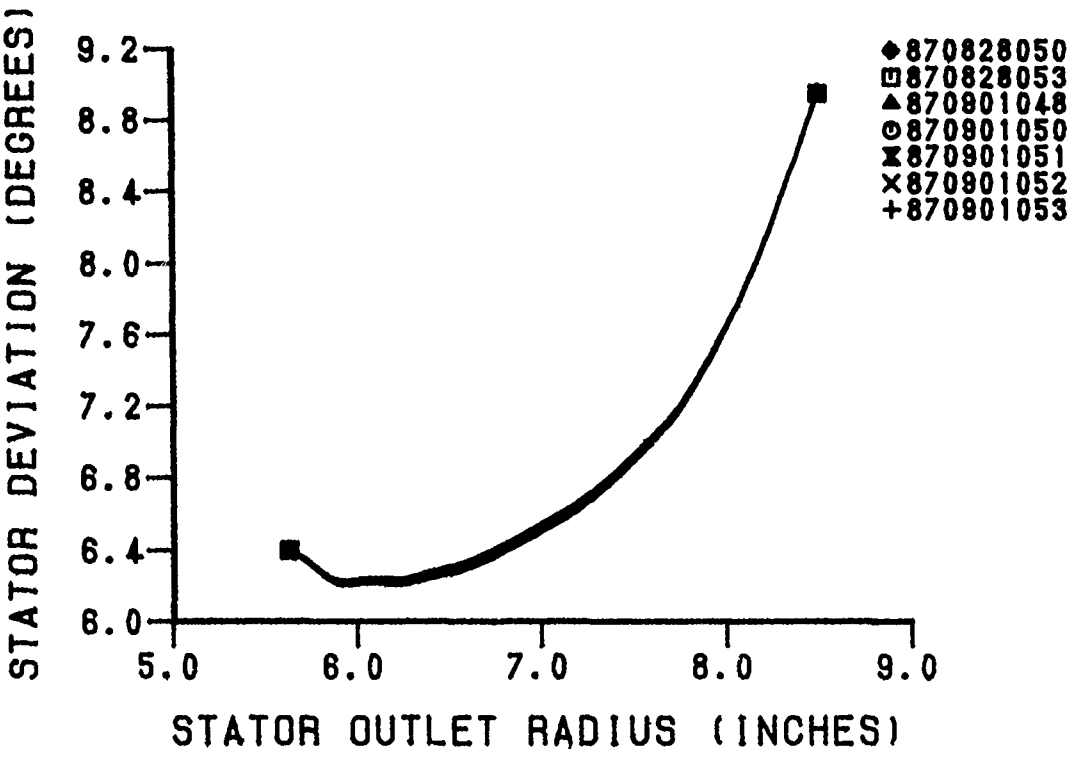


Figure 135. Stator Deviation Angle (40% N)

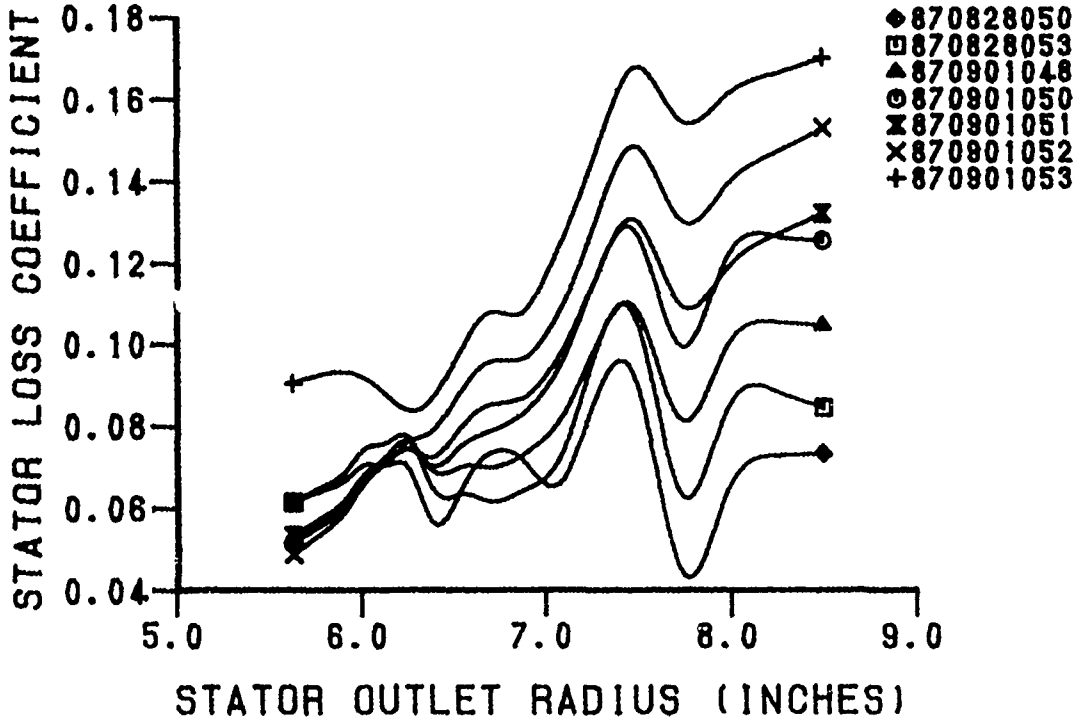


Figure 136. Stator Loss Coefficient (40% N)

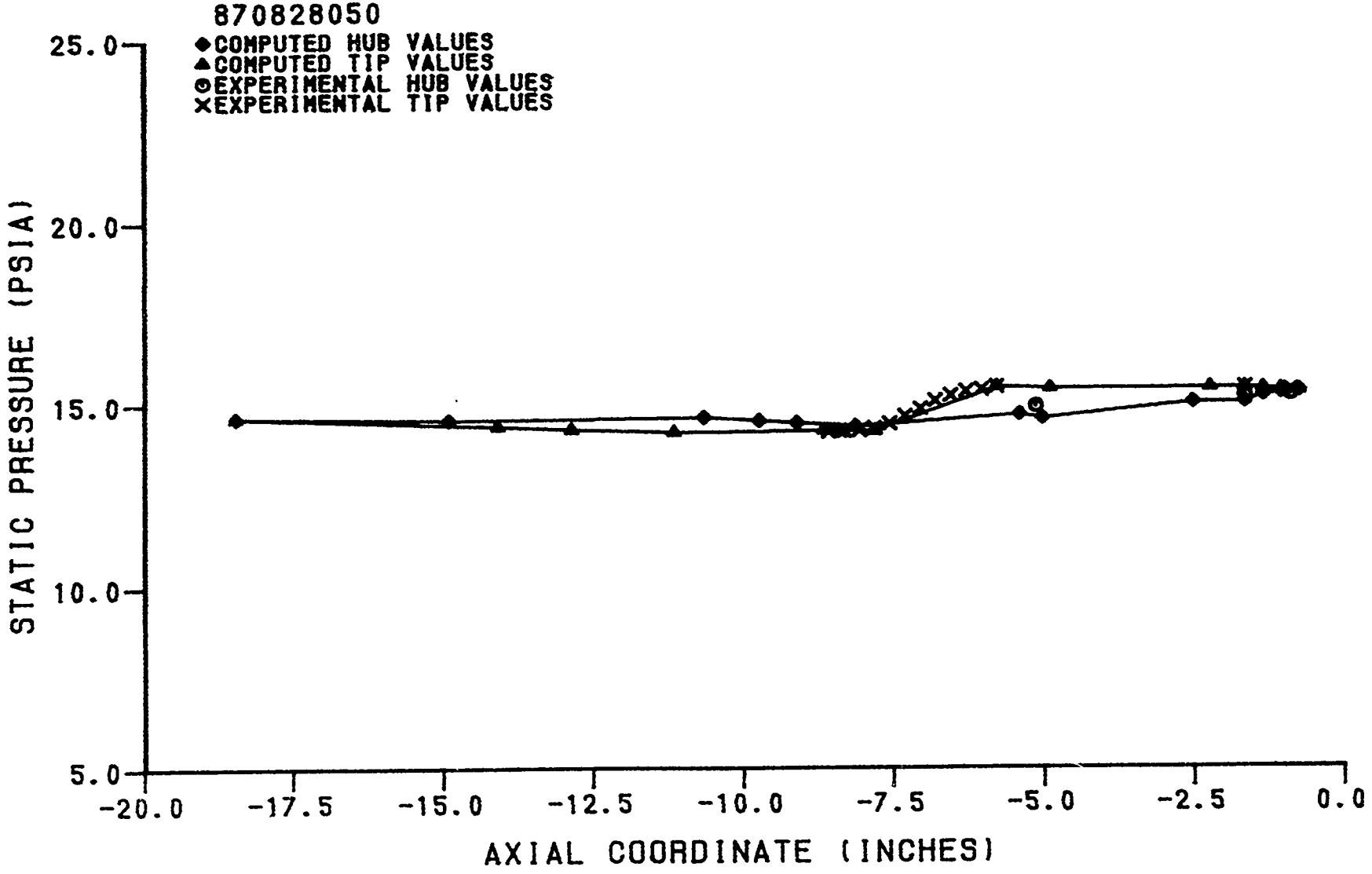


Figure 137. Static Pressure Distribution (870828050)

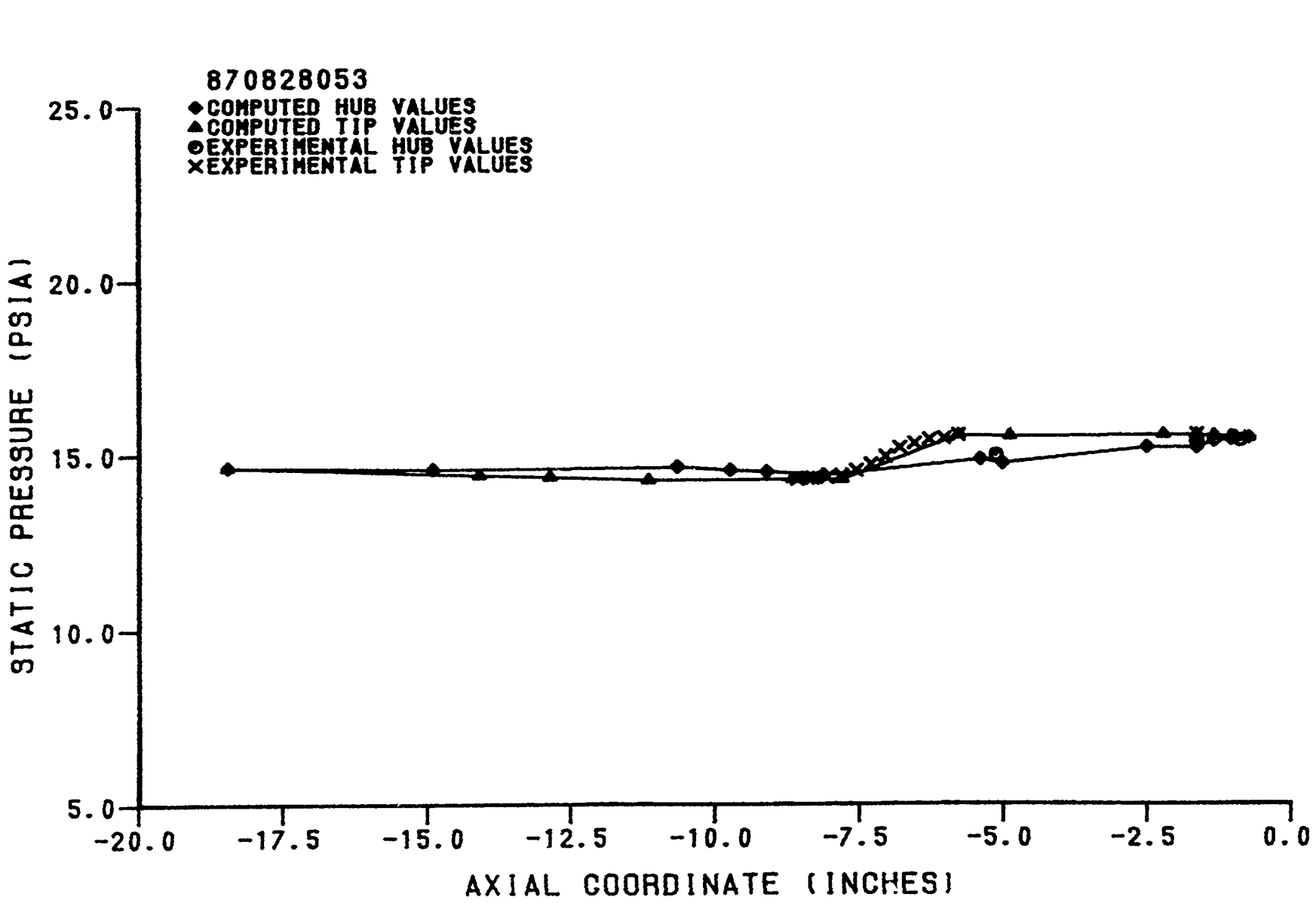


Figure 138. Static Pressure Distribution (870828053)

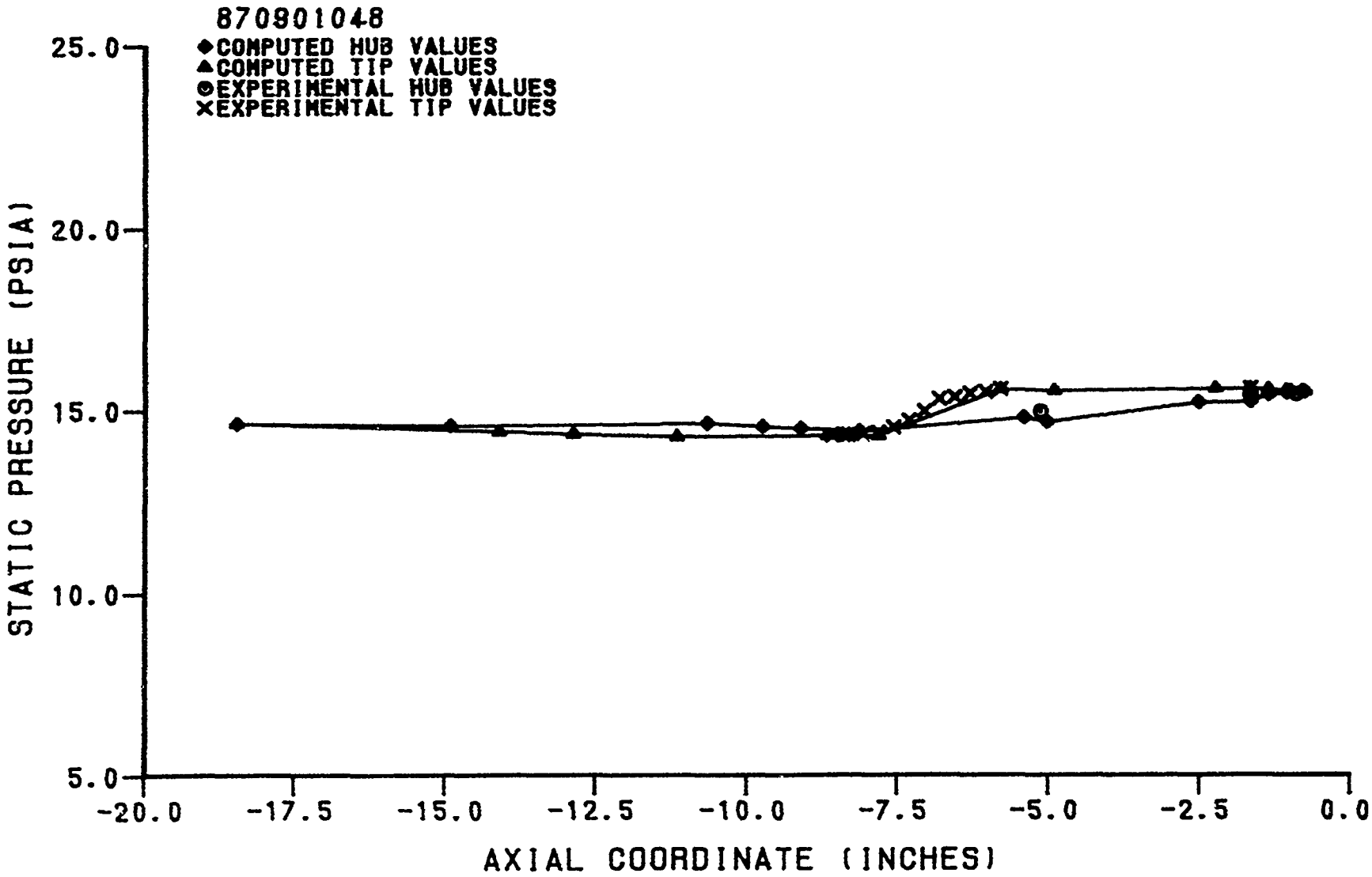


Figure 139. Static Pressure Distribution (870901048)

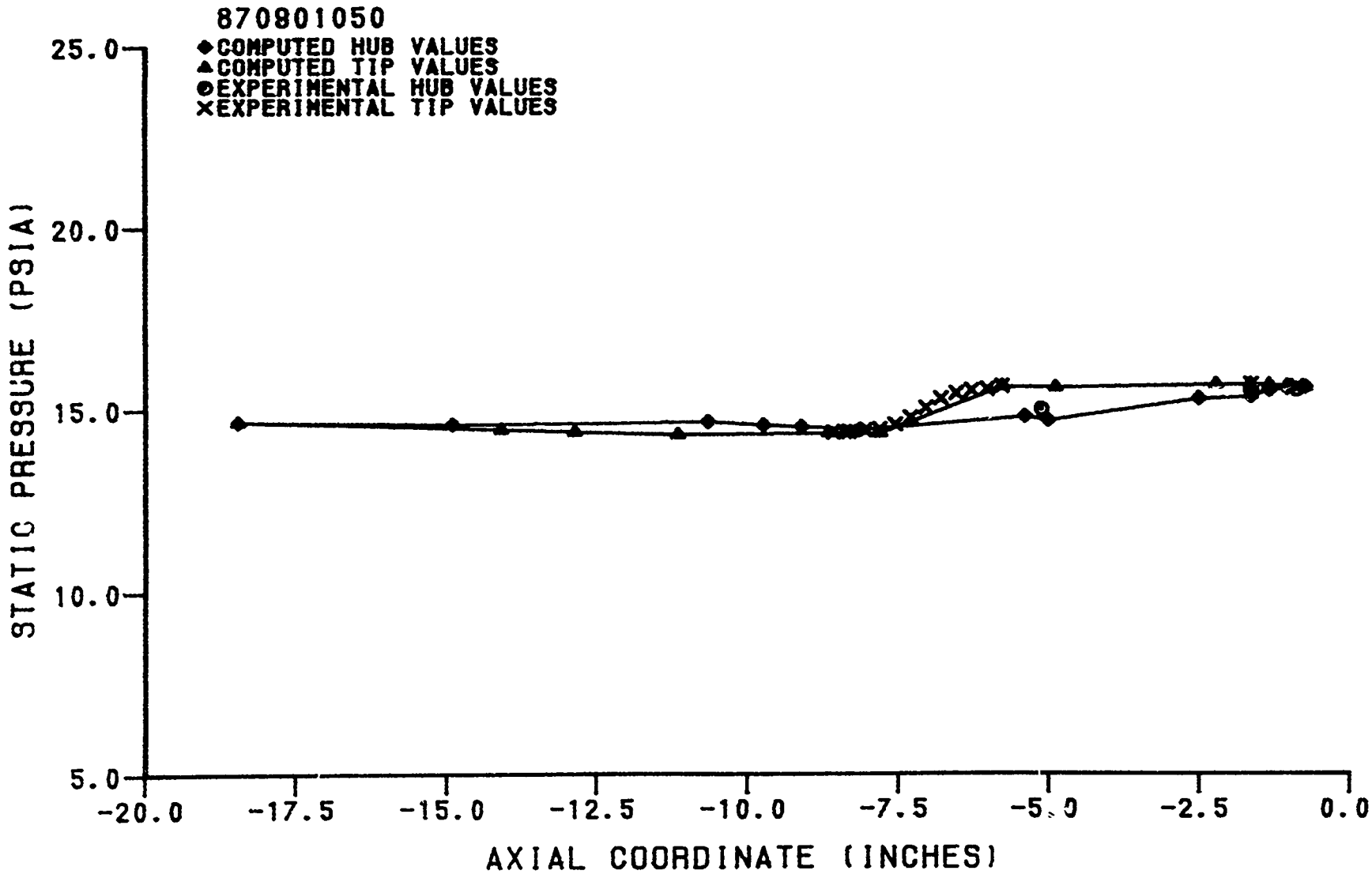


Figure 140. Static Pressure Distribution (870910050)

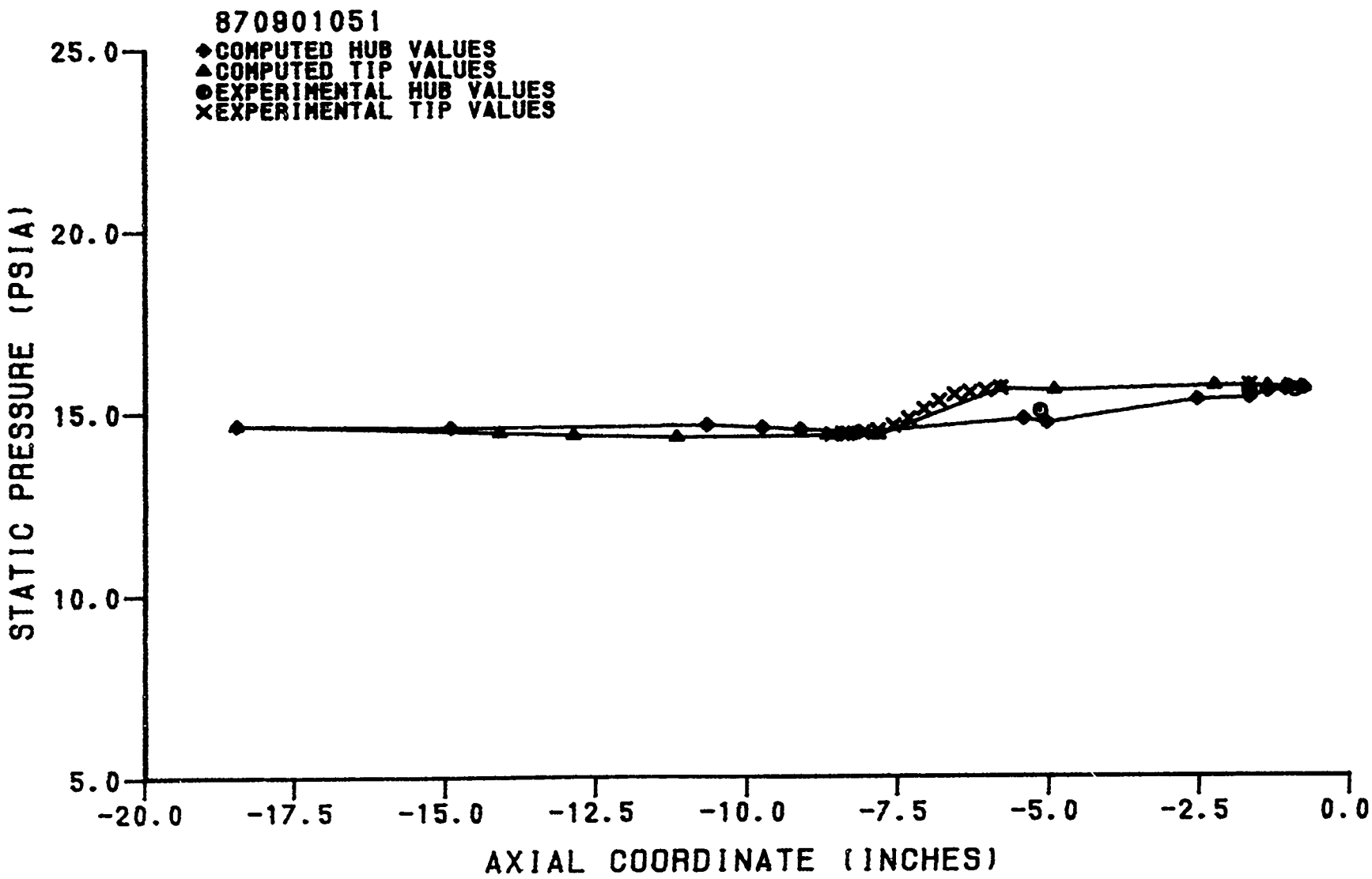


Figure 141. Static Pressure Distribution (870901051)

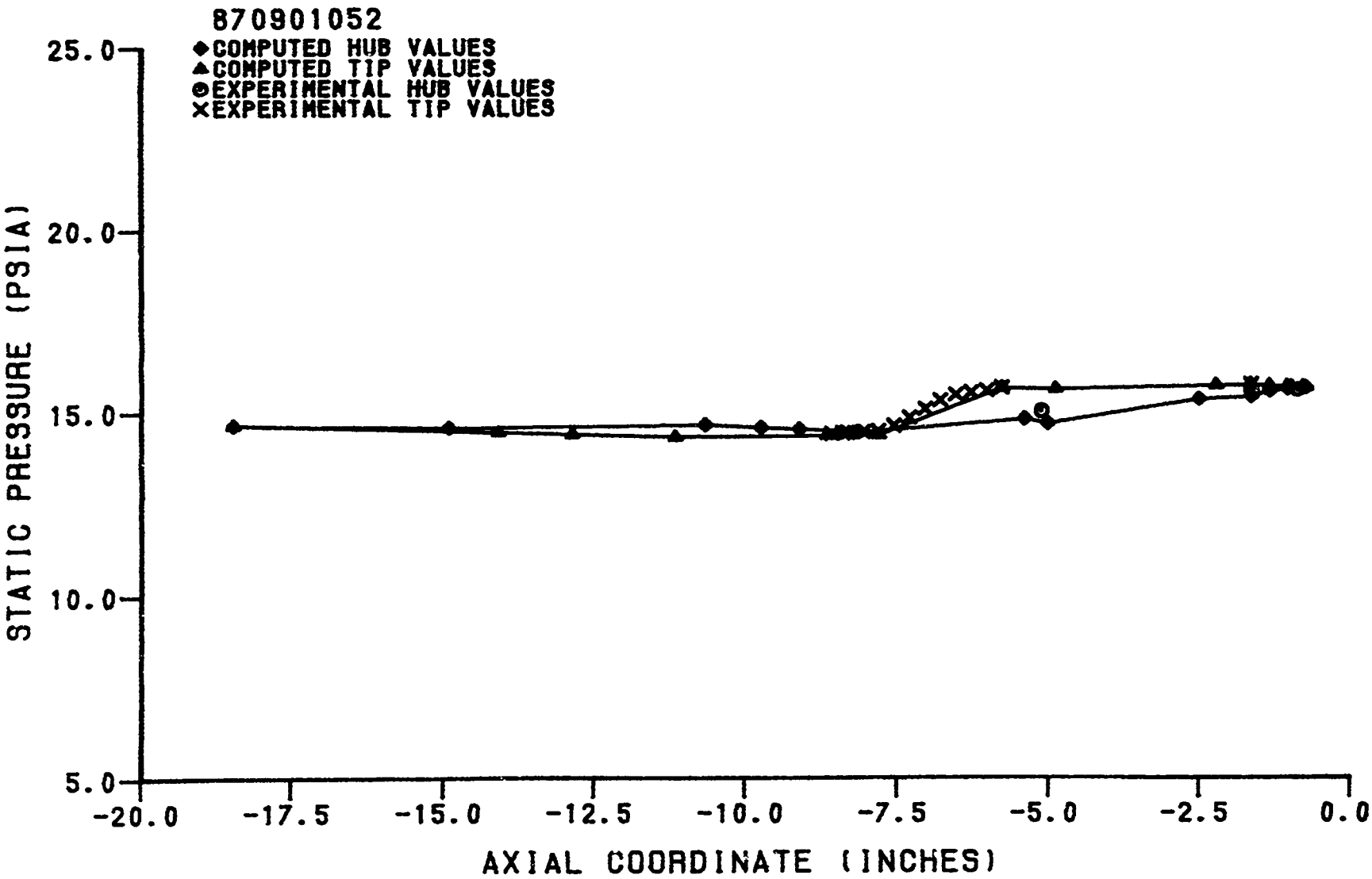


Figure 142. Static Pressure Distribution (870901052)

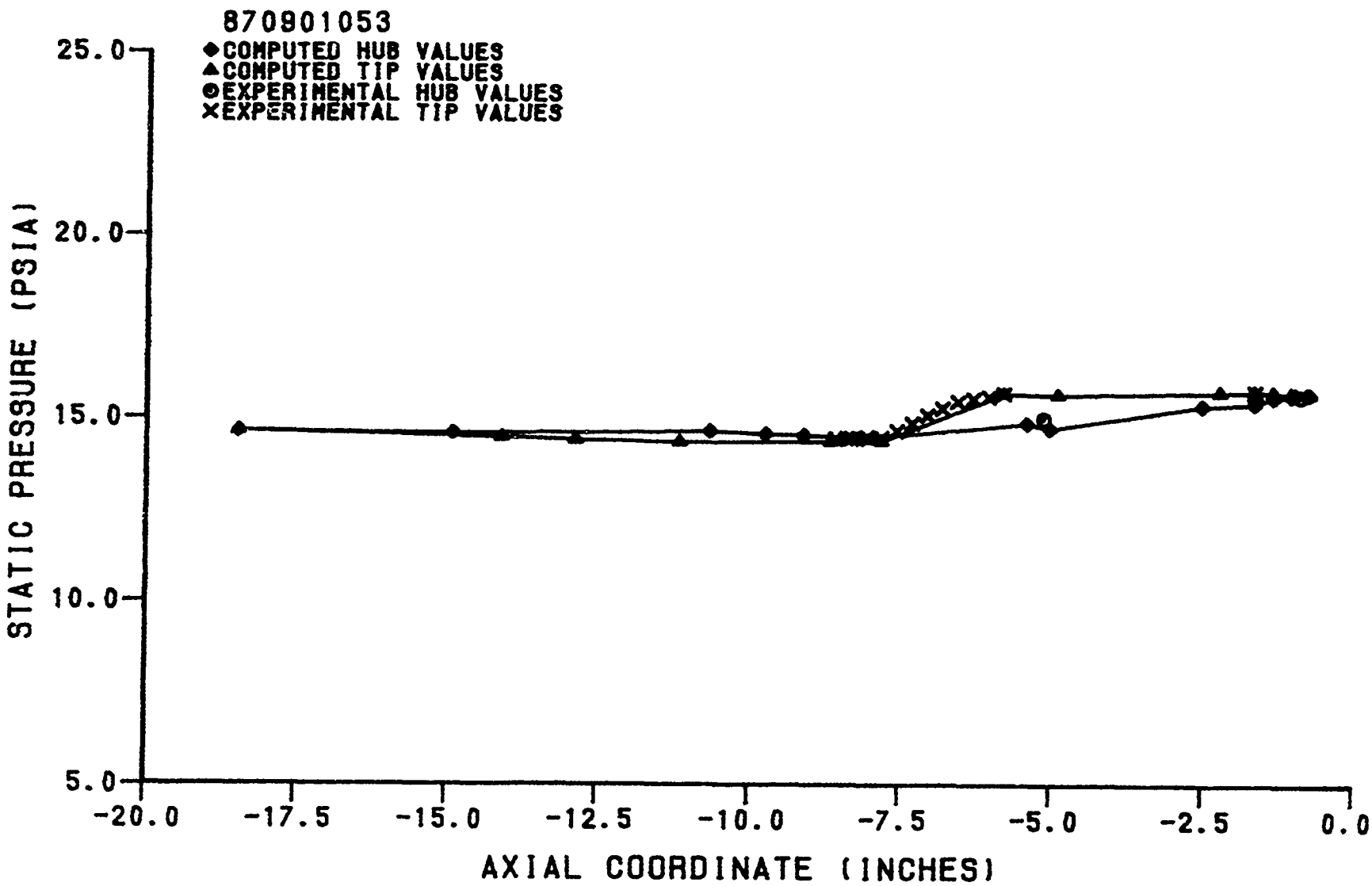


Figure 143. Static Pressure Distribution (870901053)

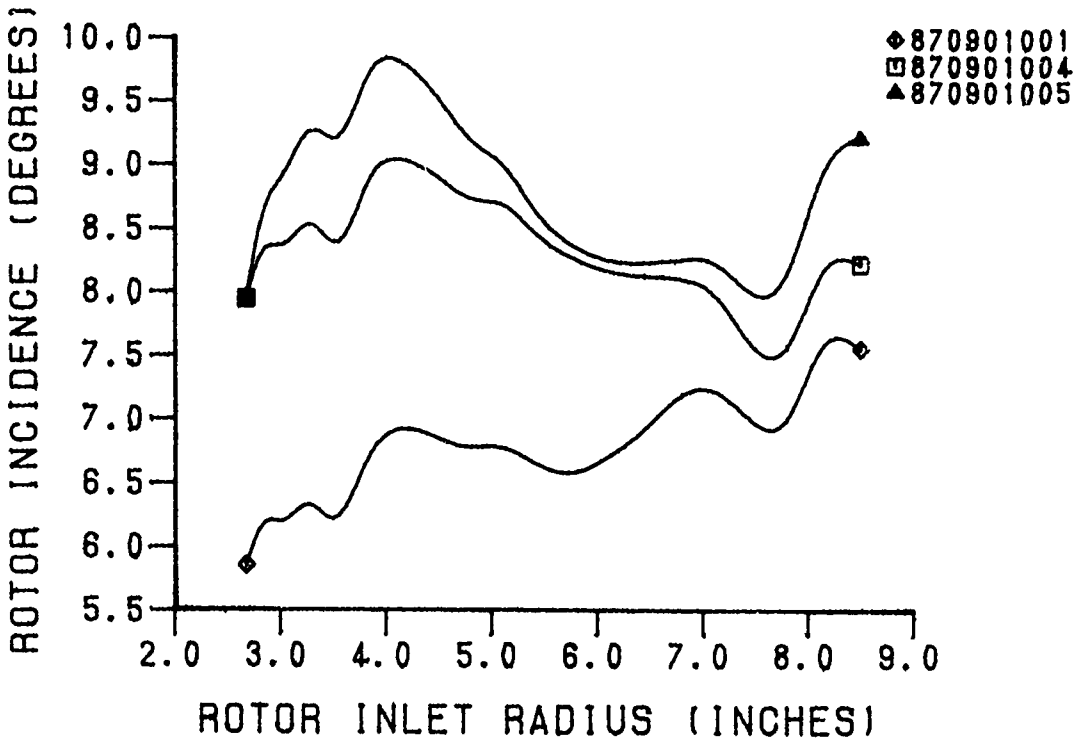


Figure 144. Rotor Incidence Angle (Thru-Blade)

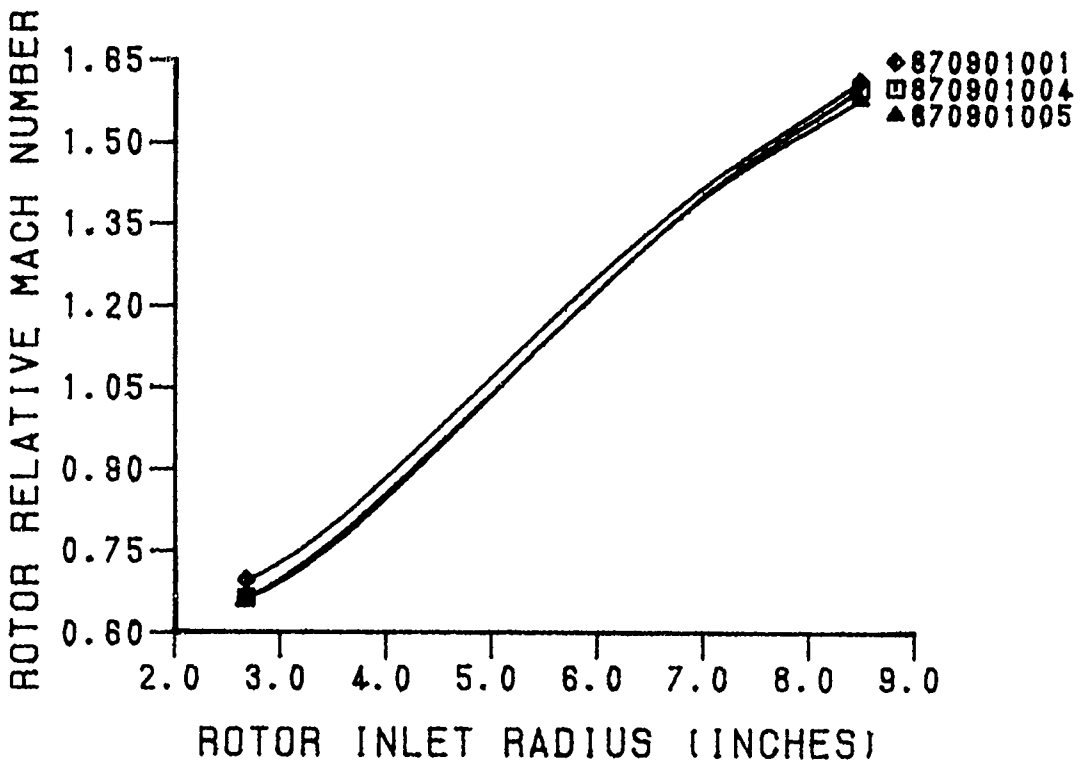


Figure 145. Rotor Relative Inlet Mach Number (Thru-Blade)

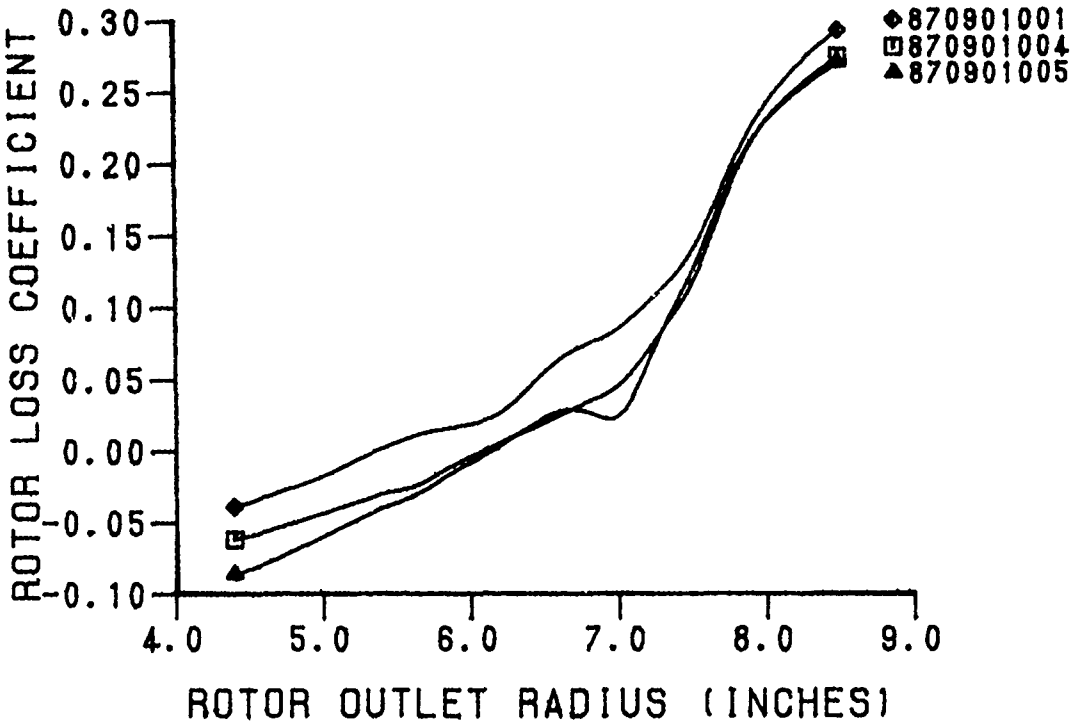


Figure 146. Rotor Loss Coefficient (Thru-Blade)

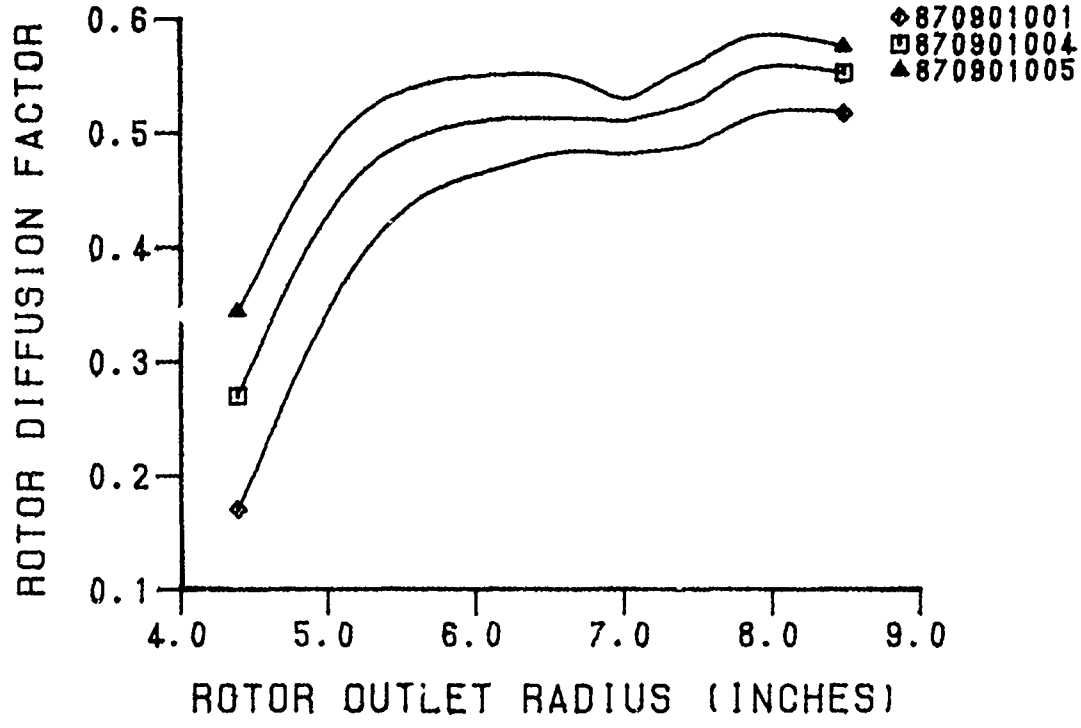


Figure 147. Rotor Diffusion Factor (Thru-Blade)

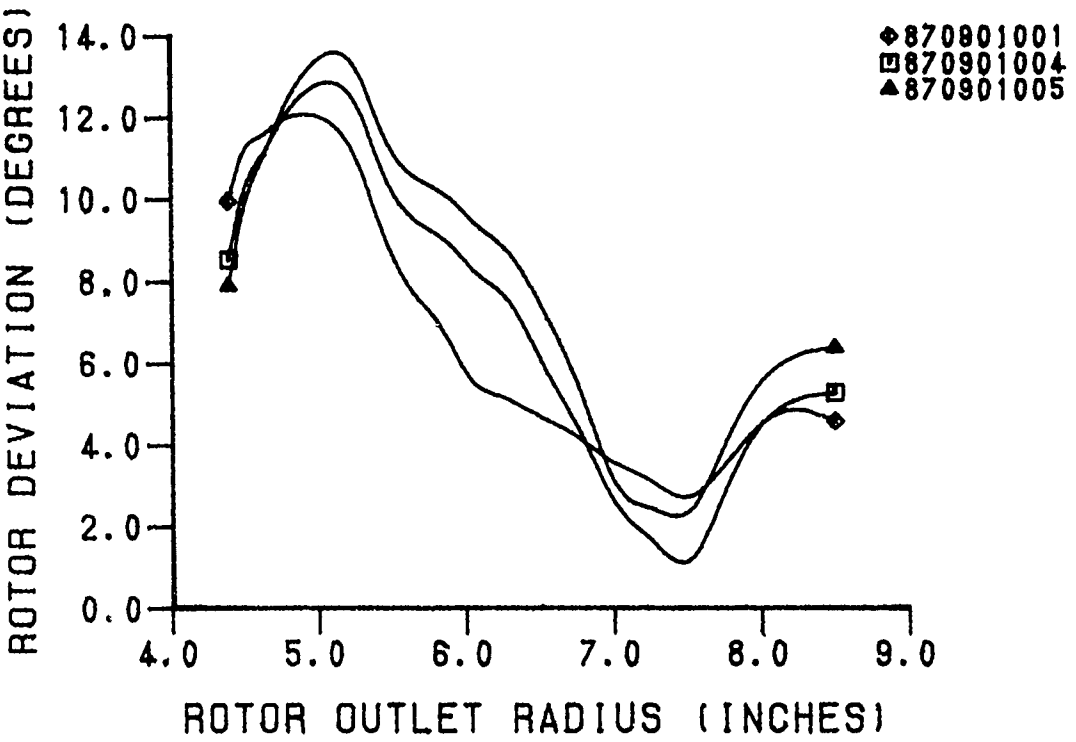


Figure 148. Rotor Deviation Angle (Thru-Blade)

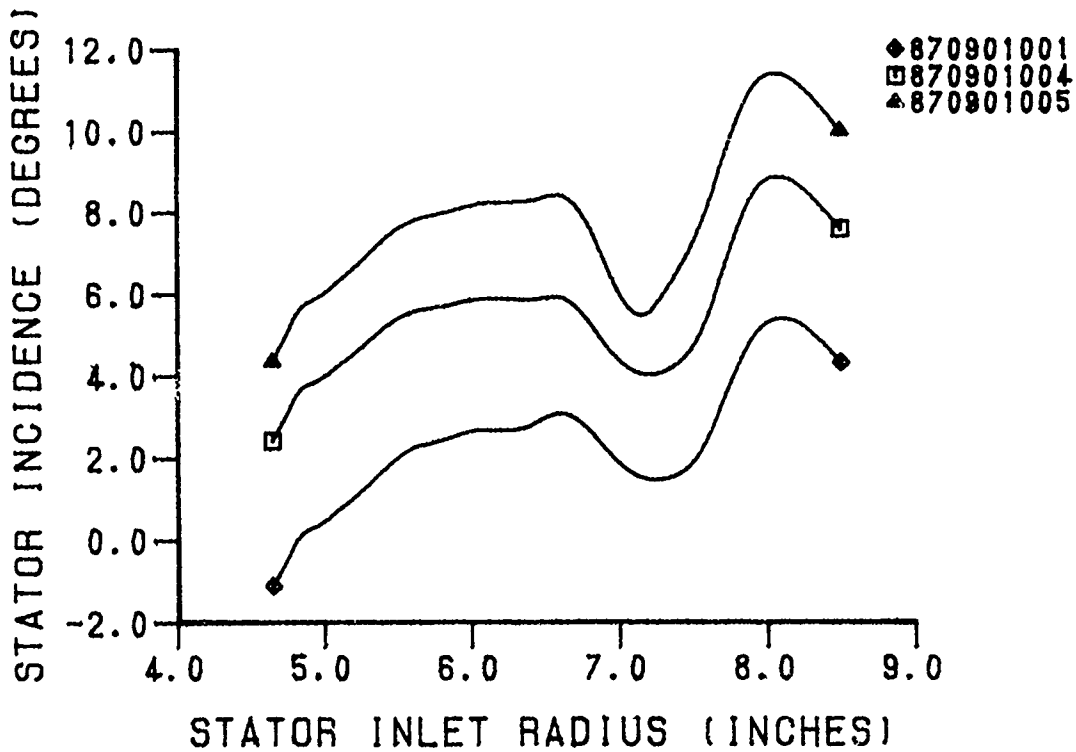


Figure 149. Stator Incidence Angle (Thru-Blade)

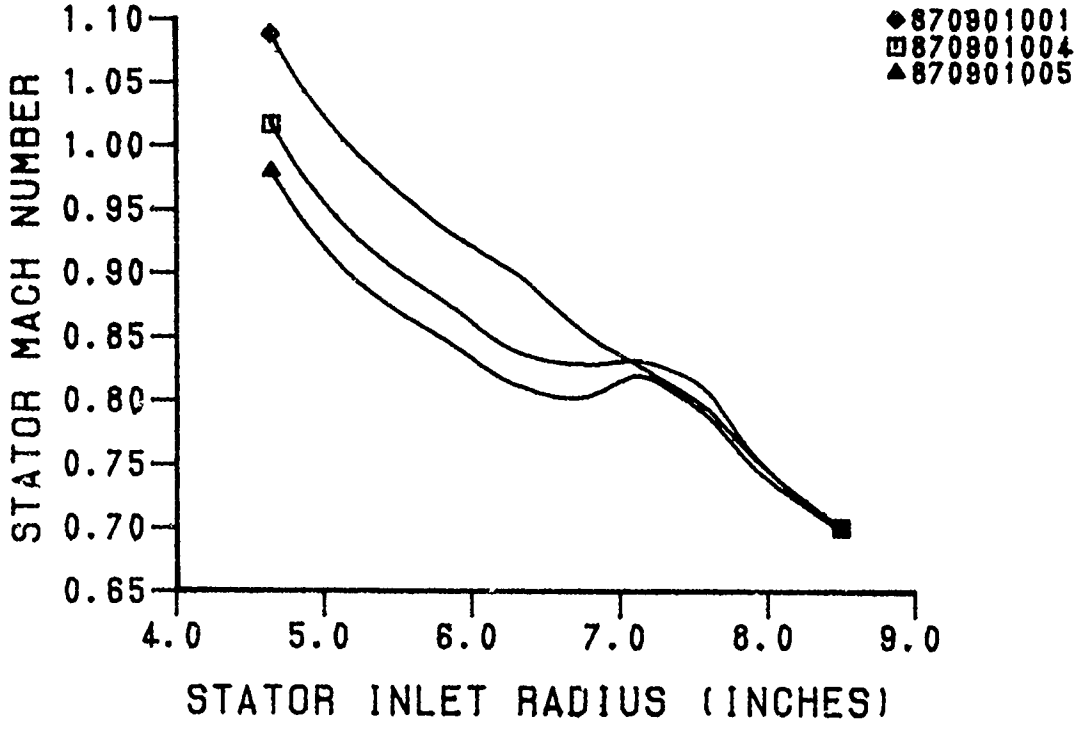


Figure 150. Stator Absolute Inlet Mach Number (Thru-Blade)

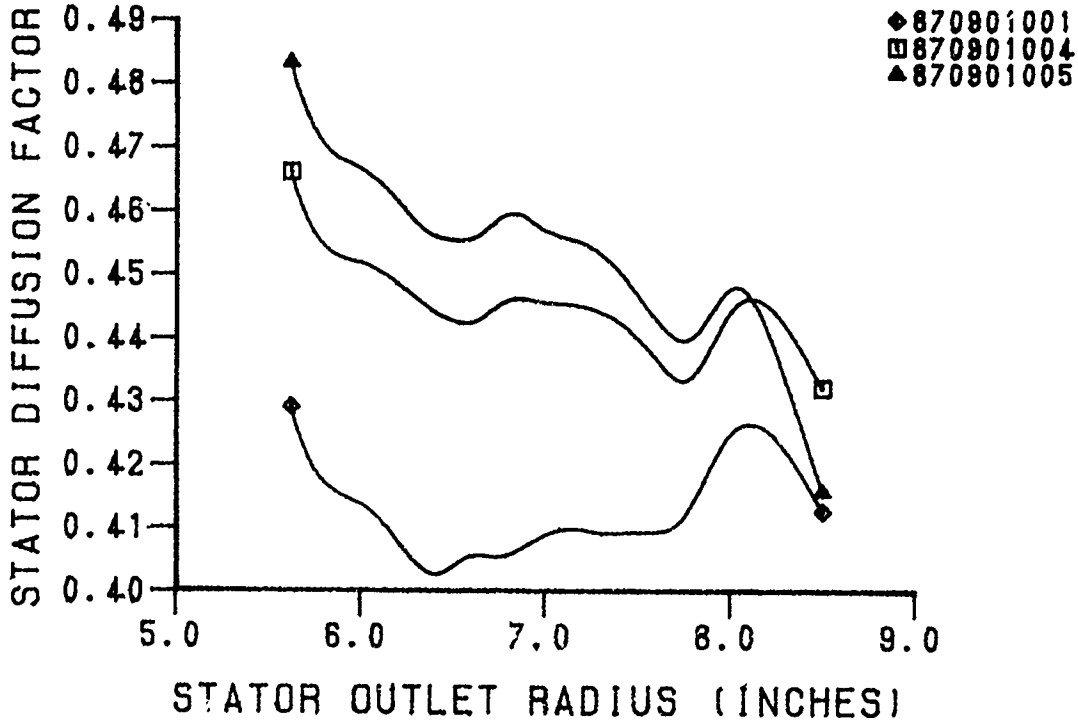


Figure 151. Stator Diffusion Factor (Thru-Blade)

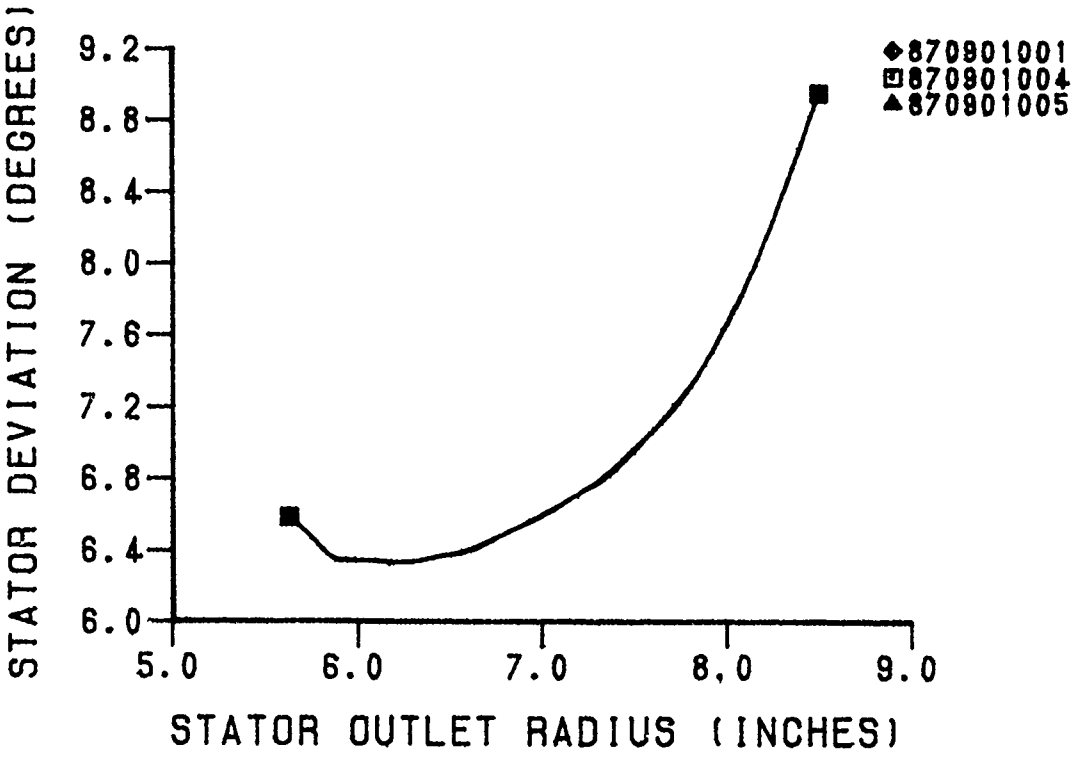


Figure 152. Stator Deviation Angle (Thru-Blade)

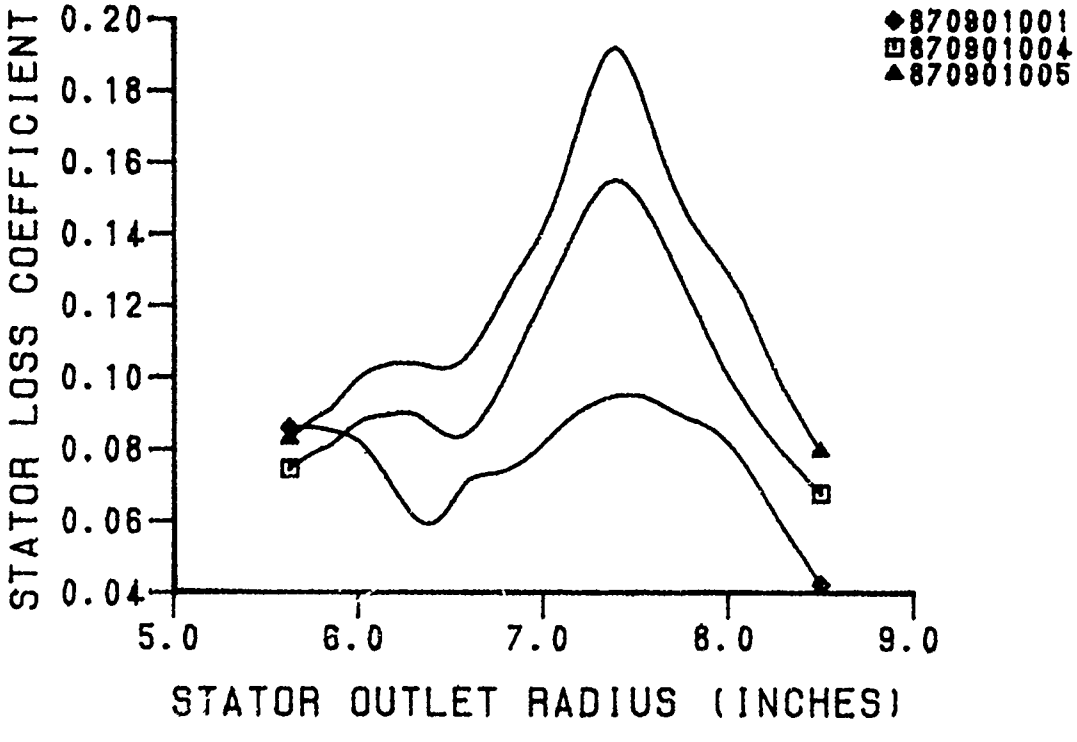


Figure 153. Stator Loss Coefficient (Thru-Blade)

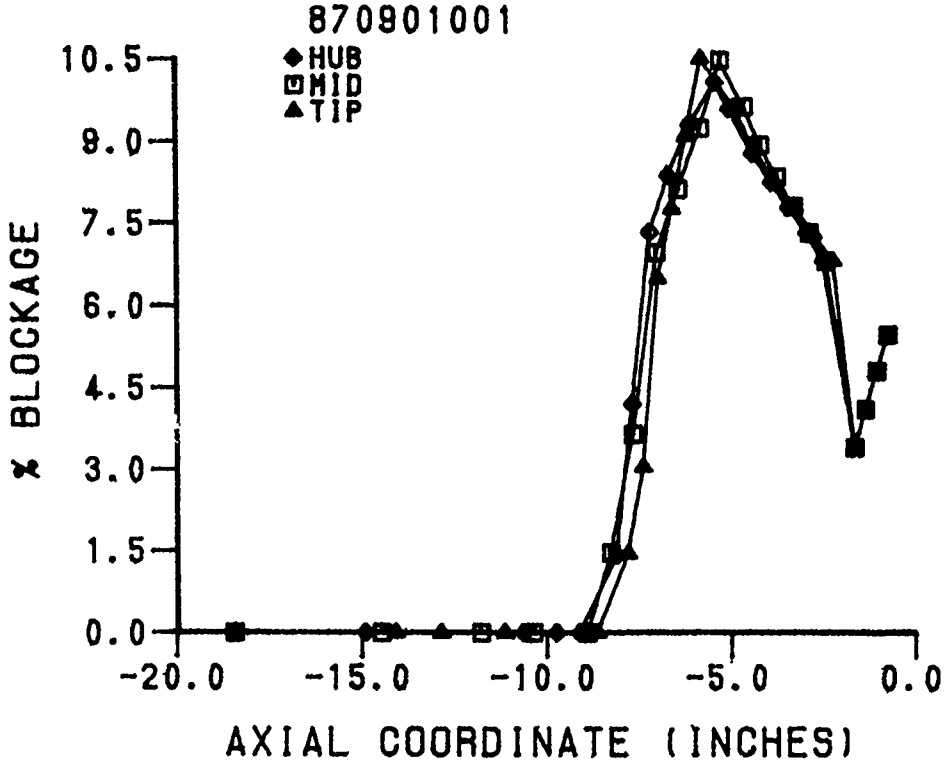


Figure 154. Wake/Bloundary Layer Blockage Distribution (Thru-Blade/870901001)

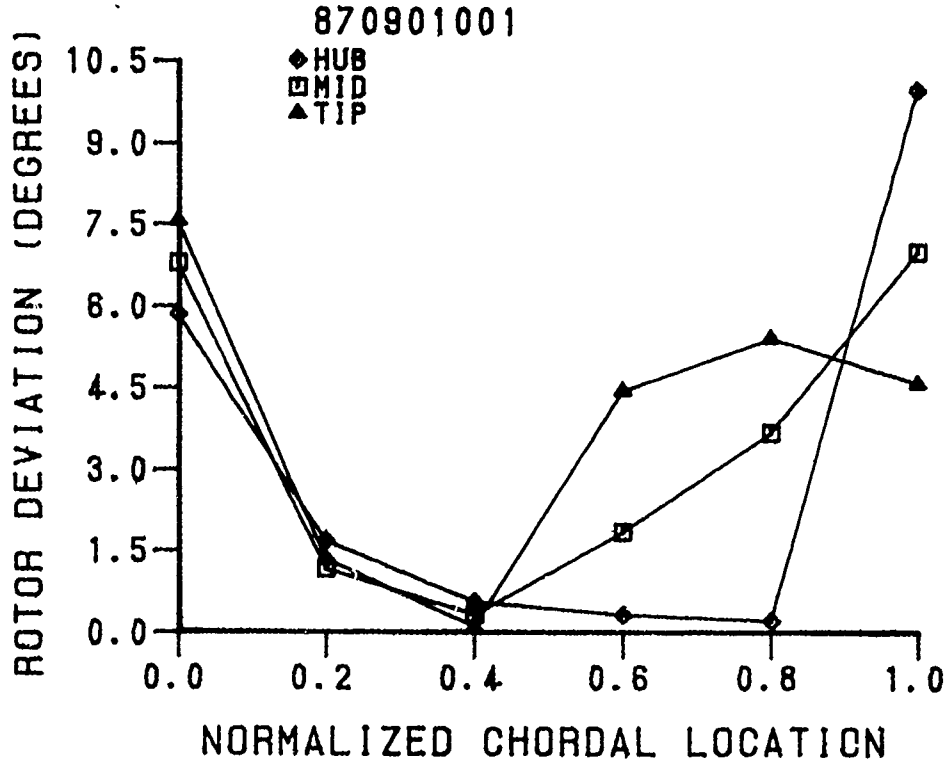


Figure 155. Chordal Distribution of Deviation (Thru-Blade/870901001)

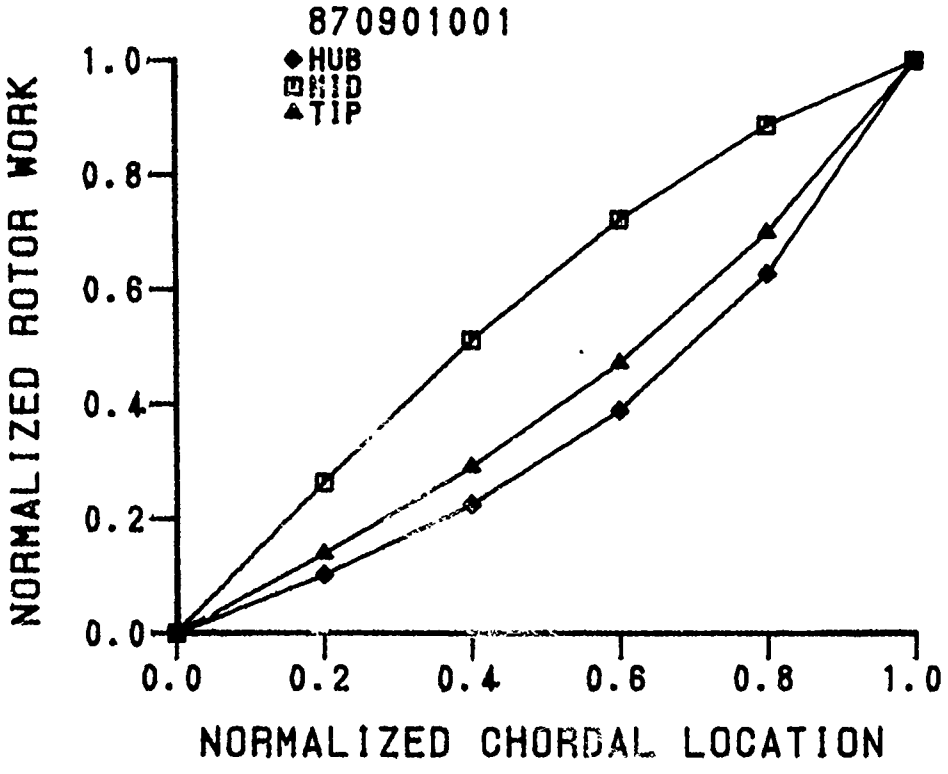


Figure 156. Chordal Distribution of Work (Thru-Blade/870901001)

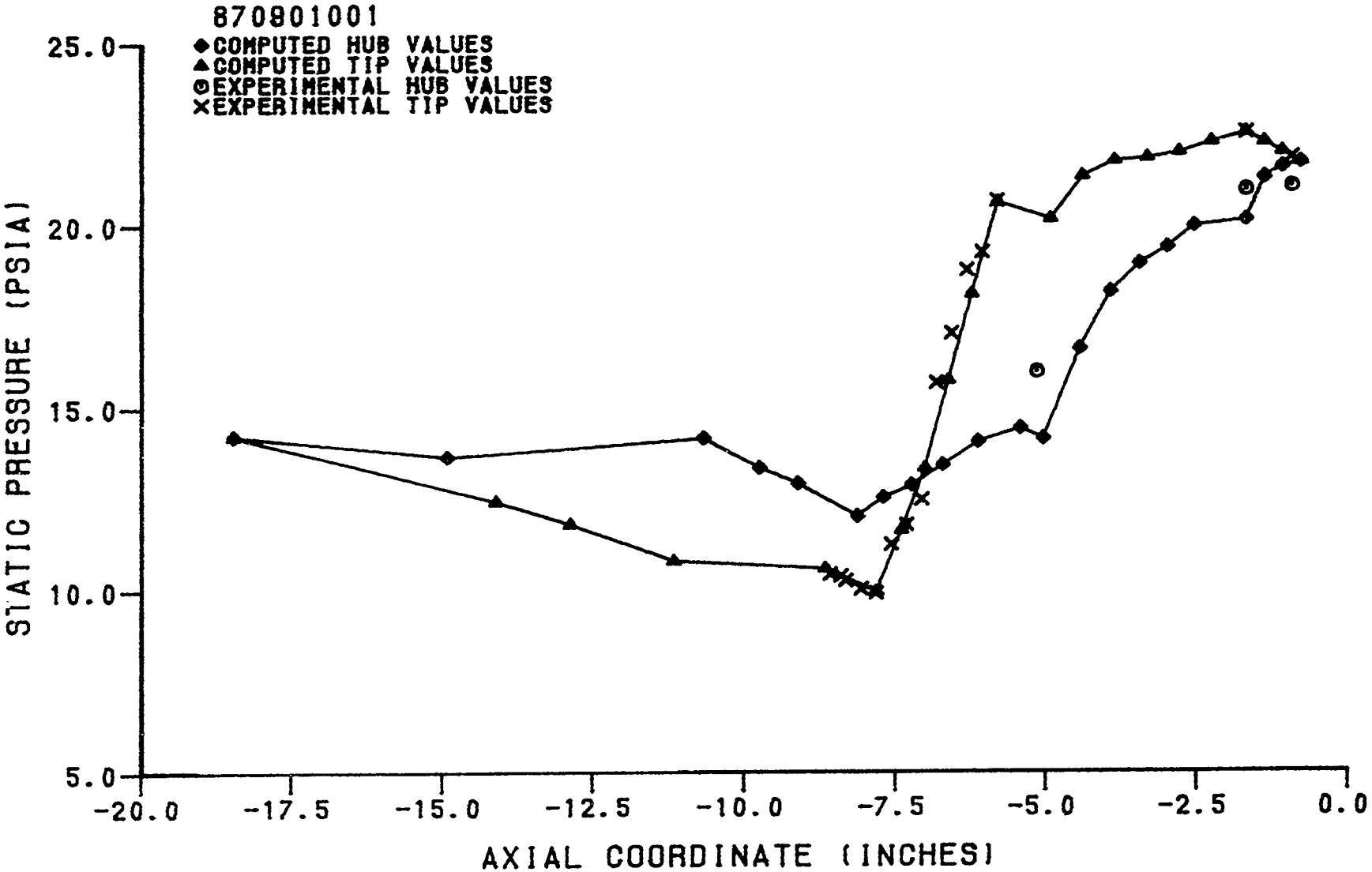


Figure 157. Static Pressure Distribution (Thru-Blade/870901001)

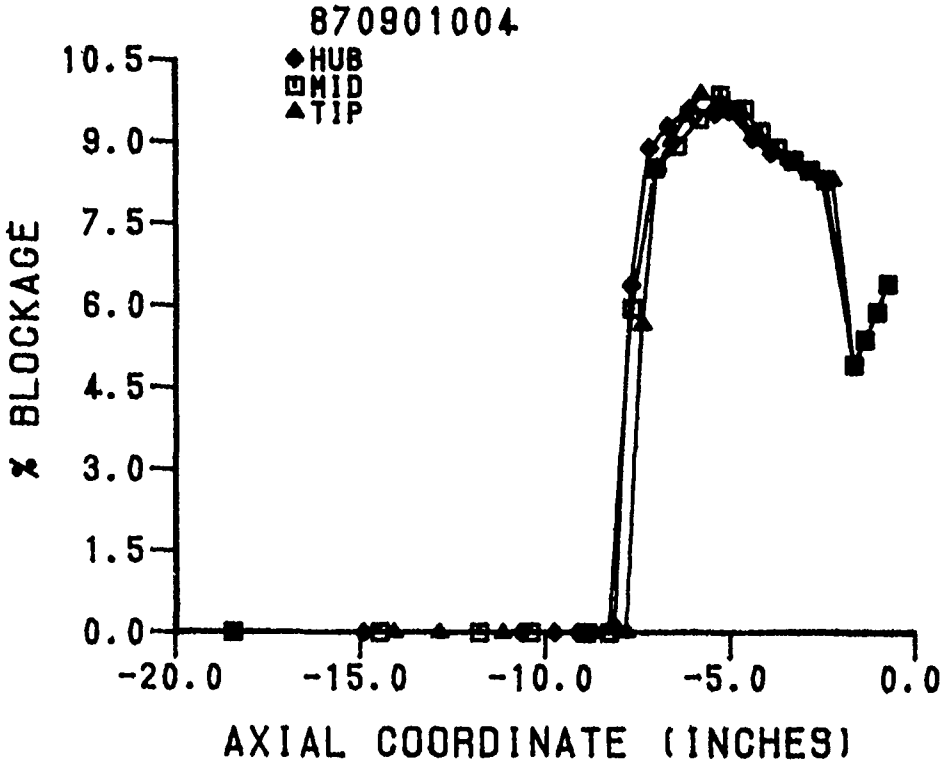


Figure 158. Wake/Bloundary Layer Blockage Distribution (Thru-Blade/870901004)

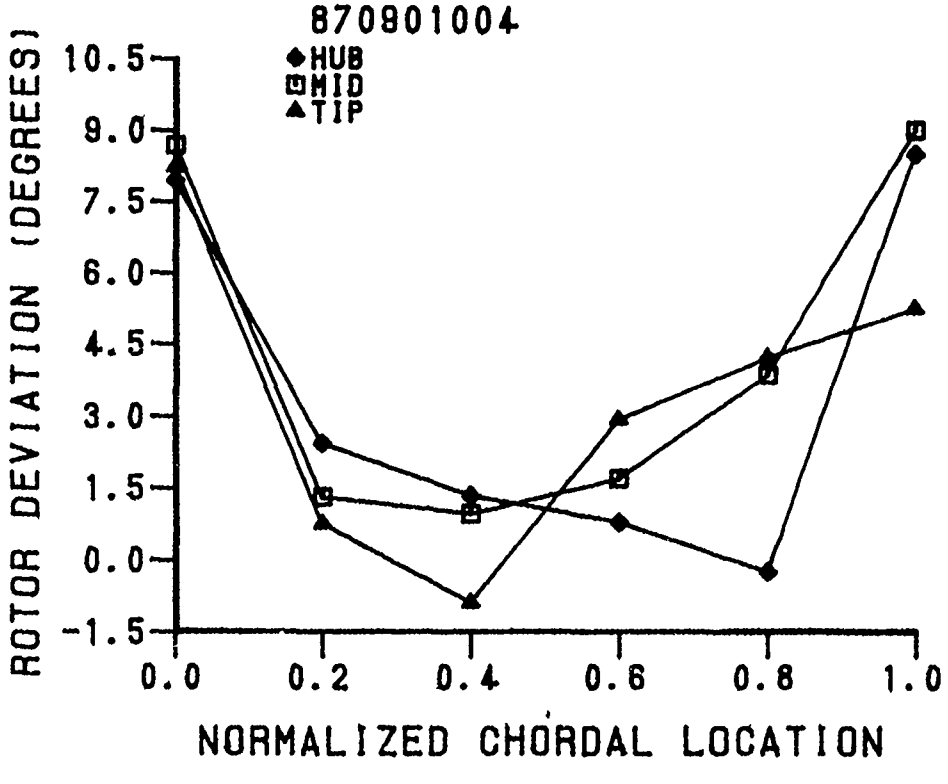


Figure 159. Chordal Distribution of Deviation (Thru-Blade/870901004)

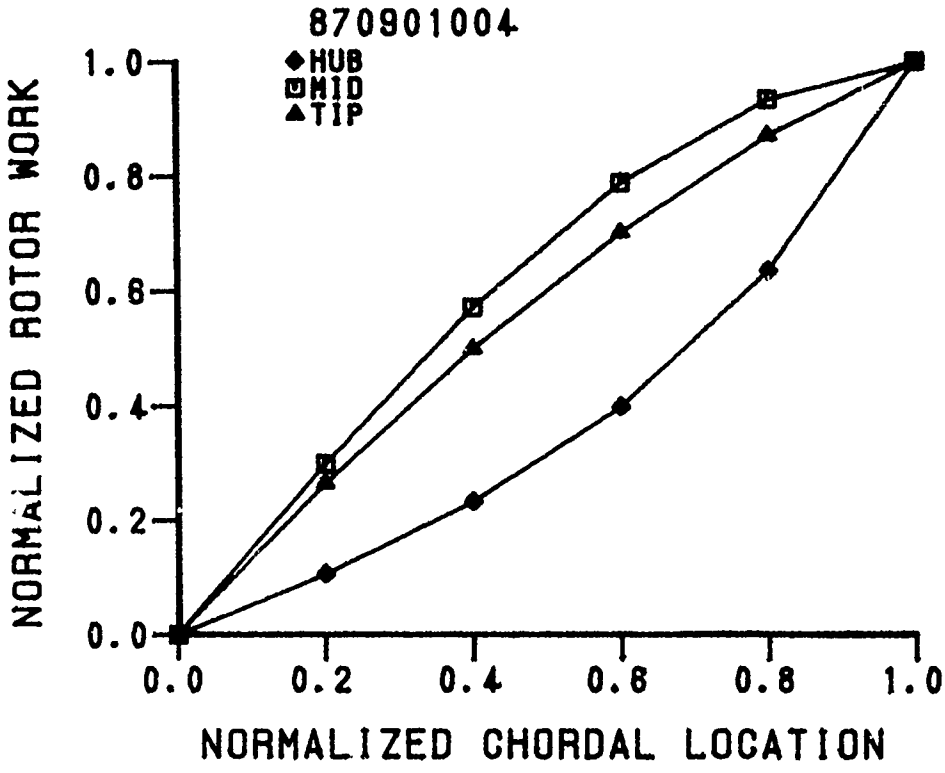


Figure 160. Chordal Distribution of Work (Thru-Blade/870901004)

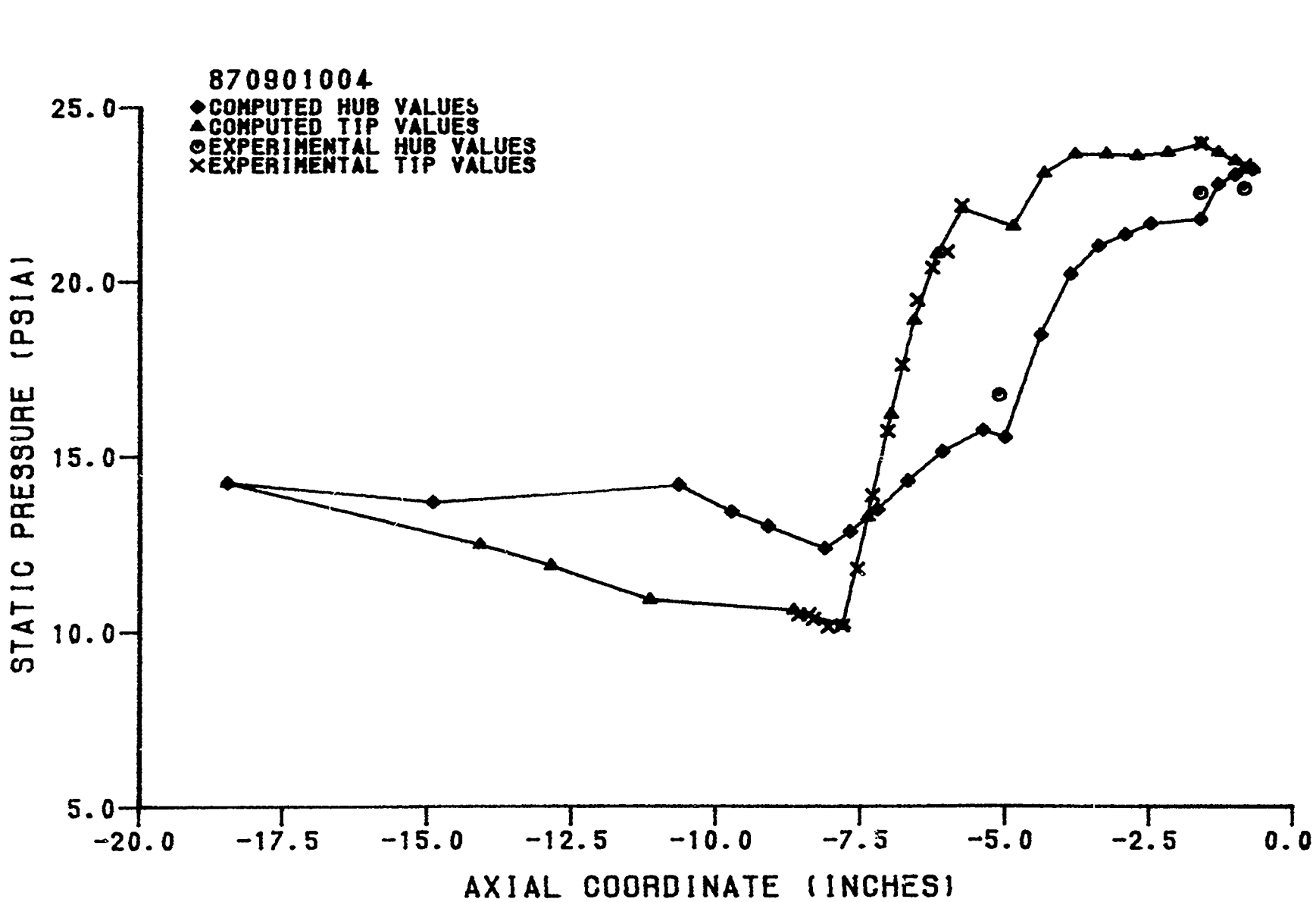


Figure 161. Static Pressure Distribution
(Thru-Blade/870901004)

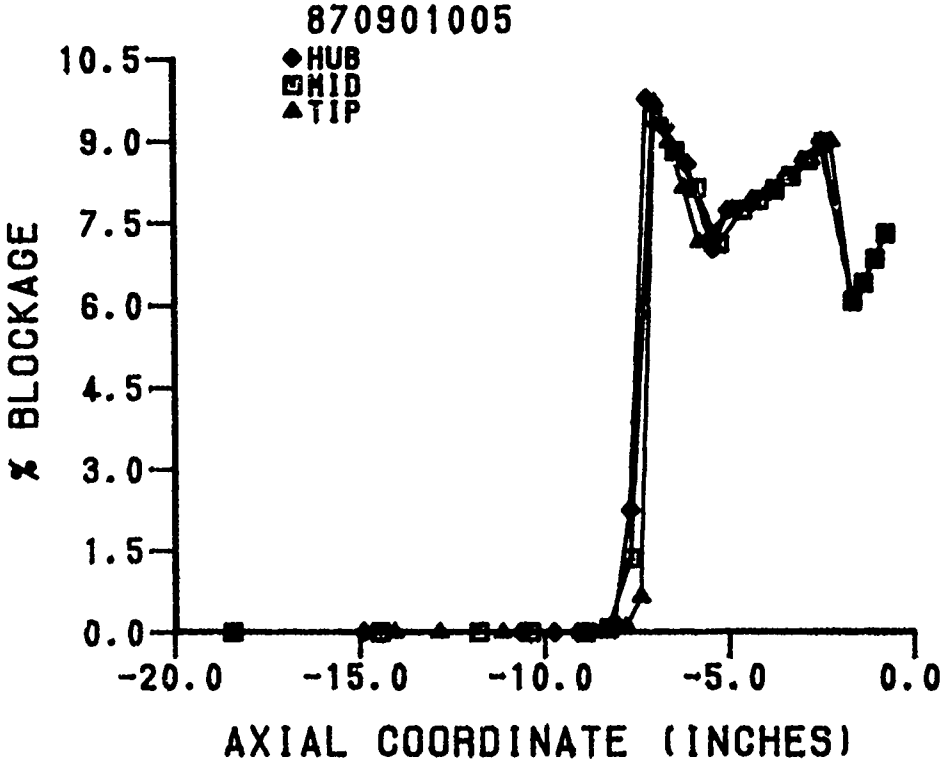


Figure 162. Wake/Bloundary Layer Blockage Distribution (Thru-Blade/870901005)

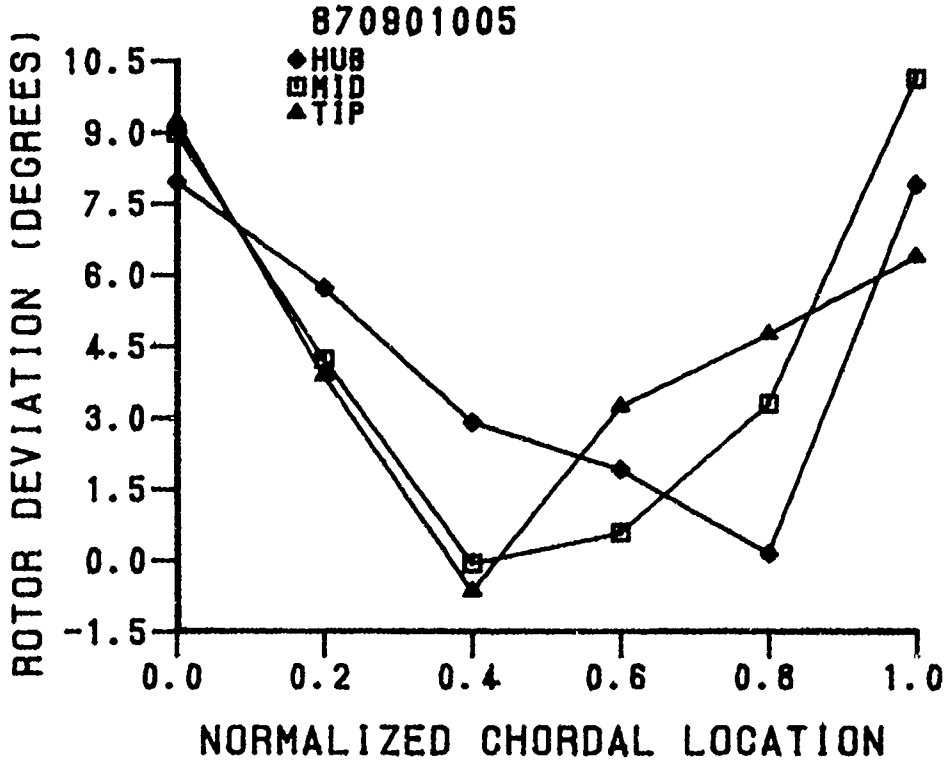


Figure 163. Chordal Distribution of Deviation (Thru-Blade/870901005)

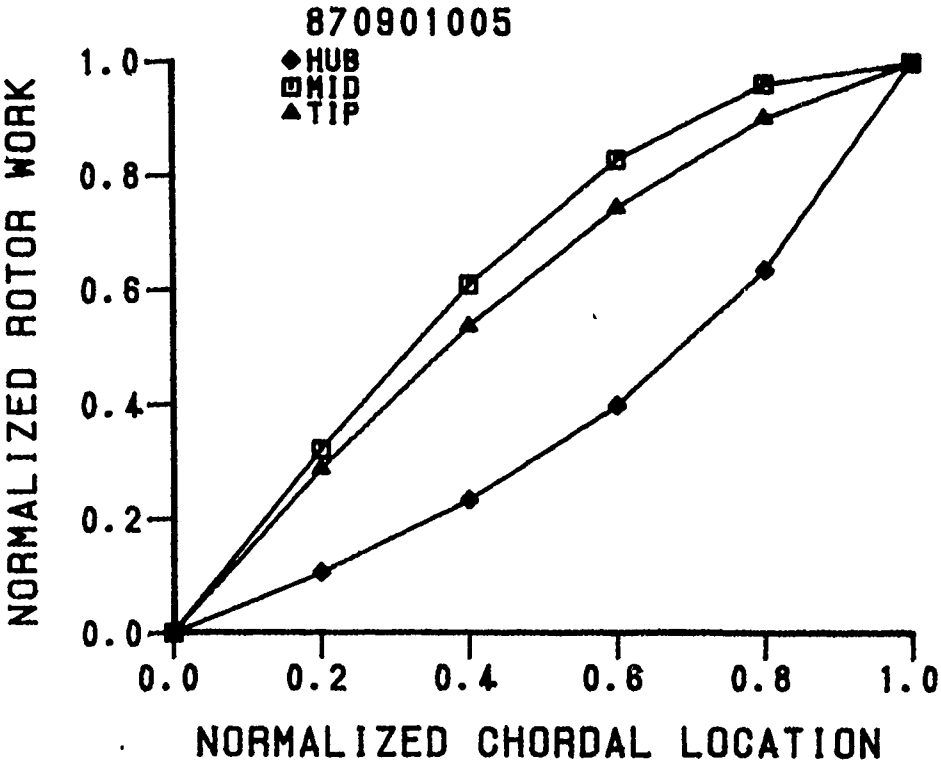


Figure 164. Chordal Distribution of Work (Thru-Blade/870901005)

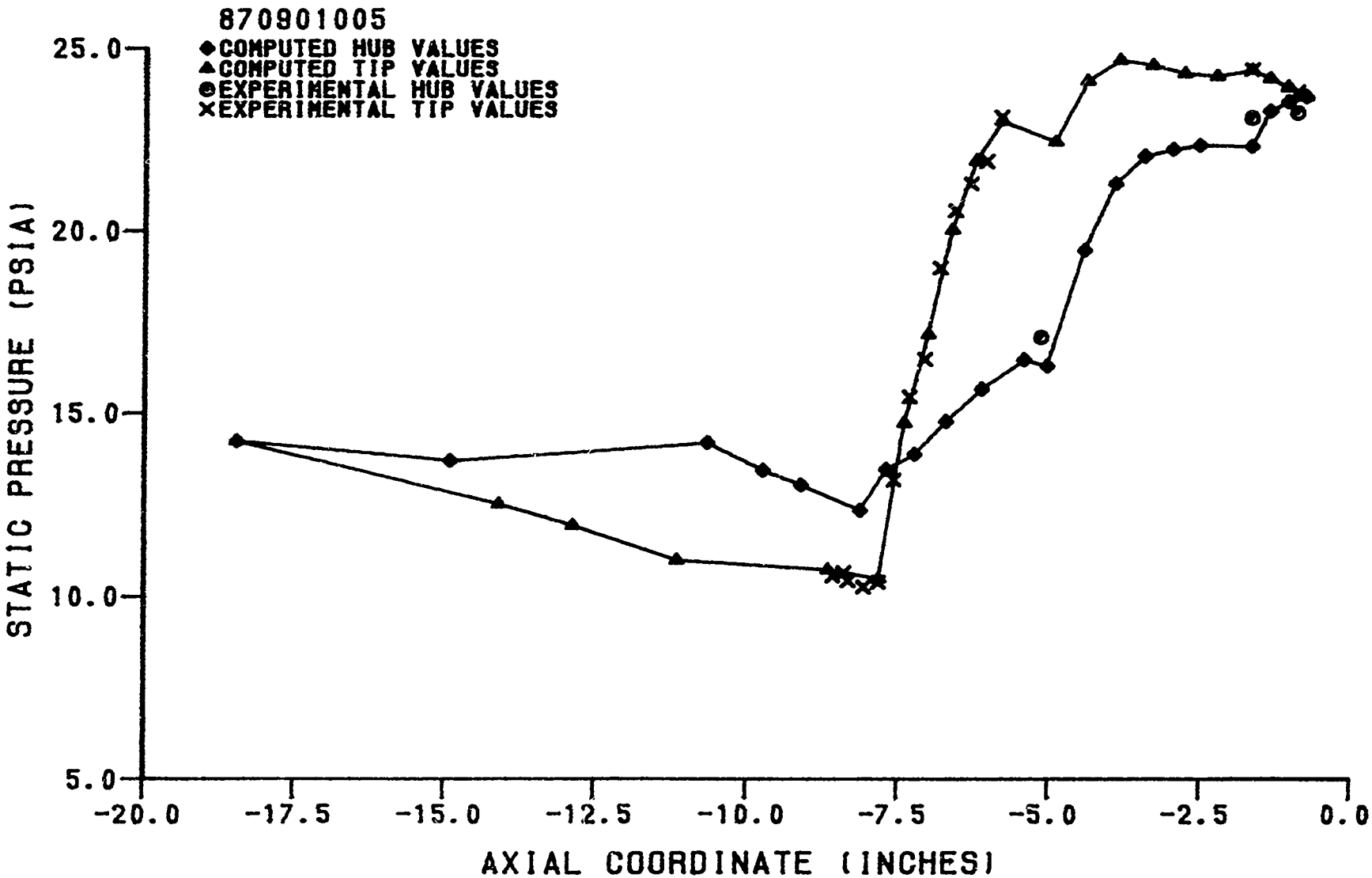


Figure 165. Static Pressure Distribution
(Thru-Blade/870901005)

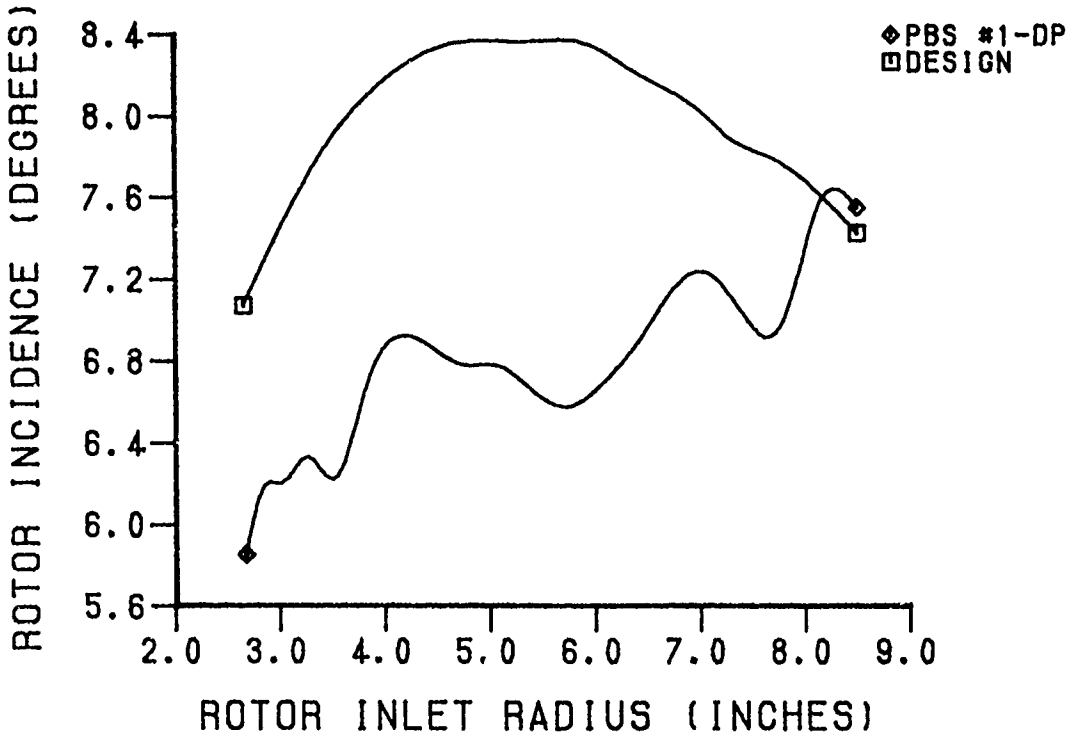


Figure 166. Comparison of Rotor Incidence Design and Experimental Distributions

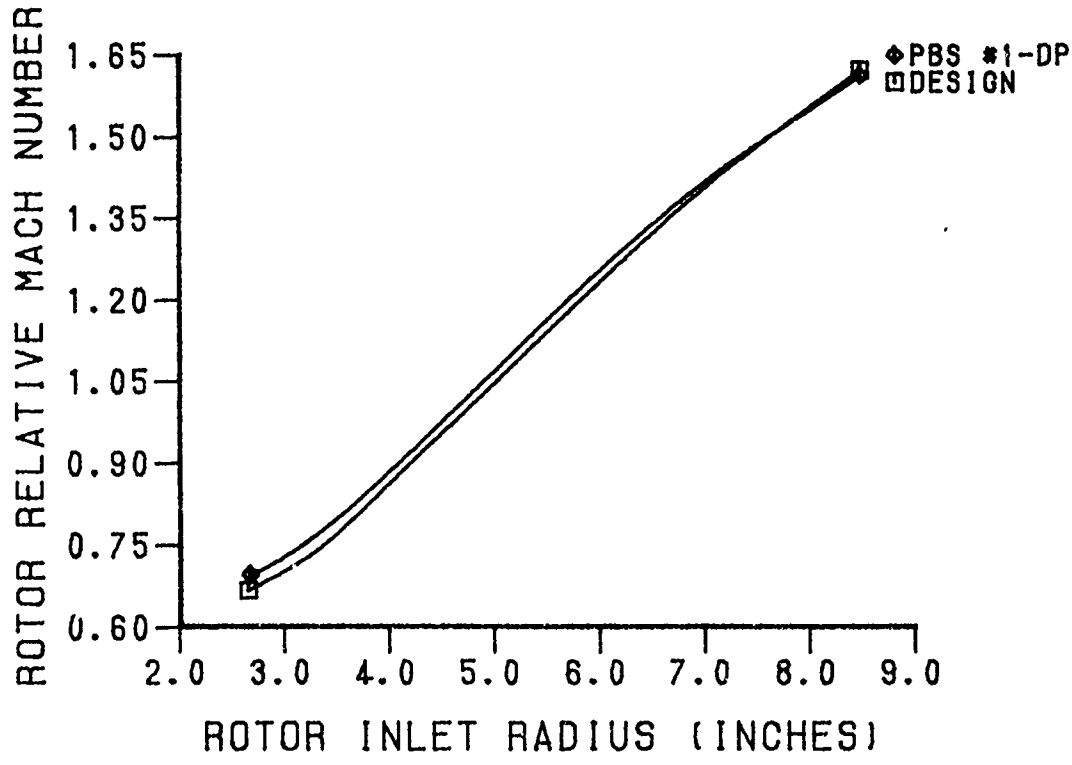


Figure 167. Comparison of Rotor Relative Inlet Mach Number Design and Experimental Distributions

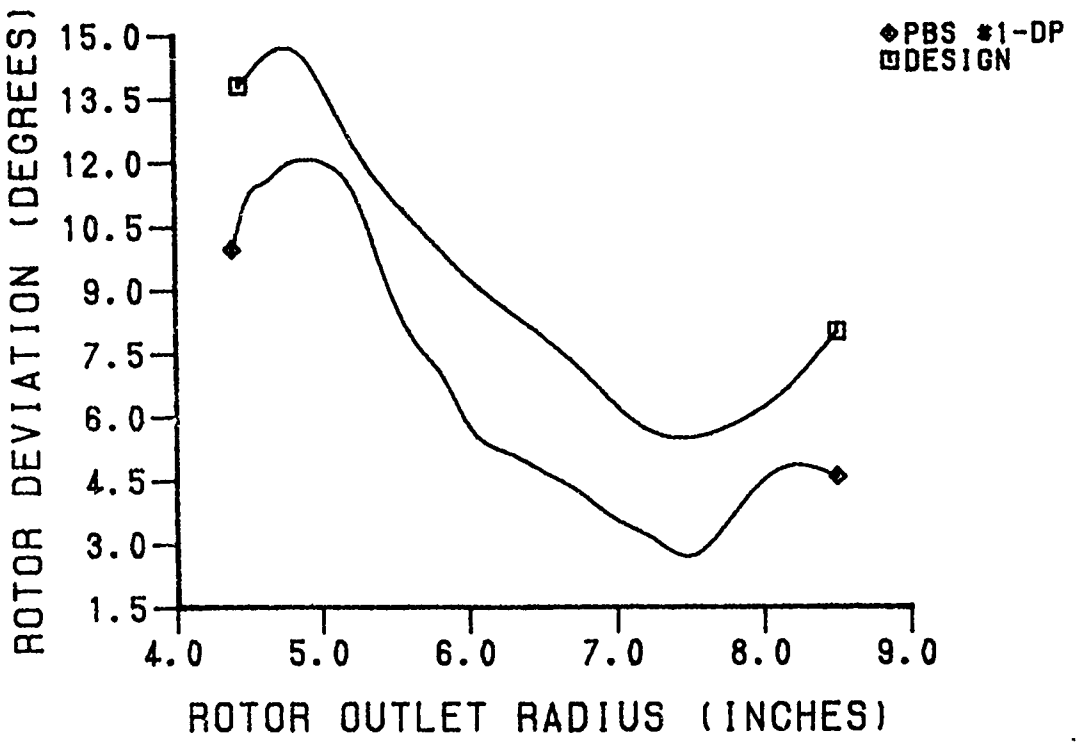


Figure 168. Comparison of Rotor Deviation Design and Experimental Distributions

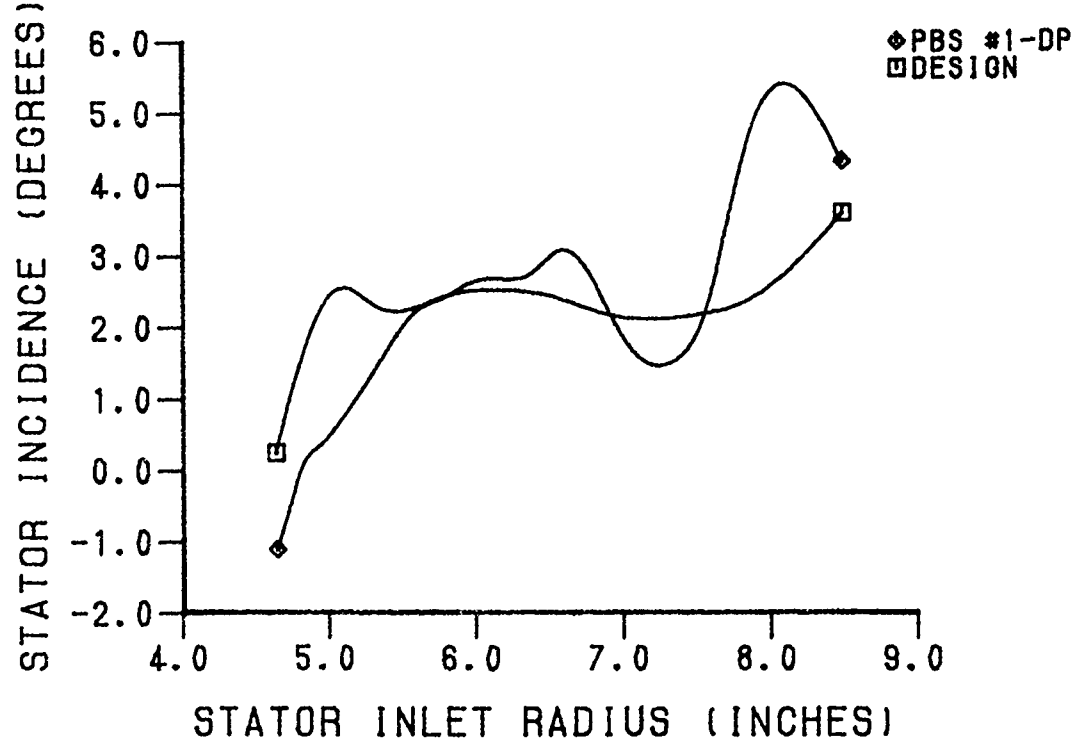


Figure 169. Comparison of Stator Incidence Design and Experimental Distributions

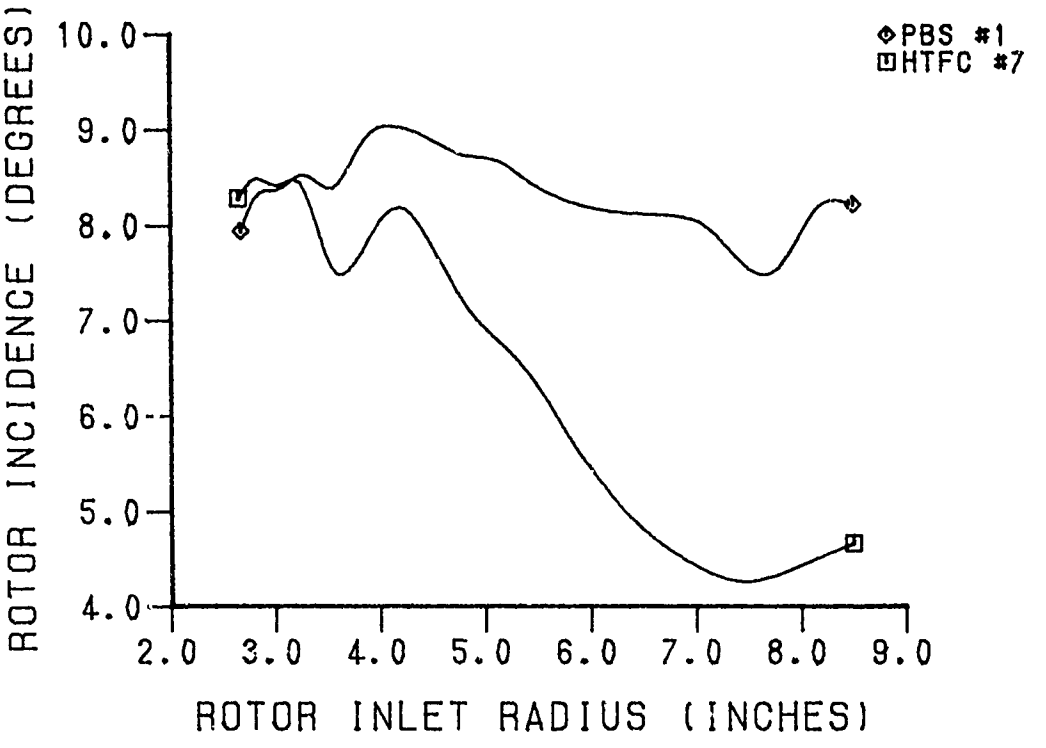


Figure 170. Rotor Incidence Angle (PBS #1 and Baseline)

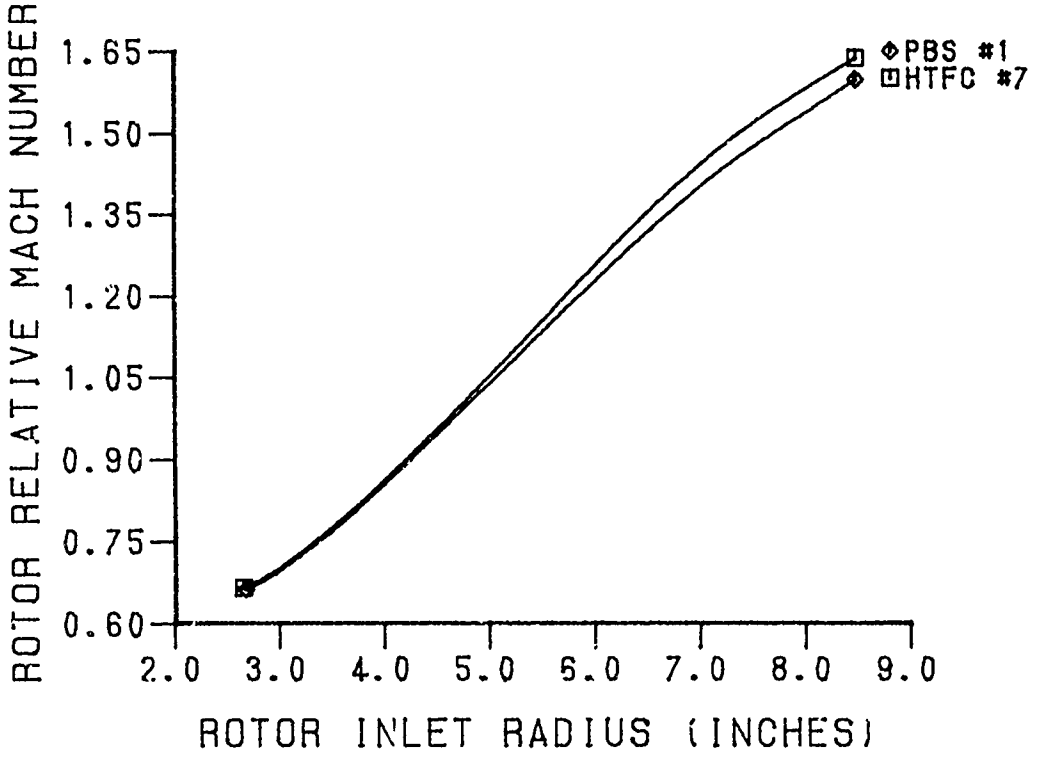


Figure 171. Rotor Relative Inlet Mach Number (PBS #1 and Baseline)

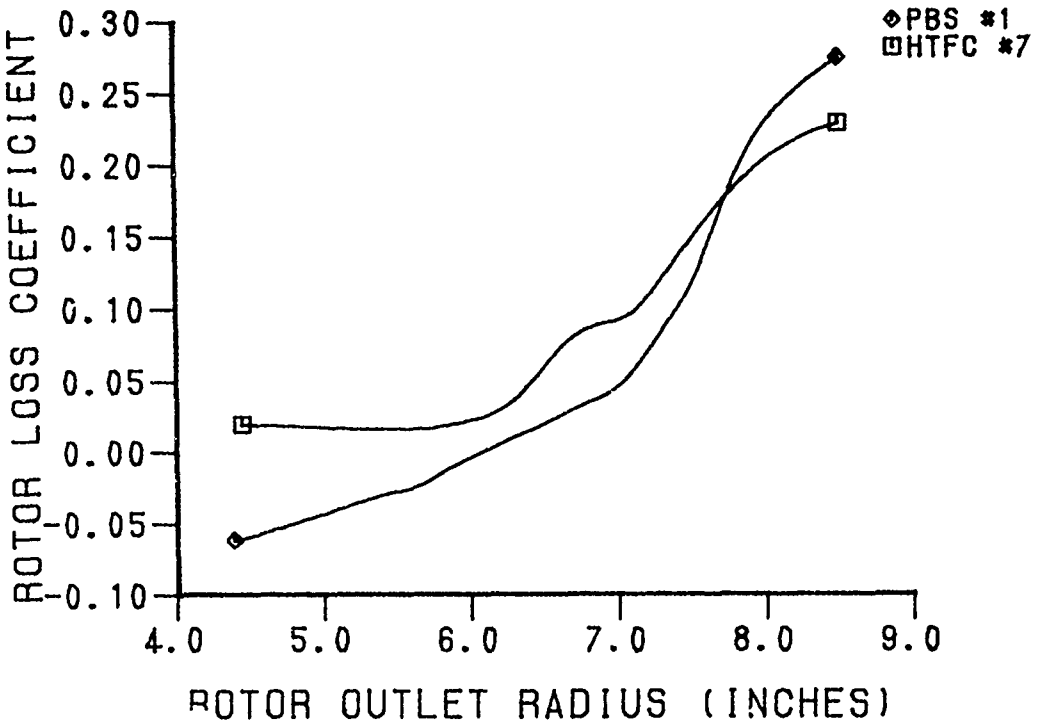


Figure 172. Rotor Loss Coefficient (PBS #1 and Baseline)

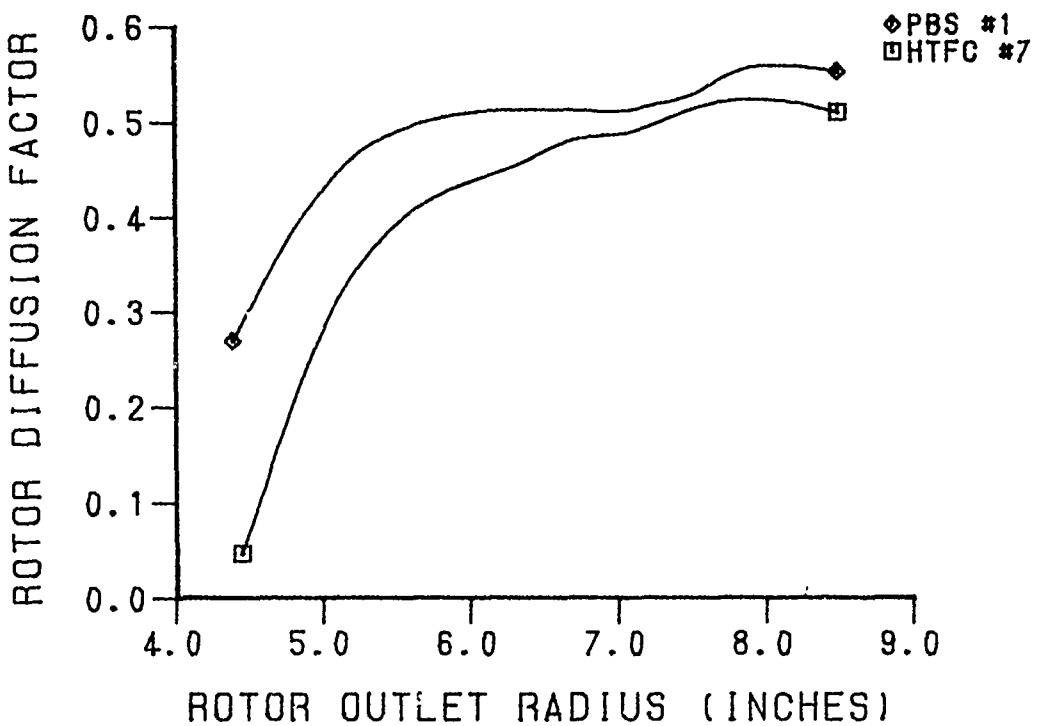


Figure 173. Rotor Diffusion Factor (PBS #1 and Baseline)

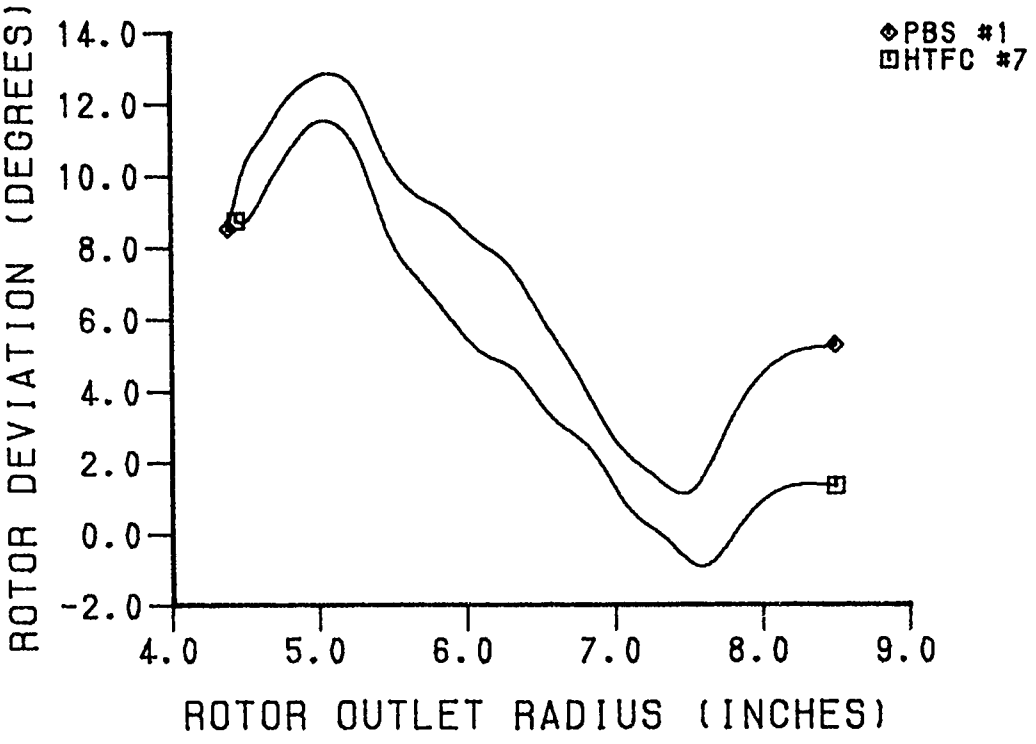


Figure 174. Rotor Deviation Angle (PBS #1 and Baseline)

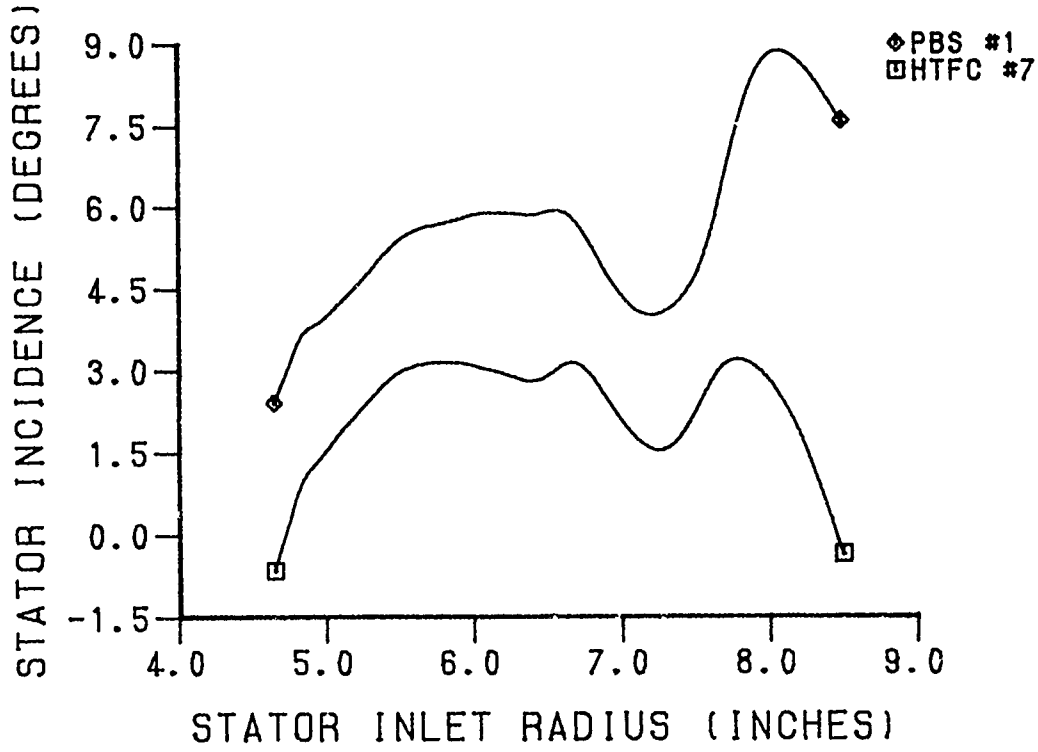


Figure 175. Stator Incidence Angle (PBS #1 and Baseline)

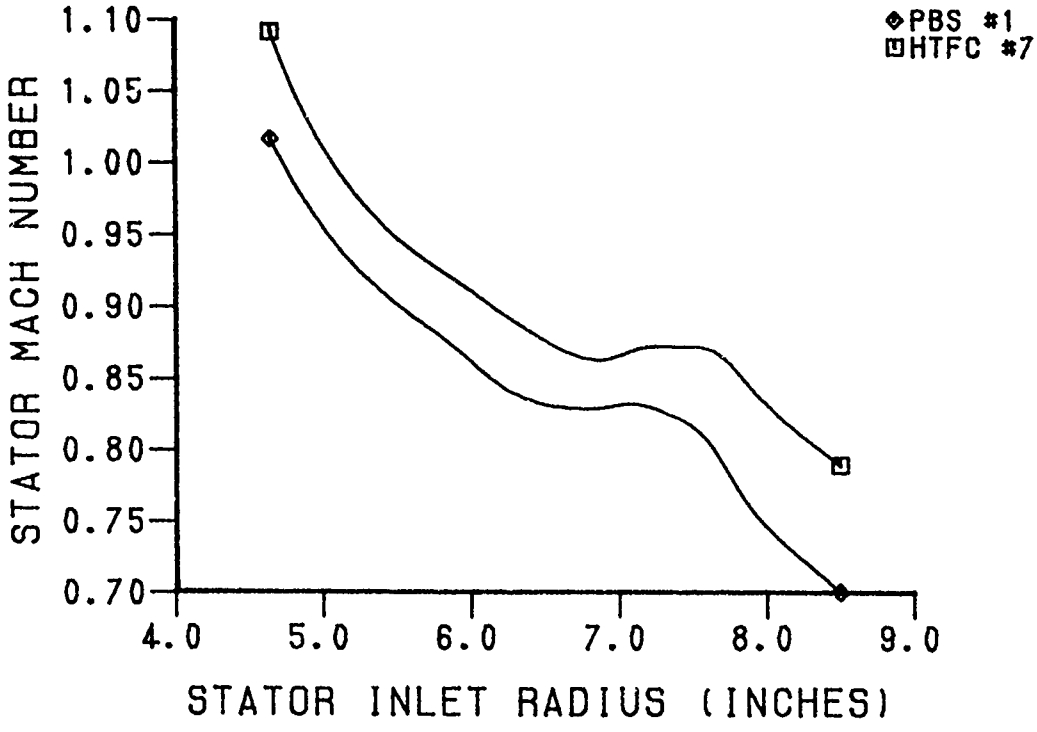


Figure 176. Stator Absolute Inlet Mach Number (PBS #1 and Baseline)

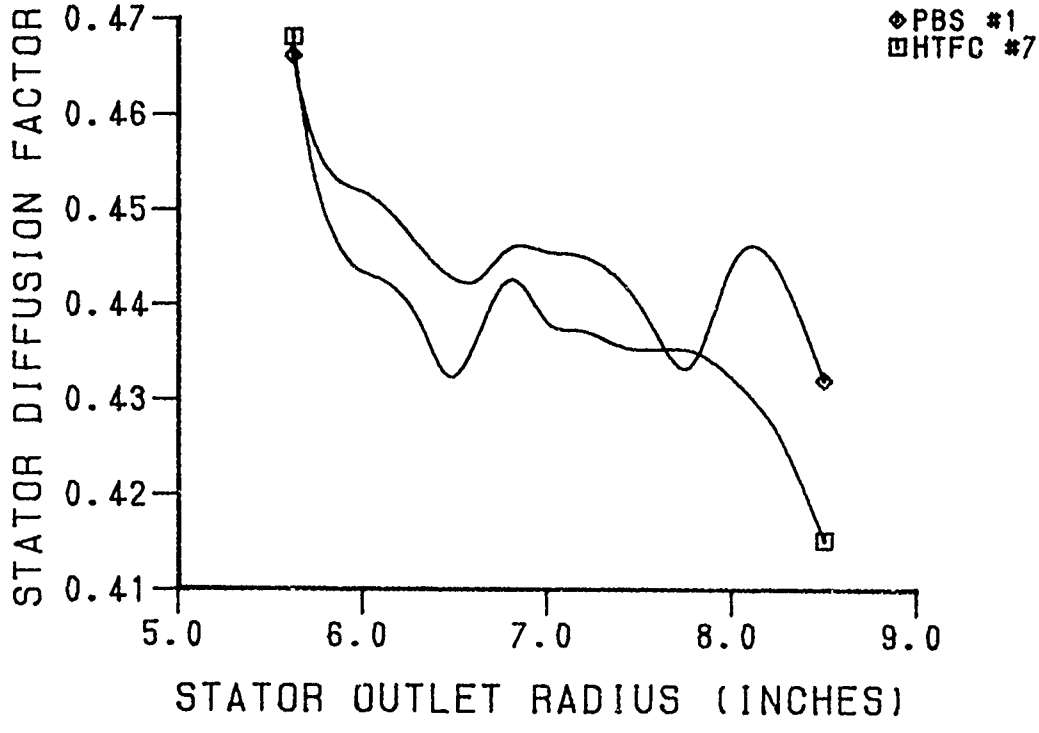


Figure 177. Stator Diffusion Factor (PBS #1 and Baseline)

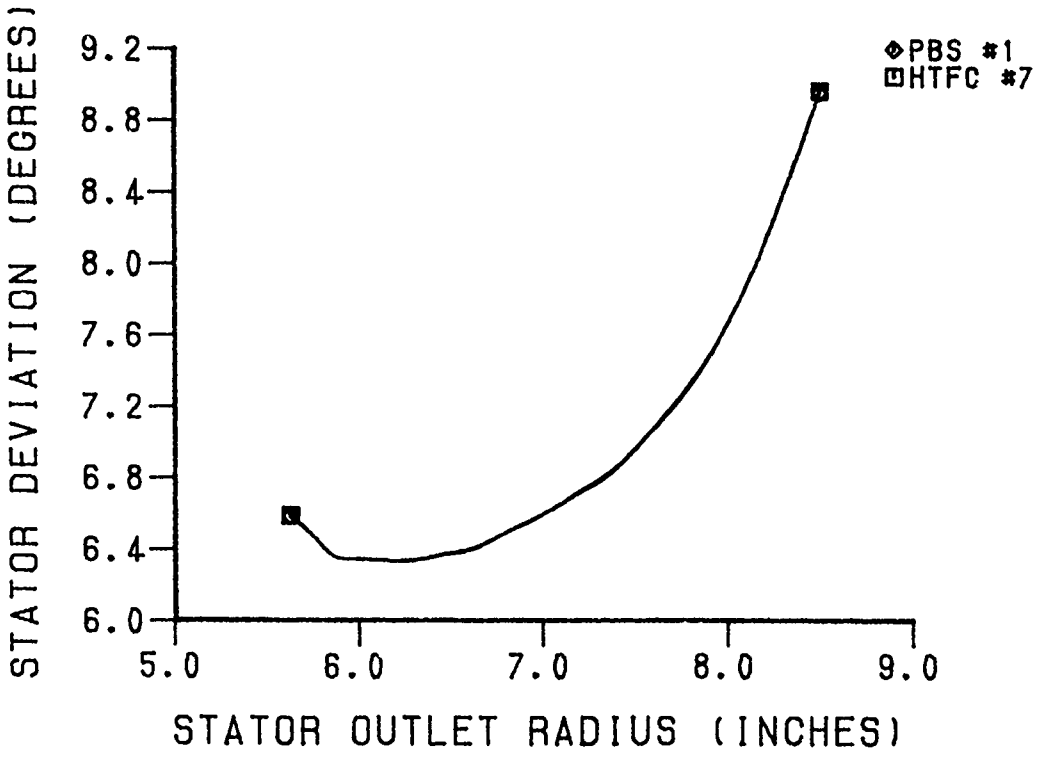


Figure 178. Stator Deviation Angle (PBS #1 and Baseline)

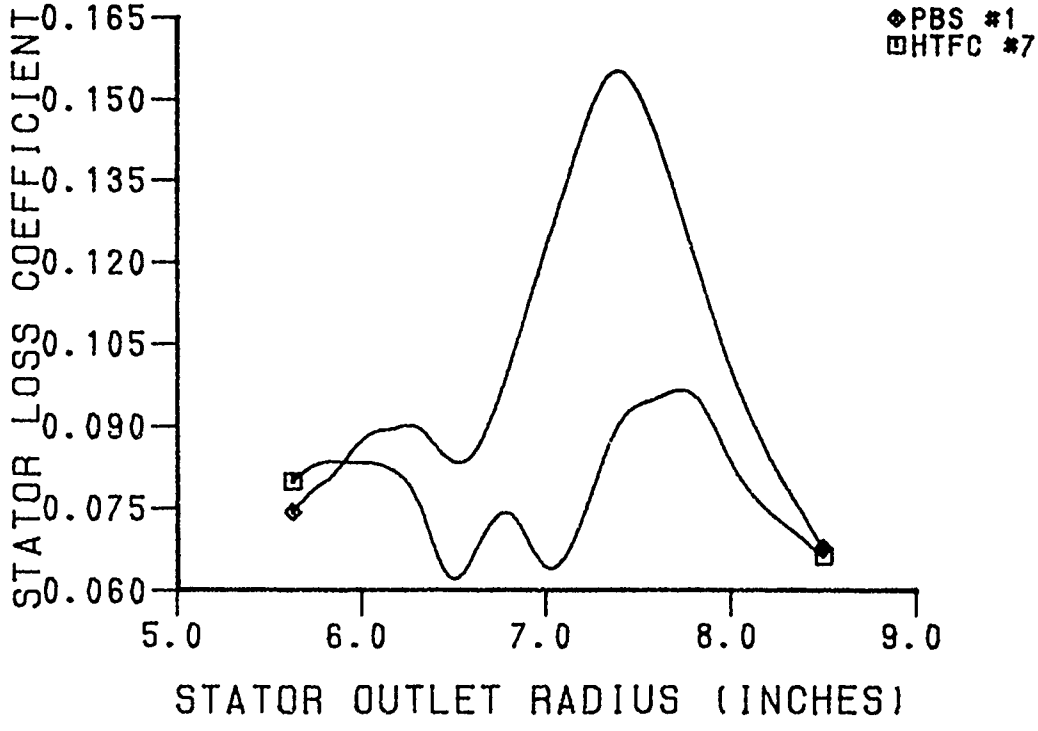


Figure 179. Stator Loss Coefficient (PBS #1 and Baseline)

APPENDIX A

SELECTED OUTPUTS FROM THE PHASE I ANALYSIS

```
COMPRESSOR CONFIGURATION:PBS       SCAN:  1          TEST ID:870828002
NOMINAL % DESIGN SPEED:100         THROTTLE:002
PERFORMANCE:
MEAS. WORK  =1698.77  ISEN. EFFIC.= 82.611  POLYTROPIC EFFIC.=84.055
MEAS. FLOWR.= 40.420  CORR. FLOWR.= 60.906  COMPUTED FLOWRATE=59.030
MEASURED RPM=20708.0  CORR. RPM   =20198.7  % DESIGN RPM      = 99.88
SPEC. HEAT  = 1.400   GAS CONSTANT= 53.351  PRESSURE RATIO    = 1.857
D.P. TEMP.  =449.877  P. COR. FAC.= 1.470   TEMP. COR. FACT.  =  .951
ATMOS. PRES.= 14.276  ATM.PRES.(S)= 14.276  REL. HUMIDITY     =  .023
CALIBRATION PRESSURES (SONIX)=   9.0000  14.2758  29.2757
VENTURI PRESSURES:
   INLET  (AVG=11.156,SONIX=11.156)=  11.156  11.151  11.162  11.155
   THROAT (AVG= 9.883,SONIX= 9.883)=   9.878   9.876   9.878   9.876
                                       9.886   9.885   9.885   9.885
                                       9.887   9.887   9.887   9.886
PLENUM CONDITIONS:
   PRESSURES     (AVG= 9.997,SONIX= 9.997)=   9.999   9.996
   TEMPERATURES (AVG=545.19)= 544.77 545.62 544.47 545.06 546.35
                              546.20 544.47 544.39 545.41
ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):
   RADIUS      =  8.125  7.750  7.375  7.000  6.625  6.250  5.875
                  5.500  5.125
   PRESSURE    = 26.076 26.888 26.570 ****** 28.321 ****** 29.567
                 29.475 29.091
   RADIUS      =  8.125  7.750  7.375  7.000  6.625  6.250  5.875
                  5.500  5.125
   TEMPERATURE= 666.02 639.60 ****** 642.58 645.35 ****** ******
                636.25 641.61
STATIC PRESSURES (CORRECTED):
 ----CASING----  -----HUB------
   X       P       X       P
-8.571  10.412  -5.125  15.308
-8.400  10.342  -5.125  15.111
-8.400  10.403  -5.125  15.591
-8.400  10.359  -5.125  15.148
-8.400  10.313  -1.650  19.095
-8.318  10.258  -1.650  19.552
-8.065   9.991  -1.650  19.528
-7.811   9.825  -1.650  18.537
-7.558  11.000   -.900  18.866
-7.304  ******   -.900  19.459
-7.051  11.309   -.900  19.641
-6.798  ******   -.900  19.109
-6.544  15.321
-6.291  17.250
-6.037  18.085
-5.784  19.625
-1.650  20.843
-1.650  21.310
-1.650  21.225
-1.650  20.641
 -.900  20.112
 -.900  20.661
 -.900  20.394
 -.900  19.734
```

COMPRESSOR CONFIGURATION:PBS SCAN: 1 TEST ID:870828002
NOMINAL % DESIGN SPEED:100 THROTTLE:002

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	634.076	26.759	
1	2	5.996	1.16	629.701	25.136	
1	3	5.996	2.32	627.251	26.113	
1	4	5.996	3.48	632.222	28.409	
1	5	5.996	4.65	630.644	29.363	
1	6	5.996	5.81	631.947	29.593	
1	7	5.996	6.97	632.083	29.629	
1	8	5.996	8.13	633.289	29.600	
1	9	5.996	9.29	633.560	29.730	
1	10	5.996	10.45	634.468	28.058	
1	AVG			632.017	28.384	
2	1	6.387	0.00	633.092	26.820	
2	2	6.387	1.16	631.403	29.053	
2	3	6.387	2.32	634.908	29.327	
2	4	6.387	3.48	636.461	29.414	
2	5	6.387	4.65	637.249	29.385	
2	6	6.387	5.81	637.252	29.610	
2	7	6.387	6.97	635.870	29.623	
2	8	6.387	8.13	635.730	29.730	
2	9	6.387	9.29	635.836	29.763	
2	10	6.387	10.45	637.861	27.972	
2	AVG			635.591	29.112	
3	1	6.755	0.00	631.489	27.214	
3	2	6.755	1.16	632.131	28.448	
3	3	6.755	2.32	634.295	28.580	
3	4	6.755	3.48	638.717	28.847	
3	5	6.755	4.65	640.441	28.879	
3	6	6.755	5.81	641.622	29.233	
3	7	6.755	6.97	638.708	29.503	
3	8	6.755	8.13	640.191	29.734	
3	9	6.755	9.29	637.898	30.037	
3	10	6.755	10.45	640.323	27.572	
3	AVG			637.651	28.843	
4	1	7.104	0.00	631.254	26.579	
4	2	7.104	1.16	630.618	27.361	
4	3	7.104	2.32	630.706	27.449	
4	4	7.104	3.48	634.985	27.425	
4	5	7.104	4.65	634.593	27.438	
4	6	7.104	5.81	634.470	27.603	
4	7	7.104	6.97	635.021	27.779	
4	8	7.104	8.13	636.439	28.223	
4	9	7.104	9.29	637.853	29.013	
4	10	7.104	10.45	641.985	26.614	
4	AVG			634.804	27.576	

COMPRESSOR CONFIGURATION:PBS SCAN: 1 TEST ID:870828002
NOMINAL % DESIGN SPEED:100 THROTTLE:002

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	633.483	25.968	
5	2	7.437	1.16	632.359	27.193	
5	3	7.437	2.32	632.252	27.433	
5	4	7.437	3.48	636.203	27.303	
5	5	7.437	4.65	636.758	27.466	
5	6	7.437	5.81	638.395	27.574	
5	7	7.437	6.97	637.860	27.522	
5	8	7.437	8.13	640.049	27.931	
5	9	7.437	9.29	638.588	28.237	
5	10	7.437	10.45	641.910	26.423	
5	AVG			636.806	27.331	
6	1	7.756	0.00	642.384	25.332	
6	2	7.756	1.16	634.305	26.885	
6	3	7.756	2.32	635.967	27.075	
6	4	7.756	3.48	639.399	27.277	
6	5	7.756	4.65	641.608	27.207	
6	6	7.756	5.81	643.416	27.417	
6	7	7.756	6.97	644.753	27.205	
6	8	7.756	8.13	647.662	27.372	
6	9	7.756	9.29	646.949	27.464	
6	10	7.756	10.45	649.717	25.911	
6	AVG			642.573	26.948	
7	1	8.062	0.00	655.291	24.776	
7	2	8.062	1.16	642.828	26.363	
7	3	8.062	2.32	642.203	27.075	
7	4	8.062	3.48	645.577	26.640	
7	5	8.062	4.65	649.080	26.519	
7	6	8.062	5.81	651.807	26.760	
7	7	8.062	6.97	654.832	26.276	
7	8	8.062	8.13	658.349	26.621	
7	9	8.062	9.29	657.855	26.721	
7	10	8.062	10.45	662.495	25.458	
7	AVG			651.833	26.358	
8	1	8.356	0.00	661.793	25.233	
8	2	8.356	1.16	649.884	26.119	
8	3	8.356	2.32	652.073	27.075	
8	4	8.356	3.48	655.588	26.083	
8	5	8.356	4.65	658.764	25.889	
8	6	8.356	5.81	662.448	26.390	
8	7	8.356	6.97	665.766	25.993	
8	8	8.356	8.13	668.283	26.310	
8	9	8.356	9.29	669.420	26.524	
8	10	8.356	10.45	670.561	25.710	
8	AVG			661.358	26.151	

COMPRESSOR CONFIGURATION:PBS SCAN: 1 TEST ID:870901001
NOMINAL % DESIGN SPEED:100 THROTTLE:025
PERFORMANCE:

MEAS. WORK =1729.44	ISEN. EFFIC.= 83.834	POLYTROPIC EFFIC.=85.255
MEAS. FLOWR.= 38.586	CORR. FLOWR.= 60.781	COMPUTED FLOWRATE=59.047
MEASURED RPM=20810.0	CORR. RPM =20187.9	% DESIGN RPM = 99.83
SPEC. HEAT = 1.400	GAS CONSTANT= 53.351	PRESSURE RATIO = 1.930
D.P. TEMP. =450.393	P. COR. FAC.= 1.528	TEMP. COR. FACT. = .941
ATMOS. PRES.= 14.332	ATM.PRES.(S)= 14.332	REL. HUMIDITY = .019

CALIBRATION PRESSURES (SONIX)= 9.0011 14.3318 29.3390
VENTURI PRESSURES:

INLET (AVG=10.735,SONIX=10.732)=	10.731	10.733	10.737	10.737
THROAT (AVG= 9.509,SONIX= 9.508)=	9.508	9.500	9.508	9.500
	9.512	9.511	9.512	9.512
	9.511	9.511	9.513	9.512

PLENUM CONDITIONS:

PRESSURES (AVG= 9.616,SONIX= 9.599)=	9.617	9.614				
TEMPERATURES (AVG=551.17)=	550.28	551.41	550.42	551.27	552.40	
	552.40	550.86	550.57	550.89		

ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):

RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
PRESSURE =	27.945	28.126	28.318	******	29.338	******	29.666
	29.611	29.339					
RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
TEMPERATURE=	674.08	637.87	******	640.03	652.17	******	******
	635.72	645.59					

STATIC PRESSURES (CORRECTED):

----CASING----		-----HUB------	
X	P	X	P
-8.571	10.426	-5.125	15.960
-8.400	10.348	-5.125	15.804
-8.400	10.436	-5.125	16.240
-8.400	10.383	-5.125	15.795
-8.400	10.327	-1.650	20.878
-8.318	10.259	-1.650	21.201
-8.065	10.018	-1.650	21.194
-7.811	9.909	-1.650	20.374
-7.558	11.249	-.900	20.637
-7.304	******	-.900	21.294
-7.051	12.465	-.900	21.282
-6.798	******	-.900	20.850
-6.544	17.013		
-6.291	18.745		
-6.037	19.233		
-5.784	20.625		
-1.650	22.309		
-1.650	22.728		
-1.650	22.753		
-1.650	22.096		
-.900	21.684		
-.900	22.120		
-.900	22.034		
-.900	21.326		

COMPRESSOR CONFIGURATION:PBS SCAN: 1 TEST ID:870901001
NOMINAL % DESIGN SPEED:100 THROTTLE:025

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	634.804	27.481	
1	2	5.996	1.16	631.169	26.283	
1	3	5.996	2.32	629.433	26.884	
1	4	5.996	3.48	634.419	28.273	
1	5	5.996	4.65	632.755	29.393	
1	6	5.996	5.81	633.946	29.656	
1	7	5.996	6.97	634.086	29.774	
1	8	5.996	8.13	634.963	29.691	
1	9	5.996	9.29	634.688	29.785	
1	10	5.996	10.45	635.583	28.497	
1	AVG			633.679	28.675	
2	1	6.387	0.00	634.919	26.989	
2	2	6.387	1.16	630.963	28.990	
2	3	6.387	2.32	634.920	29.529	
2	4	6.387	3.48	636.646	29.498	
2	5	6.387	4.65	637.616	29.440	
2	6	6.387	5.81	638.143	29.799	
2	7	6.387	6.97	637.887	29.696	
2	8	6.387	8.13	637.432	29.923	
2	9	6.387	9.29	637.754	29.905	
2	10	6.387	10.45	637.131	28.309	
2	AVG			636.382	29.256	
3	1	6.755	0.00	636.521	27.209	
3	2	6.755	1.16	636.494	29.271	
3	3	6.755	2.32	639.149	29.260	
3	4	6.755	3.48	641.057	29.213	
3	5	6.755	4.65	640.945	29.305	
3	6	6.755	5.81	642.306	29.654	
3	7	6.755	6.97	638.834	29.828	
3	8	6.755	8.13	641.257	30.052	
3	9	6.755	9.29	638.740	30.238	
3	10	6.755	10.45	639.560	28.280	
3	AVG			639.532	29.277	
4	1	7.104	0.00	639.139	26.718	
4	2	7.104	1.16	640.377	28.711	
4	3	7.104	2.32	639.433	28.807	
4	4	7.104	3.48	644.877	29.110	
4	5	7.104	4.65	643.768	29.008	
4	6	7.104	5.81	642.253	29.399	
4	7	7.104	6.97	642.932	29.066	
4	8	7.104	8.13	643.342	29.404	
4	9	7.104	9.29	642.881	29.804	
4	10	7.104	10.45	643.907	27.705	
4	AVG			642.340	28.825	

COMPRESSOR CONFIGURATION:PBS SCAN: 1 TEST ID:870901001
NOMINAL % DESIGN SPEED:100 THROTTLE:025

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	645.056	26.827	
5	2	7.437	1.16	642.405	27.533	
5	3	7.437	2.32	642.249	28.618	
5	4	7.437	3.48	646.467	29.255	
5	5	7.437	4.65	644.994	29.286	
5	6	7.437	5.81	644.879	29.381	
5	7	7.437	6.97	645.464	29.045	
5	8	7.437	8.13	647.697	29.482	
5	9	7.437	9.29	646.361	29.742	
5	10	7.437	10.45	647.136	28.194	
5	AVG			645.312	28.792	
6	1	7.756	0.00	654.574	26.538	
6	2	7.756	1.16	644.390	26.805	
6	3	7.756	2.32	644.951	28.302	
6	4	7.756	3.48	648.131	29.129	
6	5	7.756	4.65	648.859	29.124	
6	6	7.756	5.81	650.609	29.484	
6	7	7.756	6.97	652.738	28.903	
6	8	7.756	8.13	655.592	29.240	
6	9	7.756	9.29	654.676	29.354	
6	10	7.756	10.45	657.730	27.695	
6	AVG			651.238	28.536	
7	1	8.062	0.00	663.223	26.145	
7	2	8.062	1.16	650.301	27.130	
7	3	8.062	2.32	649.830	28.410	
7	4	8.062	3.48	653.364	28.307	
7	5	8.062	4.65	656.838	28.169	
7	6	8.062	5.81	657.886	28.663	
7	7	8.062	6.97	661.387	27.919	
7	8	8.062	8.13	666.159	28.362	
7	9	8.062	9.29	664.816	28.399	
7	10	8.062	10.45	671.328	27.131	
7	AVG			659.379	27.912	
8	1	8.356	0.00	669.326	26.586	
8	2	8.356	1.16	658.938	27.353	
8	3	8.356	2.32	661.131	28.029	
8	4	8.356	3.48	663.367	27.733	
8	5	8.356	4.65	667.304	27.570	
8	6	8.356	5.81	669.212	28.097	
8	7	8.356	6.97	672.860	27.768	
8	8	8.356	8.13	677.213	27.942	
8	9	8.356	9.29	676.732	28.086	
8	10	8.356	10.45	679.667	27.492	
8	AVG			669.574	27.681	

COMPRESSOR CONFIGURATION:PBS SCAN: 2 TEST ID:870901003
NOMINAL % DESIGN SPEED:100 THROTTLE:045
PERFORMANCE:

MEAS. WORK =1717.45	ISEN. EFFIC.= 84.803	POLYTROPIC EFFIC.=86.189	
MEAS. FLOWR.= 36.561	CORR. FLOWR.= 60.450	COMPUTED FLOWRATE=59.063	
MEASURED RPM=20908.0	CORR. RPM =20189.5	% DESIGN RPM	= 99.84
SPEC. HEAT = 1.400	GAS CONSTANT= 53.351	PRESSURE RATIO	= 1.982
D.P. TEMP. =450.241	P. COR. FAC.= 1.597	TEMP. COR. FACT.	= .932
ATMOS. PRES.= 14.333	ATM.PRES.(S)= 14.332	REL. HUMIDITY	= .016

CALIBRATION PRESSURES (SONIX)= 9.0018 14.3322 29.3378
VENTURI PRESSURES:

INLET (AVG=10.279,SONIX=10.277)=	10.278	10.276	10.282	10.281	
THROAT (AVG= 9.114,SONIX= 9.113)=	9.118	9.104	9.118	9.104	
	9.115	9.115	9.116	9.115	
	9.114	9.114	9.116	9.115	

PLENUM CONDITIONS:

PRESSURES (AVG= 9.203,SONIX= 9.194)=	9.208	9.199			
TEMPERATURES (AVG=556.28)=	555.50	556.34	555.65	556.34	557.33
	557.47	555.94	555.79	556.20	

ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):

RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
PRESSURE =	29.061	29.088	29.712	******	30.200	******	29.974
	29.691	29.612					
RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
TEMPERATURE=	681.11	637.97	******	639.81	660.35	******	******
	636.17	646.30					

STATIC PRESSURES (CORRECTED):

----CASING----		-----HUB------	
X	P	X	P
-8.571	10.443	-5.125	16.466
-8.400	10.401	-5.125	16.323
-8.400	10.429	-5.125	16.762
-8.400	10.433	-5.125	16.310
-8.400	10.390	-1.650	21.943
-8.318	10.320	-1.650	22.227
-8.065	10.068	-1.650	22.242
-7.811	10.044	-1.650	21.453
-7.558	11.499	-.900	21.727
-7.304	******	-.900	22.365
-7.051	14.782	-.900	22.341
-6.798	******	-.900	21.935
-6.544	18.705		
-6.291	19.751		
-6.037	20.169		
-5.784	21.533		
-1.650	23.259		
-1.650	23.711		
-1.650	23.720		
-1.650	23.053		
-.900	22.639		
-.900	23.129		
-.900	23.057		
-.900	22.300		

COMPRESSOR CONFIGURATION:PBS SCAN: 2 TEST ID:870901003
NOMINAL % DESIGN SPEED:100 THROTTLE:045

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	634.130	28.054	
1	2	5.996	1.16	630.684	26.686	
1	3	5.996	2.32	630.451	27.691	
1	4	5.996	3.48	635.686	28.787	
1	5	5.996	4.65	633.574	29.550	
1	6	5.996	5.81	634.647	29.755	
1	7	5.996	6.97	635.235	29.614	
1	8	5.996	8.13	635.510	29.849	
1	9	5.996	9.29	635.588	30.001	
1	10	5.996	10.45	636.371	28.872	
1	AVG			634.305	28.967	
2	1	6.387	0.00	634.614	27.297	
2	2	6.387	1.16	631.114	28.643	
2	3	6.387	2.32	634.985	29.445	
2	4	6.387	3.48	636.874	29.688	
2	5	6.387	4.65	637.830	29.674	
2	6	6.387	5.81	638.838	30.017	
2	7	6.387	6.97	638.948	29.909	
2	8	6.387	8.13	638.144	30.199	
2	9	6.387	9.29	638.843	30.382	
2	10	6.387	10.45	637.631	28.702	
2	AVG			636.876	29.451	
3	1	6.755	0.00	638.659	27.345	
3	2	6.755	1.16	634.504	29.211	
3	3	6.755	2.32	636.966	29.359	
3	4	6.755	3.48	639.563	29.400	
3	5	6.755	4.65	638.849	29.428	
3	6	6.755	5.81	640.960	29.777	
3	7	6.755	6.97	638.801	29.951	
3	8	6.755	8.13	640.760	30.141	
3	9	6.755	9.29	638.945	30.429	
3	10	6.755	10.45	639.790	28.792	
3	AVG			638.798	29.432	
4	1	7.104	0.00	643.840	27.348	
4	2	7.104	1.16	640.022	28.092	
4	3	7.104	2.32	641.204	28.872	
4	4	7.104	3.48	646.044	29.894	
4	5	7.104	4.65	645.328	29.911	
4	6	7.104	5.81	644.873	30.225	
4	7	7.104	6.97	645.202	29.895	
4	8	7.104	8.13	646.208	30.197	
4	9	7.104	9.29	645.725	30.626	
4	10	7.104	10.45	647.891	28.894	
4	AVG			644.717	29.468	

COMPRESSOR CONFIGURATION:PBS SCAN: 2 TEST ID:870901003
NOMINAL % DESIGN SPEED:100 THROTTLE:045

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	653.612	28.196	
5	2	7.437	1.16	646.939	26.540	
5	3	7.437	2.32	648.780	27.969	
5	4	7.437	3.48	652.583	30.441	
5	5	7.437	4.65	652.007	30.767	
5	6	7.437	5.81	649.257	30.749	
5	7	7.437	6.97	651.527	30.630	
5	8	7.437	8.13	653.679	30.827	
5	9	7.437	9.29	653.105	31.347	
5	10	7.437	10.45	654.035	30.021	
5	AVG			651.706	29.915	
6	1	7.756	0.00	660.005	28.072	
6	2	7.756	1.16	652.801	26.664	
6	3	7.756	2.32	653.444	28.032	
6	4	7.756	3.48	657.451	30.423	
6	5	7.756	4.65	658.173	30.528	
6	6	7.756	5.81	656.922	31.178	
6	7	7.756	6.97	659.546	30.993	
6	8	7.756	8.13	661.311	30.815	
6	9	7.756	9.29	660.937	31.061	
6	10	7.756	10.45	664.542	29.530	
6	AVG			658.709	29.895	
7	1	8.062	0.00	666.562	27.354	
7	2	8.062	1.16	657.963	28.138	
7	3	8.062	2.32	657.426	29.041	
7	4	8.062	3.48	660.851	29.456	
7	5	8.062	4.65	663.205	29.243	
7	6	8.062	5.81	663.526	29.839	
7	7	8.062	6.97	665.800	29.174	
7	8	8.062	8.13	669.786	29.565	
7	9	8.062	9.29	669.079	29.743	
7	10	8.062	10.45	678.207	28.134	
7	AVG			665.166	29.018	
8	1	8.356	0.00	673.450	27.540	
8	2	8.356	1.16	665.605	28.384	
8	3	8.356	2.32	666.785	28.876	
8	4	8.356	3.48	668.045	28.630	
8	5	8.356	4.65	672.416	28.637	
8	6	8.356	5.81	675.019	29.146	
8	7	8.356	6.97	677.142	28.650	
8	8	8.356	8.13	682.541	29.060	
8	9	8.356	9.29	681.594	29.156	
8	10	8.356	10.45	686.797	28.318	
8	AVG			674.947	28.658	

COMPRESSOR CONFIGURATION:PBS SCAN: 3 TEST ID:870901004
NOMINAL % DESIGN SPEED:100 THROTTLE:055
PERFORMANCE:

MEAS. WORK =1729.23	ISEN. EFFIC.= 85.171	POLYTROPIC EFFIC.=86.550	
MEAS. FLOWR.= 35.840	CORR. FLOWR.= 60.073	COMPUTED FLOWRATE=59.044	
MEASURED RPM=20932.0	CORR. RPM =20190.9	% DESIGN RPM = 99.85	
SPEC. HEAT = 1.400	GAS CONSTANT= 53.351	PRESSURE RATIO = 2.011	
D.P. TEMP. =450.211	P. COR. FAC.= 1.617	TEMP. COR. FACT. = .930	
ATMOS. PRES.= 14.331	ATM.PRES.(S)= 14.333	REL. HUMIDITY = .016	

CALIBRATION PRESSURES (SONIX)= 9.0013 14.3325 29.3426
VENTURI PRESSURES:

INLET (AVG=10.135,SONIX=10.137)=	10.137	10.130	10.137	10.135
THROAT (AVG= 8.996,SONIX= 9.000)=	9.001	8.990	9.001	8.990
	8.997	8.996	8.998	8.997
	8.994	8.994	8.998	8.997

PLENUM CONDITIONS:

PRESSURES (AVG= 9.088,SONIX= 9.077)=	9.088	9.089					
TEMPERATURES (AVG=557.48)=	556.83	557.52	556.89	557.61	558.56		
	558.59	557.09	556.97	557.29			

ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):

RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
PRESSURE =	30.012	29.952	30.234	******	30.568	******	30.197
	29.638	29.715					
RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
TEMPERATURE=	684.67	638.95	******	640.50	662.62	******	******
	636.18	646.73					

STATIC PRESSURES (CORRECTED):

----CASING----		-----HUB------	
X	P	X	P
-8.571	10.472	-5.125	16.704
-8.400	10.426	-5.125	16.612
-8.400	10.438	-5.125	17.073
-8.400	10.553	-5.125	16.598
-8.400	10.455	-1.650	22.501
-8.318	10.346	-1.650	22.767
-8.065	10.119	-1.650	22.824
-7.811	10.160	-1.650	22.014
-7.558	11.786	-.900	22.279
-7.304	******	-.900	22.902
-7.051	15.693	-.900	22.925
-6.798	******	-.900	22.499
-6.544	19.446		
-6.291	20.355		
-6.037	20.817		
-5.784	22.147		
-1.650	23.778		
-1.650	24.248		
-1.650	24.183		
-1.650	23.551		
-.900	23.137		
-.900	23.672		
-.900	23.614		
-.900	22.825		

COMPRESSOR CONFIGURATION:PBS SCAN: 3 TEST ID:870901004
NOMINAL % DESIGN SPEED:100 THROTTLE:055

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	633.066	28.185	
1	2	5.996	1.16	630.347	26.971	
1	3	5.996	2.32	629.652	27.938	
1	4	5.996	3.48	635.742	29.222	
1	5	5.996	4.65	634.143	29.551	
1	6	5.996	5.81	635.129	29.782	
1	7	5.996	6.97	635.824	29.693	
1	8	5.996	8.13	635.856	29.894	
1	9	5.996	9.29	635.931	30.109	
1	10	5.996	10.45	636.457	29.014	
1	AVG			634.367	29.111	
2	1	6.387	0.00	634.941	27.392	
2	2	6.387	1.16	631.491	28.771	
2	3	6.387	2.32	634.464	29.484	
2	4	6.387	3.48	639.074	29.862	
2	5	6.387	4.65	638.823	29.842	
2	6	6.387	5.81	639.481	30.088	
2	7	6.387	6.97	639.818	30.022	
2	8	6.387	8.13	638.890	30.283	
2	9	6.387	9.29	639.468	30.575	
2	10	6.387	10.45	638.438	28.850	
2	AVG			637.602	29.577	
3	1	6.755	0.00	639.492	27.490	
3	2	6.755	1.16	634.740	28.696	
3	3	6.755	2.32	637.516	29.318	
3	4	6.755	3.48	640.841	29.775	
3	5	6.755	4.65	639.978	29.661	
3	6	6.755	5.81	640.896	30.119	
3	7	6.755	6.97	639.206	30.098	
3	8	6.755	8.13	641.312	30.420	
3	9	6.755	9.29	641.004	30.566	
3	10	6.755	10.45	640.453	29.292	
3	AVG			639.603	29.601	
4	1	7.104	0.00	647.735	27.804	
4	2	7.104	1.16	638.982	27.933	
4	3	7.104	2.32	641.334	28.638	
4	4	7.104	3.48	646.547	30.065	
4	5	7.104	4.65	645.234	30.167	
4	6	7.104	5.81	644.328	30.556	
4	7	7.104	6.97	646.094	30.321	
4	8	7.104	8.13	647.585	30.622	
4	9	7.104	9.29	647.455	31.199	
4	10	7.104	10.45	650.666	29.545	
4	AVG			645.706	29.778	

COMPRESSOR CONFIGURATION:PBS SCAN: 3 TEST ID:870901004
NOMINAL % DESIGN SPEED:100 THROTTLE:055

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	657.151	28.918	
5	2	7.437	1.16	647.677	26.450	
5	3	7.437	2.32	648.268	27.284	
5	4	7.437	3.48	653.010	30.430	
5	5	7.437	4.65	652.644	31.177	
5	6	7.437	5.81	650.857	31.141	
5	7	7.437	6.97	653.723	31.223	
5	8	7.437	8.13	656.238	31.457	
5	9	7.437	9.29	656.214	32.004	
5	10	7.437	10.45	657.021	30.679	
5	AVG			653.582	30.321	
6	1	7.756	0.00	664.569	28.805	
6	2	7.756	1.16	656.409	26.720	
6	3	7.756	2.32	654.514	28.013	
6	4	7.756	3.48	658.992	30.806	
6	5	7.756	4.65	660.809	31.101	
6	6	7.756	5.81	659.861	32.054	
6	7	7.756	6.97	662.561	31.751	
6	8	7.756	8.13	664.566	31.610	
6	9	7.756	9.29	664.635	31.835	
6	10	7.756	10.45	670.241	30.304	
6	AVG			661.977	30.524	
7	1	8.062	0.00	670.966	27.958	
7	2	8.062	1.16	661.728	28.424	
7	3	8.062	2.32	661.238	29.377	
7	4	8.062	3.48	665.397	30.039	
7	5	8.062	4.65	667.628	30.036	
7	6	8.062	5.81	666.661	30.664	
7	7	8.062	6.97	669.653	30.114	
7	8	8.062	8.13	674.543	30.421	
7	9	8.062	9.29	674.616	30.587	
7	10	8.062	10.45	684.148	28.824	
7	AVG			669.632	29.708	
8	1	8.356	0.00	679.107	28.183	
8	2	8.356	1.16	669.266	28.910	
8	3	8.356	2.32	669.353	29.306	
8	4	8.356	3.48	671.729	29.324	
8	5	8.356	4.65	675.299	29.523	
8	6	8.356	5.81	678.119	30.008	
8	7	8.356	6.97	680.741	29.616	
8	8	8.356	8.13	687.216	29.869	
8	9	8.356	9.29	687.059	30.057	
8	10	8.356	10.45	691.644	29.107	
8	AVG			678.999	29.413	

COMPRESSOR CONFIGURATION:PBS SCAN: 4 TEST ID:870901005
NOMINAL % DESIGN SPEED:100 THROTTLE:065
PERFORMANCE:
MEAS. WORK =1745.45 ISEN. EFFIC.= 84.876 POLYTROPIC EFFIC.=86.309
MEAS. FLOWR.= 35.019 CORR. FLOWR.= 59.520 COMPUTED FLOWRATE=58.899
MEASURED RPM=20954.0 CORR. RPM =20212.2 % DESIGN RPM = 99.95
SPEC. HEAT = 1.400 GAS CONSTANT= 53.351 PRESSURE RATIO = 2.039
D.P. TEMP. =450.241 P. COR. FAC.= 1.639 TEMP. COR. FACT. = .930
ATMOS. PRES.= 14.331 ATM.PRES.(S)= 14.332 REL. HUMIDITY = .016
CALIBRATION PRESSURES (SONIX)= 9.0008 14.3327 29.3412
VENTURI PRESSURES:
INLET (AVG= 9.982,SONIX= 9.984)= 9.985 9.985 9.980 9.977
THROAT (AVG= 8.881,SONIX= 8.880)= 8.885 6.876 8.885 8.876
8.882 8.881 8.883 8.881
8.880 8.880 8.881 8.882

PLENUM CONDITIONS:
PRESSURES (AVG= 8.963,SONIX= 8.954)= 8.968 8.957
TEMPERATURES (AVG=557.48)= 557.08 557.77 557.08 557.48 558.47
558.35 557.08 556.44 557.54

ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):
RADIUS = 8.125 7.750 7.375 7.000 6.625 6.250 5.875
5.500 5.125
PRESSURE = 31.147 30.920 30.528 ****** 30.980 ****** 30.295
29.719 29.863
RADIUS = 8.125 7.750 7.375 7.000 6.625 6.250 5.875
5.500 5.125
TEMPERATURE= 687.43 639.62 ****** 641.92 665.20 ****** ******
636.14 649.79

STATIC PRESSURES (CORRECTED):

----CASING----		-----HUB------	
X	P	X	P
-8.571	10.549	-5.125	17.061
-8.400	10.500	-5.125	16.938
-8.400	10.600	-5.125	17.388
-8.400	10.776	-5.125	16.913
-8.400	10.683	-1.650	23.044
-8.318	10.420	-1.650	23.273
-8.065	10.251	-1.650	23.397
-7.811	10.376	-1.650	22.567
-7.558	13.176	-.900	22.856
-7.304	******	-.900	23.447
-7.051	16.473	-.900	23.498
-6.798	******	-.900	23.037
-6.544	20.549		
-6.291	21.279		
-6.037	21.886		
-5.784	23.097		
-1.650	24.270		
-1.650	24.718		
-1.650	24.669		
-1.650	23.952		
-.900	23.623		
-.900	24.185		
-.900	24.070		
-.900	23.304		

COMPRESSOR CONFIGURATION:PBS SCAN: 4 TEST ID:870901005
NOMINAL % DESIGN SPEED:100 THROTTLE:065

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	632.795	28.303	
1	2	5.996	1.16	632.243	27.164	
1	3	5.996	2.32	629.878	27.556	
1	4	5.996	3.48	633.892	29.527	
1	5	5.996	4.65	635.483	29.694	
1	6	5.996	5.81	635.647	29.918	
1	7	5.996	6.97	636.234	29.909	
1	8	5.996	8.13	636.355	29.899	
1	9	5.996	9.29	636.396	30.307	
1	10	5.996	10.45	636.653	29.175	
1	AVG			634.725	29.238	
2	1	6.387	0.00	637.514	27.776	
2	2	6.387	1.16	634.438	28.806	
2	3	6.387	2.32	633.923	29.225	
2	4	6.387	3.48	640.464	30.083	
2	5	6.387	4.65	640.095	30.101	
2	6	6.387	5.81	640.262	30.361	
2	7	6.387	6.97	641.729	30.378	
2	8	6.387	8.13	640.258	30.338	
2	9	6.387	9.29	640.814	30.905	
2	10	6.387	10.45	639.438	29.275	
2	AVG			639.012	29.787	
3	1	6.755	0.00	641.848	27.791	
3	2	6.755	1.16	637.905	27.961	
3	3	6.755	2.32	638.557	28.182	
3	4	6.755	3.48	642.715	30.056	
3	5	6.755	4.65	643.818	30.130	
3	6	6.755	5.81	642.458	30.597	
3	7	6.755	6.97	642.079	30.554	
3	8	6.755	8.13	643.202	30.765	
3	9	6.755	9.29	642.490	30.994	
3	10	6.755	10.45	641.656	29.703	
3	AVG			641.802	29.784	
4	1	7.104	0.00	651.032	28.175	
4	2	7.104	1.16	643.493	27.329	
4	3	7.104	2.32	642.058	27.413	
4	4	7.104	3.48	649.727	30.348	
4	5	7.104	4.65	647.121	30.590	
4	6	7.104	5.81	646.233	31.062	
4	7	7.104	6.97	649.884	30.717	
4	8	7.104	8.13	648.373	30.923	
4	9	7.104	9.29	650.221	31.557	
4	10	7.104	10.45	652.581	30.036	
4	AVG			648.286	29.998	

COMPRESSOR CONFIGURATION:PBS SCAN: 4 TEST ID:870901005
NOMINAL % DESIGN SPEED:100 THROTTLE:065

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	660.718	29.528	
5	2	7.437	1.16	653.257	26.531	
5	3	7.437	2.32	648.715	27.246	
5	4	7.437	3.48	652.698	30.440	
5	5	7.437	4.65	653.735	30.983	
5	6	7.437	5.81	651.167	31.489	
5	7	7.437	6.97	654.066	31.848	
5	8	7.437	8.13	659.457	32.060	
5	9	7.437	9.29	659.146	32.844	
5	10	7.437	10.45	660.189	31.389	
5	AVG			655.605	30.746	
6	1	7.756	0.00	675.287	29.227	
6	2	7.756	1.16	661.748	26.848	
6	3	7.756	2.32	655.005	28.100	
6	4	7.756	3.48	659.007	30.663	
6	5	7.756	4.65	662.924	31.469	
6	6	7.756	5.81	662.107	32.682	
6	7	7.756	6.97	666.810	32.302	
6	8	7.756	8.13	666.922	32.214	
6	9	7.756	9.29	667.912	32.564	
6	10	7.756	10.45	680.191	30.795	
6	AVG			666.000	30.964	
7	1	8.062	0.00	682.347	28.419	
7	2	8.062	1.16	667.646	28.459	
7	3	8.062	2.32	663.127	29.311	
7	4	8.062	3.48	669.893	30.659	
7	5	8.062	4.65	671.921	30.772	
7	6	8.062	5.81	670.521	31.632	
7	7	8.062	6.97	674.325	30.986	
7	8	8.062	8.13	677.298	31.167	
7	9	8.062	9.29	678.279	31.535	
7	10	8.062	10.45	691.255	29.767	
7	AVG			674.614	30.372	
8	1	8.356	0.00	689.576	28.899	
8	2	8.356	1.16	677.949	29.166	
8	3	8.356	2.32	672.958	30.073	
8	4	8.356	3.48	677.475	30.330	
8	5	8.356	4.65	680.815	30.557	
8	6	8.356	5.81	683.604	31.165	
8	7	8.356	6.97	685.798	30.943	
8	8	8.356	8.13	691.016	30.706	
8	9	8.356	9.29	692.151	31.124	
8	10	8.356	10.45	698.484	30.280	
8	AVG			685.018	30.365	

COMPRESSOR CONFIGURATION:PBS SCAN: 5 TEST ID:870901006
NOMINAL % DESIGN SPEED:100 THROTTLE:075
PERFORMANCE:

MEAS. WORK =1714.13	ISEN. EFFIC.= 82.222	POLYTROPIC EFFIC.=83.901	
MEAS. FLOWR.= 33.970	CORR. FLOWR.= 58.051	COMPUTED FLOWRATE=57.228	
MEASURED RPM=20816.0	CORR. RPM =20201.8	% DESIGN RPM	= 99.90
SPEC. HEAT = 1.400	GAS CONSTANT= 53.351	PRESSURE RATIO	= 2.035
D.P. TEMP. =449.968	P. COR. FAC.= 1.658	TEMP. COR. FACT.	= .942
ATMOS. PRES.= 14.333	ATM.PRES.(S)= 14.334	REL. HUMIDITY	= .019

CALIBRATION PRESSURES (SONIX)= 9.0016 14.3336 29.3424
VENTURI PRESSURES:

INLET (AVG= 9.808,SONIX= 9.809)=	9.811	9.806	9.803	9.810
THROAT (AVG= 8.780,SONIX= 8.781)=	8.780	8.775	8.780	8.775
	8.783	8.782	8.781	8.781
	8.780	8.780	8.783	8.782

PLENUM CONDITIONS:

PRESSURES (AVG= 8.860,SONIX= 8.849)=	8.861	8.859					
TEMPERATURES (AVG=550.73)=	550.94	551.64	550.79	550.21	551.35		
	550.94	549.80	549.39	551.46			

ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):

RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
PRESSURE =	31.415	31.068	30.476	******	31.239	******	30.585
	29.891	29.986					
RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
TEMPERATURE=	691.06	642.15	******	643.12	667.86	******	******
	635.91	649.57					

STATIC PRESSURES (CORRECTED):

----CASING----		-----HUB------	
X	P	X	P
-8.571	10.968	-5.125	17.366
-8.400	11.088	-5.125	17.230
-8.400	11.141	-5.125	17.644
-8.400	11.326	-5.125	17.211
-8.400	11.241	-1.650	23.255
-8.318	10.948	-1.650	23.468
-8.065	10.669	-1.650	23.584
-7.811	11.201	-1.650	22.828
-7.558	15.957	-.900	23.123
-7.304	******	-.900	23.685
-7.051	17.806	-.900	23.754
-6.798	******	-.900	23.305
-6.544	21.181		
-6.291	21.915		
-6.037	22.372		
-5.784	23.587		
-1.650	24.339		
-1.650	24.726		
-1.650	24.642		
-1.650	24.054		
-.900	23.826		
-.900	24.358		
-.900	24.206		
-.900	23.505		

COMPRESSOR CONFIGURATION:PBS SCAN: 5 TEST ID:870901006
NOMINAL % DESIGN SPEED:100 THROTTLE:075

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	634.884	28.313	
1	2	5.996	1.16	633.454	26.824	
1	3	5.996	2.32	630.833	26.833	
1	4	5.996	3.48	633.312	29.764	
1	5	5.996	4.65	636.346	29.807	
1	6	5.996	5.81	636.626	29.954	
1	7	5.996	6.97	636.528	30.102	
1	8	5.996	8.13	636.733	29.986	
1	9	5.996	9.29	637.080	30.379	
1	10	5.996	10.45	636.458	29.137	
1	AVG			635.414	29.261	
2	1	6.387	0.00	639.941	27.790	
2	2	6.387	1.16	637.176	27.762	
2	3	6.387	2.32	633.686	27.721	
2	4	6.387	3.48	639.082	29.931	
2	5	6.387	4.65	642.690	30.313	
2	6	6.387	5.81	641.723	30.413	
2	7	6.387	6.97	641.881	30.625	
2	8	6.387	8.13	641.134	30.418	
2	9	6.387	9.29	641.811	30.810	
2	10	6.387	10.45	641.276	29.279	
2	AVG			640.252	29.632	
3	1	6.755	0.00	645.217	28.183	
3	2	6.755	1.16	640.328	26.604	
3	3	6.755	2.32	640.574	26.774	
3	4	6.755	3.48	642.243	29.772	
3	5	6.755	4.65	646.150	30.158	
3	6	6.755	5.81	646.084	30.491	
3	7	6.755	6.97	644.440	30.821	
3	8	6.755	8.13	644.065	30.808	
3	9	6.755	9.29	643.071	31.316	
3	10	6.755	10.45	643.548	29.872	
3	AVG			643.763	29.719	
4	1	7.104	0.00	653.458	28.098	
4	2	7.104	1.16	647.621	26.008	
4	3	7.104	2.32	643.996	26.637	
4	4	7.104	3.48	646.197	29.292	
4	5	7.104	4.65	653.142	30.382	
4	6	7.104	5.81	650.272	30.730	
4	7	7.104	6.97	650.944	31.178	
4	8	7.104	8.13	650.320	31.029	
4	9	7.104	9.29	650.158	31.514	
4	10	7.104	10.45	653.259	30.235	
4	AVG			650.220	29.838	

COMPRESSOR CONFIGURATION:PBS SCAN: 5 TEST ID:870901006
NOMINAL % DESIGN SPEED:100 THROTTLE:075

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	667.289	28.872	
5	2	7.437	1.16	657.874	26.352	
5	3	7.437	2.32	649.164	26.825	
5	4	7.437	3.48	652.689	28.757	
5	5	7.437	4.65	658.980	30.675	
5	6	7.437	5.81	654.610	31.257	
5	7	7.437	6.97	656.723	31.630	
5	8	7.437	8.13	660.976	31.799	
5	9	7.437	9.29	659.763	32.792	
5	10	7.437	10.45	670.080	30.665	
5	AVG			659.141	30.331	
6	1	7.756	0.00	685.102	28.434	
6	2	7.756	1.16	666.870	26.737	
6	3	7.756	2.32	657.596	27.072	
6	4	7.756	3.48	660.232	28.881	
6	5	7.756	4.65	665.654	30.950	
6	6	7.756	5.81	662.186	32.136	
6	7	7.756	6.97	668.934	31.968	
6	8	7.756	8.13	670.706	31.749	
6	9	7.756	9.29	674.136	32.343	
6	10	7.756	10.45	697.639	30.346	
6	AVG			671.132	30.410	
7	1	8.062	0.00	693.682	28.259	
7	2	8.062	1.16	676.023	27.908	
7	3	8.062	2.32	666.740	28.374	
7	4	8.062	3.48	672.782	30.017	
7	5	8.062	4.65	673.675	30.830	
7	6	8.062	5.81	672.039	31.900	
7	7	8.062	6.97	677.934	31.201	
7	8	8.062	8.13	681.786	31.391	
7	9	8.062	9.29	684.097	31.753	
7	10	8.062	10.45	701.467	30.767	
7	AVG			680.029	30.409	
8	1	8.356	0.00	704.130	29.464	
8	2	8.356	1.16	689.410	29.416	
8	3	8.356	2.32	680.989	30.423	
8	4	8.356	3.48	684.593	30.596	
8	5	8.356	4.65	686.197	30.820	
8	6	8.356	5.81	687.948	32.075	
8	7	8.356	6.97	691.235	31.893	
8	8	8.356	8.13	696.675	31.771	
8	9	8.356	9.29	697.845	31.801	
8	10	8.356	10.45	709.461	31.582	
8	AVG			692.856	31.047	

COMPRESSOR CONFIGURATION:PBS SCAN: 6 TEST ID:870901007
NOMINAL % DESIGN SPEED:100 THROTTLE:080
PERFORMANCE:

MEAS. WORK =1699.03	ISEN. EFFIC.= 80.682	POLYTROPIC EFFIC.=82.490
MEAS. FLOWR.= 33.510	CORR. FLOWR.= 56.793	COMPUTED FLOWRATE=56.043
MEASURED RPM=20748.0	CORR. RPM =20192.7	% DESIGN RPM = 99.85
SPEC. HEAT = 1.400	GAS CONSTANT= 53.351	PRESSURE RATIO = 2.022
D.P. TEMP. =449.968	P. COR. FAC.= 1.649	TEMP. COR. FACT. = .947
ATMOS. PRES.= 14.334	ATM.PRES.(S)= 14.333	REL. HUMIDITY = .021

CALIBRATION PRESSURES (SONIX)= 9.0010 14.3336 29.3397
VENTURI PRESSURES:

INLET (AVG= 9.818,SONIX= 9.821)=	9.821	9.817	9.814	9.820
THROAT (AVG= 8.834,SONIX= 8.835)=	8.832	8.831	8.832	8.831
	8.836	8.835	8.836	8.836
	8.833	8.833	8.836	8.836

PLENUM CONDITIONS:

PRESSURES (AVG= 8.908,SONIX= 8.898)=	8.914	8.903					
TEMPERATURES (AVG=547.63)=	548.22	548.66	547.93	547.08	547.93		
	547.52	546.78	546.05	548.51			

ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):

RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
PRESSURE =	31.696	31.092	30.406	******	31.152	******	30.721
	30.023	30.080					
RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
TEMPERATURE=	695.77	641.99	******	642.58	668.10	******	******
	634.72	650.52					

STATIC PRESSURES (CORRECTED):

----CASING----		-----HUB------	
X	P	X	P
-8.571	11.338	-5.125	17.466
-8.400	11.382	-5.125	17.268
-8.400	11.490	-5.125	17.690
-8.400	11.627	-5.125	17.267
-8.400	11.507	-1.650	23.281
-8.318	11.289	-1.650	23.397
-8.065	10.947	-1.650	23.558
-7.811	11.529	-1.650	22.860
-7.558	17.195	-.900	23.150
-7.304	******	-.900	23.660
-7.051	18.485	-.900	23.751
-6.798	******	-.900	23.350
-6.544	21.404		
-6.291	22.100		
-6.037	22.441		
-5.784	23.661		
-1.650	24.260		
-1.650	24.610		
-1.650	24.581		
-1.650	23.994		
-.900	23.822		
-.900	24.334		
-.900	24.200		
-.900	23.536		

COMPRESSOR CONFIGURATION:PBS SCAN: 6 TEST ID:870901007
NOMINAL % DESIGN SPEED:100 THROTTLE:080

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	634.473	28.196	
1	2	5.996	1.16	633.579	26.420	
1	3	5.996	2.32	631.182	26.635	
1	4	5.996	3.48	632.613	29.548	
1	5	5.996	4.65	635.932	29.899	
1	6	5.996	5.81	636.726	29.808	
1	7	5.996	6.97	635.700	30.120	
1	8	5.996	8.13	636.364	30.032	
1	9	5.996	9.29	636.687	30.318	
1	10	5.996	10.45	636.077	29.142	
1	AVG			635.114	29.195	
2	1	6.387	0.00	640.992	27.849	
2	2	6.387	1.16	637.240	26.931	
2	3	6.387	2.32	634.935	27.092	
2	4	6.387	3.48	638.195	29.022	
2	5	6.387	4.65	643.249	30.348	
2	6	6.387	5.81	642.514	30.247	
2	7	6.387	6.97	641.033	30.784	
2	8	6.387	8.13	641.456	30.458	
2	9	6.387	9.29	641.775	30.726	
2	10	6.387	10.45	642.369	29.387	
2	AVG			640.637	29.468	
3	1	6.755	0.00	645.864	28.134	
3	2	6.755	1.16	641.338	26.222	
3	3	6.755	2.32	640.208	26.527	
3	4	6.755	3.48	642.095	28.944	
3	5	6.755	4.65	647.572	30.138	
3	6	6.755	5.81	646.483	30.319	
3	7	6.755	6.97	644.521	30.865	
3	8	6.755	8.13	644.508	30.786	
3	9	6.755	9.29	643.748	31.150	
3	10	6.755	10.45	644.953	29.826	
3	AVG			644.370	29.568	
4	1	7.104	0.00	654.552	28.094	
4	2	7.104	1.16	649.213	25.851	
4	3	7.104	2.32	643.248	26.252	
4	4	7.104	3.48	644.923	28.315	
4	5	7.104	4.65	652.638	30.143	
4	6	7.104	5.81	650.771	30.434	
4	7	7.104	6.97	651.374	31.206	
4	8	7.104	8.13	649.749	30.962	
4	9	7.104	9.29	648.904	31.599	
4	10	7.104	10.45	653.724	30.304	
4	AVG			650.204	29.693	

COMPRESSOR CONFIGURATION:PBS SCAN: 6 TEST ID:870901007
NOMINAL % DESIGN SPEED:100 THROTTLE:080

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	671.732	28.845	
5	2	7.437	1.16	661.377	26.156	
5	3	7.437	2.32	649.822	26.306	
5	4	7.437	3.48	651.565	28.050	
5	5	7.437	4.65	657.680	30.432	
5	6	7.437	5.81	654.389	30.886	
5	7	7.437	6.97	656.814	31.457	
5	8	7.437	8.13	659.994	31.476	
5	9	7.437	9.29	660.959	32.312	
5	10	7.437	10.45	675.213	30.417	
5	AVG			660.254	30.035	
6	1	7.756	0.00	689.758	27.965	
6	2	7.756	1.16	669.539	26.408	
6	3	7.756	2.32	659.073	26.600	
6	4	7.756	3.48	660.611	28.566	
6	5	7.756	4.65	665.100	30.525	
6	6	7.756	5.81	662.309	31.598	
6	7	7.756	6.97	669.117	31.765	
6	8	7.756	8.13	674.039	31.458	
6	9	7.756	9.29	678.718	31.946	
6	10	7.756	10.45	702.469	30.230	
6	AVG			673.331	30.088	
7	1	8.062	0.00	697.407	28.122	
7	2	8.062	1.16	679.998	27.558	
7	3	8.062	2.32	670.448	27.861	
7	4	8.062	3.48	674.507	29.533	
7	5	8.062	4.65	674.312	30.643	
7	6	8.062	5.81	674.180	31.707	
7	7	8.062	6.97	679.304	31.211	
7	8	8.062	8.13	684.485	31.220	
7	9	8.062	9.29	687.187	31.616	
7	10	8.062	10.45	705.750	30.717	
7	AVG			682.776	30.219	
8	1	8.356	0.00	706.614	29.328	
8	2	8.356	1.16	693.755	29.203	
8	3	8.356	2.32	686.897	30.100	
8	4	8.356	3.48	689.016	30.494	
8	5	8.356	4.65	688.300	30.743	
8	6	8.356	5.81	690.101	31.893	
8	7	8.356	6.97	693.295	31.756	
8	8	8.356	8.13	697.339	31.655	
8	9	8.356	9.29	700.349	31.880	
8	10	8.356	10.45	712.153	31.566	
8	AVG			695.775	30.933	

COMPRESSOR CONFIGURATION:PBS SCAN: 2 TEST ID:870828008
NOMINAL % DESIGN SPEED:095 THROTTLE:000
PERFORMANCE:

MEAS. WORK =1514.79	ISEN. EFFIC.= 85.298	POLYTROPIC EFFIC.=86.441
MEAS. FLOWR.= 40.108	CORR. FLOWR.= 59.417	COMPUTED FLOWRATE=57.484
MEASURED RPM=19722.0	CORR. RPM =19195.2	% DESIGN RPM = 94.92
SPEC. HEAT = 1.400	GAS CONSTANT= 53.351	PRESSURE RATIO = 1.780
D.P. TEMP. =449.816	P. COR. FAC.= 1.442	TEMP. COR. FACT. = .947
ATMOS. PRES.= 14.278	ATM.PRES.(S)= 14.276	REL. HUMIDITY = .021

CALIBRATION PRESSURES (SONIX)= 9.0037 14.2764 29.2788
VENTURI PRESSURES:

INLET (AVG=11.319,SONIX=11.315)=	11.321	11.316	11.321	11.320
THROAT (AVG=10.086,SONIX=10.086)=	10.079	10.081	10.079	10.081
	10.090	10.089	10.088	10.087
	10.088	10.088	10.089	10.089

PLENUM CONDITIONS:

PRESSURES (AVG=10.191,SONIX=10.177)=	10.195	10.187					
TEMPERATURES (AVG=547.57)=	547.66	548.21	547.22	547.22	548.21		
	548.21	546.78	546.57	548.07			

ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):

RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
PRESSURE =	25.132	25.811	25.485	******	27.258	******	27.602
	27.603	27.459					
RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
TEMPERATURE=	649.23	622.49	******	625.55	630.62	******	******
	622.37	627.65					

STATIC PRESSURES (CORRECTED):

-----CASING----		-----HUB------	
X	P	X	P
-8.571	10.780	-5.125	15.516
-8.400	10.712	-5.125	15.350
-8.400	10.731	-5.125	15.744
-8.400	10.700	-5.125	15.346
-8.400	10.617	-1.650	18.239
-8.318	10.611	-1.650	18.803
-8.065	10.428	-1.650	18.684
-7.811	10.381	-1.650	17.732
-7.558	11.590	-.900	17.989
-7.304	******	-.900	18.620
-7.051	11.635	-.900	18.779
-6.798	******	-.900	18.180
-6.544	15.687		
-6.291	17.367		
-6.037	18.379		
-5.784	19.588		
-1.650	19.976		
-1.650	20.456		
-1.650	20.377		
-1.650	19.823		
-.900	19.219		
-.900	19.750		
-.900	19.494		
-.900	18.859		

COMPRESSOR CONFIGURATION:PBS SCAN: 2 TEST ID:870828008
NOMINAL % DESIGN SPEED:095 THROTTLE:000

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	624.145	25.294	
1	2	5.996	1.16	621.633	23.763	
1	3	5.996	2.32	617.757	24.904	
1	4	5.996	3.48	621.237	26.906	
1	5	5.996	4.65	619.194	27.615	
1	6	5.996	5.81	620.477	27.832	
1	7	5.996	6.97	620.826	27.731	
1	8	5.996	8.13	621.970	27.805	
1	9	5.996	9.29	621.864	27.915	
1	10	5.996	10.45	622.513	26.707	
1	AVG			621.156	26.771	
2	1	6.387	0.00	619.449	25.498	
2	2	6.387	1.16	619.632	27.410	
2	3	6.387	2.32	621.021	27.462	
2	4	6.387	3.48	622.141	27.530	
2	5	6.387	4.65	623.047	27.457	
2	6	6.387	5.81	623.521	27.652	
2	7	6.387	6.97	622.609	27.612	
2	8	6.387	8.13	622.265	27.790	
2	9	6.387	9.29	621.946	27.697	
2	10	6.387	10.45	622.985	26.182	
2	AVG			621.884	27.259	
3	1	6.755	0.00	620.167	26.044	
3	2	6.755	1.16	621.430	27.416	
3	3	6.755	2.32	622.455	27.442	
3	4	6.755	3.48	624.283	27.420	
3	5	6.755	4.65	624.641	27.452	
3	6	6.755	5.81	625.713	27.762	
3	7	6.755	6.97	622.769	27.708	
3	8	6.755	8.13	623.615	27.844	
3	9	6.755	9.29	622.275	28.049	
3	10	6.755	10.45	624.164	25.809	
3	AVG			623.166	27.324	
4	1	7.104	0.00	622.403	25.980	
4	2	7.104	1.16	622.498	26.828	
4	3	7.104	2.32	622.617	26.856	
4	4	7.104	3.48	626.219	26.865	
4	5	7.104	4.65	626.104	26.976	
4	6	7.104	5.81	626.255	27.364	
4	7	7.104	6.97	626.725	27.312	
4	8	7.104	8.13	625.892	27.481	
4	9	7.104	9.29	625.471	27.702	
4	10	7.104	10.45	627.230	25.783	
4	AVG			625.153	26.935	

COMPRESSOR CONFIGURATION:PBS SCAN: 2 TEST ID:870828008
NOMINAL % DESIGN SPEED:095 THROTTLE:000

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	622.052	25.491	
5	2	7.437	1.16	621.852	26.531	
5	3	7.437	2.32	622.866	26.645	
5	4	7.437	3.48	625.788	26.585	
5	5	7.437	4.65	625.438	26.511	
5	6	7.437	5.81	625.577	26.667	
5	7	7.437	6.97	625.129	26.354	
5	8	7.437	8.13	625.794	26.636	
5	9	7.437	9.29	625.036	27.022	
5	10	7.437	10.45	627.721	25.282	
5	AVG			624.717	26.391	
6	1	7.756	0.00	626.312	24.904	
6	2	7.756	1.16	622.694	26.276	
6	3	7.756	2.32	623.144	26.152	
6	4	7.756	3.48	625.481	26.167	
6	5	7.756	4.65	626.533	26.097	
6	6	7.756	5.81	628.853	26.365	
6	7	7.756	6.97	629.377	26.053	
6	8	7.756	8.13	632.911	26.320	
6	9	7.756	9.29	632.522	26.307	
6	10	7.756	10.45	634.606	24.948	
6	AVG			628.199	25.979	
7	1	8.062	0.00	641.511	24.123	
7	2	8.062	1.16	630.637	25.928	
7	3	8.062	2.32	628.574	26.152	
7	4	8.062	3.48	631.572	25.859	
7	5	8.062	4.65	635.752	25.613	
7	6	8.062	5.81	639.210	25.964	
7	7	8.062	6.97	642.136	25.446	
7	8	8.062	8.13	644.558	25.674	
7	9	8.062	9.29	643.962	25.657	
7	10	8.062	10.45	648.192	24.504	
7	AVG			638.387	25.525	
8	1	8.356	0.00	649.487	24.529	
8	2	8.356	1.16	637.020	25.457	
8	3	8.356	2.32	639.899	26.152	
8	4	8.356	3.48	642.496	25.219	
8	5	8.356	4.65	646.311	25.029	
8	6	8.356	5.81	650.065	25.471	
8	7	8.356	6.97	653.482	25.144	
8	8	8.356	8.13	654.741	25.349	
8	9	8.356	9.29	655.139	25.465	
8	10	8.356	10.45	657.456	24.822	
8	AVG			648.477	25.279	

COMPRESSOR CONFIGURATION:PBS SCAN: 3 TEST ID:870828011
NOMINAL % DESIGN SPEED:095 THROTTLE:020
PERFORMANCE:

MEAS. WORK =1513.34	ISEN. EFFIC.= 86.338	POLYTROPIC EFFIC.=87.439	
MEAS. FLOWR.= 38.863	CORR. FLOWR.= 59.319	COMPUTED FLOWRATE=57.472	
MEASURED RPM=19716.0	CORR. RPM =19187.5	% DESIGN RPM = 94.88	
SPEC. HEAT = 1.400	GAS CONSTANT= 53.351	PRESSURE RATIO = 1.820	
D.P. TEMP. =450.089	P. COR. FAC.= 1.485	TEMP. COR. FACT. = .947	
ATMOS. PRES.= 14.276	ATM.PRES.(S)= 14.276	REL. HUMIDITY = .021	

CALIBRATION PRESSURES (SONIX)= 9.0020 14.2764 29.2780
VENTURI PRESSURES:

INLET (AVG=10.989,SONIX=10.987)=	11.001	10.984	10.984	10.985
THROAT (AVG= 9.795,SONIX= 9.800)=	9.786	9.788	9.786	9.788
	9.798	9.797	9.797	9.800
	9.802	9.802	9.802	9.800

PLENUM CONDITIONS:

PRESSURES (AVG= 9.892,SONIX= 9.886)=	9.894	9.890					
TEMPERATURES (AVG=547.68)=	547.77	548.50	547.22	547.51	548.36		
	548.21	546.93	546.52	548.07			

ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):

RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
PRESSURE =	26.458	26.840	26.138	******	27.464	******	27.972
	27.686	27.614					
RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
TEMPERATURE=	654.28	623.48	******	626.11	633.26	******	******
	622.41	628.23					

STATIC PRESSURES (CORRECTED):

----CASING----		-----HUB------	
X	P	X	P
-8.571	10.766	-5.125	15.798
-8.400	10.744	-5.125	15.633
-8.400	10.765	-5.125	16.048
-8.400	10.766	-5.125	15.658
-8.400	10.706	-1.650	19.265
-8.318	10.602	-1.650	19.779
-8.065	10.430	-1.650	19.677
-7.811	10.477	-1.650	18.803
-7.558	11.720	-.900	19.030
-7.304	******	-.900	19.721
-7.051	12.212	-.900	19.702
-6.798	******	-.900	19.217
-6.544	16.439		
-6.291	18.142		
-6.037	19.032		
-5.784	20.226		
-1.650	20.847		
-1.650	21.323		
-1.650	21.289		
-1.650	20.657		
-.900	20.118		
-.900	20.621		
-.900	20.483		
-.900	19.788		

COMPRESSOR CONFIGURATION:PBS SCAN: 3 TEST ID:870828011
NOMINAL % DESIGN SPEED:095 THROTTLE:020

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	624.125	25.599	
1	2	5.996	1.16	621.541	24.464	
1	3	5.996	2.32	618.351	25.380	
1	4	5.996	3.48	621.684	26.785	
1	5	5.996	4.65	619.960	27.651	
1	6	5.996	5.81	621.124	27.884	
1	7	5.996	6.97	621.349	27.775	
1	8	5.996	8.13	622.269	27.946	
1	9	5.996	9.29	622.343	28.018	
1	10	5.996	10.45	623.022	26.865	
1	AVG			621.585	26.938	
2	1	6.387	0.00	621.251	25.228	
2	2	6.387	1.16	619.334	27.404	
2	3	6.387	2.32	621.532	27.599	
2	4	6.387	3.48	623.004	27.653	
2	5	6.387	4.65	623.566	27.645	
2	6	6.387	5.81	624.410	27.820	
2	7	6.387	6.97	623.742	27.770	
2	8	6.387	8.13	623.265	27.968	
2	9	6.387	9.29	622.862	27.917	
2	10	6.387	10.45	623.055	26.567	
2	AVG			622.629	27.400	
3	1	6.755	0.00	621.283	26.111	
3	2	6.755	1.16	621.609	27.548	
3	3	6.755	2.32	621.839	27.757	
3	4	6.755	3.48	623.519	27.513	
3	5	6.755	4.65	624.353	27.565	
3	6	6.755	5.81	626.758	27.885	
3	7	6.755	6.97	624.501	27.864	
3	8	6.755	8.13	624.970	28.022	
3	9	6.755	9.29	623.205	28.219	
3	10	6.755	10.45	624.350	26.360	
3	AVG			623.662	27.512	
4	1	7.104	0.00	623.223	25.875	
4	2	7.104	1.16	623.685	27.207	
4	3	7.104	2.32	623.584	27.336	
4	4	7.104	3.48	627.510	27.118	
4	5	7.104	4.65	627.661	27.280	
4	6	7.104	5.81	626.695	27.571	
4	7	7.104	6.97	626.692	27.539	
4	8	7.104	8.13	626.973	27.806	
4	9	7.104	9.29	626.202	27.946	
4	10	7.104	10.45	627.799	26.074	
4	AVG			626.018	27.204	

COMPRESSOR CONFIGURATION:PBS SCAN: 3 TEST ID:870828011
NOMINAL % DESIGN SPEED:095 THROTTLE:020

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	625.744	25.700	
5	2	7.437	1.16	625.514	27.130	
5	3	7.437	2.32	626.026	27.266	
5	4	7.437	3.48	628.288	27.296	
5	5	7.437	4.65	629.186	27.190	
5	6	7.437	5.81	629.500	27.515	
5	7	7.437	6.97	628.774	27.135	
5	8	7.437	8.13	629.347	27.378	
5	9	7.437	9.29	627.864	27.543	
5	10	7.437	10.45	630.343	25.877	
5	AVG			628.064	27.031	
6	1	7.756	0.00	635.113	25.174	
6	2	7.756	1.16	628.111	27.203	
6	3	7.756	2.32	627.416	27.287	
6	4	7.756	3.48	630.221	27.191	
6	5	7.756	4.65	630.879	27.139	
6	6	7.756	5.81	632.279	27.357	
6	7	7.756	6.97	633.126	26.995	
6	8	7.756	8.13	636.872	27.209	
6	9	7.756	9.29	637.194	27.125	
6	10	7.756	10.45	642.998	25.613	
6	AVG			633.261	26.871	
7	1	8.062	0.00	649.017	24.884	
7	2	8.062	1.16	636.122	26.795	
7	3	8.062	2.32	631.818	27.287	
7	4	8.062	3.48	634.796	26.960	
7	5	8.062	4.65	639.343	26.723	
7	6	8.062	5.81	642.953	27.081	
7	7	8.062	6.97	646.358	26.476	
7	8	8.062	8.13	649.594	26.786	
7	9	8.062	9.29	649.990	26.749	
7	10	8.062	10.45	656.007	25.532	
7	AVG			643.287	26.570	
8	1	8.356	0.00	654.932	25.497	
8	2	8.356	1.16	643.100	26.681	
8	3	8.356	2.32	645.202	27.287	
8	4	8.356	3.48	647.426	26.508	
8	5	8.356	4.65	651.275	26.150	
8	6	8.356	5.81	655.190	26.623	
8	7	8.356	6.97	658.489	26.292	
8	8	8.356	8.13	660.189	26.538	
8	9	8.356	9.29	661.585	26.587	
8	10	8.356	10.45	664.108	25.954	
8	AVG			654.002	26.429	

COMPRESSOR CONFIGURATION:PBS SCAN: 7 TEST ID:870901010
NOMINAL % DESIGN SPEED:095 THROTTLE:045
PERFORMANCE:

MEAS. WORK =1518.06	ISEN. EFFIC.= 07.203	POLYTROPIC EFFIC.=88.269
MEAS. FLOWR.= 38.045	CORR. FLOWR.= 59.015	COMPUTED FLOWRATE=57.383
MEASURED RPM=19638.0	CORR. RPM =19181.3	% DESIGN RPM = 94.85
SPEC. HEAT = 1.400	GAS CONSTANT= 53.351	PRESSURE RATIO = 1.859
D.P. TEMP. =450.241	P. COR. FAC.= 1.515	TEMP. COR. FACT. = .954
ATMOS. PRES.= 14.330	ATM.PRES.(S)= 14.334	REL. HUMIDITY = .024

CALIBRATION PRESSURES (SONIX)= 9.0019 14.3336 29.3384
VENTURI PRESSURES:

INLET (AVG=10.754,SONIX=10.753)=	10.754	10.757	10.753	10.753
THROAT (AVG= 9.598,SONIX= 9.598)=	9.604	9.592	9.604	9.592
	9.600	9.599	9.599	9.599
	9.598	9.598	9.599	9.600

PLENUM CONDITIONS:

PRESSURES (AVG= 9.698,SONIX= 9.681)=	9.695	9.701				
TEMPERATURES (AVG=543.70)=	544.23	544.81	543.82	543.08	544.08	
	543.67	542.67	542.26	544.70		

ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):

RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
PRESSURE =	27.408	27.699	26.786	******	27.861	******	28.012
	27.763	27.760					
RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
TEMPERATURE=	657.55	624.50	******	626.92	636.08	******	******
	623.03	627.16					

STATIC PRESSURES (CORRECTED):

----CASING----		-----HUB------	
X	P	X	P
-8.571	10.798	-5.125	16.142
-8.400	10.745	-5.125	16.003
-8.400	10.784	-5.125	16.413
-8.400	10.805	-5.125	15.989
-8.400	10.667	-1.650	20.231
-8.318	10.662	-1.650	20.675
-8.065	10.460	-1.650	20.610
-7.811	10.518	-1.650	19.757
-7.558	11.850	-.900	19.990
-7.304	******	-.900	20.636
-7.051	13.818	-.900	20.637
-6.798	******	-.900	20.171
-6.544	17.907		
-6.291	19.059		
-6.037	19.649		
-5.784	20.705		
-1.650	21.685		
-1.650	22.144		
-1.650	22.089		
-1.650	21.458		
-.900	20.974		
-.900	21.466		
-.900	21.352		
-.900	20.628		

COMPRESSOR CONFIGURATION:PBS SCAN: 7 TEST ID:870901010
NOMINAL % DESIGN SPEED:095 THROTTLE:045

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	623.832	26.194	
1	2	5.996	1.16	620.961	25.141	
1	3	5.996	2.32	619.243	26.152	
1	4	5.996	3.48	622.733	27.031	
1	5	5.996	4.65	620.662	27.764	
1	6	5.996	5.81	621.916	27.958	
1	7	5.996	6.97	622.379	27.914	
1	8	5.996	8.13	623.095	27.996	
1	9	5.996	9.29	622.860	28.183	
1	10	5.996	10.45	623.655	27.174	
1	AVG			622.165	27.221	
2	1	6.387	0.00	622.771	25.387	
2	2	6.387	1.16	620.399	27.119	
2	3	6.387	2.32	623.148	27.748	
2	4	6.387	3.48	624.444	27.813	
2	5	6.387	4.65	624.895	27.839	
2	6	6.387	5.81	625.623	28.023	
2	7	6.387	6.97	625.607	27.899	
2	8	6.387	8.13	624.718	28.106	
2	9	6.387	9.29	624.479	28.209	
2	10	6.387	10.45	623.907	26.812	
2	AVG			624.045	27.545	
3	1	6.755	0.00	625.187	25.920	
3	2	6.755	1.16	622.397	27.648	
3	3	6.755	2.32	623.261	27.924	
3	4	6.755	3.48	624.535	27.855	
3	5	6.755	4.65	625.784	27.733	
3	6	6.755	5.81	628.709	28.098	
3	7	6.755	6.97	626.836	28.064	
3	8	6.755	8.13	626.304	28.298	
3	9	6.755	9.29	625.399	28.507	
3	10	6.755	10.45	625.185	27.042	
3	AVG			625.374	27.745	
4	1	7.104	0.00	626.068	25.772	
4	2	7.104	1.16	625.737	27.635	
4	3	7.104	2.32	624.128	27.711	
4	4	7.104	3.48	627.305	27.480	
4	5	7.104	4.65	627.590	27.792	
4	6	7.104	5.81	627.616	27.972	
4	7	7.104	6.97	628.743	27.870	
4	8	7.104	8.13	628.901	28.142	
4	9	7.104	9.29	627.613	28.255	
4	10	7.104	10.45	628.854	26.596	
4	AVG			627.268	27.562	

COMPRESSOR CONFIGURATION:PBS SCAN: 7 TEST ID:870901010
NOMINAL % DESIGN SPEED:095 THROTTLE:045

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	629.924	25.929	
5	2	7.437	1.16	629.015	27.500	
5	3	7.437	2.32	627.420	27.655	
5	4	7.437	3.48	629.998	27.689	
5	5	7.437	4.65	631.374	27.799	
5	6	7.437	5.81	632.952	28.185	
5	7	7.437	6.97	632.130	27.824	
5	8	7.437	8.13	632.554	28.009	
5	9	7.437	9.29	631.517	28.232	
5	10	7.437	10.45	632.913	26.581	
5	AVG			630.993	27.577	
6	1	7.756	0.00	642.391	25.418	
6	2	7.756	1.16	633.320	27.296	
6	3	7.756	2.32	631.877	28.076	
6	4	7.756	3.48	633.173	28.040	
6	5	7.756	4.65	634.934	28.070	
6	6	7.756	5.81	636.177	28.348	
6	7	7.756	6.97	636.828	27.960	
6	8	7.756	8.13	639.855	28.046	
6	9	7.756	9.29	639.671	27.927	
6	10	7.756	10.45	649.349	26.361	
6	AVG			637.512	27.619	
7	1	8.062	0.00	656.031	25.591	
7	2	8.062	1.16	642.070	27.128	
7	3	8.062	2.32	634.650	28.217	
7	4	8.062	3.48	637.465	27.877	
7	5	8.062	4.65	641.781	27.740	
7	6	8.062	5.81	646.161	28.198	
7	7	8.062	6.97	649.211	27.471	
7	8	8.062	8.13	652.939	27.765	
7	9	8.062	9.29	653.150	27.837	
7	10	8.062	10.45	662.955	26.765	
7	AVG			647.293	27.507	
8	1	8.356	0.00	659.211	26.564	
8	2	8.356	1.16	651.177	27.766	
8	3	8.356	2.32	649.272	27.989	
8	4	8.356	3.48	651.766	27.558	
8	5	8.356	4.65	655.808	27.396	
8	6	8.356	5.81	659.484	27.886	
8	7	8.356	6.97	662.766	27.551	
8	8	8.356	8.13	666.577	27.640	
8	9	8.356	9.29	667.160	27.705	
8	10	8.356	10.45	671.588	27.183	
8	AVG			659.381	27.536	

COMPRESSOR CONFIGURATION:PBS SCAN: 8 TEST ID:870901012
NOMINAL % DESIGN SPEED:095 THROTTLE:065
PERFORMANCE:

MEAS. WORK =1533.94	ISEN. EFFIC.= 87.606	POLYTROPIC EFFIC.=88.672
MEAS. FLOWR.= 37.222	CORR. FLOWR.= 58.569	COMPUTED FLOWRATE=57.138
MEASURED RPM=19626.0	CORR. RPM =19196.4	% DESIGN RPM = 94.93
SPEC. HEAT = 1.400	GAS CONSTANT= 53.351	PRESSURE RATIO = 1.898
D.P. TEMP. =449.968	P. COR. FAC.= 1.539	TEMP. COR. FACT. = .957
ATMOS. PRES.= 14.331	ATM.PRES.(S)= 14.332	REL. HUMIDITY = .025

CALIBRATION PRESSURES (SONIX)= 9.0029 14.3332 29.3372
VENTURI PRESSURES:

INLET (AVG=10.574,SONIX=10.574)=	10.571	10.578	10.572	10.574
THROAT (AVG= 9.455,SONIX= 9.458)=	9.447	9.456	9.447	9.456
	9.458	9.456	9.457	9.457
	9.456	9.456	9.458	9.458

PLENUM CONDITIONS:

PRESSURES (AVG= 9.547,SONIX= 9.535)=	9.555	9.539					
TEMPERATURES (AVG=542.18)=	542.72	543.28	542.01	541.69	542.57		
	542.28	541.13	540.83	543.13			

ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):

RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
PRESSURE =	28.514	28.620	27.647	******	28.410	******	28.160
	28.013	27.953					
RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
TEMPERATURE=	662.00	625.06	******	626.46	640.04	******	******
	623.39	629.02					

STATIC PRESSURES (CORRECTED):

----CASING----		-----HUB------	
X	P	X	P
-8.571	10.874	-5.125	16.530
-8.400	10.817	-5.125	16.390
-8.400	10.890	-5.125	16.823
-8.400	10.925	-5.125	16.394
-8.400	10.822	-1.650	21.154
-8.318	10.712	-1.650	21.477
-8.065	10.559	-1.650	21.489
-7.811	10.691	-1.650	20.652
-7.558	12.312	-.900	20.890
-7.304	******	-.900	21.545
-7.051	15.454	-.900	21.536
-6.798	******	-.900	21.114
-6.544	19.021		
-6.291	19.906		
-6.037	20.494		
-5.784	21.510		
-1.650	22.471		
-1.650	22.945		
-1.650	22.884		
-1.650	22.207		
-.900	21.791		
-.900	22.263		
-.900	22.194		
-.900	21.399		

COMPRESSOR CONFIGURATION:PBS SCAN: 8 TEST ID:870901012
NOMINAL % DESIGN SPEED:095 THROTTLE:065

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	622.715	26.625	
1	2	5.996	1.16	620.529	25.433	
1	3	5.996	2.32	620.039	26.371	
1	4	5.996	3.48	624.147	27.639	
1	5	5.996	4.65	622.504	27.896	
1	6	5.996	5.81	623.738	28.097	
1	7	5.996	6.97	624.088	27.990	
1	8	5.996	8.13	624.476	28.121	
1	9	5.996	9.29	623.791	28.294	
1	10	5.996	10.45	624.624	27.491	
1	AVG			623.159	27.463	
2	1	6.387	0.00	624.475	25.748	
2	2	6.387	1.16	621.705	27.231	
2	3	6.387	2.32	625.202	27.770	
2	4	6.387	3.48	627.108	28.117	
2	5	6.387	4.65	626.532	28.049	
2	6	6.387	5.81	626.666	28.291	
2	7	6.387	6.97	627.681	28.180	
2	8	6.387	8.13	627.146	28.350	
2	9	6.387	9.29	626.362	28.496	
2	10	6.387	10.45	625.944	27.344	
2	AVG			625.943	27.807	
3	1	6.755	0.00	627.624	25.996	
3	2	6.755	1.16	623.527	26.780	
3	3	6.755	2.32	626.005	27.911	
3	4	6.755	3.48	629.046	28.219	
3	5	6.755	4.65	628.689	28.200	
3	6	6.755	5.81	630.123	28.410	
3	7	6.755	6.97	627.910	28.320	
3	8	6.755	8.13	628.634	28.600	
3	9	6.755	9.29	626.582	28.580	
3	10	6.755	10.45	627.312	27.523	
3	AVG			627.597	27.907	
4	1	7.104	0.00	632.196	26.022	
4	2	7.104	1.16	626.333	27.924	
4	3	7.104	2.32	626.710	28.191	
4	4	7.104	3.48	628.993	28.072	
4	5	7.104	4.65	629.824	28.209	
4	6	7.104	5.81	630.822	28.582	
4	7	7.104	6.97	632.028	28.580	
4	8	7.104	8.13	632.804	28.877	
4	9	7.104	9.29	630.767	28.941	
4	10	7.104	10.45	632.072	27.504	
4	AVG			630.238	28.142	

COMPRESSOR CONFIGURATION:PBS SCAN: 8 TEST ID:870901012
NOMINAL % DESIGN SPEED:095 THROTTLE:065

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	637.127	26.228	
5	2	7.437	1.16	630.182	27.707	
5	3	7.437	2.32	630.177	28.334	
5	4	7.437	3.48	633.224	28.423	
5	5	7.437	4.65	634.400	28.516	
5	6	7.437	5.81	635.656	28.917	
5	7	7.437	6.97	636.288	28.697	
5	8	7.437	8.13	638.808	28.994	
5	9	7.437	9.29	637.313	29.156	
5	10	7.437	10.45	638.135	27.526	
5	AVG			635.128	28.305	
6	1	7.756	0.00	649.766	25.960	
6	2	7.756	1.16	638.254	26.970	
6	3	7.756	2.32	634.218	28.378	
6	4	7.756	3.48	638.028	28.664	
6	5	7.756	4.65	638.762	28.835	
6	6	7.756	5.81	642.401	29.308	
6	7	7.756	6.97	643.006	28.905	
6	8	7.756	8.13	644.351	29.071	
6	9	7.756	9.29	645.082	28.809	
6	10	7.756	10.45	657.108	27.253	
6	AVG			642.846	28.304	
7	1	8.062	0.00	660.457	26.307	
7	2	8.062	1.16	645.650	27.299	
7	3	8.062	2.32	639.265	28.757	
7	4	8.062	3.48	642.788	28.536	
7	5	8.062	4.65	645.533	28.526	
7	6	8.062	5.81	649.322	29.008	
7	7	8.062	6.97	653.125	28.428	
7	8	8.062	8.13	657.249	28.697	
7	9	8.062	9.29	657.606	28.741	
7	10	8.062	10.45	666.882	27.963	
7	AVG			651.555	28.278	
8	1	8.356	0.00	665.766	27.315	
8	2	8.356	1.16	655.301	28.308	
8	3	8.356	2.32	651.064	28.653	
8	4	8.356	3.48	656.059	28.426	
8	5	8.356	4.65	658.566	28.479	
8	6	8.356	5.81	663.118	28.875	
8	7	8.356	6.97	667.047	28.790	
8	8	8.356	8.13	671.337	28.740	
8	9	8.356	9.29	671.540	28.694	
8	10	8.356	10.45	675.612	28.184	
	AVG			663.481	28.461	

COMPRESSOR CONFIGURATION:PBS SCAN: 9 TEST ID:870901013
NOMINAL % DESIGN SPEED:095 THROTTLE:065
PERFORMANCE:

MEAS. WORK =1520.81	ISEN. EFFIC.= 85.084	POLYTROPIC EFFIC.=86.385	
MEAS. FLOWR.= 35.139	CORR. FLOWR.= 56.302	COMPUTED FLOWRATE=55.107	
MEASURED RPM=19598.0	CORR. RPM =19186.3	% DESIGN RPM	= 94.88
SPEC. HEAT = 1.400	GAS CONSTANT= 53.351	PRESSURE RATIO	= 1.919
D.P. TEMP. =449.968	P. COR. FAC.= 1.569	TEMP. COR. FACT.	= .958
ATMOS. PRES.= 14.334	ATM.PRES.(S)= 14.333	REL. HUMIDITY	= .026

CALIBRATION PRESSURES (SONIX)= 9.0028 14.3336 29.3394
VENTURI PRESSURES:

INLET (AVG=10.302,SONIX=10.303)=	10.300	10.299	10.305	10.305
THROAT (AVG= 9.292,SONIX= 9.291)=	9.298	9.286	9.298	9.286
	9.292	9.291	9.294	9.292
	9.290	9.290	9.293	9.291

PLENUM CONDITIONS:

PRESSURES (AVG= 9.368,SONIX= 9.356)=	9.371	9.364					
TEMPERATURES (AVG=541.21)=	541.71	542.15	541.30	540.71	541.45		
	541.15	540.30	539.95	542.15			

ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):

RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
PRESSURE =	29.449	29.233	28.195	******	28.988	******	28.492
	28.235	28.132					
RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
TEMPERATURE=	668.59	628.29	******	629.22	645.58	******	******
	623.58	635.16					

STATIC PRESSURES (CORRECTED):

----CASING----		------HUB------	
X	P	X	P
-8.571	11.313	-5.125	16.977
-8.400	11.295	-5.125	16.853
-8.400	11.413	-5.125	17.230
-8.400	11.475	-5.125	16.824
-8.400	11.377	-1.650	22.031
-8.318	11.167	-1.650	22.215
-8.065	10.992	-1.650	22.338
-7.811	11.443	-1.650	21.591
-7.558	15.358	-.900	21.834
-7.304	******	-.900	22.418
-7.051	16.898	-.900	22.432
-6.798	******	-.900	22.043
-6.544	20.317		
-6.291	21.126		
-6.037	21.520		
-5.784	22.466		
-1.650	23.121		
-1.650	23.509		
-1.650	23.429		
-1.650	22.818		
-.900	22.552		
-.900	23.020		
-.900	22.912		
-.900	22.214		

COMPRESSOR CONFIGURATION:PBS SCAN: 9 TEST ID:870901013
NOMINAL % DESIGN SPEED:095 THROTTLE:065

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	622.987	26.796	
1	2	5.996	1.16	621.548	25.709	
1	3	5.996	2.32	621.264	26.055	
1	4	5.996	3.48	623.003	27.901	
1	5	5.996	4.65	623.772	28.070	
1	6	5.996	5.81	624.788	28.291	
1	7	5.996	6.97	624.631	28.124	
1	8	5.996	8.13	624.897	28.222	
1	9	5.996	9.29	624.561	28.459	
1	10	5.996	10.45	624.650	27.700	
1	AVG			623.717	27.618	
2	1	6.387	0.00	627.329	26.376	
2	2	6.387	1.16	625.581	26.736	
2	3	6.387	2.32	624.110	27.069	
2	4	6.387	3.48	629.423	28.400	
2	5	6.387	4.65	628.311	28.483	
2	6	6.387	5.81	627.991	28.657	
2	7	6.387	6.97	629.030	28.685	
2	8	6.387	8.13	630.065	28.678	
2	9	6.387	9.29	629.501	28.898	
2	10	6.387	10.45	629.220	27.532	
2	AVG			628.155	28.021	
3	1	6.755	0.00	629.272	26.447	
3	2	6.755	1.16	626.718	25.993	
3	3	6.755	2.32	629.220	26.266	
3	4	6.755	3.48	631.760	28.518	
3	5	6.755	4.65	632.595	28.523	
3	6	6.755	5.81	632.397	28.784	
3	7	6.755	6.97	630.765	28.865	
3	8	6.755	8.13	631.013	28.919	
3	9	6.755	9.29	629.623	29.057	
3	10	6.755	10.45	630.595	28.067	
3	AVG			630.533	28.067	
4	1	7.104	0.00	635.956	26.717	
4	2	7.104	1.16	630.573	25.472	
4	3	7.104	2.32	629.907	25.958	
4	4	7.104	3.48	633.545	28.484	
4	5	7.104	4.65	634.444	28.596	
4	6	7.104	5.81	633.639	28.994	
4	7	7.104	6.97	635.824	29.000	
4	8	7.104	8.13	634.702	29.161	
4	9	7.104	9.29	633.080	29.539	
4	10	7.104	10.45	635.449	28.532	
4	AVG			633.870	28.222	

COMPRESSOR CONFIGURATION:PBS SCAN: 9 TEST ID:870901013
NOMINAL % DESIGN SPEED:095 THROTTLE:065

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	646.794	27.037	
5	2	7.437	1.16	638.374	25.717	
5	3	7.437	2.32	634.614	26.656	
5	4	7.437	3.48	638.052	28.731	
5	5	7.437	4.65	637.261	28.847	
5	6	7.437	5.81	637.486	29.343	
5	7	7.437	6.97	639.685	29.342	
5	8	7.437	8.13	643.579	29.575	
5	9	7.437	9.29	644.097	29.693	
5	10	7.437	10.45	648.831	28.359	
5	AVG			640.956	28.484	
6	1	7.756	0.00	660.666	26.480	
6	2	7.756	1.16	642.211	26.165	
6	3	7.756	2.32	639.725	27.122	
6	4	7.756	3.48	644.223	28.800	
6	5	7.756	4.65	643.999	29.068	
6	6	7.756	5.81	645.925	29.688	
6	7	7.756	6.97	650.980	29.380	
6	8	7.756	8.13	652.603	29.542	
6	9	7.756	9.29	653.913	29.577	
6	10	7.756	10.45	671.115	28.278	
6	AVG			650.524	28.554	
7	1	8.062	0.00	670.035	26.498	
7	2	8.062	1.16	653.562	26.433	
7	3	8.062	2.32	647.521	27.628	
7	4	8.062	3.48	652.688	28.845	
7	5	8.062	4.65	652.374	29.034	
7	6	8.062	5.81	654.922	29.732	
7	7	8.062	6.97	660.698	29.233	
7	8	8.062	8.13	663.615	29.584	
7	9	8.062	9.29	664.958	29.715	
7	10	8.062	10.45	676.258	28.937	
7	AVG			659.678	28.688	
8	1	8.356	0.00	682.207	27.617	
8	2	8.356	1.16	669.708	28.035	
8	3	8.356	2.32	660.997	29.010	
8	4	8.356	3.48	665.835	28.895	
8	5	8.356	4.65	666.739	29.132	
8	6	8.356	5.81	669.576	29.977	
8	7	8.356	6.97	673.608	29.861	
8	8	8.356	8.13	677.235	29.741	
8	9	8.356	9.29	678.972	29.766	
8	10	8.356	10.45	684.932	29.575	
8	AVG			672.949	29.205	

COMPRESSOR CONFIGURATION:PBS SCAN: 10 TEST ID:870901014
NOMINAL % DESIGN SPEED:095 THROTTLE:075
PERFORMANCE:
MEAS. WORK =1506.98 ISEN. EFFIC.= 83.037 POLYTROPIC EFFIC.=84.516
MEAS. FLOWR.= 34.015 CORR. FLOWR.= 54.839 COMPUTED FLOWRATE=53.719
MEASURED RPM=19580.0 CORR. RPM =19182.6 % DESIGN RPM = 94.86
SPEC. HEAT = 1.400 GAS CONSTANT= 53.351 PRESSURE RATIO = 1.919
D.P. TEMP. =450.029 P. COR. FAC.= 1.579 TEMP. COR. FACT. = .960
ATMOS. PRES.= 14.334 ATM.PRES.(S)= 14.334 REL. HUMIDITY = .027
CALIBRATION PRESSURES (SONIX)= 9.0037 14.3345 29.3391
VENTURI PRESSURES:
INLET (AVG=10.182,SONIX=10.182)= 10.182 10.177 10.186 10.182
THROAT (AVG= 9.232,SONIX= 9.230)= 9.236 9.230 9.236 9.230
9.232 9.230 9.232 9.231
9.230 9.230 9.232 9.232

PLENUM CONDITIONS:
PRESSURES (AVG= 9.303,SONIX= 9.291)= 9.307 9.299
TEMPERATURES (AVG=540.42)= 541.20 541.20 540.62 540.06 540.62
540.32 539.50 538.97 541.29

ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):
RADIUS = 8.125 7.750 7.375 7.000 6.625 6.250 5.875
5.500 5.125
PRESSURE = 29.594 29.327 28.406 ****** 28.922 ****** 28.875
28.278 28.278
RADIUS = 8.125 7.750 7.375 7.000 6.625 6.250 5.875
5.500 5.125
TEMPERATURE= 673.38 631.11 ****** 630.99 648.29 ****** ******
623.68 634.11

STATIC PRESSURES (CORRECTED):

----CASING----		-----HUB------	
X	P	X	P
-8.571	11.657	-5.125	17.152
-8.400	11.647	-5.125	16.993
-8.400	11.684	-5.125	17.351
-8.400	11.813	-5.125	16.969
-8.400	11.711	-1.650	22.276
-8.318	11.537	-1.650	22.442
-8.065	11.312	-1.650	22.560
-7.811	11.844	-1.650	21.876
-7.558	16.913	-.900	22.113
-7.304	******	-.900	22.641
-7.051	17.924	-.900	22.675
-6.798	******	-.900	22.311
-6.544	20.800		
-6.291	21.511		
-6.037	21.799		
-5.784	22.764		
-1.650	23.266		
-1.650	23.602		
-1.650	23.505		
-1.650	22.977		
-.900	22.761		
-.900	23.233		
-.900	23.123		
-.900	22.488		

COMPRESSOR CONFIGURATION:PBS SCAN: 10 TEST ID:870901014
NOMINAL % DESIGN SPEED:095 THROTTLE:075

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	623.843	26.946	
1	2	5.996	1.16	622.546	25.567	
1	3	5.996	2.32	621.193	25.640	
1	4	5.996	3.48	622.961	27.926	
1	5	5.996	4.65	624.620	28.161	
1	6	5.996	5.81	625.381	28.337	
1	7	5.996	6.97	624.665	28.376	
1	8	5.996	8.13	625.581	28.229	
1	9	5.996	9.29	624.820	28.475	
1	10	5.996	10.45	625.117	27.672	
1	AVG			624.197	27.649	
2	1	6.387	0.00	628.168	26.448	
2	2	6.387	1.16	626.403	26.330	
2	3	6.387	2.32	624.013	26.832	
2	4	6.387	3.48	628.724	28.143	
2	5	6.387	4.65	629.856	28.613	
2	6	6.387	5.81	629.218	28.839	
2	7	6.387	6.97	629.932	29.016	
2	8	6.387	8.13	631.260	28.789	
2	9	6.387	9.29	630.183	29.043	
2	10	6.387	10.45	630.925	27.730	
2	AVG			629.011	28.076	
3	1	6.755	0.00	631.427	26.615	
3	2	6.755	1.16	628.718	25.699	
3	3	6.755	2.32	629.793	25.836	
3	4	6.755	3.48	631.444	28.063	
3	5	6.755	4.65	635.177	28.583	
3	6	6.755	5.81	633.858	28.753	
3	7	6.755	6.97	632.340	29.047	
3	8	6.755	8.13	632.592	28.968	
3	9	6.755	9.29	631.597	29.407	
3	10	6.755	10.45	633.384	28.206	
3	AVG			632.204	28.083	
4	1	7.104	0.00	637.974	26.900	
4	2	7.104	1.16	632.471	25.050	
4	3	7.104	2.32	629.847	25.305	
4	4	7.104	3.48	631.714	27.780	
4	5	7.104	4.65	637.225	28.466	
4	6	7.104	5.81	635.235	28.987	
4	7	7.104	6.97	636.559	29.108	
4	8	7.104	8.13	634.783	29.209	
4	9	7.104	9.29	634.226	29.600	
4	10	7.104	10.45	637.905	28.332	
4	AVG			635.021	28.121	

COMPRESSOR CONFIGURATION:PBS SCAN: 10 TEST ID:870901014
NOMINAL % DESIGN SPEED:095 THROTTLE:075

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	652.413	27.145	
5	2	7.437	1.16	643.450	25.232	
5	3	7.437	2.32	634.815	25.879	
5	4	7.437	3.48	638.217	28.032	
5	5	7.437	4.65	639.998	28.700	
5	6	7.437	5.81	637.129	29.366	
5	7	7.437	6.97	640.810	29.403	
5	8	7.437	8.13	646.536	29.609	
5	9	7.437	9.29	646.490	29.869	
5	10	7.437	10.45	655.629	28.484	
5	AVG			643.650	28.402	
6	1	7.756	0.00	667.317	26.479	
6	2	7.756	1.16	648.533	25.489	
6	3	7.756	2.32	642.815	26.320	
6	4	7.756	3.48	646.368	28.171	
6	5	7.756	4.65	645.757	28.937	
6	6	7.756	5.81	646.537	29.726	
6	7	7.756	6.97	652.379	29.523	
6	8	7.756	8.13	657.547	29.581	
6	9	7.756	9.29	660.076	29.758	
6	10	7.756	10.45	679.388	28.680	
6	AVG			654.791	28.489	
7	1	8.062	0.00	677.439	26.566	
7	2	8.062	1.16	658.696	26.249	
7	3	8.062	2.32	654.125	26.729	
7	4	8.062	3.48	657.544	28.370	
7	5	8.062	4.65	655.935	29.039	
7	6	8.062	5.81	658.416	29.700	
7	7	8.062	6.97	663.361	29.454	
7	8	8.062	8.13	668.596	29.624	
7	9	8.062	9.29	670.023	29.851	
7	10	8.062	10.45	683.555	29.386	
7	AVG			664.910	28.666	
8	1	8.356	0.00	689.548	27.677	
8	2	8.356	1.16	674.413	27.639	
8	3	8.356	2.32	669.687	28.361	
8	4	8.356	3.48	673.739	28.923	
8	5	8.356	4.65	670.472	29.211	
8	6	8.356	5.81	674.448	30.244	
8	7	8.356	6.97	676.515	30.092	
8	8	8.356	8.13	680.808	30.034	
8	9	8.356	9.29	682.682	30.123	
8	10	8.356	10.45	691.227	29.999	
8	AVG			678.374	29.306	

COMPRESSOR CONFIGURATION:PBS SCAN: 11 TEST ID:870901015
NOMINAL % DESIGN SPEED:095 THROTTLE:080
PERFORMANCE:

MEAS. WORK =1496.09	ISEN. EFFIC.= 81.430	POLYTROPIC EFFIC.=83.039
MEAS. FLOWR.= 33.349	CORR. FLOWR.= 53.713	COMPUTED FLOWRATE=52.621
MEASURED RPM=19572.0	CORR. RPM =19185.2	% DESIGN RPM = 94.87
SPEC. HEAT = 1.400	GAS CONSTANT= 53.351	PRESSURE RATIO = 1.912
D.P. TEMP. =449.998	P. COR. FAC.= 1.579	TEMP. COR. FACT. = .961
ATMOS. PRES.= 14.331	ATM.PRES.(S)= 14.334	REL. HUMIDITY = .027

CALIBRATION PRESSURES (SONIX)= 9.0024 14.3337 29.3366
VENTURI PRESSURES:

INLET (AVG=10.145,SONIX=10.150)=	10.149	10.142	10.140	10.147
THROAT (AVG= 9.234,SONIX= 9.234)=	9.235	9.229	9.235	9.229
	9.236	9.234	9.236	9.236
	9.234	9.234	9.236	9.234

PLENUM CONDITIONS:

PRESSURES (AVG= 9.307,SONIX= 9.291)=	9.306	9.308
TEMPERATURES (AVG=539.84)=	540.48	540.74
	539.74	539.03

539.89	539.44	540.03					
538.56	540.62						

ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):

RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
PRESSURE =	29.923	29.333	28.458	******	28.876	******	28.997
	28.237	28.318					
RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
TEMPERATURE=	676.66	632.31	******	631.56	649.09	******	******
	623.89	634.95					

STATIC PRESSURES (CORRECTED):

-----CASING----		-----HUB------	
X	P	X	P
-8.571	11.898	-5.125	17.188
-8.400	11.845	-5.125	17.053
-8.400	11.916	-5.125	17.393
-8.400	12.031	-5.125	17.008
-8.400	11.890	-1.650	22.339
-8.318	11.799	-1.650	22.449
-8.065	11.580	-1.650	22.598
-7.811	12.131	-1.650	21.948
-7.558	17.527	-.900	22.212
-7.304	******	-.900	22.696
-7.051	18.455	-.900	22.751
-6.798	******	-.900	22.416
-6.544	21.045		
-6.291	21.701		
-6.037	21.880		
-5.784	22.858		
-1.650	23.255		
-1.650	23.591		
-1.650	23.511		
-1.650	23.000		
-.900	22.836		
-.900	23.274		
-.900	23.181		
-.900	22.545		

COMPRESSOR CONFIGURATION:PBS SCAN: 11 TEST ID:870901015
NOMINAL % DESIGN SPEED:095 THROTTLE:080

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	624.638	26.843	
1	2	5.996	1.16	623.591	25.448	
1	3	5.996	2.32	621.190	25.512	
1	4	5.996	3.48	622.847	27.794	
1	5	5.996	4.65	625.339	28.252	
1	6	5.996	5.81	625.980	28.324	
1	7	5.996	6.97	625.040	28.516	
1	8	5.996	8.13	626.187	28.245	
1	9	5.996	9.29	624.865	28.487	
1	10	5.996	10.45	625.557	27.744	
1	AVG			624.653	27.651	
2	1	6.387	0.00	629.456	26.435	
2	2	6.387	1.16	627.272	26.090	
2	3	6.387	2.32	623.754	26.510	
2	4	6.387	3.48	627.943	27.757	
2	5	6.387	4.65	630.823	28.718	
2	6	6.387	5.81	630.958	28.807	
2	7	6.387	6.97	630.414	29.058	
2	8	6.387	8.13	631.995	28.899	
2	9	6.387	9.29	630.153	29.049	
2	10	6.387	10.45	631.857	27.826	
2	AVG			629.642	28.035	
3	1	6.755	0.00	632.587	26.573	
3	2	6.755	1.16	629.465	25.442	
3	3	6.755	2.32	630.729	25.408	
3	4	6.755	3.48	631.265	27.250	
3	5	6.755	4.65	636.839	28.604	
3	6	6.755	5.81	635.699	28.721	
3	7	6.755	6.97	634.145	29.090	
3	8	6.755	8.13	634.285	29.038	
3	9	6.755	9.29	632.412	29.521	
3	10	6.755	10.45	634.670	28.253	
3	AVG			633.457	28.006	
4	1	7.104	0.00	639.800	26.957	
4	2	7.104	1.16	634.659	24.940	
4	3	7.104	2.32	629.194	24.982	
4	4	7.104	3.48	631.400	26.952	
4	5	7.104	4.65	637.965	28.348	
4	6	7.104	5.81	636.580	28.747	
4	7	7.104	6.97	637.833	29.061	
4	8	7.104	8.13	635.513	29.212	
4	9	7.104	9.29	635.025	29.559	
4	10	7.104	10.45	639.408	28.392	
4	AVG			636.043	27.997	

COMPRESSOR CONFIGURATION:PBS SCAN: 11 TEST ID:870901015
NOMINAL % DESIGN SPEED:095 THROTTLE:080

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	657.636	27.067	
5	2	7.437	1.16	646.519	25.053	
5	3	7.437	2.32	635.026	25.376	
5	4	7.437	3.48	637.945	27.329	
5	5	7.437	4.65	640.992	28.520	
5	6	7.437	5.81	638.206	29.093	
5	7	7.437	6.97	641.971	29.310	
5	8	7.437	8.13	647.256	29.392	
5	9	7.437	9.29	648.043	29.849	
5	10	7.437	10.45	661.658	28.453	
5	AVG			645.684	28.214	
6	1	7.756	0.00	672.156	26.294	
6	2	7.756	1.16	651.773	25.221	
6	3	7.756	2.32	644.021	25.525	
6	4	7.756	3.48	646.679	27.364	
6	5	7.756	4.65	647.779	28.764	
6	6	7.756	5.81	647.803	29.603	
6	7	7.756	6.97	653.260	29.488	
6	8	7.756	8.13	659.788	29.502	
6	9	7.756	9.29	663.286	29.838	
6	10	7.756	10.45	684.510	28.697	
6	AVG			657.385	28.325	
7	1	8.062	0.00	681.295	26.536	
7	2	8.062	1.16	662.656	26.044	
7	3	8.062	2.32	656.715	26.165	
7	4	8.062	3.48	658.942	27.897	
7	5	8.062	4.65	658.034	28.829	
7	6	8.062	5.81	660.681	29.584	
7	7	8.062	6.97	664.787	29.479	
7	8	8.062	8.13	670.103	29.530	
7	9	8.062	9.29	671.202	29.890	
7	10	8.062	10.45	687.707	29.469	
7	AVG			667.412	28.549	
8	1	8.356	0.00	692.030	27.748	
8	2	8.356	1.16	677.738	27.407	
8	3	8.356	2.32	674.197	28.008	
8	4	8.356	3.48	677.338	28.831	
8	5	8.356	4.65	673.223	29.162	
8	6	8.356	5.81	676.322	30.011	
8	7	8.356	6.97	678.419	30.041	
8	8	8.356	8.13	681.844	29.889	
8	9	8.356	9.29	683.657	30.258	
8	10	8.356	10.45	694.868	30.051	
8	AVG			680.994	29.226	

COMPRESSOR CONFIGURATION:PBS SCAN: 4 TEST ID:870828015
NOMINAL % DESIGN SPEED:090 THROTTLE:000
PERFORMANCE:

MEAS. WORK =1340.77	ISEN. EFFIC.= 88.604	POLYTROPIC EFFIC.=89.440
MEAS. FLOWR.= 39.485	CORR. FLOWR.= 57.522	COMPUTED FLOWRATE=55.631
MEASURED RPM=18688.0	CORR. RPM =18195.1	% DESIGN RPM = 89.98
SPEC. HEAT = 1.400	GAS CONSTANT= 53.351	PRESSURE RATIO = 1.719
D.P. TEMP. =449.968	P. COR. FAC.= 1.418	TEMP. COR. FACT. = .948
ATMOS. PRES.= 14.274	ATM.PRES.(S)= 14.274	REL. HUMIDITY = .021

CALIBRATION PRESSURES (SONIX)= 9.0021 14.2744 29.2743
VENTURI PRESSURES:

INLET (AVG=11.433,SONIX=11.426)=	11.427	11.431	11.437	11.436	
THROAT (AVG=10.261,SONIX=10.264)=	10.259	10.255	10.259	10.255	
	10.263	10.262	10.262	10.262	
	10.264	10.264	10.264	10.264	

PLENUM CONDITIONS:

PRESSURES (AVG=10.360,SONIX=10.349)=	10.358	10.361					
TEMPERATURES (AVG=547.19)=	547.31	547.86	546.87	547.01	547.72		
	547.45	546.43	546.22	547.84			

ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):

RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
PRESSURE =	24.830	24.982	24.787	******	26.091	******	25.874
	26.149	26.023					
RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
TEMPERATURE=	633.35	611.11	******	613.74	619.03	******	******
	611.61	613.38					

STATIC PRESSURES (CORRECTED):

----CASING----		-----HUB------	
X	P	X	P
-8.571	11.178	-5.125	15.677
-8.400	11.117	-5.125	15.569
-8.400	11.133	-5.125	15.919
-8.400	11.121	-5.125	15.544
-8.400	11.013	-1.650	17.939
-8.318	11.001	-1.650	18.491
-8.065	10.834	-1.650	18.348
-7.811	10.944	-1.650	17.455
-7.558	11.986	-.900	17.645
-7.304	******	-.900	18.347
-7.051	12.647	-.900	18.408
-6.798	******	-.900	17.862
-6.544	16.683		
-6.291	18.000		
-6.037	18.882		
-5.784	19.725		
-1.650	19.544		
-1.650	20.026		
-1.650	19.964		
-1.650	19.377		
-.900	18.781		
-.900	19.300		
-.900	19.095		
-.900	18.452		

COMPRESSOR CONFIGURATION:PBS SCAN: 4 TEST ID:870828015
NOMINAL % DESIGN SPEED:090 THROTTLE:000

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	614.506	23.906	
1	2	5.996	1.16	611.962	23.004	
1	3	5.996	2.32	608.660	24.247	
1	4	5.996	3.48	611.467	25.647	
1	5	5.996	4.65	609.372	26.133	
1	6	5.996	5.81	611.152	26.266	
1	7	5.996	6.97	611.381	26.140	
1	8	5.996	8.13	611.788	26.277	
1	9	5.996	9.29	611.790	26.308	
1	10	5.996	10.45	611.909	25.158	
1	AVG			611.368	25.400	
2	1	6.387	0.00	609.115	24.139	
2	2	6.387	1.16	609.269	25.960	
2	3	6.387	2.32	609.537	26.006	
2	4	6.387	3.48	611.859	25.965	
2	5	6.387	4.65	611.780	25.964	
2	6	6.387	5.81	613.265	26.060	
2	7	6.387	6.97	612.371	26.075	
2	8	6.387	8.13	612.643	26.165	
2	9	6.387	9.29	611.214	26.147	
2	10	6.387	10.45	613.246	24.888	
2	AVG			611.447	25.764	
3	1	6.755	0.00	609.651	24.519	
3	2	6.755	1.16	611.040	26.054	
3	3	6.755	2.32	610.526	25.935	
3	4	6.755	3.48	612.312	25.829	
3	5	6.755	4.65	614.107	25.912	
3	6	6.755	5.81	615.010	26.094	
3	7	6.755	6.97	612.599	26.058	
3	8	6.755	8.13	613.512	26.265	
3	9	6.755	9.29	612.489	26.304	
3	10	6.755	10.45	613.563	24.696	
3	AVG			612.501	25.791	
4	1	7.104	0.00	610.611	24.923	
4	2	7.104	1.16	610.621	25.905	
4	3	7.104	2.32	612.288	25.925	
4	4	7.104	3.48	615.599	25.880	
4	5	7.104	4.65	614.252	25.873	
4	6	7.104	5.81	614.094	26.108	
4	7	7.104	6.97	614.736	26.017	
4	8	7.104	8.13	613.083	26.226	
4	9	7.104	9.29	612.458	26.307	
4	10	7.104	10.45	613.791	24.741	
4	AVG			613.163	25.808	

COMPRESSOR CONFIGURATION:PBS SCAN: 4 TEST ID:870828015
NOMINAL % DESIGN SPEED:090 THROTTLE:000

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	612.120	25.003	
5	2	7.437	1.16	612.504	25.800	
5	3	7.437	2.32	612.507	25.826	
5	4	7.437	3.48	614.270	25.664	
5	5	7.437	4.65	615.799	25.690	
5	6	7.437	5.81	616.178	25.862	
5	7	7.437	6.97	614.411	25.747	
5	8	7.437	8.13	615.314	25.924	
5	9	7.437	9.29	614.581	26.088	
5	10	7.437	10.45	616.463	24.531	
5	AVG			614.408	25.628	
6	1	7.756	0.00	615.282	25.072	
6	2	7.756	1.16	612.059	25.676	
6	3	7.756	2.32	613.856	25.554	
6	4	7.756	3.48	615.865	25.496	
6	5	7.756	4.65	617.221	25.598	
6	6	7.756	5.81	618.454	25.756	
6	7	7.756	6.97	617.588	25.552	
6	8	7.756	8.13	619.274	25.738	
6	9	7.756	9.29	619.271	25.722	
6	10	7.756	10.45	621.781	24.414	
6	AVG			617.029	25.470	
7	1	8.062	0.00	625.824	24.102	
7	2	8.062	1.16	618.010	25.459	
7	3	8.062	2.32	618.025	25.554	
7	4	8.062	3.48	619.985	25.323	
7	5	8.062	4.65	623.398	25.224	
7	6	8.062	5.81	625.209	25.441	
7	7	8.062	6.97	627.387	25.063	
7	8	8.062	8.13	629.863	25.339	
7	9	8.062	9.29	629.600	25.227	
7	10	8.062	10.45	634.388	24.219	
7	AVG			625.035	25.115	
8	1	8.356	0.00	640.596	24.055	
8	2	8.356	1.16	624.960	25.171	
8	3	8.356	2.32	627.440	25.554	
8	4	8.356	3.48	630.368	25.294	
8	5	8.356	4.65	636.173	25.016	
8	6	8.356	5.81	639.231	25.290	
8	7	8.356	6.97	642.534	25.005	
8	8	8.356	8.13	642.058	25.124	
8	9	8.356	9.29	643.163	25.163	
8	10	8.356	10.45	644.132	24.598	
8	AVG			636.924	25.041	

COMPRESSOR CONFIGURATION:PBS SCAN: 5 TEST ID:870828017
NOMINAL % DESIGN SPEED:090 THROTTLE:010
PERFORMANCE:

MEAS. WORK =1337.71	ISEN. EFFIC.= 89.195	POLYTROPIC EFFIC.=90.006
MEAS. FLOWR.= 38.648	CORR. FLOWR.= 57.157	COMPUTED FLOWRATE=55.335
MEASURED RPM=18670.0	CORR. RPM =18179.1	% DESIGN RPM = 89.90
SPEC. HEAT = 1.400	GAS CONSTANT= 53.351	PRESSURE RATIO = 1.741
D.P. TEMP. =450.393	P. COR. FAC.= 1.440	TEMP. COR. FACT. = .948
ATMOS. PRES.= 14.273	ATM.PRES.(S)= 14.275	REL. HUMIDITY = .022

CALIBRATION PRESSURES (SONIX)= 9.0035 14.2746 29.2746
VENTURI PRESSURES:

INLET (AVG=11.241,SONIX=11.236)=	11.233	11.237	11.248	11.245
THROAT (AVG=10.101,SONIX=10.105)=	10.094	10.096	10.094	10.096
	10.103	10.102	10.103	10.103
	10.105	10.105	10.104	10.104

PLENUM CONDITIONS:

PRESSURES (AVG=10.204,SONIX=10.185)=	10.207	10.200				
TEMPERATURES (AVG=547.10)=	547.50	547.79	546.77	546.77	547.65	
	547.50	546.21	546.07	547.65		

ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):

RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
PRESSURE =	25.400	25.481	25.123	******	26.314	******	25.970
	26.204	26.076					
RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
TEMPERATURE=	633.62	612.23	******	612.46	620.16	******	******
	611.58	613.49					

STATIC PRESSURES (CORRECTED):

-----CASING-----		------HUB------	
X	P	X	P
-8.571	11.215	-5.125	15.887
-8.400	11.149	-5.125	15.755
-8.400	11.212	-5.125	16.123
-8.400	11.177	-5.125	15.724
-8.400	11.017	-1.650	18.596
-8.318	11.053	-1.650	19.091
-8.065	10.868	-1.650	18.967
-7.811	10.998	-1.650	18.117
-7.558	12.086	-.900	18.330
-7.304	******	-.900	19.005
-7.051	13.720	-.900	19.006
-6.798	******	-.900	18.516
-6.544	17.560		
-6.291	18.463		
-6.037	19.319		
-5.784	20.027		
-1.650	20.085		
-1.650	20.556		
-1.650	20.492		
-1.650	19.871		
-.900	19.345		
-.900	19.862		
-.900	19.699		
-.900	19.029		

COMPRESSOR CONFIGURATION:PBS SCAN: 5 TEST ID:870828017
NOMINAL % DESIGN SPEED:090 THROTTLE:010

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	614.717	24.272	
1	2	5.996	1.16	611.828	23.569	
1	3	5.996	2.32	609.463	24.890	
1	4	5.996	3.48	612.177	25.733	
1	5	5.996	4.65	610.166	26.119	
1	6	5.996	5.81	612.008	26.259	
1	7	5.996	6.97	611.992	26.122	
1	8	5.996	8.13	612.139	26.252	
1	9	5.996	9.29	611.751	26.292	
1	10	5.996	10.45	612.525	25.408	
1	AVG			611.855	25.554	
2	1	6.387	0.00	610.622	23.963	
2	2	6.387	1.16	609.472	25.944	
2	3	6.387	2.32	610.268	26.163	
2	4	6.387	3.48	612.080	26.060	
2	5	6.387	4.65	612.976	26.053	
2	6	6.387	5.81	613.493	26.185	
2	7	6.387	6.97	613.355	26.136	
2	8	6.387	8.13	613.609	26.274	
2	9	6.387	9.29	612.212	26.235	
2	10	6.387	10.45	613.605	25.210	
2	AVG			612.188	25.857	
3	1	6.755	0.00	611.860	24.525	
3	2	6.755	1.16	611.280	26.273	
3	3	6.755	2.32	611.772	25.996	
3	4	6.755	3.48	613.703	26.048	
3	5	6.755	4.65	614.229	26.071	
3	6	6.755	5.81	616.137	26.229	
3	7	6.755	6.97	614.254	26.260	
3	8	6.755	8.13	614.628	26.332	
3	9	6.755	9.29	613.642	26.590	
3	10	6.755	10.45	614.014	24.972	
3	AVG			613.569	25.957	
4	1	7.104	0.00	611.926	24.428	
4	2	7.104	1.16	613.186	26.157	
4	3	7.104	2.32	611.763	26.170	
4	4	7.104	3.48	616.442	26.091	
4	5	7.104	4.65	615.818	26.015	
4	6	7.104	5.81	615.861	26.329	
4	7	7.104	6.97	615.338	26.262	
4	8	7.104	8.13	615.407	26.398	
4	9	7.104	9.29	614.117	26.667	
4	10	7.104	10.45	615.639	25.009	
4	AVG			614.572	25.984	

COMPRESSOR CONFIGURATION:FBS SCAN: 5 TEST ID:870828017
NOMINAL % DESIGN SPEED:090 THROTTLE:010

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	614.500	25.179	
5	2	7.437	1.16	615.666	26.074	
5	3	7.437	2.32	614.262	26.031	
5	4	7.437	3.48	616.508	25.909	
5	5	7.437	4.65	617.035	26.050	
5	6	7.437	5.81	617.661	26.227	
5	7	7.437	6.97	617.277	25.990	
5	8	7.437	8.13	617.171	26.116	
5	9	7.437	9.29	615.435	26.232	
5	10	7.437	10.45	616.650	24.708	
5	AVG			616.223	25.869	
6	1	7.756	0.00	617.574	25.209	
6	2	7.756	1.16	615.632	26.056	
6	3	7.756	2.32	616.037	26.195	
6	4	7.756	3.48	618.195	25.885	
6	5	7.756	4.65	619.367	25.949	
6	6	7.756	5.81	620.326	26.166	
6	7	7.756	6.97	619.622	26.055	
6	8	7.756	8.13	620.880	26.259	
6	9	7.756	9.29	621.258	26.270	
6	10	7.756	10.45	623.566	24.715	
6	AVG			619.212	25.894	
7	1	8.062	0.00	627.646	24.383	
7	2	8.062	1.16	620.168	25.956	
7	3	8.062	2.32	619.495	26.195	
7	4	8.062	3.48	621.151	25.809	
7	5	8.062	4.65	624.339	25.740	
7	6	8.062	5.81	627.115	26.038	
7	7	8.062	6.97	629.074	25.652	
7	8	8.062	8.13	631.948	25.918	
7	9	8.062	9.29	632.069	25.804	
7	10	8.062	10.45	637.119	24.705	
7	AVG			626.864	25.647	
8	1	8.356	0.00	641.999	24.593	
8	2	8.356	1.16	628.816	25.723	
8	3	8.356	2.32	629.676	26.195	
8	4	8.356	3.48	632.564	25.777	
8	5	8.356	4.65	638.819	25.395	
8	6	8.356	5.81	642.201	26.082	
8	7	8.356	6.97	644.656	25.649	
8	8	8.356	8.13	645.271	25.766	
8	9	8.356	9.29	645.916	25.906	
8	10	8.356	10.45	646.988	25.326	
8	AVG			639.589	25.657	

COMPRESSOR CONFIGURATION:PBS SCAN: 6 TEST ID:870828020
NOMINAL % DESIGN SPEED:090 THROTTLE:040
PERFORMANCE:
MEAS. WORK =1337.89 ISEN. EFFIC.= 89.427 POLYTROPIC EFFIC.=90.243
MEAS. FLOWR.= 37.374 CORR. FLOWR.= 56.214 COMPUTED FLOWRATE=54.681
MEASURED RPM=18656.0 CORR. RPM =18174.3 % DESIGN RPM = 89.87
SPEC. HEAT = 1.400 GAS CONSTANT= 53.351 PRESSURE RATIO = 1.771
D.P. TEMP. =450.089 P. COR. FAC.= 1.465 TEMP. COR. FACT. = .949
ATMOS. PRES.= 14.275 ATM.PRES.(S)= 14.276 REL. HUMIDITY = .022
CALIBRATION PRESSURES (SONIX)= 9.0018 14.2764 29.2774
VENTURI PRESSURES:
INLET (AVG=11.020,SONIX=11.020)= 11.016 11.024 11.025 11.015
THROAT (AVG= 9.938,SONIX= 9.938)= 9.943 9.934 9.943 9.934
9.939 9.937 9.939 9.938
9.939 9.939 9.939 9.938
PLENUM CONDITIONS:
PRESSURES (AVG=10.028,SONIX=10.012)= 10.033 10.024
TEMPERATURES (AVG=546.57)= 547.00 547.14 546.29 546.14 547.00
546.85 545.70 545.70 547.29
ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):
RADIUS = 8.125 7.750 7.375 7.000 6.625 6.250 5.875
5.500 5.125
PRESSURE = 26.320 26.276 25.569 ****** 26.674 ****** 26.301
26.260 26.188
RADIUS = 8.125 7.750 7.375 7.000 6.625 6.250 5.875
5.500 5.125
TEMPERATURE= 640.22 614.09 ****** 614.31 622.82 ****** ******
612.18 617.32
STATIC PRESSURES (CORRECTED):

----CASING----		-----HUB------	
X	P	X	P
-8.571	11.331	-5.125	16.212
-8.400	11.293	-5.125	16.084
-8.400	11.316	-5.125	16.430
-8.400	11.334	-5.125	16.068
-8.400	11.195	-1.650	19.464
-8.318	11.164	-1.650	19.881
-8.065	11.014	-1.650	19.801
-7.811	11.220	-1.650	19.021
-7.558	12.772	-.900	19.265
-7.304	******	-.900	19.891
-7.051	15.196	-.900	19.856
-6.798	******	-.900	19.422
-6.544	18.406		
-6.291	19.227		
-6.037	19.919		
-5.784	20.544		
-1.650	20.795		
-1.650	21.262		
-1.650	21.210		
-1.650	20.578		
-.900	20.130		
-.900	20.598		
-.900	20.490		
-.900	19.812		

COMPRESSOR CONFIGURATION:PBS SCAN: 6 TEST ID:870828020
NOMINAL % DESIGN SPEED:090 THROTTLE:040

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	613.685	24.884	
1	2	5.996	1.16	611.488	23.933	
1	3	5.996	2.32	610.569	25.328	
1	4	5.996	3.48	613.190	26.117	
1	5	5.996	4.65	611.003	26.171	
1	6	5.996	5.81	612.698	26.326	
1	7	5.996	6.97	612.467	26.208	
1	8	5.996	8.13	612.700	26.335	
1	9	5.996	9.29	612.357	26.405	
1	10	5.996	10.45	613.319	25.872	
1	AVG			612.359	25.807	
2	1	6.387	0.00	611.960	23.969	
2	2	6.387	1.16	611.175	25.852	
2	3	6.387	2.32	612.421	26.291	
2	4	6.387	3.48	614.223	26.345	
2	5	6.387	4.65	614.350	26.322	
2	6	6.387	5.81	615.519	26.459	
2	7	6.387	6.97	615.637	26.387	
2	8	6.387	8.13	615.661	26.533	
2	9	6.387	9.29	614.918	26.511	
2	10	6.387	10.45	614.983	25.490	
2	AVG			614.137	26.063	
3	1	6.755	0.00	616.112	24.292	
3	2	6.755	1.16	611.820	26.068	
3	3	6.755	2.32	614.024	26.598	
3	4	6.755	3.48	615.590	26.292	
3	5	6.755	4.65	616.350	26.369	
3	6	6.755	5.81	617.631	26.595	
3	7	6.755	6.97	615.728	26.498	
3	8	6.755	8.13	617.411	26.804	
3	9	6.755	9.29	616.085	26.890	
3	10	6.755	10.45	615.751	25.724	
3	AVG			615.657	26.255	
4	1	7.104	0.00	615.225	24.454	
4	2	7.104	1.16	614.462	26.568	
4	3	7.104	2.32	613.879	26.532	
4	4	7.104	3.48	617.592	26.533	
4	5	7.104	4.65	617.927	26.442	
4	6	7.104	5.81	618.722	26.760	
4	7	7.104	6.97	619.013	26.588	
4	8	7.104	8.13	618.110	26.800	
4	9	7.104	9.29	616.665	26.834	
4	10	7.104	10.45	617.762	25.450	
4	AVG			616.960	26.338	

COMPRESSOR CONFIGURATION:PBS SCAN: 6 TEST ID:870828020
NOMINAL % DESIGN SPEED:090 THROTTLE:040

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	618.153	24.829	
5	2	7.437	1.16	619.122	26.533	
5	3	7.437	2.32	616.757	26.550	
5	4	7.437	3.48	618.717	26.311	
5	5	7.437	4.65	619.346	26.426	
5	6	7.437	5.81	619.962	26.657	
5	7	7.437	6.97	619.309	26.356	
5	8	7.437	8.13	619.837	26.622	
5	9	7.437	9.29	618.496	26.826	
5	10	7.437	10.45	619.708	25.261	
5	AVG			618.943	26.269	
6	1	7.756	0.00	621.277	24.933	
6	2	7.756	1.16	618.857	26.566	
6	3	7.756	2.32	618.134	26.515	
6	4	7.756	3.48	621.397	26.372	
6	5	7.756	4.65	621.536	26.489	
6	6	7.756	5.81	623.404	26.787	
6	7	7.756	6.97	622.683	26.652	
6	8	7.756	8.13	623.743	26.863	
6	9	7.756	9.29	625.029	26.755	
6	10	7.756	10.45	630.104	25.150	
6	AVG			622.551	26.343	
7	1	8.062	0.00	633.378	24.859	
7	2	8.062	1.16	624.205	26.304	
7	3	8.062	2.32	621.724	26.515	
7	4	8.062	3.48	623.640	26.414	
7	5	8.062	4.65	627.298	26.442	
7	6	8.062	5.81	630.798	26.750	
7	7	8.062	6.97	634.169	26.554	
7	8	8.062	8.13	636.947	26.779	
7	9	8.062	9.29	637.211	26.693	
7	10	8.062	10.45	642.197	25.426	
7	AVG			631.034	26.304	
8	1	8.356	0.00	645.830	25.188	
8	2	8.356	1.16	634.253	26.393	
8	3	8.356	2.32	632.646	26.515	
8	4	8.356	3.48	638.058	26.421	
8	5	8.356	4.65	642.439	26.156	
8	6	8.356	5.81	645.692	26.640	
8	7	8.356	6.97	648.774	26.384	
8	8	8.356	8.13	649.423	26.495	
8	9	8.356	9.29	649.563	26.585	
8	10	8.356	10.45	650.103	26.145	
8	AVG			643.620	26.306	

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COMPRESSOR CONFIGURATION:PBS       SCAN: 12          TEST ID:870901020
NOMINAL % DESIGN SPEED:090         THROTTLE:035
PERFORMANCE:
MEAS. WORK  =1318.02  ISEN. EFFIC.= 88.506  POLYTROPIC EFFIC.=89.410
MEAS. FLOWR.= 36.182  CORR. FLOWR.= 55.390  COMPUTED FLOWRATE=53.842
MEASURED RPM=18540.0  CORR. RPM   =18184.0  % DESIGN RPM      = 89.92
SPEC. HEAT  = 1.400   GAS CONSTANT= 53.351  PRESSURE RATIO    = 1.791
D.P. TEMP.  =449.968  P. COR. FAC.= 1.501   TEMP. COR. FACT.  =  .962
ATMOS. PRES.= 14.332  ATM.PRES.(S)= 14.332  REL. HUMIDITY     =  .028
CALIBRATION PRESSURES (SONIX)=   9.0025  14.3330  29.3376
VENTURI PRESSURES:
   INLET  (AVG=10.722,SONIX=10.722)=  10.725  10.724  10.720  10.719
   THROAT (AVG= 9.703,SONIX= 9.703)=   9.700   9.696   9.700   9.696
                                       9.707   9.705   9.704   9.706
                                       9.704   9.704   9.705   9.705
PLENUM CONDITIONS:
   PRESSURES     (AVG= 9.787,SONIX= 9.774)=   9.782   9.791
   TEMPERATURES (AVG=539.22)= 539.72 540.01 539.01 538.72 539.57
                              539.28 538.28 538.22 540.16
ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):
   RADIUS      =  8.125  7.750  7.375  7.000  6.625  6.250  5.875
                  5.500  5.125
   PRESSURE    = 26.893 26.768 25.852 ****** 26.912 ****** 26.471
                 26.523 26.367
   RADIUS      =  8.125  7.750  7.375  7.000  6.625  6.250  5.875
                  5.500  5.125
   TEMPERATURE= 645.17 615.82 ****** 616.46 624.88 ****** ******
                612.70 618.81
STATIC PRESSURES (CORRECTED):
 ----CASING----  -----HUB------
   X       P       X       P
-8.571  11.488  -5.125  16.415
-8.400  11.475  -5.125  16.304
-8.400  11.538  -5.125  16.637
-8.400  11.585  -5.125  16.286
-8.400  11.399  -1.650  20.134
-8.318  11.360  -1.650  20.526
-8.065  11.197  -1.650  20.454
-7.811  11.520  -1.650  19.733
-7.558  13.961   -.900  19.965
-7.304  ******   -.900  20.532
-7.051  15.767   -.900  20.483
-6.798  ******   -.900  20.098
-6.544  19.025
-6.291  19.736
-6.037  20.302
-5.784  20.887
-1.650  21.328
-1.650  21.774
-1.650  21.738
-1.650  21.087
 -.900  20.720
 -.900  21.188
 -.900  21.093
 -.900  20.407
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COMPRESSOR CONFIGURATION:PBS SCAN: 12 TEST ID:870901020
NOMINAL % DESIGN SPEED:090 THROTTLE:035

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	613.312	25.303	
1	2	5.996	1.16	611.345	24.251	
1	3	5.996	2.32	611.235	25.207	
1	4	5.996	3.48	614.182	26.290	
1	5	5.996	4.65	612.000	26.307	
1	6	5.996	5.81	613.460	26.497	
1	7	5.996	6.97	613.191	26.468	
1	8	5.996	8.13	613.320	26.457	
1	9	5.996	9.29	612.866	26.588	
1	10	5.996	10.45	613.860	26.062	
1	AVG			612.918	25.992	
2	1	6.387	0.00	614.273	24.307	
2	2	6.387	1.16	612.020	25.948	
2	3	6.387	2.32	614.818	26.330	
2	4	6.387	3.48	616.173	26.616	
2	5	6.387	4.65	615.518	26.649	
2	6	6.387	5.81	615.676	26.786	
2	7	6.387	6.97	616.962	26.711	
2	8	6.387	8.13	617.244	26.791	
2	9	6.387	9.29	616.362	26.829	
2	10	6.387	10.45	616.227	25.824	
2	AVG			615.574	26.328	
3	1	6.755	0.00	617.906	24.480	
3	2	6.755	1.16	613.405	25.410	
3	3	6.755	2.32	617.772	26.377	
3	4	6.755	3.48	618.859	26.582	
3	5	6.755	4.65	618.068	26.514	
3	6	6.755	5.81	620.083	26.809	
3	7	6.755	6.97	617.983	26.758	
3	8	6.755	8.13	618.007	26.885	
3	9	6.755	9.29	617.152	27.096	
3	10	6.755	10.45	616.485	26.033	
3	AVG			617.615	26.345	
4	1	7.104	0.00	620.660	24.572	
4	2	7.104	1.16	614.693	26.038	
4	3	7.104	2.32	616.117	26.616	
4	4	7.104	3.48	619.759	26.662	
4	5	7.104	4.65	619.501	26.715	
4	6	7.104	5.81	620.090	26.991	
4	7	7.104	6.97	620.858	26.939	
4	8	7.104	8.13	620.279	27.310	
4	9	7.104	9.29	618.858	27.235	
4	10	7.104	10.45	620.629	26.292	
4	AVG			619.143	26.587	

COMPRESSOR CONFIGURATION:PBS SCAN: 12 TEST ID:870901020
NOMINAL % DESIGN SPEED:090 THROTTLE:035

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	623.005	24.710	
5	2	7.437	1.16	618.949	26.635	
5	3	7.437	2.32	617.672	26.806	
5	4	7.437	3.48	620.663	26.755	
5	5	7.437	4.65	622.488	26.681	
5	6	7.437	5.81	622.292	27.040	
5	7	7.437	6.97	621.629	26.913	
5	8	7.437	8.13	624.341	27.012	
5	9	7.437	9.29	621.946	27.140	
5	10	7.437	10.45	622.991	25.947	
5	AVG			621.568	26.607	
6	1	7.756	0.00	630.076	24.604	
6	2	7.756	1.16	622.943	26.575	
6	3	7.756	2.32	622.896	26.999	
6	4	7.756	3.48	624.120	26.678	
6	5	7.756	4.65	624.020	26.827	
6	6	7.756	5.81	627.212	27.251	
6	7	7.756	6.97	628.477	26.958	
6	8	7.756	8.13	629.336	27.195	
6	9	7.756	9.29	630.506	27.120	
6	10	7.756	10.45	636.854	25.630	
6	AVG			627.505	26.641	
7	1	8.062	0.00	641.400	24.775	
7	2	8.062	1.16	631.208	26.303	
7	3	8.062	2.32	624.536	26.928	
7	4	8.062	3.48	627.300	26.562	
7	5	8.062	4.65	632.511	26.974	
7	6	8.062	5.81	635.405	27.250	
7	7	8.062	6.97	638.681	26.930	
7	8	8.062	8.13	640.637	27.243	
7	9	8.062	9.29	642.058	27.333	
7	10	8.062	10.45	647.585	25.939	
7	AVG			635.976	26.674	
8	1	8.356	0.00	652.106	25.518	
8	2	8.356	1.16	641.049	26.599	
8	3	8.356	2.32	637.472	26.962	
8	4	8.356	3.48	641.919	26.809	
8	5	8.356	4.65	646.934	26.617	
8	6	8.356	5.81	650.663	27.228	
8	7	8.356	6.97	653.193	26.841	
8	8	8.356	8.13	654.186	26.914	
8	9	8.356	9.29	655.679	27.099	
8	10	8.356	10.45	656.190	26.555	
8	AVG			648.886	26.732	

COMPRESSOR CONFIGURATION:PBS SCAN: 13 TEST ID:870901021
NOMINAL % DESIGN SPEED:090 THROTTLE:045
PERFORMANCE:

MEAS. WORK =1316.23	ISEN. EFFIC.= 87.465	POLYTROPIC EFFIC.=88.453
MEAS. FLOWR.= 35.569	CORR. FLOWR.= 54.493	COMPUTED FLOWRATE=53.000
MEASURED RPM=18516.0	CORR. RPM =18163.4	% DESIGN RPM = 89.82
SPEC. HEAT = 1.400	GAS CONSTANT= 53.351	PRESSURE RATIO = 1.794
D.P. TEMP. =449.968	P. COR. FAC.= 1.503	TEMP. COR. FACT. = .962
ATMOS. PRES.= 14.334	ATM.PRES.(S)= 14.333	REL. HUMIDITY = .028

CALIBRATION PRESSURES (SONIX)= 9.0042 14.3339 29.3386
VENTURI PRESSURES:

INLET (AVG=10.681,SONIX=10.681)=	10.680	10.680	10.677	10.687	
THROAT (AVG= 9.697,SONIX= 9.697)=	9.692	9.697	9.692	9.697	
	9.699	9.696	9.698	9.697	
	9.697	9.697	9.699	9.698	

PLENUM CONDITIONS:

PRESSURES (AVG= 9.777,SONIX= 9.760)=	9.773	9.781				
TEMPERATURES (AVG=539.04)=	539.61	539.90	539.05	538.61	539.34	
	539.05	538.19	537.75	539.90		

ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):

RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
PRESSURE =	27.066	26.946	26.025	******	26.989	******	26.601
	26.516	26.350					
RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
TEMPERATURE=	647.55	616.34	******	618.05	626.54	******	******
	612.48	618.82					

STATIC PRESSURES (CORRECTED):

-----CASING-----		-----HUB------	
X	P	X	P
-8.571	11.640	-5.125	16.514
-8.400	11.635	-5.125	16.403
-8.400	11.717	-5.125	16.743
-8.400	11.770	-5.125	16.380
-8.400	11.582	-1.650	20.432
-8.318	11.514	-1.650	20.786
-8.065	11.314	-1.650	20.738
-7.811	11.728	-1.650	20.054
-7.558	14.968	-.900	20.276
-7.304	******	-.900	20.835
-7.051	16.186	-.900	20.815
-6.798	******	-.900	20.416
-6.544	19.353		
-6.291	20.068		
-6.037	20.480		
-5.784	21.090		
-1.650	21.574		
-1.650	21.983		
-1.650	21.928		
-1.650	21.317		
-.900	21.002		
-.900	21.426		
-.900	21.345		
-.900	20.688		

COMPRESSOR CONFIGURATION:PBS SCAN: 13 TEST ID:870901021
NOMINAL % DESIGN SPEED:090 THROTTLE:045

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	612.873	25.346	
1	2	5.996	1.16	610.774	24.310	
1	3	5.996	2.32	611.520	25.027	
1	4	5.996	3.48	614.038	26.317	
1	5	5.996	4.65	611.991	26.350	
1	6	5.996	5.81	613.688	26.524	
1	7	5.996	6.97	613.171	26.450	
1	8	5.996	8.13	613.807	26.468	
1	9	5.996	9.29	613.040	26.634	
1	10	5.996	10.45	613.826	26.136	
1	AVG			612.932	26.010	
2	1	6.387	0.00	615.172	24.492	
2	2	6.387	1.16	612.328	25.788	
2	3	6.387	2.32	616.034	26.152	
2	4	6.387	3.48	617.697	26.692	
2	5	6.387	4.65	617.050	26.656	
2	6	6.387	5.81	617.348	26.813	
2	7	6.387	6.97	617.207	26.774	
2	8	6.387	8.13	617.222	26.849	
2	9	6.387	9.29	616.686	26.919	
2	10	6.387	10.45	616.058	25.881	
2	AVG			616.339	26.349	
3	1	6.755	0.00	618.555	24.582	
3	2	6.755	1.16	613.647	25.046	
3	3	6.755	2.32	618.523	25.764	
3	4	6.755	3.48	620.428	26.671	
3	5	6.755	4.65	618.462	26.639	
3	6	6.755	5.81	620.860	26.815	
3	7	6.755	6.97	619.677	26.803	
3	8	6.755	8.13	620.087	26.976	
3	9	6.755	9.29	617.200	27.105	
3	10	6.755	10.45	618.043	26.059	
3	AVG			618.626	26.308	
4	1	7.104	0.00	621.826	24.782	
4	2	7.104	1.16	616.057	25.429	
4	3	7.104	2.32	619.020	26.366	
4	4	7.104	3.48	621.848	26.673	
4	5	7.104	4.65	621.057	26.726	
4	6	7.104	5.81	620.495	27.134	
4	7	7.104	6.97	619.837	27.063	
4	8	7.104	8.13	621.017	27.205	
4	9	7.104	9.29	619.719	27.420	
4	10	7.104	10.45	620.948	26.335	
4	AVG			620.200	26.570	

COMPRESSOR CONFIGURATION:PBS SCAN: 13 TEST ID:870901021
NOMINAL % DESIGN SPEED:090 THROTTLE:045

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	625.617	24.750	
5	2	7.437	1.16	619.665	26.362	
5	3	7.437	2.32	619.218	26.771	
5	4	7.437	3.48	622.093	26.813	
5	5	7.437	4.65	622.370	26.865	
5	6	7.437	5.81	623.620	27.308	
5	7	7.437	6.97	625.099	26.987	
5	8	7.437	8.13	625.715	27.248	
5	9	7.437	9.29	624.086	27.274	
5	10	7.437	10.45	625.751	26.230	
5	AVG			623.293	26.709	
6	1	7.756	0.00	634.612	24.609	
6	2	7.756	1.16	624.758	26.150	
6	3	7.756	2.32	620.785	26.805	
6	4	7.756	3.48	623.484	26.736	
6	5	7.756	4.65	625.924	26.869	
6	6	7.756	5.81	628.663	27.311	
6	7	7.756	6.97	630.239	27.067	
6	8	7.756	8.13	631.783	27.235	
6	9	7.756	9.29	632.904	27.329	
6	10	7.756	10.45	640.418	25.836	
6	AVG			629.177	26.657	
7	1	8.062	0.00	644.483	24.657	
7	2	8.062	1.16	634.029	25.952	
7	3	8.062	2.32	627.974	26.877	
7	4	8.062	3.48	630.377	26.702	
7	5	8.062	4.65	634.363	26.848	
7	6	8.062	5.81	638.777	27.465	
7	7	8.062	6.97	641.469	27.188	
7	8	8.062	8.13	642.465	27.329	
7	9	8.062	9.29	644.539	27.596	
7	10	8.062	10.45	650.270	26.154	
7	AVG			638.754	26.744	
8	1	8.356	0.00	656.622	25.605	
8	2	8.356	1.16	645.433	26.472	
8	3	8.356	2.32	640.030	27.024	
8	4	8.356	3.48	644.863	26.926	
8	5	8.356	4.65	648.421	26.795	
8	6	8.356	5.81	652.228	27.492	
8	7	8.356	6.97	655.457	27.060	
8	8	8.356	8.13	656.336	27.179	
8	9	8.356	9.29	657.645	27.304	
8	10	8.356	10.45	658.769	26.741	
8	AVG			651.534	26.882	

```
COMPRESSOR CONFIGURATION:PBS        SCAN: 14          TEST ID:870901023
NOMINAL % DESIGN SPEED:090          THROTTLE:065
PERFORMANCE:
MEAS. WORK  =1314.87   ISEN. EFFIC.= 85.023   POLYTROPIC EFFIC.=86.214
MEAS. FLOWR.= 34.226   CORR. FLOWR.= 52.709   COMPUTED FLOWRATE=51.285
MEASURED RPM=18522.0   CORR. RPM   =18189.9   % DESIGN RPM      = 89.95
SPEC. HEAT  = 1.400    GAS CONSTANT= 53.351   PRESSURE RATIO    = 1.805
D.P. TEMP.  =449.877   P. COR. FAC.= 1.512    TEMP. COR. FACT.  = .964
ATMOS. PRES.= 14.333   ATM.PRES.(S)= 14.333   REL. HUMIDITY     = .029
CALIBRATION PRESSURES (SONIX)=   9.0023  14.3334  29.3361
VENTURI PRESSURES:
   INLET  (AVG=10.558,SONIX=10.559)=  10.559  10.556  10.553  10.562
   THROAT (AVG= 9.645,SONIX= 9.651)=   9.648   9.639   9.648   9.639
                                       9.648   9.647   9.644   9.647
                                       9.645   9.645   9.647   9.647
PLENUM CONDITIONS:
   PRESSURES     (AVG= 9.716,SONIX= 9.706)=   9.717   9.714
   TEMPERATURES (AVG=537.82)= 538.51 538.80 537.95 537.36 537.95
                              537.80 536.95 536.62 538.45
ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):
   RADIUS      =  8.125  7.750  7.375  7.000  6.625  6.250  5.875
                  5.500  5.125
   PRESSURE    = 27.222 27.160 26.413 ****** 27.097 ****** 27.072
                 26.554 26.512
   RADIUS      =  8.125  7.750  7.375  7.000  6.625  6.250  5.875
                  5.500  5.125
   TEMPERATURE= 656.14 619.56 ****** 619.83 629.49 ****** ******
                613.34 622.30
STATIC PRESSURES (CORRECTED):
 ----CASING----  -----HUB------
   X       P       X       P
-8.571  12.063  -5.125  16.769
-8.400  12.016  -5.125  16.631
-8.400  12.021  -5.125  16.945
-8.400  12.157  -5.125  16.604
-8.400  11.957  -1.650  21.066
-8.318  11.941  -1.650  21.281
-8.065  11.708  -1.650  21.320
-7.811  12.197  -1.650  20.692
-7.558  16.700   -.900  20.912
-7.304  ******   -.900  21.393
-7.051  17.388   -.900  21.396
-6.798  ******   -.900  21.048
-6.544  20.013
-6.291  20.718
-6.037  20.854
-5.784  21.543
-1.650  22.018
-1.650  22.377
-1.650  22.303
-1.650  21.775
 -.900  21.546
 -.900  21.945
 -.900  21.859
 -.900  21.256
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COMPRESSOR CONFIGURATION:PBS SCAN: 14 TEST ID:870901023
NOMINAL % DESIGN SPEED:090 THROTTLE:065

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	612.932	25.488	
1	2	5.996	1.16	611.700	24.465	
1	3	5.996	2.32	611.525	24.661	
1	4	5.996	3.48	613.404	26.369	
1	5	5.996	4.65	613.206	26.533	
1	6	5.996	5.81	614.010	26.707	
1	7	5.996	6.97	613.873	26.683	
1	8	5.996	8.13	614.758	26.635	
1	9	5.996	9.29	613.762	26.802	
1	10	5.996	10.45	614.656	26.236	
1	AVG			613.463	26.131	
2	1	6.387	0.00	617.430	25.147	
2	2	6.387	1.16	615.795	25.269	
2	3	6.387	2.32	615.065	25.481	
2	4	6.387	3.48	619.332	26.888	
2	5	6.387	4.65	619.509	27.089	
2	6	6.387	5.81	619.660	27.170	
2	7	6.387	6.97	617.687	27.189	
2	8	6.387	8.13	620.447	27.212	
2	9	6.387	9.29	618.247	27.375	
2	10	6.387	10.45	619.247	26.028	
2	AVG			618.340	26.555	
3	1	6.755	0.00	619.870	25.080	
3	2	6.755	1.16	617.379	24.640	
3	3	6.755	2.32	619.634	25.185	
3	4	6.755	3.48	622.045	26.873	
3	5	6.755	4.65	622.864	26.940	
3	6	6.755	5.81	621.338	27.210	
3	7	6.755	6.97	622.504	27.136	
3	8	6.755	8.13	621.219	27.287	
3	9	6.755	9.29	620.738	27.491	
3	10	6.755	10.45	620.888	26.456	
3	AVG			620.974	26.531	
4	1	7.104	0.00	623.622	25.443	
4	2	7.104	1.16	619.146	24.561	
4	3	7.104	2.32	619.234	24.839	
4	4	7.104	3.48	622.928	26.733	
4	5	7.104	4.65	624.121	26.944	
4	6	7.104	5.81	622.525	27.342	
4	7	7.104	6.97	624.099	27.339	
4	8	7.104	8.13	624.233	27.480	
4	9	7.104	9.29	622.438	27.651	
4	10	7.104	10.45	625.195	26.733	
4	AVG			622.912	26.625	

COMPRESSOR CONFIGURATION:PBS SCAN: 14 TEST ID:870901023
NOMINAL % DESIGN SPEED:090 THROTTLE:065

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	633.841	25.480	
5	2	7.437	1.16	623.643	24.810	
5	3	7.437	2.32	622.194	25.561	
5	4	7.437	3.48	626.021	26.843	
5	5	7.437	4.65	624.514	27.017	
5	6	7.437	5.81	625.767	27.480	
5	7	7.437	6.97	626.718	27.189	
5	8	7.437	8.13	628.368	27.436	
5	9	7.437	9.29	628.515	27.630	
5	10	7.437	10.45	632.656	26.675	
5	AVG			627.257	26.699	
6	1	7.756	0.00	643.472	24.917	
6	2	7.756	1.16	627.340	24.950	
6	3	7.756	2.32	625.100	25.880	
6	4	7.756	3.48	627.760	26.919	
6	5	7.756	4.65	628.879	27.019	
6	6	7.756	5.81	631.813	27.599	
6	7	7.756	6.97	634.666	27.390	
6	8	7.756	8.13	639.664	27.611	
6	9	7.756	9.29	640.752	27.665	
6	10	7.756	10.45	652.086	26.406	
6	AVG			635.146	26.738	
7	1	8.062	0.00	651.331	24.988	
7	2	8.062	1.16	637.815	25.121	
7	3	8.062	2.32	635.038	26.113	
7	4	8.062	3.48	636.847	27.017	
7	5	8.062	4.65	639.403	27.107	
7	6	8.062	5.81	642.560	27.826	
7	7	8.062	6.97	646.205	27.392	
7	8	8.062	8.13	651.049	27.706	
7	9	8.062	9.29	651.936	27.875	
7	10	8.062	10.45	658.693	26.876	
7	AVG			645.195	26.901	
8	1	8.356	0.00	665.639	25.916	
8	2	8.356	1.16	653.224	25.900	
8	3	8.356	2.32	650.557	26.755	
8	4	8.356	3.48	653.974	26.900	
8	5	8.356	4.65	653.315	27.216	
8	6	8.356	5.81	657.279	28.023	
8	7	8.356	6.97	659.309	27.660	
8	8	8.356	8.13	662.955	27.717	
8	9	8.356	9.29	664.149	27.923	
8	10	8.356	10.45	666.280	27.647	
8	AVG			658.748	27.215	

COMPRESSOR CONFIGURATION:PBS SCAN: 15 TEST ID:870901024
NOMINAL % DESIGN SPEED:090 THROTTLE:075
PERFORMANCE:

MEAS. WORK =1307.51	ISEN. EFFIC.= 82.555	POLYTROPIC EFFIC.=83.934
MEAS. FLOWR.= 33.260	CORR. FLOWR.= 51.126	COMPUTED FLOWRATE=49.758
MEASURED RPM=18508.0	CORR. RPM =18185.4	% DESIGN RPM = 89.93
SPEC. HEAT = 1.400	GAS CONSTANT= 53.351	PRESSURE RATIO = 1.799
D.P. TEMP. =449.877	P. COR. FAC.= 1.510	TEMP. COR. FACT. = .965
ATMOS. PRES.= 14.329	ATM.PRES.(S)= 14.332	REL. HUMIDITY = .029

CALIBRATION PRESSURES (SONIX)= 9.0042 14.3323 29.3373
VENTURI PRESSURES:

INLET (AVG=10.521,SONIX=10.522)=	10.528	10.515	10.520	10.522
THROAT (AVG= 9.664,SONIX= 9.663)=	9.660	9.663	9.660	9.663
	9.666	9.665	9.666	9.666
	9.663	9.663	9.665	9.664

PLENUM CONDITIONS:

PRESSURES (AVG= 9.729,SONIX= 9.718)=	9.730	9.728					
TEMPERATURES (AVG=537.28)=	537.96	538.05	537.46	536.76	537.46		
	537.20	536.46	536.17	537.96			

ROTOR 1 DISCHARGE CONDITIONS (CORRECTED):

RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
PRESSURE =	27.667	27.123	26.540	******	27.336	******	27.064
	26.514	26.523					
RADIUS =	8.125	7.750	7.375	7.000	6.625	6.250	5.875
	5.500	5.125					
TEMPERATURE=	660.70	622.55	******	620.23	633.39	******	******
	613.37	625.50					

STATIC PRESSURES (CORRECTED):

----CASING----		-----HUB------	
X	P	X	P
-8.571	12.382	-5.125	16.845
-8.400	12.345	-5.125	16.714
-8.400	12.381	-5.125	17.021
-8.400	12.460	-5.125	16.675
-8.400	12.276	-1.650	21.281
-8.318	12.296	-1.650	21.423
-8.065	12.096	-1.650	21.476
-7.811	12.559	-1.650	20.916
-7.558	17.155	-.900	21.142
-7.304	******	-.900	21.584
-7.051	18.076	-.900	21.597
-6.798	******	-.900	21.269
-6.544	20.474		
-6.291	21.054		
-6.037	21.035		
-5.784	21.698		
-1.650	22.116		
-1.650	22.448		
-1.650	22.355		
-1.650	21.857		
-.900	21.680		
-.900	22.081		
-.900	21.977		
-.900	21.452		

COMPRESSOR CONFIGURATION:PBS SCAN: 15 TEST ID:870901024
NOMINAL % DESIGN SPEED:090 THROTTLE:075

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
1	1	5.996	0.00	613.744	25.335	
1	2	5.996	1.16	613.344	24.379	
1	3	5.996	2.32	611.540	24.422	
1	4	5.996	3.48	613.557	26.494	
1	5	5.996	4.65	614.090	26.630	
1	6	5.996	5.81	614.639	26.720	
1	7	5.996	6.97	614.363	26.669	
1	8	5.996	8.13	615.509	26.599	
1	9	5.996	9.29	614.199	26.885	
1	10	5.996	10.45	615.203	26.232	
1	AVG			614.099	26.132	
2	1	6.387	0.00	618.705	25.073	
2	2	6.387	1.16	617.284	25.132	
2	3	6.387	2.32	614.105	25.299	
2	4	6.387	3.48	618.783	26.839	
2	5	6.387	4.65	620.308	27.199	
2	6	6.387	5.81	619.252	27.150	
2	7	6.387	6.97	619.007	27.259	
2	8	6.387	8.13	620.424	27.111	
2	9	6.387	9.29	618.139	27.343	
2	10	6.387	10.45	620.058	26.069	
2	AVG			618.699	26.531	
3	1	6.755	0.00	622.094	25.076	
3	2	6.755	1.16	619.011	24.496	
3	3	6.755	2.32	620.373	24.643	
3	4	6.755	3.48	622.120	26.618	
3	5	6.755	4.65	626.499	27.035	
3	6	6.755	5.81	624.909	27.360	
3	7	6.755	6.97	624.783	27.390	
3	8	6.755	8.13	623.487	27.454	
3	9	6.755	9.29	622.684	27.941	
3	10	6.755	10.45	624.460	26.477	
3	AVG			623.248	26.600	
4	1	7.104	0.00	626.308	25.407	
4	2	7.104	1.16	622.414	24.106	
4	3	7.104	2.32	618.337	24.025	
4	4	7.104	3.48	622.669	26.313	
4	5	7.104	4.65	626.031	26.790	
4	6	7.104	5.81	624.872	27.271	
4	7	7.104	6.97	626.784	27.238	
4	8	7.104	8.13	624.758	27.360	
4	9	7.104	9.29	624.605	27.712	
4	10	7.104	10.45	627.061	26.680	
4	AVG			624.637	26.474	

COMPRESSOR CONFIGURATION:PBS SCAN: 15 TEST ID:870901024
NOMINAL % DESIGN SPEED:090 THROTTLE:075

DISCHARGE CONDITIONS (CORRECTED):

PROBE	RAKE	RADIUS	ANGLE	TOTAL TEMP.	TOTAL PRES.	FLOW ANGLE
5	1	7.437	0.00	638.910	25.491	
5	2	7.437	1.16	630.797	24.347	
5	3	7.437	2.32	622.946	24.590	
5	4	7.437	3.48	626.955	26.499	
5	5	7.437	4.65	626.127	26.723	
5	6	7.437	5.81	626.247	27.252	
5	7	7.437	6.97	627.483	27.092	
5	8	7.437	8.13	630.695	27.330	
5	9	7.437	9.29	631.858	27.816	
5	10	7.437	10.45	639.629	26.586	
5	AVG			630.172	26.512	
6	1	7.756	0.00	651.380	24.851	
6	2	7.756	1.16	633.106	24.373	
6	3	7.756	2.32	628.222	24.876	
6	4	7.756	3.48	631.853	26.439	
6	5	7.756	4.65	630.565	26.829	
6	6	7.756	5.81	632.441	27.429	
6	7	7.756	6.97	635.947	27.431	
6	8	7.756	8.13	642.654	27.557	
6	9	7.756	9.29	645.391	27.796	
6	10	7.756	10.45	661.573	26.611	
6	AVG			639.388	26.579	
7	1	8.062	0.00	660.804	24.969	
7	2	8.062	1.16	644.918	24.664	
7	3	8.062	2.32	639.256	25.000	
7	4	8.062	3.48	640.740	26.410	
7	5	8.062	4.65	639.134	26.932	
7	6	8.062	5.81	644.617	27.617	
7	7	8.062	6.97	648.415	27.388	
7	8	8.062	8.13	653.242	27.558	
7	9	8.062	9.29	654.572	27.968	
7	10	8.062	10.45	667.140	27.367	
7	AVG			649.458	26.738	
8	1	8.356	0.00	670.767	26.043	
8	2	8.356	1.16	658.481	25.573	
8	3	8.356	2.32	655.789	25.998	
8	4	8.356	3.48	659.435	26.682	
8	5	8.356	4.65	655.732	27.212	
8	6	8.356	5.81	659.322	27.848	
8	7	8.356	6.97	662.051	27.828	
8	8	8.356	8.13	663.816	27.785	
8	9	8.356	9.29	665.277	28.153	
8	10	8.356	10.45	673.984	27.962	
8	AVG			662.592	27.186	

APPENDIX B

870901001 - PBS ROTOR #1 AERODYNAMIC ANALYSIS - THRU-BLADE

FREE STATION 1.000 IS INDEX 1

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	13.300	-18.450	181.5	241.1	0.0	241.1	518.71	513.87
2	12.536	-18.450	187.3	241.1	0.0	241.1	518.71	513.87
3	11.790	-18.450	193.1	241.1	0.0	241.1	518.71	513.87
4	11.061	-18.450	198.6	241.1	0.0	241.1	518.71	513.87
5	10.346	-18.450	203.9	241.1	0.0	241.1	518.71	513.87
6	9.646	-18.450	208.9	241.1	0.0	241.1	518.71	513.87
7	8.957	-18.450	213.6	241.1	0.0	241.1	518.71	513.87
8	8.280	-18.450	217.8	241.1	0.0	241.1	518.71	513.87
9	7.612	-18.450	221.7	241.1	0.0	241.1	518.71	513.87
10	6.953	-18.450	225.2	241.1	0.0	241.1	518.71	513.87
11	6.301	-18.450	228.3	241.1	0.0	241.1	518.71	513.87
12	5.655	-18.450	231.0	241.1	0.0	241.1	518.71	513.87
13	5.015	-18.450	233.3	241.1	0.0	241.1	518.71	513.87
14	4.380	-18.450	235.3	241.1	0.0	241.1	518.71	513.87
15	3.748	-18.450	236.9	241.1	0.0	241.1	518.71	513.87
16	3.119	-18.450	238.3	241.1	0.0	241.1	518.71	513.87
17	2.493	-18.450	239.3	241.1	0.0	241.1	518.71	513.87
18	1.868	-18.450	240.1	241.1	0.0	241.1	518.71	513.87
19	1.245	-18.450	240.6	241.1	0.0	241.1	518.71	513.87
20	.622	-18.450	241.0	241.1	0.0	241.1	518.71	513.87
21	.000	-18.450	241.1	241.1	0.0	241.1	518.71	513.87

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	13.300	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
2	12.536	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
3	11.790	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
4	11.061	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
5	10.346	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
6	9.646	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
7	8.957	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
8	8.280	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
9	7.612	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
10	6.953	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
11	6.301	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
12	5.655	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
13	5.015	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
14	4.380	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
15	3.748	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
16	3.119	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
17	2.493	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
18	1.868	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
19	1.245	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
20	.622	14.69	14.22	1.0000	1.0000	241.1	.217	.2169
21	.000	14.69	14.22	1.0000	1.0000	241.1	.217	.2169

FREE STATION 1.000 IS INDEX 1

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	13.300	-18.450	0.00	-41.16	0.0000	.0747	0.0000
2	12.536	-18.450	0.00	-39.00	0.0000	.0747	0.0000
3	11.790	-18.450	0.00	-36.77	0.0000	.0747	0.0000
4	11.061	-18.450	0.00	-34.51	0.0000	.0747	0.0000
5	10.346	-18.450	0.00	-32.22	0.0000	.0747	0.0000
6	9.646	-18.450	0.00	-29.93	0.0000	.0747	0.0000
7	8.957	-18.450	0.00	-27.63	0.0000	.0747	0.0000
8	8.280	-18.450	0.00	-25.36	0.0000	.0747	0.0000
9	7.612	-18.450	0.00	-23.11	0.0000	.0747	0.0000
10	6.953	-18.450	0.00	-20.90	0.0000	.0747	0.0000
11	6.301	-18.450	0.00	-18.74	0.0000	.0747	0.0000
12	5.655	-18.450	0.00	-16.62	0.0000	.0747	0.0000
13	5.015	-18.450	0.00	-14.56	0.0000	.0747	0.0000
14	4.380	-18.450	0.00	-12.55	0.0000	.0747	0.0000
15	3.748	-18.450	0.00	-10.61	0.0000	.0747	0.0000
16	3.119	-18.450	0.00	-8.73	0.0000	.0747	0.0000
17	2.493	-18.450	0.00	-6.91	0.0000	.0747	0.0000
18	1.868	-18.450	0.00	-5.14	0.0000	.0747	0.0000
19	1.245	-18.450	0.00	-3.41	0.0000	.0747	0.0000
20	.622	-18.450	0.00	-1.71	0.0000	.0747	0.0000
21	.000	-18.450	0.00	0.00	0.0000	.0747	0.0000

FREE STATION 2.000 IS INDEX 2

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	9.480	-14.081	453.7	540.8	0.0	540.8	518.71	494.34
2	9.030	-14.120	456.8	530.5	0.0	530.5	518.71	495.25
3	8.583	-14.158	456.9	518.8	0.0	518.8	518.71	496.28
4	8.137	-14.197	454.7	506.3	0.0	506.3	518.71	497.34
5	7.690	-14.235	450.9	493.7	0.0	493.7	518.71	498.40
6	7.242	-14.274	446.1	481.1	0.0	481.1	518.71	499.42
7	6.791	-14.313	440.5	468.8	0.0	468.8	518.71	500.39
8	6.338	-14.352	434.3	456.9	0.0	456.9	518.71	501.31
9	5.880	-14.392	427.7	445.6	0.0	445.6	518.71	502.16
10	5.418	-14.432	420.9	434.7	0.0	434.7	518.71	502.96
11	4.952	-14.472	414.0	424.4	0.0	424.4	518.71	503.70
12	4.480	-14.513	407.0	414.7	0.0	414.7	518.71	504.38
13	4.004	-14.554	400.0	405.5	0.0	405.5	518.71	505.01
14	3.521	-14.596	393.2	396.9	0.0	396.9	518.71	505.58
15	3.034	-14.638	386.5	388.9	0.0	388.9	518.71	506.10
16	2.540	-14.680	380.2	381.7	0.0	381.7	518.71	506.57
17	2.041	-14.724	374.4	375.1	0.0	375.1	518.71	506.98
18	1.537	-14.767	369.1	369.5	0.0	369.5	518.71	507.33
19	1.028	-14.811	364.8	364.9	0.0	364.9	518.71	507.61
20	.515	-14.855	361.8	361.8	0.0	361.8	518.71	507.80
21	.000	-14.900	360.6	360.6	0.0	360.6	518.71	507.88

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	9.480	14.69	12.42	1.0000	1.0000	540.8	.496	.4960
2	9.030	14.69	12.50	1.0000	1.0000	530.5	.486	.4862
3	8.583	14.69	12.59	1.0000	1.0000	518.8	.475	.4749
4	8.137	14.69	12.69	1.0000	1.0000	506.3	.463	.4630
5	7.690	14.69	12.78	1.0000	1.0000	493.7	.451	.4510
6	7.242	14.69	12.87	1.0000	1.0000	481.1	.439	.4390
7	6.791	14.69	12.96	1.0000	1.0000	468.8	.427	.4274
8	6.338	14.69	13.04	1.0000	1.0000	456.9	.416	.4162
9	5.880	14.69	13.12	1.0000	1.0000	445.6	.406	.4055
10	5.418	14.69	13.19	1.0000	1.0000	434.7	.395	.3953
11	4.952	14.69	13.26	1.0000	1.0000	424.4	.386	.3857
12	4.480	14.69	13.32	1.0000	1.0000	414.7	.377	.3765
13	4.004	14.69	13.38	1.0000	1.0000	405.5	.368	.3680
14	3.521	14.69	13.43	1.0000	1.0000	396.9	.360	.3600
15	3.034	14.69	13.48	1.0000	1.0000	388.9	.353	.3526
16	2.540	14.69	13.53	1.0000	1.0000	381.7	.346	.3458
17	2.041	14.69	13.57	1.0000	1.0000	375.1	.340	.3398
18	1.537	14.69	13.60	1.0000	1.0000	369.5	.335	.3345
19	1.028	14.69	13.62	1.0000	1.0000	364.9	.330	.3303
20	.515	14.69	13.64	1.0000	1.0000	361.8	.327	.3274
21	.000	14.69	13.65	1.0000	1.0000	360.6	.326	.3263

FREE STATION 2.000 IS INDEX 2

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	9.480	-14.081	0.00	-32.97	.0952	.0678	0.0000
2	9.030	-14.120	0.00	-30.56	.0982	.0681	0.0000
3	8.583	-14.158	0.00	-28.28	.0984	.0685	0.0000
4	8.137	-14.197	0.00	-26.10	.0966	.0688	0.0000
5	7.690	-14.235	0.00	-24.01	.0935	.0692	0.0000
6	7.242	-14.274	0.00	-21.98	.0894	.0696	0.0000
7	6.791	-14.313	0.00	-20.02	.0846	.0699	0.0000
8	6.338	-14.352	0.00	-18.12	.0795	.0702	0.0000
9	5.880	-14.392	0.00	-16.27	.0741	.0705	0.0000
10	5.418	-14.432	0.00	-14.47	.0686	.0708	0.0000
11	4.952	-14.472	0.00	-12.73	.0631	.0711	0.0000
12	4.480	-14.513	0.00	-11.05	.0577	.0713	0.0000
13	4.004	-14.554	0.00	-9.43	.0523	.0715	0.0000
14	3.521	-14.596	0.00	-7.87	.0470	.0717	0.0000
15	3.034	-14.638	0.00	-6.39	.0418	.0719	0.0000
16	2.540	-14.680	0.00	-4.98	.0365	.0721	0.0000
17	2.041	-14.724	0.00	-3.66	.0311	.0722	0.0000
18	1.537	-14.767	0.00	-2.46	.0253	.0723	0.0000
19	1.028	-14.811	0.00	-1.40	.0186	.0724	0.0000
20	.515	-14.855	0.00	-.59	.0102	.0725	0.0000
21	.000	-14.900	0.00	0.00	0.0000	.0725	0.0000

FREE STATION 3.000 IS INDEX 3

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.960	-12.851	583.2	614.3	0.0	614.3	518.71	487.25
2	8.519	-12.742	579.9	603.7	0.0	603.7	518.71	488.33
3	8.082	-12.635	575.6	593.8	0.0	593.8	518.71	489.32
4	7.649	-12.529	570.5	584.3	0.0	584.3	518.71	490.25
5	7.218	-12.423	564.7	575.0	0.0	575.0	518.71	491.15
6	6.788	-12.317	558.3	565.8	0.0	565.8	518.71	492.03
7	6.360	-12.212	551.1	556.4	0.0	556.4	518.71	492.91
8	5.933	-12.107	543.3	546.7	0.0	546.7	518.71	493.80
9	5.505	-12.002	534.5	536.5	0.0	536.5	518.71	494.72
10	5.078	-11.897	524.7	525.7	0.0	525.7	518.71	495.67
11	4.649	-11.792	513.8	514.1	0.0	514.1	518.71	496.68
12	4.220	-11.686	501.4	501.5	0.0	501.5	518.71	497.75
13	3.788	-11.580	487.5	487.6	0.0	487.6	518.71	498.90
14	3.353	-11.474	471.6	472.1	0.0	472.1	518.71	500.13
15	2.914	-11.366	453.3	454.7	0.0	454.7	518.71	501.48
16	2.469	-11.257	431.9	434.8	0.0	434.8	518.71	502.95
17	2.017	-11.145	406.4	411.5	0.0	411.5	518.71	504.59
18	1.552	-11.031	374.6	383.7	0.0	383.7	518.71	506.44
19	1.069	-10.913	333.4	349.3	0.0	349.3	518.71	508.54
20	.553	-10.786	276.8	306.1	0.0	306.1	518.71	510.90
21	.000	-10.650	203.4	257.5	0.0	257.5	518.71	513.18

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.960	14.69	11.81	1.0000	1.0000	614.3	.568	.5676
2	8.519	14.69	11.90	1.0000	1.0000	603.7	.557	.5571
3	8.082	14.69	11.98	1.0000	1.0000	593.8	.547	.5474
4	7.649	14.69	12.06	1.0000	1.0000	584.3	.538	.5382
5	7.218	14.69	12.14	1.0000	1.0000	575.0	.529	.5292
6	6.788	14.69	12.22	1.0000	1.0000	565.8	.520	.5202
7	6.360	14.69	12.29	1.0000	1.0000	556.4	.511	.5111
8	5.933	14.69	12.37	1.0000	1.0000	546.7	.502	.5018
9	5.505	14.69	12.45	1.0000	1.0000	536.5	.492	.4920
10	5.078	14.69	12.54	1.0000	1.0000	525.7	.482	.4816
11	4.649	14.69	12.63	1.0000	1.0000	514.1	.470	.4705
12	4.220	14.69	12.72	1.0000	1.0000	501.5	.458	.4584
13	3.788	14.69	12.82	1.0000	1.0000	487.6	.445	.4452
14	3.353	14.69	12.94	1.0000	1.0000	472.1	.431	.4305
15	2.914	14.69	13.06	1.0000	1.0000	454.7	.414	.4141
16	2.469	14.69	13.19	1.0000	1.0000	434.8	.395	.3954
17	2.017	14.69	13.34	1.0000	1.0000	411.5	.374	.3736
18	1.552	14.69	13.51	1.0000	1.0000	383.7	.348	.3477
19	1.069	14.69	13.71	1.0000	1.0000	349.3	.316	.3159
20	.553	14.69	13.94	1.0000	1.0000	306.1	.276	.2762
21	.000	14.69	14.15	1.0000	1.0000	257.5	.232	.2319

FREE STATION 3.000 IS INDEX 3

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.960	-12.851	0.00	-18.32	.1067	.0654	0.0000
2	8.519	-12.742	0.00	-16.14	.0947	.0658	0.0000
3	8.082	-12.635	0.00	-14.23	.0863	.0661	0.0000
4	7.649	-12.529	0.00	-12.49	.0803	.0664	0.0000
5	7.218	-12.423	0.00	-10.88	.0761	.0667	0.0000
6	6.788	-12.317	0.00	-9.36	.0732	.0670	0.0000
7	6.360	-12.212	0.00	-7.89	.0715	.0673	0.0000
8	5.933	-12.107	0.00	-6.45	.0706	.0676	0.0000
9	5.505	-12.002	0.00	-5.02	.0707	.0679	0.0000
10	5.078	-11.897	0.00	-3.58	.0718	.0683	0.0000
11	4.649	-11.792	0.00	-2.12	.0739	.0686	0.0000
12	4.220	-11.686	0.00	-.62	.0773	.0690	0.0000
13	3.788	-11.580	0.00	.94	.0823	.0694	0.0000
14	3.353	-11.474	0.00	2.61	.0894	.0698	0.0000
15	2.914	-11.366	0.00	4.44	.0993	.0703	0.0000
16	2.469	-11.257	0.00	6.54	.1135	.0708	0.0000
17	2.017	-11.145	0.00	9.10	.1342	.0714	0.0000
18	1.552	-11.031	0.00	12.46	.1647	.0720	0.0000
19	1.069	-10.913	0.00	17.37	.2098	.0728	0.0000
20	.553	-10.786	0.00	25.28	.2684	.0736	0.0000
21	.000	-10.650	0.00	37.85	.2963	.0744	0.0000

FREE STATION 4.000 IS INDEX 4

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.550	-11.138	718.6	724.6	0.0	724.6	518.71	474.94
2	8.170	-11.063	699.0	703.3	0.0	703.3	518.71	477.48
3	7.788	-10.988	681.3	684.2	0.0	684.2	518.71	479.69
4	7.405	-10.913	665.1	666.8	0.0	666.8	518.71	481.65
5	7.021	-10.837	650.0	650.8	0.0	650.8	518.71	483.40
6	6.636	-10.762	635.5	635.8	0.0	635.8	518.71	485.02
7	6.250	-10.686	621.2	621.2	0.0	621.2	518.71	486.54
8	5.864	-10.610	606.8	606.9	0.0	606.9	518.71	488.01
9	5.478	-10.534	591.9	592.4	0.0	592.3	518.71	489.46
10	5.091	-10.458	576.1	577.4	0.0	577.4	518.71	490.92
11	4.704	-10.381	559.2	561.8	0.0	561.8	518.71	492.41
12	4.317	-10.305	540.9	545.4	0.0	545.4	518.71	493.92
13	3.930	-10.229	521.1	528.2	0.0	528.2	518.71	495.46
14	3.545	-10.153	499.6	510.1	0.0	510.1	518.71	497.03
15	3.161	-10.078	476.0	491.2	0.0	491.2	518.71	498.60
16	2.783	-10.003	450.1	471.8	0.0	471.8	518.71	500.15
17	2.414	-9.931	421.1	452.4	0.0	452.4	518.71	501.65
18	2.064	-9.862	388.5	434.1	0.0	434.1	518.71	503.00
19	1.753	-9.801	351.6	419.6	0.0	419.6	518.71	504.04
20	1.518	-9.755	309.8	412.6	0.0	412.6	518.71	504.52
21	1.421	-9.736	260.8	412.5	0.0	412.5	518.71	504.53

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.550	14.69	10.80	1.0000	1.0000	724.6	.678	.6781
2	8.170	14.69	11.00	1.0000	1.0000	703.3	.656	.6564
3	7.788	14.69	11.18	1.0000	1.0000	684.2	.637	.6371
4	7.405	14.69	11.34	1.0000	1.0000	666.8	.620	.6197
5	7.021	14.69	11.49	1.0000	1.0000	650.8	.604	.6037
6	6.636	14.69	11.62	1.0000	1.0000	635.8	.589	.5888
7	6.250	14.69	11.75	1.0000	1.0000	621.2	.574	.5744
8	5.864	14.69	11.87	1.0000	1.0000	606.9	.560	.5603
9	5.478	14.69	12.00	1.0000	1.0000	592.3	.546	.5460
10	5.091	14.69	12.12	1.0000	1.0000	577.4	.531	.5315
11	4.704	14.69	12.25	1.0000	1.0000	561.8	.516	.5163
12	4.317	14.69	12.38	1.0000	1.0000	545.4	.500	.5005
13	3.930	14.69	12.52	1.0000	1.0000	528.2	.484	.4839
14	3.545	14.69	12.66	1.0000	1.0000	510.1	.467	.4666
15	3.161	14.69	12.80	1.0000	1.0000	491.2	.449	.4487
16	2.783	14.69	12.94	1.0000	1.0000	471.8	.430	.4303
17	2.414	14.69	13.07	1.0000	1.0000	452.4	.412	.4119
18	2.064	14.69	13.20	1.0000	1.0000	434.1	.395	.3947
19	1.753	14.69	13.29	1.0000	1.0000	419.6	.381	.3812
20	1.518	14.69	13.34	1.0000	1.0000	412.6	.375	.3746
21	1.421	14.69	13.34	1.0000	1.0000	412.5	.375	.3746

FREE STATION 4.000 IS INDEX 4

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.550	-11.138	0.00	-7.39	.1018	.0614	0.0000
2	8.170	-11.063	0.00	-6.31	.0939	.0622	0.0000
3	7.788	-10.988	0.00	-5.22	.0874	.0629	0.0000
4	7.405	-10.913	0.00	-4.12	.0822	.0636	0.0000
5	7.021	-10.837	0.00	-2.97	.0782	.0641	0.0000
6	6.636	-10.762	0.00	-1.77	.0755	.0647	0.0000
7	6.250	-10.686	0.00	-.50	.0740	.0652	0.0000
8	5.864	-10.610	0.00	.85	.0737	.0657	0.0000
9	5.478	-10.534	0.00	2.30	.0746	.0662	0.0000
10	5.091	-10.458	0.00	3.85	.0764	.0666	0.0000
11	4.704	-10.381	0.00	5.53	.0792	.0672	0.0000
12	4.317	-10.305	0.00	7.35	.0827	.0677	0.0000
13	3.930	-10.229	0.00	9.37	.0869	.0682	0.0000
14	3.545	-10.153	0.00	11.64	.0916	.0687	0.0000
15	3.161	-10.078	0.00	14.29	.0965	.0693	0.0000
16	2.783	-10.003	0.00	17.46	.1004	.0698	0.0000
17	2.414	-9.931	0.00	21.42	.1004	.0703	0.0000
18	2.064	-9.862	0.00	26.50	.0887	.0708	0.0000
19	1.753	-9.801	0.00	33.07	.0465	.0712	0.0000
20	1.518	-9.755	0.00	41.32	-.0565	.0713	0.0000
21	1.421	-9.736	0.00	50.79	-.2152	.0714	0.0000

FREE STATION 5.000 IS INDEX 5

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-8.650	747.2	747.2	0.0	747.3	518.71	472.16
2	8.138	-8.676	742.8	742.8	0.0	742.9	518.71	472.71
3	7.778	-8.701	737.7	737.7	0.0	737.8	518.71	473.34
4	7.420	-8.726	731.3	731.4	0.0	731.5	518.71	474.11
5	7.063	-8.751	723.1	723.5	0.0	723.5	518.71	475.07
6	6.707	-8.776	712.6	713.5	0.0	713.6	518.71	476.26
7	6.353	-8.801	699.4	701.3	0.0	701.4	518.71	477.71
8	5.999	-8.826	683.4	686.6	0.0	686.7	518.71	479.41
9	5.644	-8.851	664.3	669.5	0.0	669.5	518.71	481.35
10	5.289	-8.876	642.2	649.9	0.0	649.9	518.71	483.50
11	4.933	-8.901	617.8	628.6	0.0	628.6	518.71	485.78
12	4.576	-8.926	591.7	606.2	0.0	606.2	518.71	488.08
13	4.217	-8.951	564.6	583.5	0.0	583.5	518.71	490.33
14	3.859	-8.976	537.1	561.2	0.0	561.2	518.71	492.46
15	3.503	-9.001	509.5	540.0	0.0	539.9	518.71	494.41
16	3.153	-9.026	482.1	520.5	0.0	520.4	518.71	496.14
17	2.817	-9.049	454.9	503.5	0.0	503.3	518.71	497.59
18	2.506	-9.071	428.0	489.8	0.0	489.7	518.71	498.73
19	2.241	-9.090	402.1	480.3	0.0	480.1	518.71	499.50
20	2.054	-9.103	380.3	475.2	0.0	475.0	518.71	499.91
21	1.984	-9.108	370.3	473.8	0.0	473.6	518.71	500.01

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	14.69	10.58	1.0000	1.0000	747.3	.701	.7014
2	8.138	14.69	10.62	1.0000	1.0000	742.9	.697	.6968
3	7.778	14.69	10.67	1.0000	1.0000	737.8	.692	.6916
4	7.420	14.69	10.73	1.0000	1.0000	731.5	.685	.6851
5	7.063	14.69	10.81	1.0000	1.0000	723.5	.677	.6770
6	6.707	14.69	10.90	1.0000	1.0000	713.6	.667	.6668
7	6.353	14.69	11.02	1.0000	1.0000	701.4	.654	.6544
8	5.999	14.69	11.16	1.0000	1.0000	686.7	.640	.6396
9	5.644	14.69	11.32	1.0000	1.0000	669.5	.622	.6223
10	5.289	14.69	11.49	1.0000	1.0000	649.9	.603	.6028
11	4.933	14.69	11.68	1.0000	1.0000	628.6	.582	.5816
12	4.576	14.69	11.88	1.0000	1.0000	606.2	.560	.5596
13	4.217	14.69	12.07	1.0000	1.0000	583.5	.537	.5374
14	3.859	14.69	12.26	1.0000	1.0000	561.2	.516	.5157
15	3.503	14.69	12.43	1.0000	1.0000	539.9	.495	.4952
16	3.153	14.69	12.58	1.0000	1.0000	520.4	.476	.4765
17	2.817	14.69	12.71	1.0000	1.0000	503.3	.460	.4602
18	2.506	14.69	12.81	1.0000	1.0000	489.7	.447	.4472
19	2.241	14.69	12.88	1.0000	1.0000	480.1	.438	.4381
20	2.054	14.69	12.92	1.0000	1.0000	475.0	.433	.4333
21	1.984	14.69	12.92	1.0000	1.0000	473.6	.432	.4320

FREE STATION 5.000 IS INDEX 5

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-8.650	0.00	-.58	.0120	.0605	0.0000
2	8.138	-8.676	0.00	-.20	.0122	.0607	0.0000
3	7.778	-8.701	0.00	.34	.0135	.0609	0.0000
4	7.420	-8.726	0.00	1.05	.0161	.0611	0.0000
5	7.063	-8.751	0.00	1.94	.0199	.0614	0.0000
6	6.707	-8.776	0.00	3.00	.0248	.0618	0.0000
7	6.353	-8.801	0.00	4.22	.0306	.0623	0.0000
8	5.999	-8.826	0.00	5.60	.0373	.0628	0.0000
9	5.644	-8.851	0.00	7.14	.0449	.0635	0.0000
10	5.289	-8.876	0.00	8.83	.0526	.0642	0.0000
11	4.933	-8.901	0.00	10.65	.0593	.0649	0.0000
12	4.576	-8.926	0.00	12.58	.0639	.0657	0.0000
13	4.217	-8.951	0.00	14.64	.0661	.0664	0.0000
14	3.859	-8.976	0.00	16.88	.0651	.0672	0.0000
15	3.503	-9.001	0.00	19.35	.0598	.0678	0.0000
16	3.153	-9.026	0.00	22.15	.0482	.0684	0.0000
17	2.817	-9.049	0.00	25.37	.0276	.0689	0.0000
18	2.506	-9.071	0.00	29.10	-.0043	.0693	0.0000
19	2.241	-9.090	0.00	33.16	-.0473	.0696	0.0000
20	2.054	-9.103	0.00	36.84	-.0926	.0697	0.0000
21	1.984	-9.108	0.00	38.59	-.1173	.0698	0.0000

FREE STATION 6.000 IS INDEX 6

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-7.802	812.6	812.4	0.0	812.1	518.71	463.73
2	8.143	-7.878	819.6	819.5	0.0	819.2	518.71	462.77
3	7.790	-7.952	828.9	828.8	0.0	828.4	518.71	461.49
4	7.441	-8.018	835.1	835.2	0.0	834.9	518.71	460.60
5	7.095	-8.076	835.3	836.0	0.0	835.7	518.71	460.49
6	6.752	-8.128	828.5	830.4	0.0	830.2	518.71	461.26
7	6.411	-8.175	815.4	819.2	0.0	819.0	518.71	462.79
8	6.072	-8.216	796.6	803.0	0.0	802.9	518.71	464.97
9	5.736	-8.248	772.6	782.6	0.0	782.5	518.71	467.66
10	5.403	-8.264	743.7	758.4	0.0	758.4	518.71	470.76
11	5.075	-8.259	711.4	731.8	0.0	731.9	518.71	474.06
12	4.753	-8.240	677.8	704.3	0.0	704.5	518.71	477.34
13	4.437	-8.215	644.2	677.0	0.0	677.2	518.71	480.48
14	4.125	-8.192	611.6	650.8	0.0	651.1	518.71	483.38
15	3.822	-8.174	581.5	627.2	0.0	627.6	518.71	485.88
16	3.531	-8.158	555.3	608.0	0.0	608.4	518.71	487.86
17	3.262	-8.144	534.3	594.8	0.0	595.2	518.71	489.18
18	3.026	-8.133	518.9	588.1	0.0	588.6	518.71	489.83
19	2.839	-8.125	508.7	587.2	0.0	587.7	518.71	489.92
20	2.718	-8.120	502.8	589.2	0.0	589.8	518.71	489.72
21	2.675	-8.119	500.8	590.5	0.0	591.1	518.71	489.59

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	14.69	9.93	1.0000	1.0000	1703.7	.769	1.6135
2	8.143	14.69	9.86	1.0000	1.0000	1652.2	.777	1.5664
3	7.790	14.69	9.77	1.0000	1.0000	1603.3	.786	1.5221
4	7.441	14.69	9.70	1.0000	1.0000	1554.4	.793	1.4771
5	7.095	14.69	9.69	1.0000	1.0000	1503.8	.794	1.4292
6	6.752	14.69	9.75	1.0000	1.0000	1450.7	.788	1.3776
7	6.411	14.69	9.86	1.0000	1.0000	1395.3	.776	1.3227
8	6.072	14.69	10.03	1.0000	1.0000	1337.6	.759	1.2651
9	5.736	14.69	10.23	1.0000	1.0000	1278.1	.738	1.2053
10	5.403	14.69	10.47	1.0000	1.0000	1217.0	.713	1.1440
11	5.075	14.69	10.73	1.0000	1.0000	1155.4	.686	1.0822
12	4.753	14.69	10.99	1.0000	1.0000	1094.2	.658	1.0214
13	4.437	14.69	11.24	1.0000	1.0000	1034.0	.630	.9621
14	4.125	14.69	11.48	1.0000	1.0000	975.6	.604	.9050
15	3.822	14.69	11.69	1.0000	1.0000	920.1	.581	.8513
16	3.531	14.69	11.86	1.0000	1.0000	869.8	.562	.8031
17	3.262	14.69	11.97	1.0000	1.0000	827.0	.549	.7626
18	3.026	14.69	12.03	1.0000	1.0000	793.8	.542	.7315
19	2.839	14.69	12.04	1.0000	1.0000	771.3	.541	.7107
20	2.718	14.69	12.02	1.0000	1.0000	759.2	.544	.6997
21	2.675	14.69	12.01	1.0000	1.0000	755.6	.545	.6964

FREE STATION 6.000 IS INDEX 6

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-7.802	0.00	0.00	0.0000	.0578	.0288
2	8.143	-7.878	0.00	-.06	-.0230	.0575	.0293
3	7.790	-7.952	0.00	.44	-.0273	.0571	.0299
4	7.441	-8.018	0.00	1.38	-.0196	.0569	.0306
5	7.095	-8.076	0.00	2.63	-.0063	.0568	.0313
6	6.752	-8.128	0.00	4.06	.0068	.0571	.0320
7	6.411	-8.175	0.00	5.62	.0168	.0575	.0324
8	6.072	-8.216	0.00	7.32	.0247	.0582	.0328
9	5.736	-8.248	0.00	9.23	.0342	.0591	.0331
10	5.403	-8.264	0.00	11.36	.0479	.0600	.0341
11	5.075	-8.259	0.00	13.60	.0610	.0611	.0356
12	4.753	-8.240	0.00	15.80	.0678	.0621	.0380
13	4.437	-8.215	0.00	17.93	.0678	.0632	.0411
14	4.125	-8.192	0.00	20.00	.0604	.0641	.0447
15	3.822	-8.174	0.00	22.03	.0462	.0650	.0516
16	3.531	-8.158	0.00	24.06	.0253	.0656	.0602
17	3.262	-8.144	0.00	26.09	-.0031	.0661	.0719
18	3.026	-8.133	0.00	28.10	-.0391	.0663	.0836
19	2.839	-8.125	0.00	29.98	-.0789	.0663	.0936
20	2.718	-8.120	0.00	31.44	-.1121	.0662	.1007
21	2.675	-8.119	0.00	32.02	-.1255	.0662	.1034

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED
1	-53.96	7.35	1497.5
2	-52.68	8.11	1434.6
3	-51.88	7.15	1372.5
4	-50.49	5.41	1310.9
5	-48.99	3.63	1250.0
6	-47.92	2.61	1189.5
7	-47.15	1.65	1129.5
8	-46.41	.38	1069.8
9	-45.66	-.83	1010.5
10	-44.79	-2.15	951.8
11	-43.92	-3.20	894.1
12	-43.15	-3.24	837.4
13	-42.23	-2.92	781.6
14	-41.24	-2.33	726.8
15	-40.36	-1.41	673.2
16	-39.42	-.34	622.0
17	-37.68	1.33	574.6
18	-35.99	2.89	533.1
19	-34.24	4.46	500.2
20	-33.13	5.48	478.8
21	-32.74	5.84	471.3

STATION----- 6.200 IS INSIDE OF A ROTOR WITH INDEX 7

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-7.383	764.1	764.9	84.9	768.7	539.89	490.66
2	8.140	-7.422	784.8	785.6	98.5	790.8	542.24	490.13
3	7.790	-7.462	806.8	807.6	110.3	814.2	543.93	488.70
4	7.451	-7.500	828.9	829.8	120.5	837.5	545.07	486.62
5	7.119	-7.532	845.6	847.1	132.6	856.5	546.41	485.28
6	6.793	-7.562	857.4	860.3	145.8	871.6	547.77	484.47
7	6.472	-7.590	863.0	868.2	160.8	882.1	549.24	484.42
8	6.154	-7.615	863.6	872.3	177.0	889.2	550.67	484.80
9	5.842	-7.633	859.0	872.5	194.4	893.0	552.04	485.60
10	5.537	-7.644	846.1	865.9	210.5	890.3	552.91	486.88
11	5.235	-7.650	810.4	837.3	202.6	860.7	549.83	488.12
12	4.933	-7.654	771.8	806.0	189.9	827.3	546.20	489.17
13	4.632	-7.656	734.1	775.6	177.9	795.1	542.89	490.22
14	4.333	-7.658	697.6	746.3	168.2	764.4	540.10	491.41
15	4.039	-7.660	662.6	717.9	160.7	735.3	537.76	492.72
16	3.756	-7.665	629.8	691.3	154.3	708.0	535.72	493.96
17	3.493	-7.671	601.7	668.4	148.5	684.6	533.93	494.88
18	3.261	-7.676	580.2	651.2	143.6	666.9	532.45	495.40
19	3.077	-7.680	566.0	640.2	139.7	655.3	531.33	495.54
20	2.957	-7.683	558.6	634.7	137.0	649.4	530.60	495.45
21	2.915	-7.684	556.4	633.1	136.0	647.7	530.35	495.39

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	16.25	11.63	1.1056	1.0408	1606.3	.708	1.4790
2	8.140	16.52	11.60	1.1239	1.0454	1549.4	.729	1.4273
3	7.790	16.80	11.55	1.1433	1.0486	1498.4	.751	1.3823
4	7.451	17.09	11.49	1.1628	1.0508	1452.4	.774	1.3428
5	7.119	17.32	11.44	1.1789	1.0534	1405.6	.793	1.3013
6	6.793	17.54	11.42	1.1938	1.0560	1358.2	.808	1.2585
7	6.472	17.74	11.44	1.2074	1.0589	1308.8	.817	1.2127
8	6.154	17.96	11.51	1.2224	1.0616	1258.5	.824	1.1657
9	5.842	18.19	11.62	1.2378	1.0643	1207.5	.826	1.1175
10	5.537	18.32	11.74	1.2469	1.0659	1155.4	.823	1.0679
11	5.235	17.99	11.86	1.2240	1.0600	1104.0	.794	1.0191
12	4.933	17.59	11.96	1.1969	1.0530	1054.0	.763	.9719
13	4.632	17.23	12.06	1.1728	1.0466	1004.3	.732	.9251
14	4.333	16.93	12.17	1.1524	1.0412	954.5	.703	.8781
15	4.039	16.69	12.29	1.1355	1.0367	905.0	.676	.8315
16	3.756	16.47	12.40	1.1207	1.0328	857.5	.650	.7869
17	3.493	16.28	12.48	1.1077	1.0293	815.3	.628	.7475
18	3.261	16.12	12.53	1.0970	1.0265	780.9	.611	.7155
19	3.077	16.00	12.54	1.0889	1.0243	756.1	.600	.6927
20	2.957	15.92	12.53	1.0837	1.0229	741.8	.595	.6797
21	2.915	15.90	12.53	1.0819	1.0224	737.2	.594	.6755

STATION---- 6.200 IS INSIDE OF A ROTOR WITH INDEX 7

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-7.383	6.33	0.00	0.0000	.0640	.0884
2	8.140	-7.422	7.15	-.45	.0011	.0639	.0893
3	7.790	-7.462	7.78	-.11	-.0053	.0638	.0940
4	7.451	-7.500	8.27	.90	-.0098	.0637	.1010
5	7.119	-7.532	8.90	2.34	-.0116	.0636	.1109
6	6.793	-7.562	9.62	4.01	-.0105	.0636	.1236
7	6.472	-7.590	10.49	5.80	-.0066	.0637	.1367
8	6.154	-7.615	11.47	7.71	-.0024	.0641	.1478
9	5.842	-7.633	12.56	9.79	-.0023	.0646	.1563
10	5.537	-7.644	13.67	12.05	-.0098	.0651	.1637
11	5.235	-7.650	13.60	14.34	-.0209	.0656	.1681
12	4.933	-7.654	13.26	16.54	-.0296	.0660	.1732
13	4.632	-7.656	12.92	18.65	-.0337	.0664	.1791
14	4.333	-7.658	12.70	20.64	-.0333	.0669	.1863
15	4.039	-7.660	12.62	22.50	-.0295	.0673	.1949
16	3.756	-7.665	12.58	24.19	-.0250	.0678	.2036
17	3.493	-7.671	12.52	25.68	-.0217	.0681	.2130
18	3.261	-7.676	12.44	26.88	-.0213	.0683	.2233
19	3.077	-7.680	12.31	27.72	-.0255	.0683	.2326
20	2.957	-7.683	12.18	28.21	-.0327	.0683	.2395
21	2.915	-7.684	12.13	28.37	-.0365	.0682	.2421

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED	LOSS COEF.
1	-60.22	-.80	1497.5	.0502
2	-58.66	.88	1434.0	.0508
3	-56.82	1.40	1372.4	.0428
4	-54.81	1.07	1312.6	.0281
5	-52.60	-.32	1254.2	.0176
6	-50.55	-1.48	1196.8	.0078
7	-48.48	-2.52	1140.1	-.0000
8	-46.32	-3.39	1084.2	-.0109
9	-43.96	-3.77	1029.2	-.0246
10	-41.50	-3.89	975.4	-.0364
11	-39.51	-3.48	922.3	-.0471
12	-37.78	-3.21	869.1	-.0563
13	-36.66	-3.20	816.0	-.0644
14	-35.66	-2.73	763.3	-.0717
15	-34.68	-2.01	711.6	-.0782
16	-33.13	.19	661.8	-.0831
17	-31.86	2.32	615.3	-.0860
18	-30.71	4.08	574.5	-.0874
19	-29.86	5.47	542.1	-.0875
20	-29.32	6.14	521.0	-.0869
21	-29.13	6.29	513.6	-.0865

STATION---- 6.400 IS INSIDE OF A ROTOR WITH INDEX 8

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-6.984	726.7	727.1	176.8	748.0	562.79	516.21
2	8.136	-6.987	750.9	751.3	200.4	777.2	566.54	516.25
3	7.788	-6.994	779.6	780.0	220.5	810.2	569.09	514.44
4	7.457	-7.002	811.1	811.6	237.7	845.3	570.71	511.22
5	7.139	-7.008	835.5	836.5	258.4	875.2	572.82	509.05
6	6.830	-7.016	856.1	858.4	281.1	902.9	575.02	507.14
7	6.528	-7.024	872.5	877.1	306.9	928.9	577.47	505.62
8	6.232	-7.033	888.3	896.4	334.1	956.3	579.78	503.64
9	5.944	-7.037	901.8	914.8	363.2	983.9	582.03	501.42
10	5.665	-7.035	906.7	926.0	392.1	1005.3	583.85	499.72
11	5.388	-7.034	882.9	908.9	383.2	986.1	579.28	498.31
12	5.110	-7.039	852.4	886.1	366.8	958.6	573.69	497.17
13	4.827	-7.055	818.6	860.6	349.3	928.3	568.18	496.41
14	4.544	-7.080	781.3	832.1	332.3	895.5	563.00	496.21
15	4.263	-7.106	743.3	802.9	318.2	863.2	558.51	496.45
16	3.992	-7.131	706.0	773.9	307.0	832.2	554.67	496.98
17	3.736	-7.156	670.9	746.2	297.3	802.9	551.31	497.61
18	3.509	-7.178	640.8	721.7	288.9	777.1	548.46	498.16
19	3.327	-7.196	617.4	702.1	282.3	756.4	546.27	498.60
20	3.207	-7.208	602.4	688.9	277.8	742.6	544.86	498.91
21	3.165	-7.212	597.3	684.3	276.2	737.7	544.36	499.02

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	18.03	13.33	1.2271	1.0850	1507.6	.671	1.3533
2	8.136	18.54	13.39	1.2614	1.0922	1443.8	.698	1.2960
3	7.788	19.08	13.40	1.2987	1.0971	1390.9	.729	1.2507
4	7.457	19.65	13.37	1.3374	1.1003	1347.7	.762	1.2157
5	7.139	20.11	13.31	1.3687	1.1043	1303.2	.791	1.1780
6	6.830	20.54	13.23	1.3977	1.1086	1259.8	.818	1.1409
7	6.528	20.93	13.15	1.4241	1.1133	1216.6	.842	1.1035
8	6.232	21.35	13.05	1.4532	1.1177	1177.7	.869	1.0702
9	5.944	21.80	12.94	1.4837	1.1221	1142.3	.896	1.0404
10	5.665	22.11	12.83	1.5050	1.1256	1106.6	.917	1.0096
11	5.388	21.55	12.73	1.4667	1.1168	1070.8	.901	.9783
12	5.110	20.87	12.65	1.4201	1.1060	1034.2	.877	.9459
13	4.827	20.21	12.60	1.3751	1.0954	995.8	.850	.9115
14	4.544	19.59	12.60	1.3334	1.0854	954.7	.820	.8741
15	4.263	19.07	12.63	1.2976	1.0767	912.1	.790	.8349
16	3.992	18.62	12.68	1.2671	1.0693	869.5	.761	.7954
17	3.736	18.23	12.74	1.2406	1.0628	828.9	.734	.7578
18	3.509	17.90	12.79	1.2183	1.0574	793.3	.710	.7249
19	3.327	17.65	12.83	1.2013	1.0531	765.0	.691	.6987
20	3.207	17.49	12.86	1.1904	1.0504	746.4	.678	.6815
21	3.165	17.44	12.87	1.1867	1.0495	739.9	.674	.6755

STATION---- 6.400 IS INSIDE OF A ROTOR WITH INDEX 8

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-6.984	13.66	0.00	0.0000	.0697	.1323
2	8.136	-6.987	14.94	-.35	.0073	.0700	.1329
3	7.788	-6.994	15.79	-.10	.0061	.0703	.1367
4	7.457	-7.002	16.33	.82	.0049	.0706	.1431
5	7.139	-7.008	17.17	2.22	.0036	.0706	.1537
6	6.830	-7.016	18.13	3.85	.0004	.0704	.1668
7	6.528	-7.024	19.28	5.63	-.0039	.0702	.1821
8	6.232	-7.033	20.44	7.53	-.0087	.0699	.1955
9	5.944	-7.037	21.65	9.53	-.0131	.0697	.2090
10	5.665	-7.035	22.95	11.59	-.0160	.0693	.2215
11	5.388	-7.034	22.86	13.66	-.0168	.0689	.2338
12	5.110	-7.039	22.49	15.75	-.0142	.0687	.2457
13	4.827	-7.055	22.09	17.89	-.0093	.0685	.2570
14	4.544	-7.080	21.77	20.04	-.0018	.0685	.2684
15	4.263	-7.106	21.62	22.14	.0079	.0687	.2802
16	3.992	-7.131	21.64	24.13	.0193	.0689	.2931
17	3.736	-7.156	21.72	25.89	.0323	.0691	.3057
18	3.509	-7.178	21.82	27.34	.0467	.0693	.3185
19	3.327	-7.196	21.90	28.38	.0622	.0694	.3305
20	3.207	-7.208	21.96	28.96	.0751	.0695	.3391
21	3.165	-7.212	21.98	29.15	.0802	.0696	.3423

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED	LOSS COEF.
1	-61.06	-6.91	1497.5	.1010
2	-58.38	-3.53	1433.4	.0998
3	-55.36	-.68	1372.1	.0836
4	-52.13	1.41	1313.7	.0552
5	-48.43	1.11	1257.7	.0351
6	-45.09	.38	1203.2	.0161
7	-41.97	-.67	1150.0	.0003
8	-39.00	-1.58	1097.9	-.0213
9	-36.24	-2.43	1047.3	-.0479
10	-33.82	-3.19	998.0	-.0711
11	-31.59	-3.49	949.3	-.0925
12	-29.68	-3.15	900.2	-.1126
13	-27.78	-2.87	850.5	-.1315
14	-26.14	-2.64	800.5	-.1483
15	-24.84	-1.40	751.1	-.1637
16	-23.66	.00	703.2	-.1764
17	-22.79	2.00	658.2	-.1848
18	-22.19	3.77	618.3	-.1891
19	-21.95	4.46	586.1	-.1895
20	-21.02	4.90	565.0	-.1879
21	-21.78	5.05	557.5	-.1869

STATION---- 6.600 IS INSIDE OF A ROTOR WITH INDEX 9

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-6.594	648.3	648.3	286.6	708.7	590.15	548.36
2	8.134	-6.560	670.6	670.7	314.4	740.6	593.71	548.08
3	7.788	-6.534	703.8	703.8	337.0	780.2	595.67	545.03
4	7.465	-6.513	742.8	743.0	355.6	823.6	596.54	540.11
5	7.159	-6.495	768.9	769.8	379.2	858.1	598.31	537.06
6	6.866	-6.480	789.2	791.4	405.3	889.1	600.31	534.54
7	6.582	-6.470	803.9	808.3	435.5	918.1	602.75	532.62
8	6.306	-6.463	820.3	827.7	467.0	950.4	605.06	529.91
9	6.040	-6.455	836.4	848.0	500.1	984.4	607.26	526.64
10	5.784	-6.440	844.4	861.2	533.7	1013.2	609.20	523.80
11	5.533	-6.425	827.9	850.7	528.6	1001.6	604.45	520.99
12	5.281	-6.420	808.1	838.3	516.7	984.7	598.71	518.02
13	5.027	-6.432	787.8	827.1	503.7	968.4	592.96	514.91
14	4.768	-6.464	764.4	814.4	488.7	949.6	587.04	511.98
15	4.508	-6.510	737.5	799.3	473.7	928.9	581.34	509.50
16	4.254	-6.555	708.2	782.4	462.1	908.5	576.37	507.66
17	4.014	-6.597	678.1	764.4	453.3	888.4	572.09	506.37
18	3.800	-6.634	649.5	746.3	446.1	869.1	568.43	505.53
19	3.626	-6.665	625.3	730.3	440.4	852.6	565.56	505.03
20	3.511	-6.685	608.9	719.1	436.7	841.0	563.69	504.78
21	3.470	-6.692	603.1	715.0	435.4	836.8	563.03	504.71

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	20.31	15.71	1.3824	1.1377	1373.5	.617	1.1962
2	8.134	20.97	15.85	1.4270	1.1446	1304.2	.645	1.1362
3	7.788	21.70	15.90	1.4771	1.1484	1251.7	.682	1.0934
4	7.465	22.49	15.88	1.5302	1.1500	1213.5	.723	1.0649
5	7.159	23.08	15.81	1.5708	1.1535	1170.7	.755	1.0303
6	6.866	23.62	15.73	1.6074	1.1573	1128.3	.784	.9953
7	6.582	24.10	15.63	1.6401	1.1620	1085.1	.811	.9589
8	6.306	24.64	15.49	1.6771	1.1665	1048.7	.842	.9291
9	6.040	25.21	15.31	1.7158	1.1707	1018.4	.875	.9050
10	5.784	25.61	15.09	1.7430	1.1744	988.5	.903	.8809
11	5.533	24.98	14.85	1.6999	1.1653	960.6	.895	.8583
12	5.281	24.21	14.59	1.6475	1.1542	934.8	.882	.8377
13	5.027	23.46	14.32	1.5965	1.1431	911.0	.870	.8188
14	4.768	22.69	14.06	1.5442	1.1317	886.9	.856	.7994
15	4.508	21.96	13.84	1.4944	1.1207	861.1	.839	.7780
16	4.254	21.32	13.68	1.4511	1.1112	833.5	.822	.7544
17	4.014	20.78	13.56	1.4140	1.1029	805.4	.805	.7300
18	3.800	20.32	13.48	1.3828	1.0959	779.0	.788	.7066
19	3.626	19.96	13.44	1.3585	1.0903	756.8	.774	.6868
20	3.511	19.73	13.41	1.3428	1.0867	741.7	.763	.6733
21	3.470	19.65	13.41	1.3373	1.0854	736.4	.760	.6685

STATION---- 6.600 IS INSIDE OF A ROTOR WITH INDEX 9

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-6.594	23.85	0.00	0.0000	.0773	.1289
2	8.134	-6.560	25.12	-.03	.0189	.0780	.1307
3	7.788	-6.534	25.59	.32	.0258	.0788	.1345
4	7.465	-6.513	25.58	1.33	.0310	.0793	.1399
5	7.159	-6.495	26.22	2.75	.0328	.0795	.1490
6	6.866	-6.480	27.12	4.32	.0307	.0794	.1596
7	6.582	-6.470	28.32	5.97	.0252	.0792	.1720
8	6.306	-6.463	29.43	7.67	.0177	.0789	.1840
9	6.040	-6.455	30.53	9.47	.0098	.0785	.1962
10	5.784	-6.440	31.79	11.34	.0021	.0778	.2078
11	5.533	-6.425	31.86	13.30	-.0030	.0769	.2201
12	5.281	-6.420	31.65	15.43	-.0033	.0760	.2335
13	5.027	-6.432	31.34	17.73	.0008	.0750	.2484
14	4.768	-6.464	30.97	20.17	.0087	.0741	.2649
15	4.508	-6.510	30.66	22.68	.0207	.0733	.2833
16	4.254	-6.555	30.57	25.16	.0363	.0727	.3010
17	4.014	-6.597	30.67	27.48	.0540	.0723	.3196
18	3.800	-6.634	30.87	29.51	.0724	.0720	.3363
19	3.626	-6.665	31.09	31.11	.0892	.0718	.3513
20	3.511	-6.685	31.27	32.13	.1017	.0717	.3620
21	3.470	-6.692	31.34	32.49	.1065	.0717	.3658

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED	LOSS COEF.
1	-57.39	-11.17	1497.5	.1564
2	-54.73	-4.85	1433.0	.1496
3	-51.50	.54	1372.1	.1231
4	-48.06	4.61	1315.1	.0804
5	-44.32	4.46	1261.2	.0504
6	-40.80	3.59	1209.6	.0223
7	-37.41	1.94	1159.5	-.0011
8	-34.33	.75	1110.9	-.0327
9	-31.52	-.24	1064.0	-.0712
10	-28.78	-1.15	1018.9	-.1050
11	-25.83	-2.04	974.7	-.1374
12	-23.21	-1.70	930.4	-.1700
13	-20.48	-1.18	885.6	-.2032
14	-18.27	-.72	840.0	-.2345
15	-16.45	-.28	794.1	-.2633
16	-15.21	.78	749.4	-.2881
17	-14.14	1.78	707.2	-.3070
18	-13.80	2.72	669.5	-.3190
19	-13.61	3.49	638.8	-.3236
20	-13.51	4.00	618.5	-.3234
21	-13.49	4.07	611.3	-.3226

STATION---- 6.800 IS INSIDE OF A ROTOR WITH INDEX 10

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-6.196	596.5	596.4	426.3	733.2	624.90	580.24
2	8.136	-6.126	612.2	612.1	449.7	759.6	625.94	577.99
3	7.793	-6.068	651.3	651.3	465.9	800.9	625.13	571.83
4	7.480	-6.021	698.4	698.9	477.4	846.5	623.37	563.81
5	7.188	-5.981	724.1	725.8	495.9	879.1	623.18	558.94
6	6.910	-5.948	741.6	745.1	517.6	907.3	623.54	555.11
7	6.643	-5.921	751.[illegible]	757.2	544.2	932.6	624.66	552.36
8	6.385	-5.900	763.[illegible]	772.6	572.0	961.4	625.73	548.89
9	6.137	-5.881	776.6	789.0	600.8	991.8	626.77	544.98
10	5.901	-5.857	780.3	797.1	630.0	1016.1	627.66	541.82
11	5.673	-5.830	767.8	789.8	633.3	1012.5	624.00	538.76
12	5.449	-5.810	754.5	783.4	632.9	1007.2	619.78	535.41
13	5.226	-5.807	742.2	780.3	632.8	1004.7	615.65	531.68
14	5.005	-5.825	728.7	778.4	631.4	1002.4	611.34	527.76
15	4.781	-5.867	712.1	776.0	628.1	998.3	606.75	523.82
16	4.560	-5.923	691.6	771.6	625.3	993.1	602.31	520.24
17	4.350	-5.978	668.6	765.4	625.0	988.1	598.42	517.17
18	4.163	-6.027	645.5	758.5	626.4	983.6	595.17	514.65
19	4.011	-6.066	625.2	751.7	628.3	979.6	592.61	512.74
20	3.911	-6.092	611.2	746.8	629.6	976.7	590.92	511.52
21	3.876	-6.101	606.2	745.0	630.1	975.6	590.33	511.10

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	23.45	18.08	1.5958	1.2047	1226.0	.621	1.0380
2	8.136	24.10	18.23	1.6401	1.2067	1158.4	.644	.9827
3	7.793	24.87	18.20	1.6925	1.2052	1116.7	.683	.9524
4	7.480	25.71	18.08	1.7495	1.2018	1092.9	.727	.9387
5	7.188	26.26	17.93	1.7868	1.2014	1058.5	.758	.9131
6	6.910	26.72	17.78	1.8184	1.2021	1022.2	.785	.8848
7	6.643	27.11	17.62	1.8448	1.2043	982.5	.809	.8526
8	6.385	27.59	17.43	1.8774	1.2063	950.0	.837	.8270
9	6.137	28.10	17.22	1.9121	1.2083	923.8	.866	.8070
10	5.901	28.40	16.96	1.9325	1.2101	896.2	.890	.7852
11	5.673	27.89	16.68	1.8983	1.2030	870.5	.890	.7649
12	5.449	27.31	16.36	1.8583	1.1948	848.9	.888	.7482
13	5.226	26.75	16.01	1.8205	1.1869	831.8	.889	.7357
14	5.005	26.16	15.64	1.7805	1.1786	817.7	.890	.7259
15	4.781	25.53	15.26	1.7375	1.1697	805.0	.890	.7173
16	4.560	24.91	14.92	1.6952	1.1612	791.8	.888	.7080
17	4.350	24.36	14.62	1.6580	1.1537	778.3	.886	.6980
18	4.163	23.91	14.38	1.6272	1.1474	766.0	.884	.6886
19	4.011	23.56	14.19	1.6031	1.1425	755.8	.882	.6807
20	3.911	23.32	14.08	1.5873	1.1392	749.2	.881	.6756
21	3.876	23.24	14.04	1.5817	1.1381	746.9	.880	.6738

STATION----- 6.800 IS INSIDE OF A ROTOR WITH INDEX 10

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-6.196	35.56	0.00	0.0000	.0841	.1236
2	8.136	-6.126	36.31	.33	.0098	.0851	.1254
3	7.793	-6.068	35.58	1.14	.0356	.0859	.1281
4	7.480	-6.021	34.34	2.50	.0517	.0866	.1314
5	7.188	-5.981	34.34	4.08	.0568	.0866	.1358
6	6.910	-5.948	34.79	5.64	.0550	.0865	.1410
7	6.643	-5.921	35.70	7.16	.0500	.0861	.1474
8	6.385	-5.900	36.51	8.67	.0435	.0857	.1537
9	6.137	-5.881	37.29	10.22	.0356	.0853	.1599
10	5.901	-5.857	38.32	11.83	.0268	.0845	.1666
11	5.673	-5.830	38.72	13.59	.0197	.0835	.1739
12	5.449	-5.810	38.93	15.65	.0158	.0825	.1826
13	5.226	-5.807	39.04	18.01	.0145	.0813	.1942
14	5.005	-5.825	39.05	20.62	.0147	.0800	.2069
15	4.781	-5.867	38.99	23.43	.0174	.0786	.2252
16	4.560	-5.923	39.02	26.33	.0230	.0774	.2451
17	4.350	-5.978	39.23	29.15	.0302	.0763	.2653
18	4.163	-6.027	39.55	31.69	.0373	.0754	.2849
19	4.011	-6.066	39.89	33.75	.0434	.0747	.3020
20	3.911	-6.092	40.13	35.09	.0470	.0743	.3132
21	3.876	-6.101	40.22	35.56	.0480	.0741	.3172

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED	LOSS COEF.
1	-55.48	-17.43	1497.5	.2199
2	-53.24	-6.84	1433.3	.2025
3	-50.02	2.24	1373.0	.1622
4	-46.60	8.67	1317.7	.1031
5	-42.50	9.58	1266.3	.0619
6	-38.67	9.12	1217.4	.0242
7	-34.94	7.01	1170.3	-.0071
8	-31.28	5.46	1124.8	-.0481
9	-27.86	4.38	1081.2	-.0974
10	-24.59	3.68	1039.6	-.1410
11	-21.20	3.33	999.4	-.1838
12	-17.63	3.20	959.9	-.2297
13	-14.02	3.57	920.8	-.2800
14	-10.53	3.91	881.7	-.3323
15	-7.98	3.48	842.3	-.3840
16	-5.77	3.06	803.3	-.4306
17	-4.78	2.92	766.3	-.4698
18	-4.19	2.87	733.4	-.4997
19	-3.74	2.83	706.7	-.5177
20	-3.80	2.90	689.0	-.5252
21	-3.83	2.92	682.8	-.5268

ROTOR 1 STATION 7.000 FLOW 60.78 ASPECT RATIO 1.45
STA NO. 11 RPM 20188. TIP SPEED 1497. NO. OF BLADES 20

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-5.777	550.8	550.5	609.1	821.2	670.28	614.36
2	8.139	-5.672	576.2	576.1	615.6	843.3	665.43	606.44
3	7.807	-5.587	621.6	622.0	612.4	873.1	658.73	595.47
4	7.508	-5.519	672.7	674.2	605.0	906.1	651.76	583.60
5	7.233	-5.464	694.0	697.2	608.2	925.3	647.56	576.45
6	6.971	-5.416	707.4	712.7	616.3	942.4	644.56	570.80
7	6.719	-5.373	712.7	720.3	630.6	957.5	642.83	566.66
8	6.476	-5.343	722.1	732.7	646.2	977.1	641.32	562.00
9	6.245	-5.314	731.7	745.9	662.6	997.9	639.95	557.21
10	6.026	-5.283	730.6	748.7	679.2	1011.1	638.63	553.67
11	5.817	-5.247	724.8	747.8	696.2	1021.9	637.38	550.58
12	5.618	-5.216	719.7	749.0	714.0	1035.0	636.25	547.21
13	5.428	-5.196	716.4	754.0	733.7	1052.2	635.40	543.37
14	5.246	-5.192	713.3	761.1	754.1	1071.6	634.63	539.17
15	5.073	-5.206	709.8	770.2	775.3	1093.1	633.95	534.62
16	4.906	-5.238	704.0	779.6	798.7	1116.2	633.52	529.92
17	4.749	-5.282	694.6	787.6	823.4	1139.6	633.28	525.29
18	4.608	-5.328	682.0	793.4	847.1	1160.8	633.10	521.04
19	4.495	-5.368	668.4	796.5	867.4	1177.7	632.96	517.61
20	4.421	-5.394	657.6	797.4	881.3	1188.7	632.88	515.37
21	4.395	-5.403	653.4	797.6	886.4	1192.5	632.85	514.59

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	27.96	20.59	1.9027	1.2922	1045.2	.676	.8600
2	8.139	28.31	20.44	1.9267	1.2829	1000.7	.698	.8288
3	7.807	28.83	20.23	1.9617	1.2699	984.4	.730	.8227
4	7.508	29.44	19.98	2.0034	1.2565	984.7	.765	.8313
5	7.233	29.64	19.71	2.0174	1.2484	964.1	.786	.8190
6	6.971	29.76	19.43	2.0251	1.2426	939.2	.804	.8018
7	6.719	29.79	19.15	2.0276	1.2393	908.2	.820	.7781
8	6.476	29.96	18.86	2.0390	1.2364	884.1	.841	.7606
9	6.245	30.17	18.57	2.0534	1.2337	864.8	.862	.7471
10	6.026	30.15	18.28	2.0517	1.2312	840.7	.876	.7287
11	5.817	30.02	17.97	2.0432	1.2288	816.8	.888	.7099
12	5.618	29.92	17.64	2.0360	1.2266	798.2	.902	.6959
13	5.428	29.87	17.27	2.0330	1.2250	786.2	.921	.6878
14	5.246	29.83	16.85	2.0303	1.2235	779.9	.941	.6850
15	5.073	29.80	16.40	2.0279	1.2222	779.2	.964	.6873
16	4.906	29.78	15.93	2.0264	1.2214	782.3	.989	.6931
17	4.749	29.76	15.46	2.0256	1.2209	787.8	1.014	.7010
18	4.608	29.75	15.04	2.0249	1.2205	794.2	1.037	.7096
19	4.495	29.75	14.70	2.0245	1.2203	800.1	1.056	.7172
20	4.421	29.74	14.49	2.0242	1.2201	804.0	1.068	.7223
21	4.395	29.74	14.41	2.0241	1.2201	805.4	1.072	.7241

ROTOR 1 STATION 7.000 FLOW 60.78 ASPECT RATIO 1.45
STA NO. 11 RPM 20188. TIP SPEED 1497. NO. OF BLADES 20

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE	D-FACTOR
1	8.500	-5.777	47.89	0.00	0.0000	.0905	.1168	.5167
2	8.139	-5.672	46.90	1.10	.0342	.0910	.1170	.5205
3	7.807	-5.587	44.55	2.58	.0512	.0917	.1175	.5102
4	7.508	-5.519	41.90	4.17	.0498	.0924	.1178	.4906
5	7.233	-5.464	41.10	5.69	.0412	.0923	.1175	.4845
6	6.971	-5.416	40.85	7.12	.0341	.0919	.1174	.4817
7	6.719	-5.376	41.20	8.50	.0295	.0912	.1172	.4840
8	6.476	-5.343	41.41	9.87	.0269	.0906	.1172	.4806
9	6.245	-5.314	41.62	11.27	.0249	.0900	.1173	.4720
10	6.026	-5.283	42.21	12.73	.0244	.0891	.1175	.4642
11	5.817	-5.247	42.95	14.33	.0222	.0881	.1175	.4549
12	5.618	-5.216	43.63	16.16	.0133	.0870	.1176	.4416
13	5.428	-5.196	44.22	18.22	-.0034	.0858	.1191	.4209
14	5.246	-5.192	44.73	20.47	-.0261	.0844	.1218	.3942
15	5.073	-5.206	45.19	22.89	-.0528	.0828	.1247	.3591
16	4.906	-5.238	45.69	25.48	-.0775	.0811	.1356	.3184
17	4.749	-5.282	46.27	28.16	-.0928	.0795	.1512	.2755
18	4.608	-5.328	46.87	30.76	-.0976	.0779	.1660	.2329
19	4.495	-5.368	47.44	32.97	-.0952	.0767	.1791	.1988
20	4.421	-5.394	47.86	34.48	-.0899	.0759	.1924	.1776
21	4.395	-5.403	48.02	35.01	-.0872	.0756	.1972	.1706

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED	INCID-ENCE	DEVIA-TION	LOSS COEF.	ADIAB. EFFIC.	POLYT. EFFIC.
1	-53.64	-20.74	1497.5	-7.558	-4.579	.2931	68.95	71.60
2	-50.04	-7.91	1433.9	-7.581	-4.817	.2594	72.76	75.13
3	-47.05	4.88	1375.4	-6.994	-3.757	.2060	78.55	80.47
4	-44.05	13.05	1322.7	-7.011	-2.736	.1413	85.52	86.86
5	-40.53	15.90	1274.2	-7.232	-3.164	.1074	89.29	90.29
6	-37.00	16.33	1228.0	-7.159	-3.638	.0836	91.98	92.73
7	-33.23	14.08	1183.7	-6.895	-4.291	.0717	93.44	94.06
8	-29.27	12.53	1141.0	-6.691	-4.759	.0529	95.43	95.86
9	-25.22	12.19	1100.3	-6.580	-5.182	.0302	97.56	97.79
10	-21.39	12.03	1061.6	-6.662	-5.661	.0197	98.51	98.66
11	-16.73	13.52	1024.8	-6.780	-6.995	.0154	98.92	99.02
12	-12.32	14.93	989.8	-6.784	-7.888	.0105	99.32	99.38
13	-7.08	16.04	956.3	-6.872	-9.376	.0030	99.83	99.84
14	-1.45	16.89	924.3	-6.922	-11.157	-.0051	100.28	100.25
15	3.19	17.71	893.6	-6.672	-11.918	-.0140	100.69	100.62
16	7.28	17.11	864.3	-6.227	-12.090	-.0212	100.95	100.86
17	10.95	15.80	836.6	-6.333	-11.912	-.0267	101.09	100.99
18	14.06	14.60	811.9	-6.205	-11.517	-.0317	101.21	101.09
19	16.56	13.65	791.9	-6.182	-11.143	-.0356	101.29	101.17
20	17.60	13.13	778.8	-5.967	-10.275	-.0380	101.34	101.21
21	17.95	12.94	774.2	-5.854	-9.952	-.0388	101.36	101.23

FREE STATION 8.000 IS INDEX 12

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-4.889	591.9	591.6	609.1	849.3	670.28	610.46
2	8.165	-4.817	627.0	627.1	613.7	877.6	665.43	601.52
3	7.858	-4.762	672.0	673.2	608.4	907.6	658.73	590.36
4	7.580	-4.712	718.8	721.6	599.3	938.2	651.76	578.67
5	7.322	-4.671	737.8	742.4	600.7	955.2	647.56	571.78
6	7.076	-4.642	750.4	757.0	607.1	970.5	644.56	566.31
7	6.839	-4.622	756.8	765.9	619.5	985.3	642.83	562.18
8	6.611	-4.610	768.7	780.9	633.1	1005.5	641.32	557.31
9	6.392	-4.606	781.6	797.7	647.4	1027.5	639.95	552.21
10	6.183	-4.611	785.0	805.6	662.0	1042.9	638.63	548.24
11	5.981	-4.625	783.7	809.7	677.2	1055.8	637.38	544.72
12	5.786	-4.647	781.8	814.3	693.4	1069.7	636.25	541.13
13	5.598	-4.678	779.8	820.0	711.4	1085.8	635.40	537.39
14	5.419	-4.719	776.4	825.4	730.1	1102.2	634.63	533.63
15	5.249	-4.769	771.9	830.9	749.3	1119.0	633.95	529.83
16	5.091	-4.824	766.4	836.7	769.6	1137.1	633.52	526.02
17	4.949	-4.880	760.5	843.7	790.1	1156.1	633.28	522.13
18	4.826	-4.935	754.7	852.0	808.9	1175.0	633.10	518.28
19	4.731	-4.979	749.5	860.1	824.2	1191.4	632.96	514.90
20	4.670	-5.006	745.8	866.1	834.4	1202.8	632.88	512.55
21	4.649	-5.016	744.3	868.4	837.9	1206.9	632.85	511.71

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	27.96	20.13	1.9027	1.2922	849.3	.701	.7010
2	8.165	28.31	19.86	1.9267	1.2829	877.6	.730	.7298
3	7.858	28.83	19.62	1.9617	1.2699	907.6	.762	.7618
4	7.580	29.44	19.40	2.0034	1.2565	938.2	.795	.7954
5	7.322	29.64	19.16	2.0174	1.2484	955.2	.815	.8147
6	7.076	29.76	18.90	2.0251	1.2426	970.5	.832	.8318
7	6.839	29.79	18.62	2.0276	1.2393	985.3	.848	.8475
8	6.611	29.96	18.32	2.0390	1.2364	1005.5	.869	.8686
9	6.392	30.17	17.99	2.0534	1.2337	1027.5	.892	.8918
10	6.183	30.15	17.66	2.0517	1.2312	1042.9	.908	.9084
11	5.981	30.02	17.31	2.0432	1.2288	1055.8	.923	.9226
12	5.786	29.92	16.96	2.0360	1.2266	1069.7	.938	.9379
13	5.598	29.87	16.61	2.0330	1.2250	1085.8	.955	.9553
14	5.419	29.83	16.26	2.0303	1.2235	1102.2	.973	.9731
15	5.249	29.80	15.89	2.0279	1.2222	1119.0	.991	.9915
16	5.091	29.78	15.52	2.0264	1.2214	1137.1	1.011	1.0111
17	4.949	29.76	15.14	2.0256	1.2209	1156.1	1.032	1.0319
18	4.826	29.75	14.76	2.0249	1.2205	1175.0	1.053	1.0526
19	4.731	29.75	14.44	2.0245	1.2203	1191.4	1.071	1.0708
20	4.670	29.74	14.21	2.0242	1.2201	1202.8	1.084	1.0835
21	4.649	29.74	14.13	2.0241	1.2201	1206.9	1.088	1.0881

FREE STATION 8.000 IS INDEX 12

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-4.889	45.83	0.00	0.0000	.0890	.1064
2	8.165	-4.817	44.38	2.03	.0153	.0891	.1059
3	7.858	-4.762	42.11	3.86	.0171	.0897	.1057
4	7.580	-4.712	39.71	5.32	.0118	.0905	.1056
5	7.322	-4.671	38.98	6.55	.0048	.0904	.1056
6	7.076	-4.642	38.73	7.73	-.0013	.0901	.1057
7	6.839	-4.622	38.97	8.96	-.0053	.0894	.1058
8	6.611	-4.610	39.03	10.26	-.0069	.0887	.1060
9	6.392	-4.606	39.06	11.62	-.0067	.0880	.1063
10	6.183	-4.611	39.41	13.07	-.0060	.0869	.1066
11	5.981	-4.625	39.91	14.64	-.0055	.0858	.1070
12	5.786	-4.647	40.42	16.31	-.0053	.0846	.1075
13	5.598	-4.678	40.94	18.07	-.0063	.0834	.1081
14	5.419	-4.719	41.49	19.89	-.0092	.0822	.1088
15	5.249	-4.769	42.04	21.77	-.0152	.0810	.1095
16	5.091	-4.824	42.61	23.70	-.0283	.0797	.1102
17	4.949	-4.880	43.12	25.71	-.0519	.0783	.1109
18	4.826	-4.935	43.52	27.68	-.0822	.0769	.1116
19	4.731	-4.979	43.78	29.40	-.1116	.0757	.1121
20	4.670	-5.006	43.93	30.60	-.1331	.0748	.1124
21	4.649	-5.016	43.98	31.04	-.1411	.0745	.1126

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE
1	41.51	5.73
2	38.99	3.78
3	37.47	1.98
4	37.40	.41
5	37.47	-.98
6	37.06	-2.20
7	36.43	-3.63
8	35.94	-5.18
9	36.28	-7.16
10	36.72	-9.18
11	37.26	-11.28
12	38.00	-13.62
13	38.71	-16.02
14	39.75	-19.09
15	40.87	-22.24
16	41.89	-25.68
17	42.77	-29.05
18	43.45	-31.78
19	44.35	-33.80
20	44.90	-35.04
21	45.08	-35.46

STATOR 1 STATION 9.000 FLOW 60.78 ASPECT RATIO 1.40
STA NO. 13 NO VANES 31

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-2.220	697.2	697.2	0.0	697.2	670.28	629.98
2	8.238	-2.242	704.3	704.4	0.0	704.4	665.43	624.28
3	7.987	-2.266	718.9	719.2	0.0	719.2	658.73	615.83
4	7.752	-2.289	742.6	743.2	0.0	743.1	651.76	605.93
5	7.530	-2.312	749.9	750.8	0.0	750.8	647.56	600.77
6	7.318	-2.334	757.8	759.2	0.0	759.2	644.56	596.71
7	7.117	-2.356	766.5	768.5	0.0	768.4	642.83	593.81
8	6.927	-2.375	782.9	785.6	0.0	785.6	641.32	590.07
9	6.750	-2.393	799.2	802.8	0.0	802.8	639.95	586.43
10	6.584	-2.409	806.2	810.7	0.0	810.7	638.63	584.04
11	6.431	-2.424	813.9	819.5	0.0	819.4	637.38	581.61
12	6.288	-2.437	816.3	822.9	0.0	822.9	636.25	580.00
13	6.157	-2.450	817.1	825.0	0.0	825.0	635.40	578.87
14	6.039	-2.461	818.6	827.7	0.0	827.7	634.63	577.73
15	5.934	-2.472	822.3	832.7	0.0	832.7	633.95	576.35
16	5.843	-2.481	827.2	838.8	0.0	838.8	633.52	575.07
17	5.767	-2.490	831.6	844.4	0.0	844.4	633.28	574.05
18	5.708	-2.497	835.2	849.0	0.0	849.0	633.10	573.21
19	5.665	-2.503	837.9	852.5	0.0	852.5	632.96	572.58
20	5.639	-2.506	839.5	854.6	0.0	854.6	632.88	572.19
21	5.630	-2.507	840.1	855.4	0.0	855.4	632.85	572.06

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	27.63	22.22	.9881	1.0000	697.2	.567	.5665
2	8.238	27.77	22.20	.9810	1.0000	704.4	.575	.5750
3	7.987	28.06	22.15	.9736	1.0000	719.2	.591	.5910
4	7.752	28.54	22.09	.9694	1.0000	743.1	.616	.6157
5	7.530	28.65	22.02	.9664	1.0000	750.8	.625	.6247
6	7.318	28.74	21.93	.9658	1.0000	759.2	.634	.6338
7	7.117	28.82	21.82	.9673	1.0000	768.4	.643	.6431
8	6.927	29.05	21.69	.9697	1.0000	785.6	.660	.6596
9	6.750	29.28	21.55	.9703	1.0000	802.8	.676	.6761
10	6.584	29.27	21.39	.9708	1.0000	810.7	.684	.6842
11	6.431	29.26	21.22	.9745	1.0000	819.4	.693	.6930
12	6.288	29.11	21.04	.9730	1.0000	822.9	.697	.6969
13	6.157	28.91	20.86	.9679	1.0000	825.0	.699	.6993
14	6.039	28.74	20.67	.9633	1.0000	827.7	.702	.7023
15	5.934	28.63	20.50	.9607	1.0000	832.7	.707	.7074
16	5.843	28.56	20.34	.9592	1.0000	838.8	.713	.7134
17	5.767	28.50	20.20	.9577	1.0000	844.4	.719	.7187
18	5.708	28.46	20.09	.9565	1.0000	849.0	.723	.7232
19	5.665	28.43	20.00	.9556	1.0000	852.5	.727	.7266
20	5.639	28.41	19.95	.9551	1.0000	854.6	.729	.7287
21	5.630	28.40	19.93	.9550	1.0000	855.4	.729	.7294

STATOR 1 STATION 9.000 FLOW 60.78 ASPECT RATIO 1.40
STA NO. 13 NO VANES 31

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE	D-FACTOR
1	8.500	-2.220	0.00	0.00	0.0000	.0952	.0753	.4126
2	8.238	-2.242	0.00	.79	-.0075	.0960	.0752	.4245
3	7.987	-2.266	0.00	1.52	-.0136	.0971	.0752	.4242
4	7.752	-2.289	0.00	2.20	-.0192	.0984	.0752	.4117
5	7.530	-2.312	0.00	2.86	-.0248	.0989	.0752	.4095
6	7.318	-2.334	0.00	3.49	-.0307	.0992	.0753	.4092
7	7.117	-2.356	0.00	4.12	-.0375	.0992	.0754	.4099
8	6.927	-2.375	0.00	4.75	-.0454	.0992	.0755	.4077
9	6.750	-2.393	0.00	5.38	-.0543	.0992	.0756	.4055
10	6.584	-2.409	0.00	6.02	-.0635	.0989	.0757	.4055
11	6.431	-2.424	0.00	6.66	-.0734	.0985	.0759	.4028
12	6.288	-2.437	0.00	7.30	-.0834	.0979	.0761	.4049
13	6.157	-2.450	0.00	7.91	-.0926	.0972	.0763	.4097
14	6.039	-2.461	0.00	8.49	-.1005	.0966	.0765	.4131
15	5.934	-2.472	0.00	9.04	-.1072	.0960	.0767	.4147
16	5.843	-2.481	0.00	9.53	-.1130	.0955	.0769	.4162
17	5.767	-2.490	0.00	9.97	-.1178	.0950	.0769	.4186
18	5.708	-2.497	0.00	10.34	-.1216	.0946	.0769	.4220
19	5.665	-2.503	0.00	10.62	-.1243	.0943	.0769	.4255
20	5.639	-2.506	0.00	10.79	-.1259	.0941	.0769	.4281
21	5.630	-2.507	0.00	10.85	-.1264	.0941	.0769	.4291

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	INCID-ENCE	DEVIA-TION	LOSS COEF.	ADIAB. EFFIC.	POLYT. EFFIC.
1	-8.96	-.02	4.324	8.960	.0426	67.54	70.26
2	-8.21	-.02	5.384	8.209	.0636	70.43	72.94
3	-7.65	-.01	4.635	7.647	.0828	75.13	77.27
4	-7.24	.00	2.309	7.240	.0896	81.33	82.98
5	-7.00	.00	1.504	7.003	.0950	84.52	85.90
6	-6.80	.00	1.669	6.800	.0937	87.00	88.16
7	-6.67	.00	2.534	6.671	.0872	88.61	89.63
8	-6.56	-.00	3.096	6.562	.0779	90.90	91.73
9	-6.47	-.00	2.777	6.474	.0736	93.05	93.69
10	-6.40	-.00	2.692	6.401	.0705	94.04	94.58
11	-6.37	-.01	2.647	6.369	.0602	94.99	95.45
12	-6.34	-.01	2.419	6.339	.0623	95.11	95.56
13	-6.34	-.01	2.232	6.339	.0723	94.78	95.25
14	-6.35	-.01	1.742	6.345	.0807	94.46	94.96
15	-6.35	-.01	1.176	6.346	.0842	94.42	94.92
16	-6.38	-.02	.719	6.380	.0853	94.41	94.90
17	-6.46	-.02	.352	6.459	.0861	94.30	94.80
18	-6.52	-.03	.060	6.517	.0863	94.21	94.72
19	-6.56	-.04	-.566	6.556	.0862	94.14	94.66
20	-6.58	-.04	-.968	6.578	.0859	94.10	94.62
21	-6.59	-.04	-1.105	6.585	.0858	94.09	94.61

FREE STATION 10.000 IS INDEX 14

STRM-, LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-1.650	679.4	679.4	0.0	679.4	670.28	632.03
2	8.245	-1.650	685.7	685.7	0.0	685.7	665.43	626.44
3	8.001	-1.650	699.1	699.2	0.0	699.2	658.73	618.17
4	7.773	-1.650	721.8	722.1	0.0	722.1	651.76	608.49
5	7.558	-1.650	727.7	728.2	0.0	728.2	647.56	603.55
6	7.354	-1.650	734.2	734.9	0.0	734.9	644.56	599.72
7	7.160	-1.650	741.8	742.7	0.0	742.7	642.83	597.04
8	6.977	-1.650	757.6	758.9	0.0	758.9	641.32	593.50
9	6.807	-1.650	773.7	775.2	0.0	775.2	639.95	590.05
10	6.650	-1.650	780.6	782.3	0.0	782.3	638.63	587.81
11	6.503	-1.650	788.6	790.5	0.0	790.5	637.38	585.48
12	6.369	-1.650	791.7	793.8	0.0	793.8	636.25	583.92
13	6.245	-1.650	793.9	796.2	0.0	796.2	635.40	582.75
14	6.134	-1.650	797.8	800.1	0.0	800.1	634.63	581.45
15	6.035	-1.650	805.0	807.4	0.0	807.4	633.95	579.80
16	5.951	-1.650	814.2	816.6	0.0	816.6	633.52	578.13
17	5.882	-1.650	823.2	825.7	0.0	825.7	633.28	576.65
18	5.827	-1.650	831.4	833.6	0.0	833.8	633.10	575.33
19	5.788	-1.650	838.0	840.3	0.0	840.3	632.96	574.29
20	5.765	-1.650	842.2	844.5	0.0	844.5	632.88	573.62
21	5.757	-1.650	843.7	846.0	0.0	846.0	632.85	573.39

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	27.63	22.47	1.8800	1.2922	679.4	.551	.5511
2	8.245	27.77	22.47	1.8902	1.2829	685.7	.559	.5587
3	8.001	28.06	22.45	1.9099	1.2699	699.2	.574	.5736
4	7.773	28.54	22.42	1.9421	1.2565	722.1	.597	.5970
5	7.558	28.65	22.38	1.9496	1.2484	728.2	.604	.6045
6	7.354	28.74	22.32	1.9559	1.2426	734.9	.612	.6120
7	7.160	28.82	22.24	1.9613	1.2393	742.7	.620	.6199
8	6.977	29.05	22.14	1.9773	1.2364	758.9	.635	.6353
9	6.807	29.28	22.02	1.9924	1.2337	775.2	.651	.6509
10	6.650	29.27	21.88	1.9918	1.2312	782.3	.658	.6580
11	6.503	29.26	21.72	1.9912	1.2288	790.5	.666	.6663
12	6.369	29.11	21.54	1.9810	1.2266	793.8	.670	.6700
13	6.245	28.91	21.35	1.9678	1.2250	796.2	.673	.6727
14	6.134	28.74	21.14	1.9558	1.2235	800.1	.677	.6767
15	6.035	28.63	20.93	1.9483	1.2222	807.4	.684	.6839
16	5.951	28.56	20.72	1.9437	1.2214	816.6	.693	.6926
17	5.882	28.50	20.52	1.9399	1.2209	825.7	.701	.7012
18	5.827	28.46	20.35	1.9369	1.2205	833.8	.709	.7090
19	5.788	28.43	20.21	1.9347	1.2203	840.3	.715	.7151
20	5.765	28.41	20.13	1.9334	1.2201	844.5	.719	.7191
21	5.757	28.40	20.10	1.9329	1.2201	846.0	.721	.7205

FREE STATION 10.000 IS INDEX 14

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-1.650	0.00	0.00	0.0000	.0960	.0340
2	8.245	-1.650	0.00	.62	-.0040	.0968	.0340
3	8.001	-1.650	0.00	1.18	-.0086	.0980	.0340
4	7.773	-1.650	0.00	1.69	-.0151	.0995	.0340
5	7.558	-1.650	0.00	2.14	-.0227	.1001	.0340
6	7.354	-1.650	0.00	2.55	-.0305	.1004	.0340
7	7.160	-1.650	0.00	2.92	-.0390	.1005	.0340
8	6.977	-1.650	0.00	3.26	-.0488	.1007	.0340
9	6.807	-1.650	0.00	3.55	-.0603	.1007	.0340
10	6.650	-1.650	0.00	3.80	-.0735	.1005	.0340
11	6.503	-1.650	0.00	4.02	-.0881	.1001	.0340
12	6.369	-1.650	0.00	4.19	-.1044	.0996	.0340
13	6.245	-1.650	0.00	4.32	-.1226	.0989	.0340
14	6.134	-1.650	0.00	4.40	-.1426	.0982	.0340
15	6.035	-1.650	0.00	4.43	-.1640	.0974	.0340
16	5.951	-1.650	0.00	4.43	-.1860	.0967	.0340
17	5.882	-1.650	0.00	4.39	-.2072	.0961	.0340
18	5.827	-1.650	0.00	4.34	-.2260	.0955	.0340
19	5.788	-1.650	0.00	4.29	-.2410	.0950	.0340
20	5.765	-1.650	0.00	4.25	-.2506	.0947	.0340
21	5.757	-1.650	0.00	4.24	-.2539	.0946	.0340

FREE STATION 11.000 IS INDEX 15

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-1.350	698.5	698.5	0.0	698.5	670.28	629.83
2	8.248	-1.350	704.5	704.5	0.0	704.5	665.43	624.27
3	8.007	-1.350	717.3	717.4	0.0	717.4	658.73	616.04
4	7.781	-1.350	739.0	739.2	0.0	739.2	651.76	606.41
5	7.568	-1.350	744.1	744.4	0.0	744.4	647.56	601.57
6	7.365	-1.350	749.5	750.0	0.0	750.0	644.56	597.87
7	7.172	-1.350	755.7	756.2	0.0	756.2	642.83	595.36
8	6.990	-1.350	769.7	770.3	0.0	770.3	641.32	592.05
9	6.821	-1.350	783.4	784.0	0.0	784.1	639.95	588.90
10	6.664	-1.350	787.3	787.9	0.0	788.0	638.63	587.07
11	6.517	-1.350	791.6	792.2	0.0	792.2	637.38	585.26
12	6.382	-1.350	789.9	790.5	0.0	790.5	636.25	584.36
13	6.258	-1.350	786.2	786.7	0.0	786.7	635.40	584.00
14	6.145	-1.350	782.8	783.2	0.0	783.2	634.63	583.69
15	6.045	-1.350	781.6	781.8	0.0	781.9	633.95	583.17
16	5.958	-1.350	781.5	781.6	0.0	781.6	633.52	582.78
17	5.887	-1.350	781.0	781.0	0.0	781.0	633.28	582.62
18	5.830	-1.350	780.0	780.0	0.0	780.0	633.10	582.55
19	5.790	-1.350	779.0	779.0	0.0	779.0	632.96	582.55
20	5.765	-1.350	778.2	778.2	0.0	778.2	632.88	582.57
21	5.757	-1.350	777.9	777.9	0.0	777.9	632.85	582.59

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	27.63	22.20	1.8800	1.2922	698.5	.568	.5677
2	8.248	27.77	22.19	1.8902	1.2829	704.5	.575	.5751
3	8.007	28.06	22.18	1.9099	1.2699	717.4	.589	.5895
4	7.781	28.54	22.16	1.9421	1.2565	739.2	.612	.6122
5	7.568	28.65	22.12	1.9496	1.2484	744.4	.619	.6190
6	7.365	28.74	22.08	1.9559	1.2426	750.0	.626	.6255
7	7.172	28.82	22.02	1.9613	1.2393	756.2	.632	.6321
8	6.990	29.05	21.95	1.9773	1.2364	770.3	.646	.6456
9	6.821	29.28	21.87	1.9924	1.2337	784.1	.659	.6589
10	6.664	29.27	21.78	1.9918	1.2312	788.0	.663	.6632
11	6.517	29.26	21.69	1.9912	1.2288	792.2	.668	.6678
12	6.382	29.11	21.60	1.9810	1.2266	790.5	.667	.6669
13	6.258	28.91	21.51	1.9678	1.2250	786.7	.664	.6639
14	6.145	28.74	21.43	1.9558	1.2235	783.2	.661	.6611
15	6.045	28.63	21.36	1.9483	1.2222	781.9	.660	.6603
16	5.958	28.56	21.31	1.9437	1.2214	781.6	.660	.6603
17	5.887	28.50	21.28	1.9399	1.2209	781.0	.660	.6599
18	5.830	28.46	21.26	1.9369	1.2205	780.0	.659	.6591
19	5.790	28.43	21.25	1.9347	1.2203	779.0	.658	.6582
20	5.765	28.41	21.25	1.9334	1.2201	778.2	.658	.6575
21	5.757	28.40	21.25	1.9329	1.2201	777.9	.657	.6573

FREE STATION 11.000 IS INDEX 15

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-1.350	0.00	0.00	0.0000	.0951	.0410
2	8.248	-1.350	0.00	.53	-.0043	.0960	.0410
3	8.007	-1.350	0.00	1.00	-.0088	.0972	.0410
4	7.781	-1.350	0.00	1.37	-.0134	.0986	.0410
5	7.568	-1.350	0.00	1.67	-.0182	.0993	.0410
6	7.365	-1.350	0.00	1.92	-.0234	.0997	.0410
7	7.172	-1.350	0.00	2.11	-.0289	.0998	.0410
8	6.990	-1.350	0.00	2.24	-.0345	.1001	.0410
9	6.821	-1.350	0.00	2.30	-.0399	.1002	.0410
10	6.664	-1.350	0.00	2.30	-.0450	.1002	.0410
11	6.517	-1.350	0.00	2.23	-.0493	.1000	.0410
12	6.382	-1.350	0.00	2.11	-.0524	.0998	.0410
13	6.258	-1.350	0.00	1.92	-.0535	.0994	.0410
14	6.145	-1.350	0.00	1.67	-.0520	.0991	.0410
15	6.045	-1.350	0.00	1.37	-.0474	.0989	.0410
16	5.958	-1.350	0.00	1.05	-.0398	.0987	.0410
17	5.887	-1.350	0.00	.73	-.0299	.0986	.0410
18	5.830	-1.350	0.00	.44	-.0192	.0985	.0410
19	5.790	-1.350	0.00	.20	-.0094	.0985	.0410
20	5.765	-1.350	0.00	.05	-.0025	.0984	.0410
21	5.757	-1.350	0.00	0.00	0.0000	.0984	.0410

FREE STATION 12.000 IS INDEX 16

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-1.050	717.3	717.3	0.0	717.3	670.28	627.62
2	8.250	-1.050	722.9	722.9	0.0	722.9	665.43	622.09
3	8.012	-1.050	734.8	734.9	0.0	734.9	658.73	613.93
4	7.787	-1.050	755.1	755.3	0.0	755.3	651.76	604.42
5	7.576	-1.050	759.0	759.3	0.0	759.3	647.56	599.71
6	7.374	-1.050	763.1	763.4	0.0	763.4	644.56	596.18
7	7.182	-1.050	767.5	767.8	0.0	767.8	642.83	593.88
8	7.001	-1.050	779.3	779.7	0.0	779.7	641.32	590.84
9	6.832	-1.050	790.5	790.9	0.0	790.9	639.95	588.01
10	6.674	-1.050	791.7	792.1	0.0	792.1	638.63	586.53
11	6.527	-1.050	793.0	793.3	0.0	793.3	637.38	585.11
12	6.391	-1.050	788.2	788.4	0.0	788.4	636.25	584.63
13	6.265	-1.050	781.2	781.4	0.0	781.4	635.40	584.69
14	6.151	-1.050	774.6	774.7	0.0	774.7	634.63	584.78
15	6.050	-1.050	770.6	770.7	0.0	770.7	633.95	584.62
16	5.962	-1.050	768.2	768.3	0.0	768.3	633.52	584.50
17	5.889	-1.050	766.1	766.1	0.0	766.1	633.28	584.53
18	5.832	-1.050	764.2	764.2	0.0	764.2	633.10	584.58
19	5.790	-1.050	762.8	762.8	0.0	762.8	632.96	584.63
20	5.765	-1.050	761.9	761.9	0.0	761.9	632.88	584.67
21	5.757	-1.050	761.6	761.6	0.0	761.6	632.85	584.68

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	27.63	21.93	1.8800	1.2922	717.3	.584	.5840
2	8.250	27.77	21.92	1.8902	1.2829	722.9	.591	.5911
3	8.012	28.06	21.92	1.9099	1.2699	734.9	.605	.6049
4	7.787	28.54	21.90	1.9421	1.2565	755.3	.627	.6265
5	7.576	28.65	21.88	1.9496	1.2484	759.3	.632	.6323
6	7.374	28.74	21.86	1.9559	1.2426	763.4	.638	.6376
7	7.182	28.82	21.83	1.9613	1.2393	767.8	.643	.6426
8	7.001	29.05	21.79	1.9773	1.2364	779.7	.654	.6542
9	6.832	29.28	21.76	1.9924	1.2337	790.9	.665	.6652
10	6.674	29.27	21.71	1.9918	1.2312	792.1	.667	.6670
11	6.527	29.26	21.67	1.9912	1.2288	793.3	.669	.6689
12	6.391	29.11	21.63	1.9810	1.2266	788.4	.665	.6650
13	6.265	28.91	21.60	1.9678	1.2250	781.4	.659	.6590
14	6.151	28.74	21.57	1.9558	1.2235	774.7	.653	.6534
15	6.050	28.63	21.55	1.9483	1.2222	770.7	.650	.6500
16	5.962	28.56	21.53	1.9437	1.2214	768.3	.648	.6481
17	5.889	28.50	21.52	1.9399	1.2209	766.1	.646	.6462
18	5.832	28.46	21.52	1.9369	1.2205	764.2	.645	.6446
19	5.790	28.43	21.52	1.9347	1.2203	762.8	.643	.6434
20	5.765	28.41	21.52	1.9334	1.2201	761.9	.643	.6426
21	5.757	28.40	21.52	1.9329	1.2201	761.6	.642	.6423

FREE STATION 12.000 IS INDEX 16

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-1.050	0.00	0.00	0.0000	.0943	.0480
2	8.250	-1.050	0.00	.47	-.0027	.0951	.0480
3	8.012	-1.050	0.00	.88	-.0053	.0964	.0480
4	7.787	-1.050	0.00	1.19	-.0078	.0978	.0480
5	7.576	-1.050	0.00	1.43	-.0101	.0985	.0480
6	7.374	-1.050	0.00	1.61	-.0126	.0990	.0480
7	7.182	-1.050	0.00	1.74	-.0150	.0992	.0480
8	7.001	-1.050	0.00	1.80	-.0172	.0996	.0480
9	6.832	-1.050	0.00	1.80	-.0191	.0999	.0480
10	6.674	-1.050	0.00	1.74	-.0205	.0999	.0480
11	6.527	-1.050	0.00	1.63	-.0212	.1000	.0480
12	6.391	-1.050	0.00	1.48	-.0211	.0999	.0480
13	6.265	-1.050	0.00	1.29	-.0201	.0997	.0480
14	6.151	-1.050	0.00	1.07	-.0180	.0996	.0480
15	6.050	-1.050	0.00	.84	-.0150	.0995	.0480
16	5.962	-1.050	0.00	.61	-.0115	.0994	.0480
17	5.889	-1.050	0.00	.40	-.0079	.0994	.0480
18	5.832	-1.050	0.00	.23	-.0046	.0994	.0480
19	5.790	-1.050	0.00	.11	-.0021	.0993	.0480
20	5.765	-1.050	0.00	.03	-.0005	.0993	.0480
21	5.757	-1.050	0.00	0.00	0.0000	.0993	.0480

FREE STATION 13.000 IS INDEX 17

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-.750	735.8	735.8	0.0	735.8	670.28	625.40
2	8.253	-.750	740.9	740.9	0.0	740.9	665.43	619.91
3	8.016	-.750	751.7	751.8	0.0	751.8	658.73	611.84
4	7.793	-.750	770.5	770.7	0.0	770.7	651.76	602.47
5	7.583	-.750	773.1	773.3	0.0	773.3	647.56	597.92
6	7.382	-.750	775.5	775.8	0.0	775.8	644.56	594.60
7	7.190	-.750	778.0	778.4	0.0	778.4	642.83	592.53
8	7.009	-.750	787.6	787.9	0.0	787.9	641.32	589.77
9	6.840	-.750	796.5	796.8	0.0	796.8	639.95	587.23
10	6.682	-.750	795.3	795.6	0.0	795.6	638.63	586.07
11	6.534	-.750	794.2	794.4	0.0	794.4	637.38	584.96
12	6.397	-.750	787.0	787.2	0.0	787.2	636.25	584.78
13	6.271	-.750	777.9	778.1	0.0	778.1	635.40	585.12
14	6.156	-.750	769.6	769.7	0.0	769.7	634.63	585.43
15	6.053	-.750	764.2	764.2	0.0	764.2	633.95	585.44
16	5.965	-.750	760.8	760.9	0.0	760.9	633.52	585.44
17	5.891	-.750	758.1	758.1	0.0	758.1	633.28	585.54
18	5.833	-.750	755.9	755.9	0.0	755.9	633.10	585.63
19	5.791	-.750	754.4	754.4	0.0	754.4	632.96	585.69
20	5.765	-.750	753.4	753.4	0.0	753.4	632.88	585.73
21	5.757	-.750	753.1	753.1	0.0	753.1	632.85	585.74

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	27.63	21.65	1.8800	1.2922	735.8	.600	.6001
2	8.253	27.77	21.65	1.8902	1.2829	740.9	.607	.6069
3	8.016	28.06	21.65	1.9099	1.2699	751.8	.620	.6199
4	7.793	28.54	21.65	1.9421	1.2565	770.7	.640	.6403
5	7.583	28.65	21.65	1.9496	1.2484	773.3	.645	.6450
6	7.382	28.74	21.65	1.9559	1.2426	775.8	.649	.6488
7	7.190	28.82	21.65	1.9613	1.2393	778.4	.652	.6521
8	7.009	29.05	21.65	1.9773	1.2364	787.9	.662	.6617
9	6.840	29.28	21.65	1.9924	1.2337	796.8	.671	.6706
10	6.682	29.27	21.65	1.9918	1.2312	795.6	.670	.6702
11	6.534	29.26	21.65	1.9912	1.2288	794.4	.670	.6699
12	6.397	29.11	21.65	1.9810	1.2266	787.2	.664	.6639
13	6.271	28.91	21.65	1.9678	1.2250	778.1	.656	.6560
14	6.156	28.74	21.65	1.9558	1.2235	769.7	.649	.6488
15	6.053	28.63	21.65	1.9483	1.2222	764.2	.644	.6442
16	5.965	28.56	21.65	1.9437	1.2214	760.9	.641	.6413
17	5.891	28.50	21.65	1.9399	1.2209	758.1	.639	.6390
18	5.833	28.46	21.65	1.9369	1.2205	755.9	.637	.6371
19	5.791	28.43	21.65	1.9347	1.2203	754.4	.636	.6357
20	5.765	28.41	21.65	1.9334	1.2201	753.4	.635	.6349
21	5.757	28.40	21.65	1.9329	1.2201	753.1	.635	.6346

FREE STATION 13.000 IS INDEX 17

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-.750	0.00	0.00	0.0000	.0935	.0546
2	8.253	-.750	0.00	.44	0.0000	.0943	.0546
3	8.016	-.750	0.00	.83	0.0000	.0955	.0546
4	7.793	-.750	0.00	1.12	0.0000	.0970	.0546
5	7.583	-.750	0.00	1.34	0.0000	.0978	.0546
6	7.382	-.750	0.00	1.50	0.0000	.0983	.0546
7	7.190	-.750	0.00	1.61	0.0000	.0986	.0546
8	7.009	-.750	0.00	1.65	0.0000	.0991	.0546
9	6.840	-.750	0.00	1.63	0.0000	.0995	.0546
10	6.682	-.750	0.00	1.56	0.0000	.0997	.0546
11	6.534	-.750	0.00	1.45	0.0000	.0999	.0546
12	6.397	-.750	0.00	1.29	0.0000	.0999	.0546
13	6.271	-.750	0.00	1.11	0.0000	.0999	.0546
14	6.156	-.750	0.00	.91	0.0000	.0998	.0546
15	6.053	-.750	0.00	.71	0.0000	.0998	.0546
16	5.965	-.750	0.00	.51	0.0000	.0998	.0546
17	5.891	-.750	0.00	.34	0.0000	.0998	.0546
18	5.833	-.750	0.00	.19	0.0000	.0998	.0546
19	5.791	-.750	0.00	.09	0.0000	.0998	.0546
20	5.765	-.750	0.00	.02	0.0000	.0998	.0546
21	5.757	-.750	0.00	0.00	0.0000	.0998	.0546

870901001 - PBS ROTOR #1 AERODYNAMIC ANALYSIS - THRU BLADE

THE MAXIMUM ROTOR D-FACTOR .521 OCCURED AT STAGE 1 ON STREAMLINE 2.
THE MAXIMUM VANE D-FACTOR .429 OCCURED AT STAGE 1 ON STREAMLINE 21.

THE MAXIMUM MERIDINAL MACH NO. .845 OCCURED AT STATION 8 ON STREAMLINE 10.

PERFORMANCE SUMMARY FOR 870901001:

		SPEC FLOW IN	FLOW RATE IN	CORR FLOW IN	------STAGE-------- P/P	ADIA EFF.	POLY EFF.	VANE TO VANE	---CUMULATIVE--- P/P	ADIA EFF.	POLY EFF.
REFERENCE			60.78	60.79							
ROTOR	1	42.75	60.76	60.79	2.008	89.5	90.5	90.5	2.008	89.5	90.5
STAGE	1	30.58	60.78	33.80	1.948	85.2	86.5		1.948	85.2	86.5

		ENTROPY RISE	MASS AVERAGED TOTAL PRESS -URE	TOTAL TEMP -ATURE	ROTOR TIP MACH NO.	VANE HUB MACH NO.	RESET ANGLE
REFERENCE			14.69	518.71			
ROTOR	1	2.1	29.51	646.35	.86		
STAGE	1	3.0	28.62	646.37		.73	

CORRECTED RPM 20188.
FLOW COEF. .251
OVERALL ADIA. EFF. 85.19
PT COEF. .727
WORK COEF. .853
FLOW 60.78
RPM 20187.9
PRESSURE RATIO 1.948
EFFICIENCY 85.19

APPENDIX C

870901004 - PBS ROTOR #1 AERODYNAMIC ANALYSIS - THRU-BLADE

FREE STATION 1.000 IS INDEX 1

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	13.300	-18.450	179.2	239.1	0.0	238.1	518.71	513.99
2	12.536	-18.450	185.0	238.1	0.0	238.1	518.71	513.99
3	11.790	-18.450	190.7	238.1	0.0	238.1	518.71	513.99
4	11.061	-18.450	196.2	238.1	0.0	238.1	518.71	513.99
5	10.346	-18.450	201.5	238.1	0.0	238.1	518.71	513.99
6	9.645	-18.450	206.4	238.1	0.0	238.1	518.71	513.99
7	8.957	-18.450	211.0	238.1	0.0	238.1	518.71	513.99
8	8.280	-18.450	215.2	238.1	0.0	238.1	518.71	513.99
9	7.612	-18.450	219.0	238.1	0.0	238.1	518.71	513.99
10	6.953	-18.450	222.5	238.1	0.0	238.1	518.71	513.99
11	6.301	-18.450	225.5	238.1	0.0	238.1	518.71	513.99
12	5.656	-18.450	228.2	238.1	0.0	238.1	518.71	513.99
13	5.016	-18.450	230.5	238.1	0.0	238.1	518.71	513.99
14	4.380	-18.450	232.4	238.1	0.0	238.1	518.71	513.99
15	3.748	-18.450	234.0	238.1	0.0	238.1	518.71	513.99
16	3.119	-18.450	235.3	238.1	0.0	238.1	518.71	513.99
17	2.493	-18.450	236.3	238.1	0.0	238.1	518.71	513.99
18	1.868	-18.450	237.1	238.1	0.0	238.1	518.71	513.99
19	1.245	-18.450	237.6	238.1	0.0	238.1	518.71	513.99
20	.622	-18.450	238.0	238.1	0.0	238.1	518.71	513.99
21	.000	-18.450	238.1	238.1	0.0	238.1	518.71	513.99

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	13.300	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
2	12.536	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
3	11.790	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
4	11.061	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
5	10.346	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
6	9.645	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
7	8.957	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
8	8.280	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
9	7.612	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
10	6.953	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
11	6.301	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
12	5.656	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
13	5.016	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
14	4.380	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
15	3.748	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
16	3.119	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
17	2.493	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
18	1.868	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
19	1.245	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
20	.622	14.69	14.23	1.0000	1.0000	238.1	.214	.2141
21	.000	14.69	14.23	1.0000	1.0000	238.1	.214	.2141

FREE STATION 1.000 IS INDEX 1

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVATURE	DENSITY	BLOCKAGE
1	13.300	-18.450	0.00	-41.16	0.0000	.0747	0.0000
2	12.536	-18.450	0.00	-38.99	0.0000	.0747	0.0000
3	11.790	-18.450	0.00	-36.76	0.0000	.0747	0.0000
4	11.061	-18.450	0.00	-34.49	0.0000	.0747	0.0000
5	10.346	-18.450	0.00	-32.20	0.0000	.0747	0.0000
6	9.645	-18.450	0.00	-29.89	0.0000	.0747	0.0000
7	8.957	-18.450	0.00	-27.60	0.0000	.0747	0.0000
8	8.280	-18.450	0.00	-25.32	0.0000	.0747	0.0000
9	7.612	-18.450	0.00	-23.06	0.0000	.0747	0.0000
10	6.953	-18.450	0.00	-20.85	0.0000	.0747	0.0000
11	6.301	-18.450	0.00	-18.68	0.0000	.0747	0.0000
12	5.656	-18.450	0.00	-16.56	0.0000	.0747	0.0000
13	5.016	-18.450	0.00	-14.50	0.0000	.0747	0.0000
14	4.380	-18.450	0.00	-12.50	0.0000	.0747	0.0000
15	3.748	-18.450	0.00	-10.57	0.0000	.0747	0.0000
16	3.119	-18.450	0.00	-8.69	0.0000	.0747	0.0000
17	2.493	-18.450	0.00	-6.87	0.0000	.0747	0.0000
18	1.868	-18.450	0.00	-5.11	0.0000	.0747	0.0000
19	1.245	-18.450	0.00	-3.39	0.0000	.0747	0.0000
20	.622	-18.450	0.00	-1.70	0.0000	.0747	0.0000
21	.000	-18.450	0.00	0.00	0.0000	.0747	0.0000

FREE STATION 2.000 IS INDEX 2

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	9.480	-14.081	447.5	533.4	0.0	533.4	518.71	495.00
2	9.030	-14.119	450.7	523.3	0.0	523.3	518.71	495.89
3	8.584	-14.158	450.7	511.7	0.0	511.7	518.71	496.89
4	8.138	-14.197	448.5	499.4	0.0	499.4	518.71	497.93
5	7.692	-14.235	444.8	486.9	0.0	486.9	518.71	498.95
6	7.245	-14.274	440.0	474.4	0.0	474.4	518.71	499.95
7	6.794	-14.313	434.5	462.3	0.0	462.3	518.71	500.90
8	6.341	-14.352	428.3	450.5	0.0	450.5	518.71	501.80
9	5.884	-14.391	421.7	439.2	0.0	439.2	518.71	502.63
10	5.422	-14.431	414.9	428.4	0.0	428.4	518.71	503.41
11	4.956	-14.472	408.0	418.2	0.0	418.2	518.71	504.14
12	4.484	-14.512	401.0	408.5	0.0	408.5	518.71	504.80
13	4.008	-14.554	394.0	399.4	0.0	399.4	518.71	505.42
14	3.525	-14.595	387.2	390.8	0.0	390.8	518.71	505.98
15	3.037	-14.637	380.6	382.9	0.0	382.9	518.71	506.49
16	2.543	-14.680	374.3	375.7	0.0	375.7	518.71	506.95
17	2.044	-14.723	368.5	369.2	0.0	369.2	518.71	507.35
18	1.539	-14.767	363.3	363.6	0.0	363.6	518.71	507.69
19	1.029	-14.811	359.0	359.1	0.0	359.1	518.71	507.96
20	.516	-14.855	356.1	356.1	0.0	356.1	518.71	508.14
21	.000	-14.900	354.9	354.9	0.0	354.9	518.71	508.22

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	9.480	14.69	12.48	1.0000	1.0000	533.4	.489	.4890
2	9.030	14.69	12.56	1.0000	1.0000	523.3	.479	.4792
3	8.584	14.69	12.64	1.0000	1.0000	511.7	.468	.4682
4	8.138	14.69	12.74	1.0000	1.0000	499.4	.456	.4564
5	7.692	14.69	12.83	1.0000	1.0000	486.9	.445	.4445
6	7.245	14.69	12.92	1.0000	1.0000	474.4	.433	.4327
7	6.794	14.69	13.01	1.0000	1.0000	462.3	.421	.4212
8	6.341	14.69	13.09	1.0000	1.0000	450.5	.410	.4101
9	5.884	14.69	13.16	1.0000	1.0000	439.2	.400	.3995
10	5.422	14.69	13.23	1.0000	1.0000	428.4	.389	.3894
11	4.956	14.69	13.30	1.0000	1.0000	418.2	.380	.3798
12	4.484	14.69	13.36	1.0000	1.0000	408.5	.371	.3708
13	4.008	14.69	13.42	1.0000	1.0000	399.4	.362	.3623
14	3.525	14.69	13.47	1.0000	1.0000	390.8	.354	.3544
15	3.037	14.69	13.52	1.0000	1.0000	382.9	.347	.3470
16	2.543	14.69	13.56	1.0000	1.0000	375.7	.340	.3403
17	2.044	14.69	13.60	1.0000	1.0000	369.2	.334	.3343
18	1.539	14.69	13.63	1.0000	1.0000	363.6	.329	.3291
19	1.029	14.69	13.66	1.0000	1.0000	359.1	.325	.3250
20	.516	14.69	13.67	1.0000	1.0000	356.1	.322	.3222
21	.000	14.69	13.68	1.0000	1.0000	354.9	.321	.3210

FREE STATION 2.000 IS INDEX 2

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	9.480	-14.081	0.00	-32.97	.0952	.0680	0.0000
2	9.030	-14.119	0.00	-30.55	.0982	.0683	0.0000
3	8.584	-14.158	0.00	-28.26	.0984	.0687	0.0000
4	8.138	-14.197	0.00	-26.08	.0967	.0690	0.0000
5	7.692	-14.235	0.00	-23.98	.0936	.0694	0.0000
6	7.245	-14.274	0.00	-21.94	.0896	.0697	0.0000
7	6.794	-14.313	0.00	-19.97	.0848	.0701	0.0000
8	6.341	-14.352	0.00	-18.06	.0797	.0704	0.0000
9	5.884	-14.391	0.00	-16.20	.0743	.0707	0.0000
10	5.422	-14.431	0.00	-14.40	.0688	.0710	0.0000
11	4.956	-14.472	0.00	-12.66	.0633	.0712	0.0000
12	4.484	-14.512	0.00	-10.98	.0579	.0714	0.0000
13	4.008	-14.554	0.00	-9.36	.0525	.0717	0.0000
14	3.525	-14.595	0.00	-7.81	.0472	.0719	0.0000
15	3.037	-14.637	0.00	-6.32	.0420	.0720	0.0000
16	2.543	-14.680	0.00	-4.92	.0367	.0722	0.0000
17	2.044	-14.723	0.00	-3.62	.0312	.0724	0.0000
18	1.539	-14.767	0.00	-2.42	.0254	.0725	0.0000
19	1.029	-14.811	0.00	-1.38	.0186	.0726	0.0000
20	.516	-14.855	0.00	-.58	.0102	.0726	0.0000
21	.000	-14.900	0.00	0.00	0.0000	.0727	0.0000

FREE STATION 3.000 IS INDEX 3

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.960	-12.851	575.0	605.7	0.0	605.7	518.71	488.13
2	8.520	-12.743	571.8	595.2	0.0	595.2	518.71	489.18
3	8.084	-12.636	567.5	585.4	0.0	585.4	518.71	490.14
4	7.652	-12.529	562.5	576.0	0.0	576.0	518.71	491.06
5	7.222	-12.424	556.7	566.8	0.0	566.8	518.71	491.93
6	6.793	-12.319	550.2	557.5	0.0	557.6	518.71	492.80
7	6.366	-12.214	543.0	548.1	0.0	548.1	518.71	493.67
8	5.939	-12.109	535.0	538.3	0.0	538.3	518.71	494.56
9	5.513	-12.004	526.1	528.1	0.0	528.1	518.71	495.47
10	5.086	-11.899	516.2	517.1	0.0	517.1	518.71	496.42
11	4.658	-11.794	505.1	505.4	0.0	505.4	518.71	497.42
12	4.229	-11.689	492.6	492.6	0.0	492.6	518.71	498.48
13	3.797	-11.583	478.6	478.7	0.0	478.6	518.71	499.62
14	3.362	-11.476	462.7	463.2	0.0	463.2	518.71	500.83
15	2.922	-11.368	444.5	445.9	0.0	445.9	518.71	502.14
16	2.477	-11.258	423.4	426.2	0.0	426.2	518.71	503.57
17	2.023	-11.147	398.2	403.4	0.0	403.3	518.71	505.15
18	1.557	-11.032	367.2	376.0	0.0	376.0	518.71	506.93
19	1.072	-10.913	326.7	342.3	0.0	342.3	518.71	508.95
20	.555	-10.786	271.2	299.9	0.0	299.9	518.71	511.21
21	.000	-10.650	199.2	252.3	0.0	252.3	518.71	513.40

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.960	14.69	11.88	1.0000	1.0000	605.7	.559	.5591
2	8.520	14.69	11.97	1.0000	1.0000	595.2	.549	.5489
3	8.084	14.69	12.06	1.0000	1.0000	585.4	.539	.5393
4	7.652	14.69	12.13	1.0000	1.0000	576.0	.530	.5301
5	7.222	14.69	12.21	1.0000	1.0000	566.8	.521	.5212
6	6.793	14.69	12.28	1.0000	1.0000	557.6	.512	.5122
7	6.366	14.69	12.36	1.0000	1.0000	548.1	.503	.5031
8	5.939	14.69	12.44	1.0000	1.0000	538.3	.494	.4937
9	5.513	14.69	12.52	1.0000	1.0000	528.1	.484	.4838
10	5.086	14.69	12.60	1.0000	1.0000	517.1	.473	.4734
11	4.658	14.69	12.69	1.0000	1.0000	505.4	.462	.4621
12	4.229	14.69	12.79	1.0000	1.0000	492.6	.450	.4500
13	3.797	14.69	12.89	1.0000	1.0000	478.6	.437	.4367
14	3.362	14.69	13.00	1.0000	1.0000	463.2	.422	.4221
15	2.922	14.69	13.12	1.0000	1.0000	445.9	.406	.4058
16	2.477	14.69	13.25	1.0000	1.0000	426.2	.387	.3873
17	2.023	14.69	13.39	1.0000	1.0000	403.3	.366	.3660
18	1.557	14.69	13.56	1.0000	1.0000	376.0	.341	.3406
19	1.072	14.69	13.75	1.0000	1.0000	342.3	.309	.3094
20	.555	14.69	13.97	1.0000	1.0000	299.9	.270	.2705
21	.000	14.69	14.18	1.0000	1.0000	252.3	.227	.2271

FREE STATION 3.000 IS INDEX 3

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.960	-12.851	0.00	-18.32	.1067	.0657	0.0000
2	8.520	-12.743	0.00	-16.13	.0948	.0661	0.0000
3	8.084	-12.636	0.00	-14.20	.0865	.0664	0.0000
4	7.652	-12.529	0.00	-12.45	.0807	.0667	0.0000
5	7.222	-12.424	0.00	-10.82	.0766	.0670	0.0000
6	6.793	-12.319	0.00	-9.28	.0738	.0673	0.0000
7	6.366	-12.214	0.00	-7.79	.0722	.0676	0.0000
8	5.939	-12.109	0.00	-6.33	.0715	.0679	0.0000
9	5.513	-12.004	0.00	-4.89	.0716	.0682	0.0000
10	5.086	-11.899	0.00	-3.44	.0727	.0685	0.0000
11	4.658	-11.794	0.00	-1.98	.0749	.0689	0.0000
12	4.229	-11.689	0.00	-.48	.0782	.0692	0.0000
13	3.797	-11.583	0.00	1.08	.0830	.0696	0.0000
14	3.362	-11.476	0.00	2.73	.0899	.0701	0.0000
15	2.922	-11.368	0.00	4.54	.0996	.0705	0.0000
16	2.477	-11.258	0.00	6.61	.1135	.0710	0.0000
17	2.023	-11.147	0.00	9.14	.1339	.0716	0.0000
18	1.557	-11.032	0.00	12.47	.1643	.0722	0.0000
19	1.072	-10.913	0.00	17.36	.2093	.0729	0.0000
20	.555	-10.786	0.00	25.27	.2682	.0737	0.0000
21	.000	-10.650	0.00	37.85	.2963	.0745	0.0000

FREE STATION 4.000 IS INDEX 4

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.550	-11.138	708.2	714.2	0.0	714.2	518.71	476.19
2	8.172	-11.064	689.2	693.4	0.0	693.4	518.71	478.63
3	7.791	-10.989	671.9	674.6	0.0	674.7	518.71	480.77
4	7.410	-10.914	655.9	657.6	0.0	657.6	518.71	482.67
5	7.027	-10.839	640.9	641.7	0.0	641.7	518.71	484.39
6	6.644	-10.763	626.3	626.6	0.0	626.6	518.71	485.99
7	6.260	-10.688	611.8	611.9	0.0	611.9	518.71	487.50
8	5.875	-10.612	597.1	597.2	0.0	597.2	518.71	488.98
9	5.490	-10.536	581.7	582.3	0.0	582.3	518.71	490.44
10	5.104	-10.460	565.5	567.0	0.0	567.0	518.71	491.92
11	4.717	-10.384	548.1	551.0	0.0	551.0	518.71	493.41
12	4.330	-10.308	529.5	534.3	0.0	534.3	518.71	494.92
13	3.943	-10.232	509.5	516.8	0.0	516.8	518.71	496.45
14	3.557	-10.156	487.9	498.6	0.0	498.6	518.71	497.99
15	3.172	-10.080	464.6	479.8	0.0	479.7	518.71	499.53
16	2.792	-10.005	439.2	460.6	0.0	460.6	518.71	501.03
17	2.421	-9.932	411.1	441.6	0.0	441.6	518.71	502.46
18	2.069	-9.863	379.4	423.8	0.0	423.8	518.71	503.74
19	1.755	-9.801	343.6	409.8	0.0	409.8	518.71	504.72
20	1.518	-9.755	302.7	402.9	0.0	402.9	518.71	505.18
21	1.421	-9.736	254.7	402.8	0.0	402.8	518.71	505.19

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.550	14.69	10.90	1.0000	1.0000	714.2	.667	.6675
2	8.172	14.69	11.09	1.0000	1.0000	693.4	.646	.6464
3	7.791	14.69	11.27	1.0000	1.0000	674.7	.628	.6275
4	7.410	14.69	11.42	1.0000	1.0000	657.6	.610	.6104
5	7.027	14.69	11.57	1.0000	1.0000	641.7	.595	.5946
6	6.644	14.69	11.70	1.0000	1.0000	626.6	.580	.5797
7	6.260	14.69	11.83	1.0000	1.0000	611.9	.565	.5652
8	5.875	14.69	11.96	1.0000	1.0000	597.2	.551	.5508
9	5.490	14.69	12.08	1.0000	1.0000	582.3	.536	.5363
10	5.104	14.69	12.21	1.0000	1.0000	567.0	.521	.5214
11	4.717	14.69	12.34	1.0000	1.0000	551.0	.506	.5059
12	4.330	14.69	12.47	1.0000	1.0000	534.3	.490	.4898
13	3.943	14.69	12.61	1.0000	1.0000	516.8	.473	.4730
14	3.557	14.69	12.74	1.0000	1.0000	498.6	.456	.4556
15	3.172	14.69	12.88	1.0000	1.0000	479.7	.438	.4378
16	2.792	14.69	13.02	1.0000	1.0000	460.6	.420	.4196
17	2.421	14.69	13.15	1.0000	1.0000	441.6	.402	.4017
18	2.069	14.69	13.26	1.0000	1.0000	423.8	.385	.3851
19	1.755	14.69	13.35	1.0000	1.0000	409.8	.372	.3720
20	1.518	14.69	13.40	1.0000	1.0000	402.9	.366	.3656
21	1.421	14.69	13.40	1.0000	1.0000	402.8	.366	.3655

FREE STATION 4.000 IS INDEX 4

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.550	-11.138	0.00	-7.39	.1018	.0618	0.0000
2	8.172	-11.064	0.00	-6.27	.0943	.0626	0.0000
3	7.791	-10.989	0.00	-5.15	.0881	.0633	0.0000
4	7.410	-10.914	0.00	-4.00	.0832	.0639	0.0000
5	7.027	-10.839	0.00	-2.81	.0796	.0645	0.0000
6	6.644	-10.763	0.00	-1.57	.0773	.0650	0.0000
7	6.260	-10.688	0.00	-.26	.0761	.0655	0.0000
8	5.875	-10.612	0.00	1.12	.0761	.0660	0.0000
9	5.490	-10.536	0.00	2.59	.0771	.0665	0.0000
10	5.104	-10.460	0.00	4.16	.0790	.0670	0.0000
11	4.717	-10.384	0.00	5.84	.0818	.0675	0.0000
12	4.330	-10.308	0.00	7.65	.0852	.0680	0.0000
13	3.943	-10.232	0.00	9.64	.0891	.0685	0.0000
14	3.557	-10.156	0.00	11.87	.0935	.0691	0.0000
15	3.172	-10.080	0.00	14.45	.0977	.0696	0.0000
16	2.792	-10.005	0.00	17.55	.1009	.0701	0.0000
17	2.421	-9.932	0.00	21.44	.1002	.0706	0.0000
18	2.069	-9.863	0.00	26.46	.0880	.0711	0.0000
19	1.755	-9.801	0.00	33.01	.0460	.0714	0.0000
20	1.518	-9.755	0.00	41.29	-.0566	.0716	0.0000
21	1.421	-9.736	0.00	50.79	-.2152	.0716	0.0000

FREE STATION 5.000 IS INDEX 5

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-8.650	744.8	744.7	0.0	744.8	518.71	472.47
2	8.142	-8.675	740.6	740.4	0.0	740.4	518.71	473.01
3	7.786	-8.700	735.2	735.1	0.0	735.1	518.71	473.66
4	7.431	-8.725	728.1	728.1	0.0	728.2	518.71	474.51
5	7.078	-8.750	718.6	719.1	0.0	719.1	518.71	475.60
6	6.726	-8.775	706.4	707.7	0.0	707.7	518.71	476.96
7	6.374	-8.800	691.3	693.7	0.0	693.8	518.71	478.59
8	6.022	-8.824	673.3	677.3	0.0	677.4	518.71	480.46
9	5.669	-8.849	652.3	658.5	0.0	658.6	518.71	482.55
10	5.315	-8.874	628.7	637.6	0.0	637.8	518.71	484.81
11	4.958	-8.899	603.0	615.2	0.0	615.3	518.71	487.15
12	4.600	-8.924	576.1	592.0	0.0	592.1	518.71	489.49
13	4.240	-8.950	548.5	568.7	0.0	568.8	518.71	491.74
14	3.879	-8.975	520.8	546.1	0.0	546.2	518.71	493.85
15	3.519	-9.000	493.5	524.8	0.0	524.8	518.71	495.76
16	3.165	-9.025	466.9	505.5	0.0	505.4	518.71	497.42
17	2.825	-9.049	441.1	489.2	0.0	489.0	518.71	498.78
18	2.511	-9.071	416.1	476.7	0.0	476.5	518.71	499.78
19	2.243	-9.090	392.3	468.6	0.0	468.5	518.71	500.42
20	2.054	-9.103	372.2	464.9	0.0	464.8	518.71	500.70
21	1.984	-9.108	362.9	464.1	0.0	464.1	518.71	500.76

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	14.69	10.60	1.0000	1.0000	744.8	.699	.6988
2	8.142	14.69	10.65	1.0000	1.0000	740.4	.694	.6943
3	7.786	14.69	10.70	1.0000	1.0000	735.1	.689	.6888
4	7.431	14.69	10.76	1.0000	1.0000	728.2	.682	.6817
5	7.078	14.69	10.85	1.0000	1.0000	719.1	.672	.6725
6	6.726	14.69	10.96	1.0000	1.0000	707.7	.661	.6609
7	6.374	14.69	11.09	1.0000	1.0000	693.8	.647	.6468
8	6.022	14.69	11.24	1.0000	1.0000	677.4	.630	.6303
9	5.669	14.69	11.42	1.0000	1.0000	658.6	.611	.6115
10	5.315	14.69	11.60	1.0000	1.0000	637.8	.591	.5907
11	4.958	14.69	11.80	1.0000	1.0000	615.3	.569	.5686
12	4.600	14.69	12.00	1.0000	1.0000	592.1	.546	.5458
13	4.240	14.69	12.19	1.0000	1.0000	568.8	.523	.5232
14	3.879	14.69	12.38	1.0000	1.0000	546.2	.501	.5012
15	3.519	14.69	12.54	1.0000	1.0000	524.8	.481	.4807
16	3.165	14.69	12.69	1.0000	1.0000	505.4	.462	.4622
17	2.825	14.69	12.81	1.0000	1.0000	489.0	.447	.4466
18	2.511	14.69	12.90	1.0000	1.0000	476.5	.435	.4347
19	2.243	14.69	12.96	1.0000	1.0000	468.5	.427	.4271
20	2.054	14.69	12.99	1.0000	1.0000	464.8	.424	.4237
21	1.984	14.69	12.99	1.0000	1.0000	464.1	.423	.4229

FREE STATION 5.000 IS INDEX 5

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-8.650	0.00	-.58	.0120	.0606	0.0000
2	8.142	-8.675	0.00	-.10	.0132	.0607	0.0000
3	7.786	-8.700	0.00	.56	.0158	.0610	0.0000
4	7.431	-8.725	0.00	1.40	.0203	.0612	0.0000
5	7.078	-8.750	0.00	2.43	.0262	.0616	0.0000
6	6.726	-8.775	0.00	3.61	.0332	.0620	0.0000
7	6.374	-8.800	0.00	4.93	.0409	.0626	0.0000
8	6.022	-8.824	0.00	6.39	.0491	.0632	0.0000
9	5.669	-8.849	0.00	7.98	.0576	.0639	0.0000
10	5.315	-8.874	0.00	9.68	.0658	.0646	0.0000
11	4.958	-8.899	0.00	11.49	.0725	.0654	0.0000
12	4.600	-8.924	0.00	13.38	.0769	.0662	0.0000
13	4.240	-8.950	0.00	15.39	.0787	.0669	0.0000
14	3.879	-8.975	0.00	17.56	.0774	.0676	0.0000
15	3.519	-9.000	0.00	19.93	.0716	.0683	0.0000
16	3.165	-9.025	0.00	22.59	.0591	.0689	0.0000
17	2.825	-9.049	0.00	25.66	.0370	.0693	0.0000
18	2.511	-9.071	0.00	29.24	.0028	.0697	0.0000
19	2.243	-9.090	0.00	33.20	-.0431	.0699	0.0000
20	2.054	-9.103	0.00	36.85	-.0913	.0700	0.0000
21	1.984	-9.108	0.00	38.59	-.1173	.0700	0.0000

FREE STATION 6.000 IS INDEX 6

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-7.802	790.3	790.3	0.0	790.6	518.71	466.60
2	8.149	-7.876	800.7	800.6	0.0	800.9	518.71	465.24
3	7.802	-7.949	811.4	811.5	0.0	811.5	518.71	463.80
4	7.459	-8.015	817.2	817.8	0.0	817.7	518.71	462.97
5	7.119	-8.073	814.5	816.2	0.0	816.0	518.71	463.20
6	6.781	-8.124	802.9	806.4	0.0	806.1	518.71	464.54
7	6.444	-8.170	784.1	790.2	0.0	789.9	518.71	466.70
8	6.109	-8.212	760.1	769.4	0.0	769.0	518.71	469.41
9	5.774	-8.245	732.3	745.4	0.0	745.1	518.71	472.43
10	5.442	-8.263	701.7	719.5	0.0	719.3	518.71	475.58
11	5.114	-8.261	669.1	692.3	0.0	692.3	518.71	478.76
12	4.791	-8.243	635.6	664.7	0.0	664.9	518.71	481.86
13	4.473	-8.218	602.4	637.5	0.0	637.8	518.71	484.80
14	4.159	-8.194	570.5	611.4	0.0	611.8	518.71	487.51
15	3.851	-8.176	541.2	587.8	0.0	588.3	518.71	489.86
16	3.555	-8.160	515.8	568.4	0.0	568.8	518.71	491.74
17	3.279	-8.145	495.5	554.6	0.0	555.0	518.71	493.04
18	3.037	-8.133	480.9	547.2	0.0	547.5	518.71	493.73
19	2.845	-8.125	471.6	545.6	0.0	545.8	518.71	493.88
20	2.719	-8.120	466.7	547.3	0.0	547.4	518.71	493.73
21	2.675	-8.119	465.0	548.5	0.0	548.6	518.71	493.63

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	14.69	10.15	1.0000	1.0000	1693.4	.746	1.5988
2	8.149	14.69	10.05	1.0000	1.0000	1644.0	.757	1.5544
3	7.802	14.69	9.94	1.0000	1.0000	1596.4	.769	1.5117
4	7.459	14.69	9.88	1.0000	1.0000	1547.9	.775	1.4672
5	7.119	14.69	9.89	1.0000	1.0000	1496.5	.773	1.4181
6	6.781	14.69	9.99	1.0000	1.0000	1441.5	.763	1.3640
7	6.444	14.69	10.16	1.0000	1.0000	1383.4	.746	1.3060
8	6.109	14.69	10.37	1.0000	1.0000	1323.0	.724	1.2454
9	5.774	14.69	10.60	1.0000	1.0000	1261.2	.699	1.1834
10	5.442	14.69	10.85	1.0000	1.0000	1198.8	.673	1.1211
11	5.114	14.69	11.10	1.0000	1.0000	1136.3	.645	1.0591
12	4.791	14.69	11.36	1.0000	1.0000	1074.5	.618	.9983
13	4.473	14.69	11.60	1.0000	1.0000	1013.7	.591	.9390
14	4.159	14.69	11.83	1.0000	1.0000	954.4	.565	.8816
15	3.851	14.69	12.03	1.0000	1.0000	897.8	.542	.8273
16	3.555	14.69	12.19	1.0000	1.0000	845.8	.523	.7779
17	3.279	14.69	12.31	1.0000	1.0000	800.9	.510	.7356
18	3.037	14.69	12.37	1.0000	1.0000	765.4	.502	.7025
19	2.845	14.69	12.38	1.0000	1.0000	740.9	.501	.6799
20	2.719	14.69	12.37	1.0000	1.0000	727.4	.502	.6676
21	2.675	14.69	12.36	1.0000	1.0000	723.2	.504	.6639

FREE STATION 6.000 IS INDEX 6

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-7.802	0.00	0.00	0.0000	.0587	.0145
2	8.149	-7.876	0.00	.25	-.0140	.0583	.0149
3	7.802	-7.949	0.00	.95	-.0166	.0578	.0156
4	7.459	-8.015	0.00	2.14	-.0059	.0576	.0162
5	7.119	-8.073	0.00	3.69	.0124	.0577	.0169
6	6.781	-8.124	0.00	5.38	.0293	.0581	.0176
7	6.444	-8.170	0.00	7.12	.0405	.0587	.0181
8	6.109	-8.212	0.00	8.89	.0459	.0596	.0185
9	5.774	-8.245	0.00	10.75	.0490	.0606	.0188
10	5.442	-8.263	0.00	12.76	.0548	.0616	.0197
11	5.114	-8.261	0.00	14.88	.0630	.0626	.0210
12	4.791	-8.243	0.00	17.02	.0693	.0636	.0235
13	4.473	-8.218	0.00	19.09	.0695	.0646	.0265
14	4.159	-8.194	0.00	21.06	.0620	.0655	.0301
15	3.851	-8.176	0.00	22.97	.0475	.0663	.0369
16	3.555	-8.160	0.00	24.84	.0270	.0669	.0454
17	3.279	-8.145	0.00	26.69	-.0006	.0674	.0573
18	3.037	-8.133	0.00	28.50	-.0363	.0676	.0695
19	2.845	-8.125	0.00	30.18	-.0769	.0677	.0799
20	2.719	-8.120	0.00	31.50	-.1115	.0676	.0874
21	2.675	-8.119	0.00	32.02	-.1255	.0676	.0901

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED
1	-53.96	7.35	1497.7
2	-52.68	8.13	1435.8
3	-51.87	7.18	1374.7
4	-50.51	5.52	1314.3
5	-48.97	3.70	1254.3
6	-47.87	2.69	1194.8
7	-47.04	1.74	1135.5
8	-46.28	.73	1076.3
9	-45.50	-.67	1017.4
10	-44.67	-2.00	958.8
11	-43.78	-3.20	901.1
12	-43.05	-3.24	844.2
13	-42.12	-2.99	788.2
14	-41.13	-2.40	732.9
15	-40.22	-1.51	678.6
16	-39.39	-.49	626.4
17	-37.64	1.22	577.8
18	-35.99	2.79	535.2
19	-34.24	4.42	501.2
20	-33.12	5.47	479.1
21	-32.74	5.84	471.4

STATION----- 6.200 IS INSIDE OF A ROTOR WITH INDEX 7

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-7.383	736.3	736.1	169.9	756.6	561.08	513.42
2	8.149	-7.421	751.8	751.6	177.7	773.5	561.19	511.37
3	7.808	-7.460	775.0	774.8	184.0	797.7	560.87	507.87
4	7.477	-7.497	803.6	803.7	189.0	827.0	560.19	503.22
5	7.156	-7.529	821.8	822.9	194.8	847.0	559.61	499.85
6	6.839	-7.558	832.3	835.6	200.8	860.6	559.01	497.31
7	6.525	-7.585	833.6	840.2	207.4	866.5	558.41	495.88
8	6.211	-7.610	830.0	840.6	215.2	868.6	557.93	495.09
9	5.900	-7.630	821.9	837.6	225.0	867.9	557.67	494.93
10	5.594	-7.643	809.0	830.8	235.2	863.9	557.31	495.14
11	5.290	-7.650	780.1	808.9	230.1	841.3	554.42	495.47
12	4.987	-7.653	743.2	779.2	215.3	808.5	550.21	495.76
13	4.683	-7.656	705.0	748.1	200.1	774.4	546.21	496.25
14	4.380	-7.657	668.5	718.3	187.3	742.2	542.79	496.89
15	4.081	-7.660	634.0	689.8	177.2	712.1	539.94	497.69
16	3.790	-7.664	602.1	663.2	168.5	684.1	537.46	498.47
17	3.518	-7.670	574.8	640.4	160.6	659.9	535.29	499.00
18	3.277	-7.675	554.0	622.9	153.6	641.2	533.49	499.23
19	3.085	-7.680	540.3	611.3	148.0	628.6	532.11	499.18
20	2.959	-7.683	533.3	605.2	144.0	621.7	531.21	499.01
21	2.915	-7.684	531.2	603.5	142.5	619.6	530.90	498.91

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	18.07	13.25	1.2297	1.0817	1518.2	.681	1.3665
2	8.149	18.23	13.17	1.2404	1.0819	1465.5	.698	1.3217
3	7.808	18.43	13.03	1.2543	1.0813	1421.4	.722	1.2863
4	7.477	18.71	12.86	1.2731	1.0800	1385.4	.752	1.2595
5	7.156	18.84	12.70	1.2824	1.0789	1346.8	.773	1.2285
6	6.839	18.91	12.57	1.2872	1.0777	1306.5	.787	1.1948
7	6.525	18.90	12.48	1.2863	1.0765	1262.5	.794	1.1562
8	6.211	18.89	12.44	1.2859	1.0756	1216.4	.796	1.1150
9	5.900	18.91	12.45	1.2866	1.0751	1168.4	.796	1.0711
10	5.594	18.90	12.50	1.2861	1.0744	1119.6	.792	1.0261
11	5.290	18.59	12.54	1.2648	1.0689	1071.1	.771	.9813
12	4.987	18.11	12.58	1.2328	1.0607	1023.3	.741	.9373
13	4.683	17.66	12.63	1.2016	1.0530	974.9	.709	.8925
14	4.380	17.27	12.68	1.1753	1.0464	926.0	.679	.8472
15	4.081	16.95	12.75	1.1536	1.0409	877.2	.651	.8019
16	3.790	16.68	12.82	1.1350	1.0362	830.2	.625	.7583
17	3.518	16.44	12.86	1.1188	1.0320	788.1	.603	.7195
18	3.277	16.24	12.88	1.1054	1.0285	753.4	.585	.6877
19	3.085	16.09	12.87	1.0952	1.0258	728.2	.574	.6647
20	2.959	16.00	12.86	1.0887	1.0241	713.3	.568	.6512
21	2.915	15.96	12.85	1.0864	1.0235	708.5	.566	.6469

STATION---- 6.200 IS INSIDE OF A ROTOR WITH INDEX 7

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-7.383	13.00	0.00	0.0000	.0696	.1147
2	8.149	-7.421	13.30	-.16	-.0121	.0695	.1156
3	7.808	-7.460	13.36	.30	-.0261	.0692	.1198
4	7.477	-7.497	13.24	1.55	-.0338	.0690	.1262
5	7.156	-7.529	13.32	3.34	-.0370	.0686	.1354
6	6.839	-7.558	13.51	5.31	-.0368	.0682	.1470
7	6.525	-7.585	13.86	7.28	-.0332	.0679	.1599
8	6.211	-7.610	14.36	9.22	-.0280	.0678	.1703
9	5.900	-7.630	15.04	11.18	-.0251	.0679	.1793
10	5.594	-7.643	15.80	13.25	-.0278	.0681	.1864
11	5.290	-7.650	15.88	15.40	-.0355	.0683	.1913
12	4.987	-7.653	15.44	17.54	-.0438	.0685	.1961
13	4.683	-7.656	14.97	19.60	-.0478	.0687	.2017
14	4.380	-7.657	14.62	21.51	-.0463	.0689	.2086
15	4.081	-7.660	14.41	23.27	-.0414	.0691	.2169
16	3.790	-7.664	14.26	24.84	-.0358	.0694	.2255
17	3.518	-7.670	14.08	26.19	-.0310	.0696	.2347
18	3.277	-7.675	13.86	27.25	-.0279	.0696	.2450
19	3.085	-7.680	13.60	27.93	-.0284	.0696	.2543
20	2.959	-7.683	13.38	28.27	-.0333	.0695	.2613
21	2.915	-7.684	13.28	28.37	-.0365	.0695	.2640

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED	LOSS COEF.
1	-60.25	-.80	1497.7	.0868
2	-58.72	.83	1435.8	.0789
3	-56.93	1.38	1375.7	.0623
4	-54.98	1.18	1317.5	.0349
5	-52.80	-.17	1260.9	.0156
6	-50.73	-1.32	1205.1	-.0009
7	-48.66	-2.38	1149.7	-.0118
8	-46.49	-3.24	1094.4	-.0229
9	-44.18	-3.74	1039.7	-.0344
10	-41.72	-3.87	985.6	-.0470
11	-39.65	-3.55	932.1	-.0595
12	-37.76	-3.21	878.7	-.0705
13	-36.62	-3.20	825.1	-.0781
14	-35.59	-2.84	771.7	-.0846
15	-34.63	-2.11	719.0	-.0906
16	-33.16	-.09	667.9	-.0952
17	-31.90	2.13	619.9	-.0979
18	-30.75	3.96	577.5	-.0988
19	-29.90	5.41	543.5	-.0982
20	-29.36	6.13	521.4	-.0969
21	-29.17	6.29	513.7	-.0963

STATION---- 6.400 IS INSIDE OF A ROTOR WITH INDEX 8

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-6.984	673.8	673.1	321.6	747.4	598.87	552.40
2	8.147	-6.987	686.8	686.1	335.7	765.3	598.90	550.19
3	7.807	-6.993	713.4	712.7	346.8	794.1	598.10	545.65
4	7.487	-7.001	753.5	752.9	355.2	833.9	596.71	538.86
5	7.181	-7.008	776.7	776.8	364.6	859.4	595.49	534.04
6	6.884	-7.014	792.2	793.8	374.1	878.7	594.23	529.99
7	6.591	-7.022	798.4	802.5	384.6	891.0	593.06	527.00
8	6.300	-7.031	804.2	811.8	396.9	904.6	592.04	523.95
9	6.013	-7.037	809.8	821.9	412.5	920.4	591.45	520.94
10	5.731	-7.036	814.6	832.3	431.1	938.0	591.16	517.94
11	5.452	-7.034	801.4	825.4	427.6	930.2	587.09	515.07
12	5.172	-7.037	776.9	807.8	409.1	906.0	580.78	512.45
13	4.888	-7.051	746.6	785.0	387.5	875.9	574.27	510.40
14	4.600	-7.075	713.4	759.9	365.8	843.7	568.08	508.80
15	4.313	-7.102	679.6	734.3	347.1	812.5	562.63	507.65
16	4.032	-7.127	647.0	709.4	331.8	783.4	557.97	506.86
17	3.767	-7.153	616.4	685.6	318.4	756.1	553.91	506.30
18	3.529	-7.176	590.1	664.5	306.4	731.7	550.45	505.85
19	3.337	-7.195	569.7	647.3	296.7	712.0	547.77	505.54
20	3.210	-7.207	556.6	635.7	290.0	696.5	546.03	505.38
21	3.165	-7.212	552.2	631.5	287.6	693.7	545.42	505.34

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	21.45	16.17	1.4598	1.1545	1355.1	.649	1.1759
2	8.147	21.78	16.18	1.4820	1.1546	1296.2	.665	1.1270
3	7.807	22.21	16.10	1.5114	1.1531	1251.6	.693	1.0928
4	7.487	22.81	15.96	1.5521	1.1504	1223.0	.733	1.0745
5	7.181	23.10	15.78	1.5719	1.1480	1189.4	.758	1.0497
6	6.884	23.25	15.57	1.5820	1.1456	1154.9	.778	1.0231
7	6.591	23.21	15.35	1.5798	1.1433	1116.9	.792	.9922
8	6.300	23.19	15.12	1.5781	1.1414	1080.7	.806	.9628
9	6.013	23.20	14.88	1.5786	1.1402	1046.1	.822	.9347
10	5.731	23.24	14.63	1.5815	1.1397	1013.7	.841	.9084
11	5.452	22.75	14.39	1.5480	1.1318	982.6	.836	.8829
12	5.172	21.95	14.16	1.4936	1.1197	951.2	.816	.8569
13	4.888	21.10	13.97	1.4358	1.1071	916.9	.791	.8277
14	4.600	20.31	13.81	1.3820	1.0952	880.5	.763	.7961
15	4.313	19.63	13.70	1.3358	1.0847	842.4	.735	.7625
16	4.032	19.06	13.62	1.2970	1.0757	804.2	.71[illegible]	.7285
17	3.767	18.57	13.56	1.2638	1.0679	767.7	.685	.6958
18	3.529	18.16	13.52	1.2360	1.0612	735.6	.6[illegible]	.6670
19	3.337	17.85	13.48	1.2146	1.0560	709.9	.6[illegible]	.6439
20	3.210	17.65	13.46	1.2010	1.0527	692.8	.6[illegible]	.6285
21	3.165	17.58	13.46	1.1962	1.0515	686.8	.629	.6231

STATION---- 6.400 IS INSIDE OF A ROTOR WITH INDEX 8

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-6.984	25.54	0.00	0.0000	.0790	.1528
2	8.147	-6.987	26.07	-.42	-.0092	.0794	.1534
3	7.807	-6.993	25.94	-.25	-.0147	.0797	.1568
4	7.487	-7.001	25.26	.82	-.0170	.0799	.1624
5	7.181	-7.008	25.14	2.50	-.0190	.0797	.1723
6	6.884	-7.014	25.23	4.37	-.0225	.0793	.1839
7	6.591	-7.022	25.61	6.31	-.0269	.0786	.1982
8	6.300	-7.031	26.05	8.22	-.0312	.0779	.2114
9	6.013	-7.037	26.65	10.14	-.0352	.0771	.2248
10	5.731	-7.036	27.38	12.07	-.0385	.0762	.2369
11	5.452	-7.034	27.39	14.04	-.0397	.0754	.2494
12	5.172	-7.037	26.86	16.06	-.0372	.0746	.2608
13	4.888	-7.051	26.27	18.16	-.0317	.0739	.2723
14	4.600	-7.075	25.71	20.29	-.0228	.0733	.2833
15	4.313	-7.102	25.30	22.39	-.0100	.0728	.2951
16	4.032	-7.127	25.06	24.35	.0054	.0725	.3078
17	3.767	-7.153	24.91	26.08	.0223	.0723	.3206
18	3.529	-7.176	24.76	27.49	.0400	.0721	.3335
19	3.337	-7.195	24.62	28.47	.0582	.0720	.3456
20	3.210	-7.207	24.52	29.00	.0739	.0719	.3545
21	3.165	-7.212	24.49	29.15	.0802	.0719	.3579

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED	LOSS COEF.
1	-61.10	-6.91	1497.7	.1544
2	-58.50	-3.63	1435.4	.1408
3	-55.58	-.82	1375.6	.1121
4	-52.51	1.43	1319.1	.0634
5	-48.95	1.15	1265.3	.0283
6	-45.64	.57	1213.0	-.0023
7	-42.59	-.45	1161.4	-.0232
8	-39.61	-1.37	1110.1	-.0448
9	-36.73	-2.24	1059.5	-.0670
10	-34.32	-3.01	1009.8	-.0915
11	-31.90	-3.57	960.7	-.1166
12	-30.02	-3.23	911.3	-.1404
13	-28.04	-2.92	861.3	-.1582
14	-26.32	-2.68	810.5	-.1736
15	-24.96	-1.65	759.9	-.1876
16	-23.75	-.23	710.5	-.1995
17	-22.84	1.76	663.7	-.2076
18	-22.22	3.61	621.9	-.2112
19	-21.98	4.43	588.0	-.2104
20	-21.85	4.89	565.5	- 2076
21	-21.81	5.05	557.6	-.2060

STATION----- 6.600 IS INSIDE OF A ROTOR WITH INDEX 9

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-6.594	595.6	594.9	452.7	748.7	631.48	584.92
2	8.143	-6.561	610.7	610.0	470.7	771.6	631.04	581.58
3	7.804	-6.535	644.1	643.4	483.8	806.0	629.37	575.39
4	7.491	-6.514	696.6	696.0	492.8	853.6	626.92	566.36
5	7.201	-6.497	722.2	722.2	502.3	880.4	624.72	560.30
6	6.921	-6.483	737.0	738.2	511.7	898.9	622.54	555.36
7	6.648	-6.472	738.9	742.1	522.6	908.3	620.54	551.95
8	6.377	-6.465	741.7	747.5	535.6	920.2	618.83	548.42
9	6.110	-6.458	745.6	754.9	552.4	936.0	617.67	544.81
10	5.850	-6.444	751.4	764.9	574.0	956.9	617.15	541.00
11	5.595	-6.429	743.7	762.3	575.2	955.5	613.06	537.13
12	5.342	-6.420	727.9	752.7	561.8	939.8	606.71	533.23
13	5.086	-6.427	707.2	739.8	545.1	919.4	600.01	529.67
14	4.824	-6.456	684.3	726.1	526.3	897.3	593.17	526.17
15	4.558	-6.501	659.0	711.3	507.0	873.9	586.49	522.92
16	4.296	-6.547	632.3	695.9	490.7	851.9	580.54	520.13
17	4.047	-6.591	605.5	680.4	477.6	831.6	575.41	517.84
18	3.821	-6.631	580.1	664.9	466.4	812.4	571.00	516.05
19	3.637	-6.663	558.5	651.1	457.3	795.8	567.51	514.78
20	3.514	-6.684	543.8	641.3	451.1	784.2	565.22	514.01
21	3.470	-6.692	538.5	637.7	448.9	780.0	564.41	513.76

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	24.66	18.85	1.6785	1.2174	1202.5	.631	1.0140
2	8.143	25.13	18.87	1.7099	1.2166	1140.8	.653	.9648
3	7.804	25.74	18.80	1.7520	1.2133	1099.2	.685	.9345
4	7.491	26.63	18.65	1.8124	1.2086	1081.0	.732	.9264
5	7.201	27.02	18.46	1.8392	1.2044	1053.1	.759	.9074
6	6.921	27.20	18.23	1.8509	1.2002	1022.7	.778	.8851
7	6.648	27.10	17.98	1.8440	1.1963	985.7	.789	.8557
8	6.377	27.01	17.69	1.8383	1.1930	951.1	.801	.8283
9	6.110	26.97	17.38	1.8358	1.1908	919.0	.818	.8030
10	5.850	27.02	17.04	1.8389	1.1898	890.9	.839	.7812
11	5.595	26.50	16.68	1.8034	1.1819	865.9	.841	.7620
12	5.342	25.63	16.31	1.7440	1.1696	842.9	.830	.7445
13	5.086	24.66	15.94	1.6779	1.1567	818.8	.815	.7255
14	4.824	23.68	15.57	1.6118	1.1436	795.0	.798	.7068
15	4.558	22.76	15.23	1.5488	1.1307	770.5	.779	.6871
16	4.296	21.95	14.95	1.4940	1.1192	745.1	.762	.6663
17	4.047	21.27	14.71	1.4476	1.1093	719.9	.745	.6452
18	3.821	20.70	14.53	1.4086	1.1008	696.3	.729	.6251
19	3.637	20.25	14.40	1.3782	1.0941	676.5	.715	.6081
20	3.514	19.96	14.32	1.3585	1.0897	663.0	.705	.5964
21	3.470	19.86	14.29	1.3516	1.0881	658.1	.702	.5921

STATION---- 6.600 IS INSIDE OF A ROTOR WITH INDEX 9

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-6.594	37.27	0.00	0.0000	.0870	.1416
2	8.143	-6.561	37.65	-.43	.0084	.0876	.1434
3	7.804	-6.535	36.94	-.22	.0168	.0882	.1469
4	7.491	-6.514	35.30	.85	.0190	.0889	.1517
5	7.201	-6.497	34.82	2.43	.0146	.0889	.1602
6	6.921	-6.483	34.73	4.15	.0077	.0886	.1696
7	6.648	-6.472	35.15	5.88	.0002	.0879	.1812
8	6.377	-6.465	35.62	7.59	-.0072	.0871	.1929
9	6.110	-6.458	36.20	9.31	-.0139	.0861	.2047
10	5.850	-6.444	36.89	11.06	-.0199	.0850	.2164
11	5.595	-6.429	37.04	12.91	-.0237	.0838	.2283
12	5.342	-6.420	36.74	14.96	-.0232	.0825	.2414
13	5.086	-6.427	36.39	17.23	-.0184	.0812	.2559
14	4.824	-6.456	35.94	19.68	-.0101	.0799	.2720
15	4.558	-6.501	35.48	22.25	.0024	.0786	.2901
16	4.296	-6.547	35.19	24.82	.0197	.0776	.3082
17	4.047	-6.591	35.07	27.24	.0404	.0767	.3269
18	3.821	-6.631	35.05	29.37	.0628	.0760	.3443
19	3.637	-6.663	35.08	31.04	.0839	.0755	.3598
20	3.514	-6.684	35.12	32.12	.1001	.0752	.3710
21	3.470	-6.692	35.14	32.49	.1065	.0751	.3751

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED	LOSS COEF.
1	-57.42	-11.17	1497.7	.2065
2	-54.82	-5.00	1434.7	.1887
3	-51.67	.32	1375.0	.1508
4	-48.39	4.62	1320.0	.0857
5	-44.86	4.48	1268.8	.0378
6	-41.49	3.91	1219.6	-.0045
7	-38.23	2.32	1171.3	-.0340
8	-35.11	1.01	1123.6	-.0648
9	-32.26	.03	1076.6	-.0967
10	-29.52	-.91	1030.8	-.1319
11	-26.61	-1.82	985.9	-.1694
12	-23.85	-1.82	941.2	-.2077
13	-21.14	-1.30	896.1	-.2402
14	-18.72	-.82	849.9	-.2707
15	-16.78	-.36	803.1	-.2986
16	-15.41	.60	756.9	-.3233
17	-14.28	1.65	713.0	-.3427
18	-13.83	2.63	673.3	-.3545
19	-13.63	3.44	640.9	-.3582
20	-13.53	3.98	619.1	-.3565
21	-13.51	4.07	611.4	-.3550

STATION---- 6.800 IS INSIDE OF A ROTOR WITH INDEX 10

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-6.196	546.4	545.7	562.1	784.2	658.65	607.62
2	8.140	-6.127	565.9	565.2	579.8	810.5	656.96	602.45
3	7.804	-6.070	607.7	607.0	590.6	847.6	653.73	594.09
4	7.501	-6.024	670.0	669.7	595.8	897.0	649.64	582.84
5	7.224	-5.986	695.1	695.7	601.3	920.1	645.99	575.68
6	6.961	-5.954	706.5	708.4	606.8	933.3	642.47	570.11
7	6.704	-5.927	701.9	705.7	614.0	935.9	639.33	566.55
8	6.450	-5.905	698.2	704.3	623.9	941.4	636.64	563.00
9	6.201	-5.886	695.9	704.8	637.9	951.1	634.65	559.48
10	5.960	-5.863	696.4	708.7	657.2	967.0	633.50	555.79
11	5.727	-5.836	690.4	706.9	665.7	971.5	630.44	552.00
12	5.499	-5.813	680.2	702.4	665.2	967.9	625.94	548.05
13	5.274	-5.806	665.6	695.4	662.4	960.8	621.12	544.36
14	5.049	-5.820	650.3	689.9	658.6	954.2	616.19	540.47
15	4.821	-5.858	633.0	684.8	653.0	946.6	611.01	536.48
16	4.594	-5.914	613.1	679.2	647.4	938.7	605.91	532.61
17	4.376	-5.972	591.4	672.9	644.2	931.9	601.37	529.12
18	4.180	-6.023	569.9	666.6	642.8	926.3	597.50	526.11
19	4.020	-6.064	551.2	660.8	642.2	921.7	594.43	523.73
20	3.914	-6.091	538.2	656.7	641.9	918.6	592.38	522.16
21	3.876	-6.101	533.6	655.3	641.7	917.4	591.65	521.61

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	27.56	20.76	1.8754	1.2698	1083.1	.649	.8961
2	8.140	28.05	20.70	1.9091	1.2665	1024.5	.673	.8512
3	7.804	28.74	20.55	1.9560	1.2603	991.8	.709	.8299
4	7.501	29.78	20.35	2.0267	1.2524	987.6	.758	.8343
5	7.224	30.16	20.13	2.0523	1.2454	967.0	.782	.8219
6	6.961	30.25	19.90	2.0586	1.2386	941.2	.797	.8039
7	6.704	30.00	19.64	2.0418	1.2325	905.3	.802	.7757
8	6.450	29.79	19.36	2.0274	1.2274	871.1	.809	.7487
9	6.201	29.64	19.06	2.0174	1.2235	838.7	.820	.7232
10	5.960	29.62	18.72	2.0155	1.2213	810.3	.837	.7010
11	5.727	29.25	18.36	1.9903	1.2154	785.9	.843	.6822
12	5.499	28.63	17.97	1.9483	1.2067	765.3	.843	.6667
13	5.274	27.88	17.56	1.8974	1.1974	744.8	.840	.6511
14	5.049	27.12	17.13	1.8457	1.1879	727.5	.837	.6382
15	4.821	26.33	16.70	1.7921	1.1779	712.4	.834	.6273
16	4.594	25.57	16.28	1.7401	1.1681	698.2	.830	.6170
17	4.376	24.90	15.90	1.6944	1.1594	684.8	.826	.6071
18	4.180	24.33	15.59	1.6560	1.1519	673.1	.824	.5985
19	4.020	23.89	15.34	1.6259	1.1460	664.1	.821	.5918
20	3.914	23.60	15.18	1.6062	1.1420	658.5	.820	.5877
21	3.876	23.50	15.12	1.5992	1.1406	656.6	.819	.5863

STATION----- 6.800 IS INSIDE OF A ROTOR WITH INDEX 10

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-6.196	45.85	0.00	0.0000	.0922	.1276
2	8.140	-6.127	45.73	-.06	.0212	.0927	.1294
3	7.804	-6.070	44.21	.62	.0450	.0933	.1320
4	7.501	-6.024	41.66	1.87	.0529	.0943	.1351
5	7.224	-5.986	40.84	3.38	.0497	.0944	.1392
6	6.961	-5.954	40.58	4.91	.0427	.0942	.1438
7	6.704	-5.927	41.03	6.43	.0350	.0936	.1498
8	6.450	-5.905	41.54	7.93	.0280	.0928	.1560
9	6.201	-5.886	42.15	9.43	.0211	.0919	.1621
10	5.960	-5.863	42.84	10.95	.0139	.0909	.1687
11	5.727	-5.836	43.28	12.64	.0084	.0898	.1759
12	5.499	-5.813	43.44	14.65	.0058	.0885	.1839
13	5.274	-5.806	43.61	17.00	.0060	.0871	.1953
14	5.049	-5.820	43.67	19.65	.0082	.0856	.2078
15	4.821	-5.858	43.64	22.55	.0123	.0840	.2253
16	4.594	-5.914	43.63	25.59	.0190	.0825	.2454
17	4.376	-5.972	43.75	28.59	.0273	.0811	.2661
18	4.180	-6.023	43.96	31.33	.0357	.0800	.2863
19	4.020	-6.064	44.18	33.57	.0428	.0790	.3042
20	3.914	-6.091	44.34	35.04	.0469	.0784	.3161
21	3.876	-6.101	44.40	35.56	.0480	.0782	.3204

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED	LOSS COEF.
1	-55.51	-17.43	1497.7	.2463
2	-53.28	-6.97	1434.3	.2243
3	-50.11	1.98	1375.0	.1785
4	-46.86	8.60	1321.6	.1003
5	-42.97	9.47	1272.9	.0420
6	-39.33	9.51	1226.5	-.0098
7	-35.79	7.49	1181.2	-.0467
8	-32.21	5.75	1136.5	-.0854
9	-28.75	4.66	1092.7	-.1257
10	-25.44	3.77	1050.1	-.1703
11	-22.03	3.41	1009.0	-.2192
12	-18.47	3.12	968.9	-.2723
13	-14.81	3.49	929.3	-.3223
14	-11.21	3.86	889.6	-.3746
15	-8.43	3.56	849.5	-.4272
16	-6.10	3.13	809.4	-.4763
17	-4.87	2.93	771.0	-.5189
18	-4.25	2.88	736.5	-.5518
19	-3.77	2.83	708.4	-.5715
20	-3.80	2.90	689.6	-.5793
21	-3.83	2.92	682.9	-.5808

ROTOR 1 STATION 7.000 FLOW 60.07 ASPECT RATIO 1.45
STA NO. 11 RPM 20191. TIP SPEED 1498. NO. OF BLADES 20

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-5.777	513.6	513.0	646.0	825.4	679.46	622.98
2	8.142	-5.673	544.3	543.9	657.4	853.7	675.43	614.99
3	7.814	-5.589	591.9	591.9	660.2	887.2	669.78	604.48
4	7.524	-5.523	658.0	658.9	657.0	931.0	663.49	591.56
5	7.261	-5.469	680.2	682.4	654.8	946.2	657.98	583.66
6	7.012	-5.423	687.7	691.4	653.0	951.5	652.86	577.68
7	6.770	-5.384	677.7	683.3	653.5	945.9	648.33	574.02
8	6.532	-5.350	668.8	676.5	656.8	943.3	644.42	570.50
9	6.299	-5.321	660.7	671.1	664.4	944.8	641.34	567.19
10	6.073	-5.290	655.2	668.7	677.3	952.2	639.25	563.92
11	5.859	-5.254	652.3	669.8	697.3	967.3	638.41	560.67
12	5.655	-5.221	649.4	672.3	717.7	983.8	637.65	557.22
13	5.461	-5.198	642.2	671.8	736.6	997.4	636.60	553.93
14	5.275	-5.192	635.7	673.9	756.4	1013.5	635.64	550.27
15	5.096	-5.203	629.5	678.6	777.2	1032.2	634.79	546.24
16	4.925	-5.233	622.4	684.9	800.2	1053.6	634.21	541.93
17	4.763	-5.277	612.7	690.9	825.3	1076.7	633.91	537.55
18	4.618	-5.325	600.2	695.3	849.5	1098.1	633.68	533.42
19	4.500	-5.366	586.8	697.4	870.5	1115.7	633.51	530.01
20	4.422	-5.393	576.1	697.9	885.1	1127.4	633.41	527.72
21	4.395	-5.403	572.0	697.9	890.3	1131.5	633.38	526.92

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	29.91	22.05	2.0354	1.3099	994.3	.674	.8124
2	8.142	30.26	21.77	2.0596	1.3021	948.5	.702	.7801
3	7.814	30.84	21.51	2.0985	1.2912	929.4	.736	.7709
4	7.524	31.82	21.27	2.1653	1.2791	938.7	.781	.7871
5	7.261	32.03	21.03	2.1798	1.2685	925.1	.799	.7810
6	7.012	31.93	20.79	2.1730	1.2586	904.1	.807	.7672
7	6.770	31.47	20.53	2.1415	1.2499	870.6	.805	.7411
8	6.532	31.06	20.26	2.1141	1.2423	837.8	.805	.7153
9	6.299	30.75	19.98	2.0924	1.2364	805.5	.809	.6897
10	6.073	30.57	19.70	2.0803	1.2324	775.5	.818	.6660
11	5.859	30.57	19.39	2.0805	1.2308	748.9	.833	.6451
12	5.655	30.58	19.06	2.0808	1.2293	727.8	.850	.6288
13	5.461	30.43	18.69	2.0710	1.2273	708.7	.864	.6141
14	5.275	30.29	18.27	2.0615	1.2254	695.8	.881	.6049
15	5.096	30.17	17.82	2.0532	1.2238	689.3	.901	.6015
16	4.925	30.09	17.34	2.0476	1.2227	688.2	.923	.6029
17	4.763	30.04	16.86	2.0446	1.2221	691.1	.947	.6079
18	4.618	30.01	16.41	2.0423	1.2217	696.2	.970	.6148
19	4.500	29.99	16.05	2.0407	1.2213	701.7	.988	.6216
20	4.422	29.97	15.81	2.0397	1.2211	705.9	1.001	.6267
21	4.395	29.97	15.73	2.0393	1.2211	707.4	1.005	.6285

ROTOR 1 STATION 7.000 FLOW 60.07 ASPECT RATIO 1.45
STA NO. 11 RPM 20191. TIP SPEED 1498. NO. OF BLADES 20

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE	D-FACTOR
1	8.500	-5.777	51.54	0.00	0.0000	.0955	.1108	.5518
2	8.142	-5.673	50.40	1.00	.0420	.0956	.1110	.5585
3	7.814	-5.589	48.12	2.37	.0612	.0960	.1116	.5522
4	7.524	-5.523	44.92	3.79	.0619	.0970	.1118	.5289
5	7.261	-5.469	43.82	5.13	.0541	.0973	.1116	.5179
6	7.012	-5.423	43.36	6.42	.0456	.0971	.1114	.5108
7	6.770	-5.384	43.72	7.70	.0384	.0965	.1113	.5123
8	6.532	-5.350	44.15	9.01	.0336	.0959	.1112	.5130
9	6.299	-5.321	44.71	10.36	.0313	.0951	.1114	.5134
10	6.073	-5.290	45.37	11.77	.0319	.0943	.1115	.5111
11	5.859	-5.254	46.15	13.34	.0314	.0934	.1116	.5064
12	5.655	-5.221	46.87	15.16	.0238	.0923	.1116	.4983
13	5.461	-5.198	47.63	17.23	.0074	.0911	.1126	.4866
14	5.275	-5.192	48.30	19.54	-.0158	.0896	.1155	.4698
15	5.096	-5.203	48.87	22.06	-.0437	.0881	.1183	.4442
16	4.925	-5.233	49.44	24.77	-.0710	.0864	.1279	.4112
17	4.763	-5.277	50.06	27.61	-.0893	.0847	.1440	.3735
18	4.618	-5.325	50.70	30.39	-.0962	.0831	.1593	.3334
19	4.500	-5.366	51.30	32.79	-.0949	.0817	.1727	.2994
20	4.422	-5.393	51.74	34.43	-.0899	.0809	.1867	.2773
21	4.395	-5.403	51.91	35.01	-.0872	.0806	.1918	.2697

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED	INCID-ENCE	DEVIA-TION	LOSS COEF.	ADIAB. EFFIC.	POLYT. EFFIC.
1	-53.65	-20.74	1497.7	-8.226	-5.285	.2747	72.53	75.10
2	-50.07	-8.00	1434.5	-8.180	-4.941	.2452	75.76	78.08
3	-47.10	4.63	1376.8	-7.575	-3.341	.1964	80.87	82.75
4	-44.21	12.88	1325.7	-7.595	-1.206	.1227	88.37	89.56
5	-40.82	15.60	1279.4	-7.978	-1.652	.0788	92.77	93.51
6	-37.53	16.70	1235.6	-8.107	-2.586	.0466	95.89	96.31
7	-33.93	14.54	1192.9	-8.129	-4.364	.0336	97.17	97.45
8	-30.20	12.62	1150.9	-8.165	-5.947	.0213	98.32	98.49
9	-26.07	12.27	1109.8	-8.267	-7.500	.0106	99.25	99.32
10	-22.20	11.94	1070.1	-8.446	-8.233	-.0004	100.10	100.09
11	-17.54	13.23	1032.3	-8.681	-9.034	-.0112	100.82	100.74
12	-12.99	14.67	996.4	-8.739	-9.526	-.0232	101.49	101.34
13	-8.00	15.88	962.2	-8.914	-10.558	-.0285	101.66	101.50
14	-2.12	16.76	929.4	-9.038	-12.283	-.0339	101.78	101.61
15	2.79	17.59	898.0	-8.884	-12.884	-.0398	101.89	101.71
16	6.99	17.27	867.8	-8.392	-12.627	-.0456	101.97	101.78
17	10.78	15.92	839.3	-8.532	-11.950	-.0508	102.01	101.82
18	13.97	14.69	813.7	-8.374	-11.016	-.0555	102.04	101.84
19	16.55	13.68	792.9	-8.332	-10.204	-.0590	102.06	101.86
20	17.61	13.14	779.2	-8.076	-8.981	-.0611	102.07	101.88
21	17.96	12.94	774.4	-7.942	-8.528	-.0617	102.08	101.88

FREE STATION 8.000 IS INDEX 12

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-4.889	559.7	559.0	646.0	854.7	679.46	618.89
2	8.168	-4.818	593.7	593.4	655.3	884.6	675.43	610.54
3	7.864	-4.763	639.7	640.6	656.0	917.4	669.78	599.95
4	7.594	-4.714	701.3	703.9	651.0	959.3	663.49	587.11
5	7.347	-4.674	721.9	726.2	647.2	973.2	657.98	579.34
6	7.111	-4.646	728.3	734.4	643.9	977.2	652.86	573.55
7	6.882	-4.626	719.0	727.0	642.8	970.9	648.33	570.02
8	6.657	-4.612	711.6	721.8	644.5	968.2	644.42	566.55
9	6.437	-4.606	706.0	719.2	650.2	970.0	641.34	563.17
10	6.222	-4.610	704.0	720.7	661.1	978.4	639.25	559.70
11	6.015	-4.622	705.1	726.3	679.1	994.8	638.41	556.17
12	5.816	-4.643	705.6	732.4	697.8	1012.1	637.65	552.52
13	5.625	-4.673	700.7	733.9	715.2	1025.2	636.60	549.24
14	5.442	-4.713	695.0	735.7	733.2	1039.1	635.64	545.88
15	5.268	-4.763	688.9	738.4	751.9	1054.3	634.79	542.39
16	5.106	-4.818	682.9	742.6	771.9	1071.5	634.21	538.76
17	4.959	-4.876	677.1	748.5	792.7	1090.7	633.91	535.02
18	4.833	-4.932	671.4	755.9	811.8	1109.6	633.68	531.31
19	4.734	-4.977	666.4	763.3	827.6	1126.3	633.51	528.04
20	4.671	-5.006	662.7	769.0	838.0	1137.8	633.41	525.77
21	4.649	-5.016	661.3	771.1	841.6	1141.9	633.38	524.95

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	29.91	21.54	2.0354	1.3099	854.7	.701	.7007
2	8.168	30.26	21.23	2.0596	1.3021	884.6	.730	.7301
3	7.864	30.84	20.95	2.0985	1.2912	917.4	.764	.7639
4	7.594	31.82	20.71	2.1653	1.2791	959.3	.807	.8074
5	7.347	32.03	20.50	2.1798	1.2685	973.2	.825	.8246
6	7.111	31.93	20.27	2.1730	1.2586	977.2	.832	.8322
7	6.882	31.47	20.04	2.1415	1.2499	970.9	.829	.8294
8	6.657	31.06	19.78	2.1141	1.2423	968.2	.830	.8295
9	6.437	30.75	19.49	2.0924	1.2364	970.0	.834	.8336
10	6.222	30.57	19.18	2.0803	1.2324	978.4	.843	.8435
11	6.015	30.57	18.85	2.0805	1.2308	994.8	.860	.8603
12	5.816	30.58	18.50	2.0808	1.2293	1012.1	.878	.8781
13	5.625	30.43	18.14	2.0710	1.2273	1025.2	.892	.8921
14	5.442	30.29	17.77	2.0615	1.2254	1039.1	.907	.9071
15	5.268	30.17	17.39	2.0532	1.2238	1054.3	.923	.9232
16	5.106	30.09	16.99	2.0476	1.2227	1071.5	.941	.9415
17	4.959	30.04	16.58	2.0446	1.2221	1090.7	.962	.9616
18	4.833	30.01	16.19	2.0423	1.2217	1109.6	.982	.9818
19	4.734	29.99	15.84	2.0407	1.2213	1126.3	1.000	.9996
20	4.671	29.97	15.61	2.0397	1.2211	1137.8	1.012	1.0120
21	4.649	29.97	15.52	2.0393	1.2211	1141.9	1.016	1.0164

FREE STATION 8.000 IS INDEX 12

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-4.889	49.13	0.00	0.0000	.0940	.1065
2	8.168	-4.818	47.84	2.14	.0184	.0938	.1060
3	7.864	-4.763	45.68	4.04	.0282	.0943	.1057
4	7.594	-4.714	42.76	5.52	.0314	.0952	.1056
5	7.347	-4.674	41.71	6.70	.0307	.0955	.1056
6	7.111	-4.646	41.24	7.76	.0278	.0954	.1057
7	6.882	-4.626	41.48	8.84	.0241	.0949	.1058
8	6.657	-4.612	41.76	9.98	.0206	.0942	.1060
9	6.437	-4.606	42.12	11.23	.0176	.0934	.1063
10	6.222	-4.610	42.53	12.60	.0149	.0925	.1066
11	6.015	-4.622	43.08	14.10	.0126	.0915	.1070
12	5.816	-4.643	43.62	15.73	.0102	.0904	.1075
13	5.625	-4.673	44.26	17.46	.0070	.0892	.1081
14	5.442	-4.713	44.90	19.30	.0020	.0879	.1087
15	5.268	-4.763	45.52	21.23	-.0059	.0865	.1094
16	5.106	-4.818	46.11	23.24	-.0202	.0851	.1102
17	4.959	-4.876	46.64	25.34	-.0449	.0837	.1109
18	4.833	-4.932	47.04	27.44	-.0772	.0822	.1116
19	4.734	-4.977	47.31	29.28	-.1089	.0810	.1121
20	4.671	-5.006	47.46	30.57	-.1323	.0801	.1125
21	4.649	-5.016	47.50	31.04	-.1411	.0798	.1126

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE
1	41.53	5.73
2	39.04	3.80
3	37.52	2.02
4	37.41	.48
5	37.54	-.86
6	37.13	-2.03
7	36.58	-3.36
8	35.90	-4.77
9	36.23	-6.75
10	36.63	-8.77
11	37.20	-10.92
12	37.89	-13.23
13	38.66	-15.68
14	39.64	-18.65
15	40.80	-21.89
16	41.84	-25.32
17	42.75	-28.81
18	43.43	-31.64
19	44.35	-33.74
20	44.91	-35.02
21	45.10	-35.46

STATOR 1 STATION 9.000 FLOW 60.07 ASPECT RATIO 1.40
STA NO. 13 NO VANES 31

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-2.220	695.8	695.8	0.0	695.8	679.46	639.35
2	8.249	-2.241	704.6	704.6	0.0	704.6	675.43	634.28
3	8.010	-2.264	721.2	721.5	0.0	721.4	669.78	626.62
4	7.786	-2.286	750.5	751.1	0.0	751.1	663.49	616.70
5	7.575	-2.307	747.7	748.7	0.0	748.7	657.98	611.47
6	7.371	-2.328	739.8	741.3	0.0	741.2	652.86	607.26
7	7.172	-2.350	730.8	732.7	0.0	732.7	648.33	603.76
8	6.980	-2.370	727.5	730.0	0.0	730.0	644.42	600.17
9	6.797	-2.388	728.0	731.2	0.0	731.2	641.34	596.95
10	6.625	-2.405	732.7	736.7	0.0	736.7	639.25	594.18
11	6.464	-2.420	739.6	744.5	0.0	744.5	638.41	592.38
12	6.315	-2.435	743.2	749.2	0.0	749.2	637.65	591.03
13	6.179	-2.448	743.6	750.6	0.0	750.7	636.60	589.80
14	6.055	-2.459	744.6	752.7	0.0	752.7	635.64	588.58
15	5.946	-2.470	747.4	756.6	0.0	756.6	634.79	587.24
16	5.851	-2.480	751.6	762.0	0.0	762.0	634.21	585.99
17	5.773	-2.489	755.4	766.9	0.0	766.9	633.91	585.06
18	5.711	-2.497	758.6	771.0	0.0	771.1	633.68	584.30
19	5.666	-2.502	760.9	774.1	0.0	774.2	633.51	583.73
20	5.639	-2.506	762.4	776.1	0.0	776.1	633.41	583.38
21	5.630	-2.507	762.9	776.7	0.0	776.8	633.38	583.26

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	29.34	23.69	.9810	1.0000	695.8	.561	.5612
2	8.249	29.52	23.67	.9755	1.0000	704.6	.571	.5706
3	8.010	29.85	23.62	.9679	1.0000	721.4	.588	.5878
4	7.786	30.44	23.55	.9568	1.0000	751.1	.617	.6168
5	7.575	30.35	23.46	.9474	1.0000	748.7	.618	.6175
6	7.371	30.12	23.36	.9434	1.0000	741.2	.613	.6135
7	7.172	29.87	23.26	.9491	1.0000	732.7	.608	.6082
8	6.980	29.71	23.15	.9565	1.0000	730.0	.608	.6077
9	6.797	29.62	23.03	.9634	1.0000	731.2	.610	.6103
10	6.625	29.59	22.90	.9681	1.0000	736.7	.616	.6164
11	6.464	29.58	22.75	.9676	1.0000	744.5	.624	.6239
12	6.315	29.49	22.60	.9646	1.0000	749.2	.629	.6285
13	6.179	29.33	22.44	.9638	1.0000	750.7	.630	.6304
14	6.055	29.18	22.28	.9633	1.0000	752.7	.633	.6328
15	5.946	29.08	22.13	.9639	1.0000	756.6	.637	.6368
16	5.851	29.02	21.99	.9647	1.0000	762.0	.642	.6420
17	5.773	28.98	21.87	.9645	1.0000	766.9	.647	.6466
18	5.711	28.94	21.77	.9644	1.0000	771.1	.651	.6506
19	5.666	28.91	21.70	.9642	1.0000	774.2	.654	.6535
20	5.639	28.90	21.65	.9642	1.0000	776.1	.655	.6553
21	5.630	28.89	21.64	.9642	1.0000	776.8	.656	.6560

STATOR 1 STATION 9.000 FLOW 60.07 ASPECT RATIO 1.40
STA NO. 13 NO VANES 31

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE	D-FACTOR
1	8.500	-2.220	0.00	0.00	0.0000	.1000	.0904	.4321
2	8.249	-2.241	0.00	.85	-.0106	.1007	.0904	.4439
3	8.010	-2.264	0.00	1.65	-.0198	.1017	.0903	.4443
4	7.786	-2.286	0.00	2.38	-.0267	.1031	.0903	.4336
5	7.575	-2.307	0.00	3.02	-.0315	.1036	.0904	.4377
6	7.371	-2.328	0.00	3.61	-.0346	.1038	.0904	.4431
7	7.172	-2.350	0.00	4.18	-.0383	.1040	.0905	.4452
8	6.980	-2.370	0.00	4.76	-.0442	.1041	.0906	.4457
9	6.797	-2.388	0.00	5.36	-.0522	.1041	.0907	.4459
10	6.625	-2.405	0.00	5.99	-.0618	.1040	.0908	.4426
11	6.464	-2.420	0.00	6.63	-.0719	.1037	.0910	.4432
12	6.315	-2.435	0.00	7.24	-.0813	.1032	.0912	.4460
13	6.179	-2.448	0.00	7.84	-.0900	.1027	.0914	.4492
14	6.055	-2.459	0.00	8.42	-.0981	.1022	.0916	.4513
15	5.946	-2.470	0.00	8.97	-.1053	.1017	.0918	.4523
16	5.851	-2.480	0.00	9.48	-.1116	.1013	.0920	.4534
17	5.773	-2.489	0.00	9.93	-.1169	.1009	.0920	.4557
18	5.711	-2.497	0.00	10.32	-.1211	.1006	.0920	.4590
19	5.666	-2.502	0.00	10.61	-.1241	.1003	.0920	.4625
20	5.639	-2.506	0.00	10.79	-.1258	.1002	.0921	.4651
21	5.630	-2.507	0.00	10.85	-.1264	.1001	.0921	.4661

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	INCID-ENCE	DEVIA-TION	LOSS COEF.	ADIAB. EFFIC.	POLYT. EFFIC.
1	-8.96	-.02	7.598	8.960	.0678	70.38	73.08
2	-8.24	-.02	8.796	8.240	.0822	72.89	75.39
3	-7.68	-.01	8.153	7.683	.1001	76.94	79.11
4	-7.30	-.00	5.358	7.295	.1238	82.78	84.44
5	-7.05	.00	4.171	7.046	.1460	85.65	87.03
6	-6.83	.00	4.109	6.828	.1551	87.93	89.08
7	-6.70	.00	4.905	6.701	.1401	89.81	90.77
8	-6.58	-.00	5.858	6.584	.1196	91.88	92.64
9	-6.49	-.00	5.883	6.494	.0999	93.73	94.31
10	-6.41	-.00	5.904	6.406	.0856	95.21	95.66
11	-6.37	-.01	5.879	6.373	.0844	95.82	96.21
12	-6.34	-.01	5.721	6.343	.0898	95.98	96.35
13	-6.34	-.01	5.598	6.337	.0897	95.98	96.35
14	-6.34	-.01	5.262	6.345	.0887	96.00	96.36
15	-6.35	-.01	4.718	6.347	.0852	96.16	96.51
16	-6.37	-.01	4.268	6.371	.0811	96.34	96.67
17	-6.45	-.02	3.889	6.454	.0792	96.34	96.67
18	-6.51	-.03	3.614	6.514	.0774	96.34	96.67
19	-6.55	-.04	2.966	6.555	.0758	96.33	96.67
20	-6.58	-.04	2.549	6.578	.0748	96.33	96.66
21	-6.59	-.04	2.405	6.586	.0744	96.33	96.66

FREE STATION 10.000 IS INDEX 14

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VEL.OC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-1.650	679.2	679.2	0.0	679.2	679.46	641.24
2	8.256	-1.650	687.4	687.4	0.0	687.4	675.43	636.27
3	8.024	-1.650	702.8	702.9	0.0	703.0	669.78	628.81
4	7.808	-1.650	731.2	731.5	0.0	731.5	663.49	619.11
5	7.604	-1.650	726.7	727.2	0.0	727.2	657.98	614.11
6	7.407	-1.650	717.4	718.1	0.0	718.1	652.86	610.07
7	7.215	-1.650	707.4	708.3	0.0	708.3	648.33	606.69
8	7.030	-1.650	703.7	704.8	0.0	704.8	644.42	603.18
9	6.855	-1.650	704.0	705.4	0.0	705.4	641.34	600.03
10	6.690	-1.650	708.9	710.4	0.0	710.5	639.25	597.34
11	6.536	-1.650	716.2	718.0	0.0	718.1	638.41	595.60
12	6.395	-1.650	720.7	722.7	0.0	722.7	637.65	594.27
13	6.266	-1.650	722.5	724.6	0.0	724.6	636.60	593.00
14	6.149	-1.650	725.7	727.9	0.0	727.9	635.64	591.63
15	6.047	-1.650	731.7	733.9	0.0	734.0	634.79	590.05
16	5.959	-1.650	740.0	742.3	0.0	742.3	634.21	588.45
17	5.887	-1.650	748.4	750.6	0.0	750.7	633.91	587.11
18	5.830	-1.650	756.0	758.2	0.0	758.3	633.68	585.93
19	5.789	-1.650	762.2	764.3	0.0	764.4	633.51	584.98
20	5.765	-1.650	766.2	768.3	0.0	768.3	633.41	584.38
21	5.757	-1.650	767.6	769.6	0.0	769.7	633.38	584.17

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	29.34	23.94	1.9969	1.3099	679.2	.547	.5470
2	8.256	29.52	23.93	2.0090	1.3021	687.4	.556	.5558
3	8.024	29.85	23.91	2.0312	1.2912	703.0	.572	.5717
4	7.808	30.44	23.87	2.0718	1.2791	731.5	.600	.5995
5	7.604	30.35	23.82	2.0652	1.2685	727.2	.598	.5985
6	7.407	30.12	23.74	2.0500	1.2586	718.1	.593	.5929
7	7.215	29.87	23.66	2.0325	1.2499	708.3	.586	.5865
8	7.030	29.71	23.56	2.0222	1.2423	704.8	.585	.5853
9	6.855	29.62	23.45	2.0160	1.2364	705.4	.587	.5873
10	6.690	29.59	23.33	2.0139	1.2324	710.5	.593	.5929
11	6.536	29.58	23.19	2.0132	1.2308	718.1	.600	.6001
12	6.395	29.49	23.03	2.0071	1.2293	722.7	.605	.6046
13	6.266	29.33	22.87	1.9960	1.2273	724.6	.607	.6069
14	6.149	29.18	22.69	1.9859	1.2254	727.9	.610	.6103
15	6.047	29.08	22.50	1.9791	1.2238	734.0	.616	.6162
16	5.959	29.02	22.32	1.9752	1.2227	742.3	.624	.6241
17	5.887	28.98	22.14	1.9720	1.2221	750.7	.632	.6318
18	5.830	28.94	21.99	1.9695	1.2217	758.3	.639	.6389
19	5.789	28.91	21.86	1.9677	1.2213	764.4	.645	.6445
20	5.765	28.90	21.79	1.9666	1.2211	768.3	.648	.6482
21	5.757	28.89	21.76	1.9662	1.2211	769.7	.649	.6495

FREE STATION 10.000 IS INDEX 14

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-1.650	0.00	0.00	0.0000	.1008	.0493
2	8.256	-1.650	0.00	.52	-.0053	.1015	.0493
3	8.024	-1.650	0.00	1.19	-.0113	.1026	.0493
4	7.808	-1.650	0.00	1.69	-.0191	.1041	.0493
5	7.604	-1.650	0.00	2.13	-.0275	.1047	.0493
6	7.407	-1.650	0.00	2.54	-.0352	.1051	.0493
7	7.215	-1.650	0.00	2.93	-.0425	.1053	.0493
8	7.030	-1.650	0.00	3.28	-.0503	.1054	.0493
9	6.855	-1.650	0.00	3.59	-.0595	.1055	.0493
10	6.690	-1.650	0.00	3.86	-.0705	.1054	.0493
11	6.536	-1.650	0.00	4.09	-.0835	.1051	.0493
12	6.395	-1.650	0.00	4.27	-.0986	.1046	.0493
13	6.266	-1.650	0.00	4.40	-.1160	.1041	.0493
14	6.149	-1.650	0.00	4.48	-.1358	.1035	.0493
15	6.047	-1.650	0.00	4.51	-.1575	.1029	.0493
16	5.959	-1.650	0.00	4.49	-.1804	.1024	.0493
17	5.887	-1.650	0.00	4.44	-.2028	.1018	.0493
18	5.830	-1.650	0.00	4.37	-.2232	.1013	.0493
19	5.789	-1.650	0.00	4.30	-.2396	.1009	.0493
20	5.765	-1.650	0.00	4.25	-.2502	.1006	.0493
21	5.757	-1.650	0.00	4.24	-.2539	.1005	.0493

FREE STATION 11.000 IS INDEX 15

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-1.350	696.0	696.0	0.0	696.0	679.46	639.32
2	8.259	-1.350	703.8	703.8	0.0	703.8	675.43	634.38
3	8.030	-1.350	718.5	718.6	0.0	718.6	669.78	626.96
4	7.816	-1.350	745.6	745.8	0.0	745.8	663.49	617.36
5	7.613	-1.350	740.2	740.5	0.0	740.5	657.98	612.49
6	7.417	-1.350	729.7	730.0	0.0	730.1	652.86	608.63
7	7.227	-1.350	718.2	718.6	0.0	718.7	648.33	605.46
8	7.044	-1.350	712.7	713.2	0.0	713.2	644.42	602.19
9	6.869	-1.350	710.9	711.5	0.0	711.5	641.34	599.32
10	6.704	-1.350	713.2	713.8	0.0	713.8	639.25	596.94
11	6.551	-1.350	717.4	718.0	0.0	718.0	638.41	595.61
12	6.409	-1.350	717.9	718.4	0.0	718.5	637.65	594.78
13	6.279	-1.350	714.7	715.1	0.0	715.1	636.60	594.13
14	6.162	-1.350	711.8	712.1	0.0	712.1	635.64	593.52
15	6.057	-1.350	710.5	710.7	0.0	710.8	634.79	592.84
16	5.967	-1.350	710.6	710.8	0.0	710.8	634.21	592.26
17	5.893	-1.350	710.4	710.4	0.0	710.4	633.91	592.00
18	5.834	-1.350	709.7	709.7	0.0	709.7	633.68	591.85
19	5.791	-1.350	708.8	708.8	0.0	708.8	633.51	591.79
20	5.765	-1.350	708.1	708.0	0.0	708.1	633.41	591.77
21	5.757	-1.350	707.8	707.7	0.0	707.8	633.38	591.77

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	29.34	23.69	1.9969	1.3099	696.0	.561	.5614
2	8.259	29.52	23.68	2.0090	1.3021	703.8	.570	.5699
3	8.030	29.85	23.66	2.0312	1.2912	718.6	.585	.5853
4	7.816	30.44	23.64	2.0718	1.2791	745.8	.612	.6121
5	7.613	30.35	23.60	2.0652	1.2685	740.5	.610	.6102
6	7.417	30.12	23.55	2.0500	1.2586	730.1	.604	.6035
7	7.227	29.87	23.49	2.0325	1.2499	718.7	.596	.5957
8	7.044	29.71	23.43	2.0222	1.2423	713.2	.593	.5927
9	6.869	29.62	23.35	2.0160	1.2364	711.5	.593	.5927
10	6.704	29.59	23.27	2.0139	1.2324	713.8	.596	.5958
11	6.551	29.58	23.19	2.0132	1.2308	718.0	.600	.6000
12	6.409	29.49	23.10	2.0071	1.2293	718.5	.601	.6008
13	6.279	29.33	23.02	1.9960	1.2273	715.1	.598	.5983
14	6.162	29.18	22.94	1.9859	1.2254	712.1	.596	.5961
15	6.057	29.08	22.88	1.9791	1.2238	710.8	.595	.5953
16	5.967	29.02	22.83	1.9752	1.2227	710.8	.596	.5957
17	5.893	28.98	22.80	1.9720	1.2221	710.4	.596	.5955
18	5.834	28.94	22.78	1.9695	1.2217	709.7	.595	.5949
19	5.791	28.91	22.77	1.9677	1.2213	708.8	.594	.5942
20	5.765	28.90	22.77	1.9666	1.2211	708.1	.594	.5936
21	5.757	28.89	22.77	1.9662	1.2211	707.8	.593	.5934

FREE STATION 11.000 IS INDEX 15

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-1.350	0.00	0.00	0.0000	.1000	.0539
2	8.259	-1.350	0.00	.51	-.0049	.1008	.0539
3	8.030	-1.350	0.00	.95	-.0099	.1019	.0539
4	7.816	-1.350	0.00	1.30	-.0148	.1033	.0539
5	7.613	-1.350	0.00	1.58	-.0197	.1040	.0539
6	7.417	-1.350	0.00	1.84	-.0248	.1044	.0539
7	7.227	-1.350	0.00	2.06	-.0299	.1047	.0539
8	7.044	-1.350	0.00	2.24	-.0350	.1050	.0539
9	6.869	-1.350	0.00	2.35	-.0402	.1052	.0539
10	6.704	-1.350	0.00	2.40	-.0453	.1052	.0539
11	6.551	-1.350	0.00	2.37	-.0499	.1051	.0539
12	6.409	-1.350	0.00	2.27	-.0535	.1048	.0539
13	6.279	-1.350	0.00	2.09	-.0553	.1046	.0539
14	6.162	-1.350	0.00	1.84	-.0546	.1043	.0539
15	6.057	-1.350	0.00	1.53	-.0507	.1042	.0539
16	5.967	-1.350	0.00	1.18	-.0433	.1040	.0539
17	5.893	-1.350	0.00	.82	-.0331	.1039	.0539
18	5.834	-1.350	0.00	.50	-.0215	.1039	.0539
19	5.791	-1.350	0.00	.23	-.0106	.1038	.0539
20	5.765	-1.350	0.00	.06	-.0028	.1038	.0539
21	5.757	-1.350	0.00	0.00	0.0000	.1038	.0539

FREE STATION 12.000 IS INDEX 16

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-1.050	712.5	712.5	0.0	712.5	679.46	637.39
2	8.261	-1.050	719.8	719.8	0.0	719.8	675.43	632.48
3	8.034	-1.050	733.6	733.7	0.0	733.7	669.78	625.14
4	7.822	-1.050	759.2	759.3	0.0	759.3	663.49	615.67
5	7.621	-1.050	752.7	752.9	0.0	752.9	657.98	610.94
6	7.426	-1.050	740.9	741.2	0.0	741.2	652.86	607.27
7	7.236	-1.050	727.9	728.2	0.0	728.2	648.33	604.31
8	7.054	-1.050	720.5	720.8	0.0	720.8	644.42	601.28
9	6.879	-1.050	716.5	716.8	0.0	716.8	641.34	598.68
10	6.715	-1.050	716.2	716.5	0.0	716.5	639.25	596.62
11	6.561	-1.050	717.6	717.9	0.0	717.9	638.41	595.62
12	6.419	-1.050	715.1	715.4	0.0	715.4	637.65	595.15
13	6.288	-1.050	708.8	709.0	0.0	709.0	636.60	594.86
14	6.169	-1.050	702.8	702.9	0.0	703.0	635.64	594.60
15	6.063	-1.050	698.8	698.8	0.0	698.9	634.79	594.23
16	5.971	-1.050	696.6	696.7	0.0	696.7	634.21	593.91
17	5.895	-1.050	694.7	694.7	0.0	694.8	633.91	593.83
18	5.835	-1.050	693.1	693.0	0.0	693.1	633.68	593.79
19	5.792	-1.050	691.7	691.7	0.0	691.7	633.51	593.78
20	5.766	-1.050	690.9	690.9	0.0	690.9	633.41	593.77
21	5.757	-1.050	690.6	690.6	0.0	690.6	633.38	593.77

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	29.34	23.44	1.9969	1.3099	712.5	.576	.5756
2	8.261	29.52	23.43	2.0090	1.3021	719.8	.584	.5837
3	8.034	29.85	23.43	2.0312	1.2912	733.7	.598	.5985
4	7.822	30.44	23.41	2.0718	1.2791	759.3	.624	.6241
5	7.621	30.35	23.39	2.0652	1.2685	752.9	.621	.6212
6	7.426	30.12	23.36	2.0500	1.2586	741.2	.613	.6134
7	7.236	29.87	23.34	2.0325	1.2499	728.2	.604	.6041
8	7.054	29.71	23.30	2.0222	1.2423	720.8	.600	.5995
9	6.879	29.62	23.27	2.0160	1.2364	716.8	.597	.5975
10	6.715	29.59	23.23	2.0139	1.2324	716.5	.598	.5983
11	6.561	29.58	23.19	2.0132	1.2308	717.9	.600	.5999
12	6.419	29.49	23.15	2.0071	1.2293	715.4	.598	.5981
13	6.288	29.33	23.12	1.9960	1.2273	709.0	.593	.5928
14	6.169	29.18	23.09	1.9859	1.2254	703.0	.588	.5879
15	6.063	29.08	23.07	1.9791	1.2238	698.9	.585	.5847
16	5.971	29.02	23.05	1.9752	1.2227	696.7	.583	.5830
17	5.895	28.98	23.04	1.9720	1.2221	694.8	.581	.5814
18	5.835	28.94	23.04	1.9695	1.2217	693.1	.580	.5800
19	5.792	28.91	23.04	1.9677	1.2213	691.7	.579	.5789
20	5.766	28.90	23.04	1.9666	1.2211	690.9	.578	.5782
21	5.757	28.89	23.04	1.9662	1.2211	690.6	.578	.5780

FREE STATION 12.000 IS INDEX 16

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-1.050	0.00	0.00	0.0000	.0993	.0591
2	8.261	-1.050	0.00	.44	-.0029	.1000	.0591
3	8.034	-1.050	0.00	.82	-.0057	.1011	.0591
4	7.822	-1.050	0.00	1.10	-.0081	.1026	.0591
5	7.621	-1.050	0.00	1.32	-.0105	.1033	.0591
6	7.426	-1.050	0.00	1.51	-.0129	.1038	.0591
7	7.236	-1.050	0.00	1.67	-.0153	.1042	.0591
8	7.054	-1.050	0.00	1.78	-.0176	.1046	.0591
9	6.879	-1.050	0.00	1.84	-.0196	.1049	.0591
10	6.715	-1.050	0.00	1.82	-.0213	.1051	.0591
11	6.561	-1.050	0.00	1.75	-.0224	.1051	.0591
12	6.419	-1.050	0.00	1.61	-.0226	.1050	.0591
13	6.288	-1.050	0.00	1.43	-.0218	.1049	.0591
14	6.169	-1.050	0.00	1.20	-.0198	.1048	.0591
15	6.063	-1.050	0.00	.95	-.0167	.1048	.0591
16	5.971	-1.050	0.00	.70	-.0129	.1048	.0591
17	5.895	-1.050	0.00	.46	-.0089	.1047	.0591
18	5.835	-1.050	0.00	.27	-.0053	.1047	.0591
19	5.792	-1.050	0.00	.12	-.0024	.1047	.0591
20	5.766	-1.050	0.00	.03	-.0006	.1047	.0591
21	5.757	-1.050	0.00	0.00	0.0000	.1047	.0591

FREE STATION 13.000 IS INDEX 17

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-.750	728.9	728.8	0.0	728.9	679.46	635.44
2	8.264	-.750	735.7	735.7	0.0	735.7	675.43	630.57
3	8.038	-.750	748.4	748.5	0.0	748.5	669.78	623.32
4	7.827	-.750	772.4	772.5	0.0	772.5	663.49	613.99
5	7.627	-.750	764.8	764.9	0.0	765.0	657.98	609.43
6	7.433	-.750	751.6	751.8	0.0	751.9	652.86	605.95
7	7.245	-.750	737.0	737.3	0.0	737.3	648.33	603.21
8	7.062	-.750	727.7	727.9	0.0	727.9	644.42	600.43
9	6.888	-.750	721.5	721.8	0.0	721.8	641.34	598.09
10	6.723	-.750	718.9	719.2	0.0	719.2	639.25	596.30
11	6.569	-.750	717.9	718.2	0.0	718.2	638.41	595.58
12	6.426	-.750	713.2	713.4	0.0	713.4	637.65	595.39
13	6.294	-.750	704.7	704.8	0.0	704.8	636.60	595.35
14	6.174	-.750	696.8	696.9	0.0	697.0	635.64	595.30
15	6.067	-.750	691.3	691.4	0.0	691.4	634.79	595.09
16	5.975	-.750	688.2	688.2	0.0	688.2	634.21	594.88
17	5.897	-.750	685.6	685.6	0.0	685.6	633.91	594.88
18	5.836	-.750	683.6	683.6	0.0	683.6	633.68	594.87
19	5.792	-.750	682.1	682.1	0.0	682.1	633.51	594.87
20	5.766	-.750	681.2	681.2	0.0	681.3	633.41	594.87
21	5.757	-.750	681.0	680.9	0.0	681.0	633.38	594.87

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	29.34	23.19	1.9969	1.3099	728.9	.590	.5897
2	8.264	29.52	23.19	2.0090	1.3021	735.7	.598	.5975
3	8.038	29.85	23.19	2.0312	1.2912	748.5	.611	.6114
4	7.827	30.44	23.19	2.0718	1.2791	772.5	.636	.6358
5	7.627	30.35	23.19	2.0652	1.2685	765.0	.632	.6320
6	7.433	30.12	23.19	2.0500	1.2586	751.9	.623	.6229
7	7.245	29.87	23.19	2.0325	1.2499	737.3	.612	.6122
8	7.062	29.71	23.19	2.0222	1.2423	727.9	.606	.6059
9	6.888	29.62	23.19	2.0160	1.2364	721.8	.602	.6019
10	6.723	29.59	23.19	2.0139	1.2324	719.2	.601	.6006
11	6.569	29.58	23.19	2.0132	1.2308	718.2	.600	.6002
12	6.426	29.49	23.19	2.0071	1.2293	713.4	.596	.5963
13	6.294	29.33	23.19	1.9960	1.2273	704.8	.589	.5891
14	6.174	29.18	23.19	1.9859	1.2254	697.0	.583	.5826
15	6.067	29.08	23.19	1.9791	1.2238	691.4	.578	.5780
16	5.975	29.02	23.19	1.9752	1.2227	688.2	.575	.5755
17	5.897	28.98	23.19	1.9720	1.2221	685.6	.573	.5733
18	5.836	28.94	23.19	1.9695	1.2217	683.6	.572	.5716
19	5.792	28.91	23.19	1.9677	1.2213	682.1	.570	.5704
20	5.766	28.90	23.19	1.9666	1.2211	681.3	.570	.5696
21	5.757	28.89	23.19	1.9662	1.2211	681.0	.569	.5694

FREE STATION 13.000 IS INDEX 17

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-.750	0.00	0.00	0.0000	.0985	.0643
2	8.264	-.750	0.00	.42	0.0000	.0992	.0643
3	8.038	-.750	0.00	.77	0.0000	.1004	.0643
4	7.827	-.750	0.00	1.03	0.0000	.1019	.0643
5	7.627	-.750	0.00	1.23	0.0000	.1027	.0643
6	7.433	-.750	0.00	1.40	0.0000	.1033	.0643
7	7.245	-.750	0.00	1.54	0.0000	.1038	.0643
8	7.062	-.750	0.00	1.63	0.0000	.1042	.0643
9	6.888	-.750	0.00	1.67	0.0000	.1046	.0643
10	6.723	-.750	0.00	1.64	0.0000	.1050	.0643
11	6.569	-.750	0.00	1.55	0.0000	.1051	.0643
12	6.426	-.750	0.00	1.42	0.0000	.1051	.0643
13	6.294	-.750	0.00	1.24	0.0000	.1051	.0643
14	6.174	-.750	0.00	1.03	0.0000	.1051	.0643
15	6.067	-.750	0.00	.80	0.0000	.1052	.0643
16	5.975	-.750	0.00	.58	0.0000	.1052	.0643
17	5.897	-.750	0.00	.39	0.0000	.1052	.0643
18	5.836	-.750	0.00	.22	0.0000	.1052	.0643
19	5.792	-.750	0.00	.10	0.0000	.1052	.0643
20	5.766	-.750	0.00	.03	0.0000	.1052	.0643
21	5.757	-.750	0.00	0.00	0.0000	.1052	.0643

870901004 - PBS ROTOR #1 AL ?ODYNAMIC ANALYSIS - THRU BLADE

THE MAXIMUM ROTOR D-FACTOR .559 OCCURED AT STAGE 1 ON STREAMLINE 2.
THE MAXIMUM VANE D-FACTOR .466 OCCURED AT STAGE 1 ON STREAMLINE 21.

THE MAXIMUM MERIDINAL MACH NO. .775 OCCURED AT STATION 6 ON STREAMLINE 4.

PERFORMANCE SUMMARY FOR 870901004:

	SPEC FLOW IN	FLOW RATE IN	CORR FLOW IN	------S T A G E------- P/P	ADIA EFF.	POLY EFF.	VANE TO VANE	---CUMULATIVE--- P/P	ADIA EFF.	POLY EFF.
REFERENCE		60.07	60.09							
ROTOR 1	42.25	60.07	60.09	2.103	91.9	92.7	92.7	2.103	91.9	92.7
STAGE 1	28.99	60.07	32.04	2.022	86.5	87.7		2.022	86.5	87.7

	ENTROPY RISE	MASS AVERAGED TOTAL PRESS -URE	TOTAL TEMP -ATURE	ROTOR TIP MACH NO.	VANE HUB MACH NO.	RESET ANGLE
REFERENCE		14.69	518.71			
ROTOR 1	1.7	30.90	652.17	.81		
STAGE 1	2.8	29.71	652.19		.66	

CORRECTED RPM 20191.
FLOW COEF. .238
OVERALL ADIA. EFF. 86.47
PT COEF. .778
WORK COEF. .900
FLOW 60.07
RPM 20190.9
PRESSURE RATIO 2.022
EFFICIENCY 86.47

APPENDIX D

870901005 - PBS ROTOR #1 AERODYNAMIC ANALYSIS - THRU-BLADE

FREE STATION 1.000 IS INDEX 1

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	13.300	-18.450	177.5	235.7	0.0	235.7	518.71	514.08
2	12.536	-18.450	183.2	235.7	0.0	235.7	518.71	514.08
3	11.790	-18.450	188.9	235.7	0.0	235.7	518.71	514.08
4	11.060	-18.450	194.3	235.7	0.0	235.7	518.71	514.08
5	10.346	-18.450	199.5	235.7	0.0	235.7	518.71	514.08
6	9.645	-18.450	204.4	235.7	0.0	235.7	518.71	514.08
7	8.957	-18.450	209.0	235.7	0.0	235.7	518.71	514.08
8	8.280	-18.450	213.1	235.7	0.0	235.7	518.71	514.08
9	7.612	-18.450	216.9	235.7	0.0	235.7	518.71	514.08
10	6.953	-18.450	220.3	235.7	0.0	235.7	518.71	514.08
11	6.301	-18.450	223.3	235.7	0.0	235.7	518.71	514.08
12	5.656	-18.450	226.0	235.7	0.0	235.7	518.71	514.08
13	5.016	-18.450	228.2	235.7	0.0	235.7	518.71	514.08
14	4.380	-18.450	230.2	235.7	0.0	235.7	518.71	514.08
15	3.748	-18.450	231.8	235.7	0.0	235.7	518.71	514.08
16	3.119	-18.450	233.0	235.7	0.0	235.7	518.71	514.08
17	2.493	-18.450	234.0	235.7	0.0	235.7	518.71	514.08
18	1.868	-18.450	234.8	235.7	0.0	235.7	518.71	514.08
19	1.245	-18.450	235.3	235.7	0.0	235.7	518.71	514.08
20	.622	-18.450	235.6	235.7	0.0	235.7	518.71	514.08
21	.000	-18.450	235.7	235.7	0.0	235.7	518.71	514.08

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	13.300	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
2	12.536	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
3	11.790	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
4	11.060	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
5	10.346	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
6	9.645	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
7	8.957	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
8	8.280	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
9	7.612	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
10	6.953	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
11	6.301	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
12	5.656	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
13	5.016	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
14	4.380	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
15	3.748	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
16	3.119	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
17	2.493	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
18	1.868	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
19	1.245	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
20	.622	14.69	14.24	1.0000	1.0000	235.7	.212	.2120
21	.000	14.69	14.24	1.0000	1.0000	235.7	.212	.2120

FREE STATION 1.000 IS INDEX 1

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	13.300	-18.450	0.00	-41.16	0.0000	.0748	0.0000
2	12.536	-18.450	0.00	-38.99	0.0000	.0748	0.0000
3	11.790	-18.450	0.00	-36.75	0.0000	.0748	0.0000
4	11.060	-18.450	0.00	-34.48	0.0000	.0748	0.0000
5	10.346	-18.450	0.00	-32.18	0.0000	.0748	0.0000
6	9.645	-18.450	0.00	-29.88	0.0000	.0748	0.0000
7	8.957	-18.450	0.00	-27.58	0.0000	.0748	0.0000
8	8.280	-18.450	0.00	-25.29	0.0000	.0748	0.0000
9	7.612	-18.450	0.00	-23.04	0.0000	.0748	0.0000
10	6.953	-18.450	0.00	-20.83	0.0000	.0748	0.0000
11	6.301	-18.450	0.00	-18.66	0.0000	.0748	0.0000
12	5.656	-18.450	0.00	-16.54	0.0000	.0748	0.0000
13	5.016	-18.450	0.00	-14.48	0.0000	.0748	0.0000
14	4.380	-18.450	0.00	-12.48	0.0000	.0748	0.0000
15	3.748	-18.450	0.00	-10.55	0.0000	.0748	0.0000
16	3.119	-18.450	0.00	-8.67	0.0000	.0748	0.0000
17	2.493	-18.450	0.00	-6.86	0.0000	.0748	0.0000
18	1.868	-18.450	0.00	-5.10	0.0000	.0748	0.0000
19	1.245	-18.450	0.00	-3.38	0.0000	.0748	0.0000
20	.622	-18.450	0.00	-1.69	0.0000	.0748	0.0000
21	.000	-18.450	0.00	0.00	0.0000	.0748	0.0000

FREE STATION 2.000 IS INDEX 2

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	9.480	-14.081	442.7	527.6	0.0	527.6	518.71	495.51
2	9.031	-14.119	445.7	517.6	0.0	517.6	518.71	496.38
3	8.585	-14.158	445.8	506.1	0.0	506.1	518.71	497.37
4	8.139	-14.196	443.6	493.9	0.0	493.9	518.71	498.38
5	7.694	-14.235	440.0	481.5	0.0	481.5	518.71	499.39
6	7.246	-14.274	435.2	469.1	0.0	469.1	518.71	500.37
7	6.796	-14.313	429.7	457.1	0.0	457.1	518.71	501.30
8	6.343	-14.352	423.5	445.4	0.0	445.4	518.71	502.17
9	5.886	-14.391	417.1	434.3	0.0	434.3	518.71	502.99
10	5.424	-14.431	410.3	423.6	0.0	423.6	518.71	503.76
11	4.958	-14.471	403.4	413.5	0.0	413.5	518.71	504.46
12	4.486	-14.512	396.5	403.9	0.0	403.9	518.71	505.12
13	4.009	-14.55	389.6	394.8	0.0	394.8	518.71	505.72
14	3.527	-14.59	382.8	386.4	0.0	386.4	518.71	506.27
15	3.039	-14.637	376.3	378.6	0.0	378.6	518.71	506.77
16	2.545	-14.680	370.0	371.4	0.0	371.4	518.71	507.21
17	2.045	-14.723	364.3	365.0	0.0	365.0	518.71	507.61
18	1.540	-14.767	359.1	359.5	0.0	359.5	518.71	507.94
19	1.030	-14.811	354.9	355.0	0.0	355.0	518.71	508.21
20	.516	-14.855	351.9	352.0	0.0	352.0	518.71	508.39
21	.000	-14.900	350.8	350.8	0.0	350.8	518.71	508.46

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	9.480	14.69	12.52	1.0000	1.0000	527.6	.483	.4834
2	9.031	14.69	12.60	1.0000	1.0000	517.6	.474	.4738
3	8.585	14.69	12.69	1.0000	1.0000	506.1	.463	.4628
4	8.139	14.69	12.78	1.0000	1.0000	493.9	.451	.4512
5	7.694	14.69	12.87	1.0000	1.0000	481.5	.439	.4394
6	7.246	14.69	12.96	1.0000	1.0000	469.1	.428	.4277
7	6.796	14.69	13.04	1.0000	1.0000	457.1	.416	.4164
8	6.343	14.69	13.12	1.0000	1.0000	445.4	.405	.4054
9	5.886	14.69	13.20	1.0000	1.0000	434.3	.395	.3949
10	5.424	14.69	13.27	1.0000	1.0000	423.6	.385	.3849
11	4.958	14.69	13.33	1.0000	1.0000	413.5	.375	.3754
12	4.486	14.69	13.39	1.0000	1.0000	403.9	.366	.3665
13	4.009	14.69	13.45	1.0000	1.0000	394.8	.358	.3581
14	3.527	14.69	13.50	1.0000	1.0000	386.4	.350	.3502
15	3.039	14.69	13.55	1.0000	1.0000	378.6	.343	.3430
16	2.545	14.69	13.59	1.0000	1.0000	371.4	.336	.3363
17	2.045	14.69	13.62	1.0000	1.0000	365.0	.330	.3304
18	1.540	14.69	13.66	1.0000	1.0000	359.5	.325	.3253
19	1.030	14.69	13.68	1.0000	1.0000	355.0	.321	.3212
20	.516	14.69	13.70	1.0000	1.0000	352.0	.318	.3184
21	.000	14.69	13.70	1.0000	1.0000	350.8	.317	.3172

FREE STATION 2.000 IS INDEX 2

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	9.480	-14.081	0.00	-32.97	.0952	.0682	0.0000
2	9.031	-14.119	0.00	-30.54	.0982	.0685	0.0000
3	8.585	-14.158	0.00	-28.26	.0984	.0689	0.0000
4	8.139	-14.196	0.00	-26.07	.0967	.0692	0.0000
5	7.694	-14.235	0.00	-23.96	.0936	.0696	0.0000
6	7.246	-14.274	0.00	-21.93	.0895	.0699	0.0000
7	6.796	-14.313	0.00	-19.95	.0848	.0702	0.0000
8	6.343	-14.352	0.00	-18.04	.0797	.0705	0.0000
9	5.886	-14.391	0.00	-16.18	.0743	.0708	0.0000
10	5.424	-14.431	0.00	-14.38	.0688	.0711	0.0000
11	4.958	-14.471	0.00	-12.64	.0633	.0713	0.0000
12	4.486	-14.512	0.00	-10.96	.0579	.0716	0.0000
13	4.009	-14.553	0.00	-9.34	.0525	.0718	0.0000
14	3.527	-14.595	0.00	-7.78	.0472	.0720	0.0000
15	3.039	-14.637	0.00	-6.30	.0420	.0721	0.0000
16	2.545	-14.680	0.00	-4.90	.0367	.0723	0.0000
17	2.045	-14.723	0.00	-3.60	.0312	.0724	0.0000
18	1.540	-14.767	0.00	-2.41	.0254	.0726	0.0000
19	1.030	-14.811	0.00	-1.37	.0187	.0727	0.0000
20	.516	-14.855	0.00	-.57	.0103	.0727	0.0000
21	.000	-14.900	0.00	0.00	0.0000	.0727	0.0000

FREE STATION 3.000 IS INDEX 3

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.960	-12.851	568.5	598.8	0.0	598.8	518.71	488.82
2	8.520	-12.743	565.2	588.3	0.0	588.3	518.71	489.86
3	8.085	-12.636	560.9	578.6	0.0	578.6	518.71	490.81
4	7.653	-12.530	555.8	569.2	0.0	569.2	518.71	491.71
5	7.223	-12.424	550.1	560.0	0.0	560.0	518.71	492.57
6	6.795	-12.319	543.6	550.8	0.0	550.8	518.71	493.42
7	6.368	-12.214	536.5	541.5	0.0	541.5	518.71	494.27
8	5.942	-12.109	528.5	531.8	0.0	531.8	518.71	495.14
9	5.516	-12.005	519.7	521.6	0.0	521.6	518.71	496.04
10	5.089	-11.900	509.8	510.7	0.0	510.7	518.71	496.97
11	4.661	-11.795	498.8	499.1	0.0	499.1	518.71	497.95
12	4.232	-11.689	486.4	486.5	0.0	486.5	518.71	498.99
13	3.800	-11.583	472.5	472.6	0.0	472.6	518.71	500.09
14	3.365	-11.476	456.8	457.3	0.0	457.3	518.71	501.28
15	2.925	-11.368	438.9	440.2	0.0	440.2	518.71	502.56
16	2.479	-11.259	418.0	420.8	0.0	420.8	518.71	503.95
17	2.025	-11.147	393.2	398.2	0.0	398.2	518.71	505.49
18	1.559	-11.033	362.5	371.3	0.0	371.3	518.71	507.22
19	1.074	-10.914	322.6	338.0	0.0	338.0	518.71	509.19
20	.556	-10.787	267.9	296.2	0.0	296.2	518.71	511.40
21	.000	-10.650	196.7	249.1	0.0	249.1	518.71	513.54

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.960	14.69	11.94	1.0000	1.0000	598.8	.552	.5524
2	8.520	14.69	12.03	1.0000	1.0000	588.3	.542	.5421
3	8.085	14.69	12.11	1.0000	1.0000	578.6	.533	.5326
4	7.653	14.69	12.19	1.0000	1.0000	569.2	.523	.5235
5	7.223	14.69	12.26	1.0000	1.0000	560.0	.515	.5146
6	6.795	14.69	12.34	1.0000	1.0000	550.8	.506	.5057
7	6.368	14.69	12.41	1.0000	1.0000	541.5	.497	.4967
8	5.942	14.69	12.49	1.0000	1.0000	531.8	.487	.4874
9	5.516	14.69	12.57	1.0000	1.0000	521.6	.478	.4776
10	5.089	14.69	12.65	1.0000	1.0000	510.7	.467	.4672
11	4.661	14.69	12.74	1.0000	1.0000	499.1	.456	.4561
12	4.232	14.69	12.83	1.0000	1.0000	486.5	.444	.4441
13	3.800	14.69	12.93	1.0000	1.0000	472.6	.431	.4310
14	3.365	14.69	13.04	1.0000	1.0000	457.3	.417	.4166
15	2.925	14.69	13.16	1.0000	1.0000	440.2	.401	.4005
16	2.479	14.69	13.28	1.0000	1.0000	420.8	.382	.3823
17	2.025	14.69	13.43	1.0000	1.0000	398.2	.361	.3612
18	1.559	14.69	13.59	1.0000	1.0000	371.3	.336	.3362
19	1.074	14.69	13.77	1.0000	1.0000	338.0	.305	.3055
20	.556	14.69	13.98	1.0000	1.0000	296.2	.267	.2671
21	.000	14.69	14.19	1.0000	1.0000	249.1	.224	.2242

FREE STATION 3.000 IS INDEX 3

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.960	-12.851	0.00	-18.32	.1067	.0659	0.0000
2	8.520	-12.743	0.00	-16.12	.0948	.0663	0.0000
3	8.085	-12.636	0.00	-14.19	.0865	.0666	0.0000
4	7.653	-12.530	0.00	-12.44	.0807	.0669	0.0000
5	7.223	-12.424	0.00	-10.81	.0766	.0672	0.0000
6	6.795	-12.319	0.00	-9.27	.0739	.0675	0.0000
7	6.368	-12.214	0.00	-7.78	.0722	.0678	0.0000
8	5.942	-12.109	0.00	-6.32	.0715	.0681	0.0000
9	5.516	-12.005	0.00	-4.87	.0717	.0684	0.0000
10	5.089	-11.900	0.00	-3.42	.0729	.0687	0.0000
11	4.661	-11.795	0.00	-1.95	.0750	.0691	0.0000
12	4.232	-11.689	0.00	-.45	.0783	.0694	0.0000
13	3.800	-11.583	0.00	1.10	.0831	.0698	0.0000
14	3.365	-11.476	0.00	2.75	.0899	.0702	0.0000
15	2.925	-11.368	0.00	4.56	.0995	.0707	0.0000
16	2.479	-11.259	0.00	6.63	.1134	.0711	0.0000
17	2.025	-11.147	0.00	9.14	.1337	.0717	0.0000
18	1.559	-11.033	0.00	12.47	.1640	.0723	0.0000
19	1.074	-10.914	0.00	17.35	.2091	.0730	0.0000
20	.556	-10.787	0.00	25.25	.2680	.0738	0.0000
21	.000	-10.650	0.00	37.85	.2963	.0746	0.0000

FREE STATION 4.000 IS INDEX 4

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.550	-11.138	699.1	704.9	0.0	704.9	518.71	477.29
2	8.172	-11.064	680.2	684.3	0.0	684.3	518.71	479.67
3	7.793	-10.989	663.1	665.8	0.0	665.8	518.71	481.76
4	7.412	-10.914	647.4	649.0	0.0	649.0	518.71	483.60
5	7.029	-10.839	632.6	633.4	0.0	633.4	518.71	485.27
6	6.646	-10.764	618.3	618.5	0.0	618.5	518.71	486.82
7	6.263	-10.688	604.0	604.0	0.0	604.0	518.71	488.30
8	5.878	-10.612	589.5	589.6	0.0	589.6	518.71	489.74
9	5.493	-10.537	574.3	574.9	0.0	574.9	518.71	491.17
10	5.107	-10.461	558.1	559.6	0.0	559.6	518.71	492.61
11	4.721	-10.385	540.8	543.7	0.0	543.7	518.71	494.07
12	4.334	-10.309	522.3	527.1	0.0	527.1	518.71	495.56
13	3.947	-10.233	502.4	509.7	0.0	509.7	518.71	497.06
14	3.560	-10.156	481.1	491.6	0.0	491.6	518.71	498.56
15	3.175	-10.081	458.1	473.1	0.0	473.1	518.71	500.06
16	2.794	-10.006	433.0	454.2	0.0	454.2	518.71	501.52
17	2.423	-9.933	405.3	435.4	0.0	435.4	518.71	502.91
18	2.070	-9.863	374.2	417.9	0.0	417.9	518.71	504.16
19	1.756	-9.802	338.8	404.0	0.0	404.0	518.71	505.11
20	1.519	-9.755	298.5	397.2	0.0	397.2	518.71	505.56
21	1.421	-9.736	251.1	397.2	0.0	397.2	518.71	505.56

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.550	14.69	10.99	1.0000	1.0000	704.9	.658	.6581
2	8.172	14.69	11.18	1.0000	1.0000	684.3	.637	.6372
3	7.793	14.69	11.35	1.0000	1.0000	665.8	.619	.6187
4	7.412	14.69	11.50	1.0000	1.0000	649.0	.602	.6019
5	7.029	14.69	11.64	1.0000	1.0000	633.4	.586	.5864
6	6.646	14.69	11.77	1.0000	1.0000	618.5	.572	.5717
7	6.263	14.69	11.90	1.0000	1.0000	604.0	.557	.5575
8	5.878	14.69	12.02	1.0000	1.0000	589.6	.543	.5434
9	5.493	14.69	12.14	1.0000	1.0000	574.9	.529	.5290
10	5.107	14.69	12.27	1.0000	1.0000	559.6	.514	.5142
11	4.721	14.69	12.40	1.0000	1.0000	543.7	.499	.4989
12	4.334	14.69	12.53	1.0000	1.0000	527.1	.483	.4829
13	3.947	14.69	12.66	1.0000	1.0000	509.7	.466	.4662
14	3.560	14.69	12.79	1.0000	1.0000	491.6	.449	.4491
15	3.175	14.69	12.93	1.0000	1.0000	473.1	.431	.4314
16	2.794	14.69	13.06	1.0000	1.0000	454.2	.414	.4136
17	2.423	14.69	13.19	1.0000	1.0000	435.4	.396	.3960
18	2.070	14.69	13.30	1.0000	1.0000	417.9	.380	.3796
19	1.756	14.69	13.39	1.0000	1.0000	404.0	.367	.3666
20	1.519	14.69	13.43	1.0000	1.0000	397.2	.360	.3603
21	1.421	14.69	13.43	1.0000	1.0000	397.2	.360	.3603

FREE STATION 4.000 IS INDEX 4

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.550	-11.138	0.00	-7.39	.1018	.0621	0.0000
2	8.172	-11.064	0.00	-6.28	.0941	.0629	0.0000
3	7.793	-10.989	0.00	-5.16	.0878	.0636	0.0000
4	7.412	-10.914	0.00	-4.01	.0829	.0642	0.0000
5	7.029	-10.839	0.00	-2.82	.0793	.0648	0.0000
6	6.646	-10.764	0.00	-1.57	.0771	.0653	0.0000
7	6.263	-10.688	0.00	-.25	.0760	.0658	0.0000
8	5.878	-10.612	0.00	1.15	.0762	.0662	0.0000
9	5.493	-10.537	0.00	2.63	.0774	.0667	0.0000
10	5.107	-10.461	0.00	4.21	.0795	.0672	0.0000
11	4.721	-10.385	0.00	5.90	.0824	.0677	0.0000
12	4.334	-10.309	0.00	7.71	.0859	.0682	0.0000
13	3.947	-10.233	0.00	9.69	.0897	.0687	0.0000
14	3.560	-10.156	0.00	11.91	.0938	.0693	0.0000
15	3.175	-10.081	0.00	14.47	.0978	.0698	0.0000
16	2.794	-10.006	0.00	17.56	.1008	.0703	0.0000
17	2.423	-9.933	0.00	21.43	.1001	.0708	0.0000
18	2.070	-9.863	0.00	26.45	.0882	.0712	0.0000
19	1.756	-9.802	0.00	33.00	.0464	.0716	0.0000
20	1.519	-9.755	0.00	41.28	-.0561	.0717	0.0000
21	1.421	-9.736	0.00	50.79	-.2152	.0717	0.0000

FREE STATION 5.000 IS INDEX 5

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-8.650	731.5	731.6	0.0	731.7	518.71	474.09
2	8.142	-8.675	727.8	727.8	0.0	727.9	518.71	474.54
3	7.786	-8.700	723.4	723.4	0.0	723.5	518.71	475.08
4	7.432	-8.725	717.4	717.6	0.0	717.6	518.71	475.78
5	7.079	-8.750	709.1	709.6	0.0	709.7	518.71	476.73
6	6.728	-8.775	697.8	699.1	0.0	699.1	518.71	477.97
7	6.377	-8.799	683.3	685.8	0.0	685.7	518.71	479.51
8	6.026	-8.824	665.5	669.6	0.0	669.6	518.71	481.33
9	5.674	-8.849	644.5	650.8	0.0	650.8	518.71	483.40
10	5.321	-8.874	620.5	629.6	0.0	629.6	518.71	485.67
11	4.965	-8.899	594.2	606.7	0.0	606.7	518.71	488.03
12	4.606	-8.924	566.7	582.9	0.0	582.9	518.71	490.39
13	4.246	-8.949	538.8	559.3	0.0	559.3	518.71	492.64
14	3.884	-8.975	511.2	536.6	0.0	536.6	518.71	494.71
15	3.523	-9.000	484.5	515.5	0.0	515.5	518.71	496.56
16	3.168	-9.025	458.8	496.9	0.0	496.9	518.71	498.13
17	2.827	-9.049	434.0	481.3	0.0	481.3	518.71	499.41
18	2.512	-9.071	409.8	469.4	0.0	469.3	518.71	500.35
19	2.244	-9.090	386.4	461.5	0.0	461.5	518.71	500.96
20	2.055	-9.103	366.3	457.6	0.0	457.6	518.71	501.26
21	1.984	-9.108	357.0	456.7	0.0	456.6	518.71	501.33

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	14.69	10.73	1.0000	1.0000	731.7	.685	.6853
2	8.142	14.69	10.77	1.0000	1.0000	727.9	.681	.6815
3	7.786	14.69	10.81	1.0000	1.0000	723.5	.677	.6770
4	7.432	14.69	10.87	1.0000	1.0000	717.6	.671	.6710
5	7.079	14.69	10.94	1.0000	1.0000	709.7	.663	.6629
6	6.728	14.69	11.04	1.0000	1.0000	699.1	.652	.6521
7	6.377	14.69	11.17	1.0000	1.0000	685.7	.639	.6387
8	6.026	14.69	11.31	1.0000	1.0000	669.6	.622	.6225
9	5.674	14.69	11.49	1.0000	1.0000	650.8	.604	.6037
10	5.321	14.69	11.67	1.0000	1.0000	629.6	.583	.5827
11	4.965	14.69	11.87	1.0000	1.0000	606.7	.560	.5601
12	4.606	14.69	12.08	1.0000	1.0000	582.9	.537	.5369
13	4.246	14.69	12.27	1.0000	1.0000	559.3	.514	.5139
14	3.884	14.69	12.45	1.0000	1.0000	536.6	.492	.4920
15	3.523	14.69	12.62	1.0000	1.0000	515.5	.472	.4718
16	3.168	14.69	12.76	1.0000	1.0000	496.9	.454	.4540
17	2.827	14.69	12.87	1.0000	1.0000	481.3	.439	.4392
18	2.512	14.69	12.96	1.0000	1.0000	469.3	.428	.4279
19	2.244	14.69	13.01	1.0000	1.0000	461.5	.420	.4205
20	2.055	14.69	13.04	1.0000	1.0000	457.6	.417	.4168
21	1.984	14.69	13.04	1.0000	1.0000	456.6	.416	.4159

FREE STATION 5.000 IS INDEX 5

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-8.650	0.00	-.58	.0120	.0611	0.0000
2	8.142	-8.675	0.00	-.21	.0112	.0612	0.0000
3	7.786	-8.700	0.00	.39	.0127	.0614	0.0000
4	7.432	-8.725	0.00	1.22	.0166	.0616	0.0000
5	7.079	-8.750	0.00	2.27	.0226	.0619	0.0000
6	6.728	-8.775	0.00	3.48	.0300	.0624	0.0000
7	6.377	-8.799	0.00	4.85	.0382	.0629	0.0000
8	6.026	-8.824	0.00	6.36	.0471	.0634	0.0000
9	5.674	-8.849	0.00	8.01	.0566	.0641	0.0000
10	5.321	-8.874	0.00	9.77	.0660	.0649	0.0000
11	4.965	-8.899	0.00	11.63	.0741	.0657	0.0000
12	4.606	-8.924	0.00	13.56	.0795	.0665	0.0000
13	4.246	-8.949	0.00	15.56	.0816	.0672	0.0000
14	3.884	-8.975	0.00	17.68	.0797	.0679	0.0000
15	3.523	-9.000	0.00	19.99	.0728	.0686	0.0000
16	3.168	-9.025	0.00	22 58	.0589	.0691	0.0000
17	2.827	-9.049	0.00	25.61	.0356	.0696	0.0000
18	2.512	-9.071	0.00	29.18	.0008	.0699	0.0000
19	2.244	-9.090	0.00	33.16	-.0447	.0701	0.0000
20	2.055	-9.103	0.00	36.83	-.0918	.0702	0.0000
21	1.984	-9.108	0.00	38.59	-.1173	.0702	0.0000

FREE STATION 6.000 IS INDEX 6

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-7.802	758.3	758.4	0.0	758.4	518.71	470.76
2	8.146	-7.877	776.2	776.3	0.0	776.4	518.71	468.46
3	7.798	-7.950	793.4	793.5	0.0	793.6	518.71	466.21
4	7.456	-8.016	805.0	805.5	0.0	805.6	518.71	464.61
5	7.117	-8.073	807.2	808.9	0.0	808.9	518.71	464.16
6	6.780	-8.124	799.2	802.8	0.0	802.9	518.71	464.97
7	6.446	-8.170	782.3	788.8	0.0	788.8	518.71	466.84
8	6.112	-8.211	759.3	769.4	0.0	769.3	518.71	469.37
9	5.779	-8.245	731.7	746.0	0.0	745.9	518.71	472.33
10	5.449	-8.263	699.6	719.2	0.0	719.1	518.71	475.60
11	5.123	-8.261	663.8	689.6	0.0	689.6	518.71	479.07
12	4.801	-8.243	626.7	658.9	0.0	658.9	518.71	482.53
13	4.483	-8.219	590.3	628.7	0.0	628.7	518.71	485.77
14	4.167	-8.195	556.3	600.5	0.0	600.4	518.71	488.66
15	3.857	-8.176	526.2	575.8	0.0	575.8	518.71	491.08
16	3.558	-8.160	501.3	556.3	0.0	556.3	518.71	492.92
17	3.280	-8.145	482.9	543.8	0.0	543.8	518.71	494.06
18	3.036	-8.133	471.7	539.1	0.0	539.1	518.71	494.49
19	2.843	-8.125	466.8	541.3	0.0	541.2	518.71	494.29
20	2.719	-8.120	465.5	546.3	0.0	546.3	518.71	493.83
21	2.675	-8.119	465.4	548.9	0.0	548.9	518.71	493.60

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	14.69	10.47	1.0000	1.0000	1680.2	.713	1.5793
2	8.146	14.69	10.29	1.0000	1.0000	1633.2	.732	1.5389
3	7.798	14.69	10.12	1.0000	1.0000	1588.0	.750	1.4999
4	7.456	14.69	10.00	1.0000	1.0000	1542.1	.762	1.4591
5	7.117	14.69	9.97	1.0000	1.0000	1493.3	.766	1.4136
6	6.780	14.69	10.03	1.0000	1.0000	1440.4	.759	1.3623
7	6.446	14.69	10.17	1.0000	1.0000	1383.8	.745	1.3062
8	6.112	14.69	10.36	1.0000	1.0000	1324.4	.724	1.2468
9	5.779	14.69	10.59	1.0000	1.0000	1263.2	.700	1.1854
10	5.449	14.69	10.85	1.0000	1.0000	1200.4	.673	1.1226
11	5.123	14.69	11.13	1.0000	1.0000	1136.7	.643	1.0591
12	4.801	14.69	11.41	1.0000	1.0000	1073.0	.612	.9962
13	4.483	14.69	11.68	1.0000	1.0000	1010.2	.582	.9347
14	4.167	14.69	11.93	1.0000	1.0000	949.1	.554	.8757
15	3.857	14.69	12.14	1.0000	1.0000	891.3	.530	.8202
16	3.558	14.69	12.30	1.0000	1.0000	838.6	.511	.7703
17	3.280	14.69	12.40	1.0000	1.0000	794.0	.499	.7285
18	3.036	14.69	12.43	1.0000	1.0000	759.9	.494	.6969
19	2.843	14.69	12.42	1.0000	1.0000	737.9	.496	.6769
20	2.719	14.69	12.38	1.0000	1.0000	726.9	.501	.6671
21	2.675	14.69	12.35	1.0000	1.0000	723.9	.504	.6645

FREE STATION 6.000 IS INDEX 6

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-7.802	0.00	0.00	0.0000	.0600	.0152
2	8.146	-7.877	0.00	.15	-.0085	.0593	.0156
3	7.798	-7.950	0.00	.78	-.0095	.0586	.0163
4	7.456	-8.016	0.00	1.95	.0017	.0581	.0170
5	7.117	-8.073	0.00	3.56	.0226	.0580	.0177
6	6.780	-8.124	0.00	5.43	.0458	.0582	.0183
7	6.446	-8.170	0.00	7.35	.0631	.0588	.0188
8	6.112	-8.211	0.00	9.24	.0707	.0596	.0192
9	5.779	-8.245	0.00	11.23	.0755	.0605	.0195
10	5.449	-8.263	0.00	13.40	.0839	.0616	.0204
11	5.123	-8.261	0.00	15.70	.0954	.0627	.0217
12	4.801	-8.243	0.00	17.97	.1043	.0638	.0241
13	4.483	-8.219	0.00	20.12	.1070	.0649	.0271
14	4.167	-8.195	0.00	22.10	.1014	.0659	.0308
15	3.857	-8.176	0.00	23.94	.0875	.0667	.0374
16	3.558	-8.160	0.00	25.68	.0655	.0673	.0460
17	3.280	-8.145	0.00	27.36	.0330	.0677	.0580
18	3.036	-8.133	0.00	28.94	-.0113	.0679	.0703
19	2.843	-8.125	0.00	30.40	-.0630	.0678	.0806
20	2.719	-8.120	0.00	31.56	-.1075	.0676	.0881
21	2.675	-8.119	0.00	32.02	-.1255	.0676	.0908

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED
1	-53.95	7.35	1499.3
2	-52.67	8.12	1436.9
3	-51.87	7.17	1375.5
4	-50.51	5.50	1315.1
5	-48.97	3.69	1255.3
6	-47.87	2.69	1196.0
7	-47.01	1.74	1136.9
8	-46.23	.74	1078.0
9	-45.44	-.65	1019.4
10	-44.59	-1.97	961.1
11	-43.67	-3.20	903.6
12	-42.92	-3.24	846.8
13	-41.97	-3.01	790.6
14	-40.95	-2.41	735.0
15	-40.03	-1.52	680.3
16	-39.22	-.51	627.5
17	-37.51	1.21	578.5
18	-35.89	2.80	535.6
19	-34.19	4.43	501.5
20	-33.11	5.47	479.5
21	-32.73	5.84	471.9

STATION---- 6.200 IS INSIDE OF A ROTOR WITH INDEX 7

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-7.383	634.6	634.7	191.1	662.9	566.42	529.84
2	8.146	-7.421	649.5	649.6	199.6	679.7	566.46	528.00
3	7.804	-7.460	670.3	670.4	206.2	701.5	565.96	525.00
4	7.473	-7.497	696.4	696.7	210.7	728.0	564.96	520.83
5	7.154	-7.529	715.2	716.6	215.3	748.4	563.96	517.32
6	6.842	-7.558	727.7	731.3	219.9	763.7	562.90	514.34
7	6.533	-7.585	726.0	732.8	227.4	767.3	562.34	513.32
8	6.223	-7.610	722.4	733.0	235.6	769.9	561.78	512.42
9	5.916	-7.629	719.4	734.7	245.6	774.7	561.40	511.42
10	5.614	-7.642	712.2	733.5	255.3	776.6	560.81	510.58
11	5.315	-7.649	687.8	715.8	249.0	757.8	557.59	509.76
12	5.015	-7.653	653.8	688.6	231.2	726.3	552.78	508.84
13	4.712	-7.656	619.1	660.7	213.2	694.1	548.22	508.09
14	4.408	-7.657	586.3	634.4	197.7	664.4	544.32	507.55
15	4.106	-7.659	555.9	609.8	185.4	637.3	541.08	507.25
16	3.811	-7.664	527.8	586.5	174.7	612.0	538.28	507.07
17	3.534	-7.670	503.9	566.2	165.0	589.8	535.84	506.85
18	3.287	-7.675	486.2	550.5	156.3	572.4	533.81	506.51
19	3.089	-7.679	475.4	540.3	149.2	560.6	532.25	506.07
20	2.960	-7.683	470.6	535.0	144.2	554.2	531.25	505.66
21	2.915	-7.684	469.4	533.5	142.3	552.3	530.90	505.48

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	18.61	14.73	1.2664	1.0920	1454.0	.587	1.2883
2	8.146	18.76	14.67	1.2767	1.0921	1397.5	.603	1.2403
3	7.804	18.94	14.57	1.2893	1.0911	1348.7	.624	1.2004
4	7.473	19.19	14.44	1.3059	1.0892	1308.4	.651	1.1693
5	7.154	19.35	14.31	1.3170	1.0872	1268.4	.671	1.1373
6	6.842	19.46	14.19	1.3242	1.0852	1228.4	.687	1.1046
7	6.533	19.39	14.09	1.3193	1.0841	1180.0	.691	1.0622
8	6.223	19.33	14.01	1.3157	1.0830	1131.6	.694	1.0195
9	5.916	19.35	13.96	1.3166	1.0823	1084.7	.699	.9782
10	5.614	19.33	13.92	1.3154	1.0812	1038.4	.701	.9372
11	5.315	18.98	13.87	1.2914	1.0750	993.2	.685	.8971
12	5.015	18.43	13.80	1.2543	1.0657	949.2	.657	.8582
13	4.712	17.90	13.72	1.2185	1.0569	904.7	.628	.8185
14	4.408	17.46	13.67	1.1882	1.0494	859.4	.601	.7780
15	4.106	17.09	13.64	1.1633	1.0431	813.8	.577	.7369
16	3.811	16.78	13.62	1.1421	1.0377	769.1	.554	.6966
17	3.534	16.51	13.59	1.1237	1.0330	728.4	.534	.6599
18	3.287	16.29	13.56	1.1086	1.0291	694.5	.519	.6294
19	3.089	16.12	13.51	1.0970	1.0261	669.7	.508	.6071
20	2.960	16.01	13.47	1.0896	1.0242	655.1	.503	.5941
21	2.915	15.97	13.46	1.0871	1.0235	650.3	.501	.5899

STATION---- 6.200 IS INSIDE OF A ROTOR WITH INDEX 7

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-7.383	16.76	0.00	0.0000	.0751	.0646
2	8.146	-7.421	17.08	-.01	-.0009	.0750	.0656
3	7.804	-7.460	17.09	.47	-.0108	.0749	.0701
4	7.473	-7.497	16.83	1.68	-.0209	.0748	.0769
5	7.154	-7.529	16.72	3.49	-.0306	.0747	.0866
6	6.842	-7.558	16.74	5.62	-.0385	.0745	.0986
7	6.533	-7.585	17.24	7.75	-.0427	.0741	.1122
8	6.223	-7.610	17.82	9.72	-.0446	.0738	.1230
9	5.916	-7.629	18.49	11.70	-.0492	.0737	.1326
10	5.614	-7.642	19.19	13.82	-.0610	.0736	.1399
11	5.315	-7.649	19.18	16.04	-.0779	.0734	.1452
12	5.015	-7.653	18.56	18.28	-.0927	.0732	.1502
13	4.712	-7.656	17.88	20.43	-.1001	.0729	.1560
14	4.408	-7.657	17.31	22.44	-.0984	.0727	.1631
15	4.106	-7.659	16.91	24.26	-.0894	.0726	.1718
16	3.811	-7.664	16.59	25.84	-.0767	.0725	.1810
17	3.534	-7.670	16.24	27.11	-.0619	.0724	.1908
18	3.287	-7.675	15.85	27.95	-.0476	.0722	.2018
19	3.089	-7.679	15.44	28.34	-.0377	.0721	.2119
20	2.960	-7.683	15.08	28.39	-.0356	.0719	.2195
21	2.915	-7.684	14.93	28.37	-.0365	.0719	.2224

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED	LOSS COEF.
1	-60.24	-.80	1499.3	.0915
2	-58.69	.84	1436.9	.0835
3	-56.89	1.39	1376.4	.0671
4	-54.94	1.16	1318.2	.0395
5	-52.77	-.17	1261.9	.0144
6	-50.71	-1.31	1206.8	-.0097
7	-48.64	-2.36	1152.2	-.0167
8	-46.47	-3.20	1097.7	-.0251
9	-44.20	-3.73	1043.6	-.0386
10	-41.75	-3.86	990.3	-.0534
11	-39.66	-3.59	937.5	-.0673
12	-37.67	-3.21	884.6	-.0796
13	-36.49	-3.20	831.2	-.0882
14	-35.41	-2.91	777.5	-.0953
15	-34.43	-2.18	724.3	-.1015
16	-33.00	-.26	672.3	-.1057
17	-31.74	2.00	623.3	-.1070
18	-30.65	3.88	579.8	-.1055
19	-29.83	5.38	544.9	-.1021
20	-29.33	6.12	522.2	-.0984
21	-29.16	6.29	514.2	-.0968

STATION---- 6.400 IS INSIDE OF A ROTOR WITH INDEX 8

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-6.984	647.2	647.4	358.5	740.1	608.15	562.61
2	8.146	-6.987	660.3	660.5	373.8	759.0	608.08	560.19
3	7.806	-6.993	688.1	688.3	385.3	788.8	606.99	555.25
4	7.485	-7.001	729.8	730.1	392.8	829.0	605.01	547.85
5	7.182	-7.008	761.2	762.1	399.8	860.5	602.99	541.40
6	6.890	-7.014	784.3	786.8	406.3	885.4	600.89	535.67
7	6.602	-7.022	785.2	790.3	418.2	894.0	599.76	533.27
8	6.314	-7.030	787.2	795.5	431.1	904.7	598.63	530.52
9	6.030	-7.037	794.6	807.0	446.7	922.2	597.78	527.01
10	5.751	-7.036	800.5	817.9	464.5	940.4	597.14	523.54
11	5.475	-7.034	787.4	810.4	459.5	931.4	592.58	520.38
12	5.198	-7.036	760.9	790.2	436.6	902.6	585.35	517.54
13	4.917	-7.049	728.4	764.7	410.6	867.7	578.00	515.32
14	4.629	-7.073	692.3	736.3	384.6	830.4	571.00	513.58
15	4.341	-7.099	655.8	707.7	361.7	794.5	564.82	512.26
16	4.058	-7.125	620.6	680.2	342.6	761.4	559.55	511.28
17	3.788	-7.151	587.6	653.9	326.0	730.4	554.99	510.55
18	3.544	-7.175	558.6	629.9	311.0	702.2	551.09	510.02
19	3.345	-7.194	535.5	609.5	298.7	678.6	548.06	509.71
20	3.212	-7.207	520.2	595.1	290.3	661.9	546.10	509.61
21	3.165	-7.212	514.9	589.7	287.3	655.8	545.42	509.59

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	22.52	17.15	1.5327	1.1724	1311.7	.636	1.1278
2	8.146	22.84	17.13	1.5542	1.1723	1251.5	.654	1.0784
3	7.806	23.23	17.00	1.5810	1.1702	1207.0	.683	1.0447
4	7.485	23.77	16.79	1.6176	1.1664	1180.4	.722	1.0285
5	7.182	24.12	16.54	1.6415	1.1625	1154.3	.754	1.0117
6	6.890	24.35	16.28	1.6571	1.1584	1128.4	.780	.9943
7	6.602	24.18	16.03	1.6457	1.1563	1086.9	.790	.9599
8	6.314	24.05	15.76	1.6369	1.1541	1048.3	.801	.9282
9	6.030	24.07	15.49	1.6381	1.1524	1015.7	.819	.9024
10	5.751	24.10	15.21	1.6399	1.1512	985.5	.838	.8784
11	5.475	23.53	14.94	1.6016	1.1424	955.5	.833	.8543
12	5.198	22.60	14.69	1.5379	1.1285	924.7	.809	.8290
13	4.917	21.63	14.47	1.4717	1.1143	890.6	.780	.8001
14	4.629	20.72	14.30	1.4100	1.1008	853.6	.747	.7682
15	4.341	19.94	14.17	1.3569	1.0889	814.9	.716	.7343
16	4.058	19.29	14.07	1.3125	1.0787	775.8	.687	.6997
17	3.788	18.73	13.99	1.2747	1.0699	738.0	.659	.6661
18	3.544	18.26	13.93	1.2430	1.0624	703.8	.634	.6356
19	3.345	17.91	13.89	1.2187	1.0566	675.5	.613	.6102
20	3.212	17.68	13.88	1.2031	1.0528	656.1	.598	.5927
21	3.165	17.60	13.88	1.1977	1.0515	649.0	.592	.5863

STATION----- 6.400 IS INSIDE OF A ROTOR WITH INDEX 8

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-6.984	28.98	0.00	0.0000	.0823	.1642
2	8.146	-6.987	29.51	-.26	-.0198	.0826	.1648
3	7.806	-6.993	29.24	-.08	-.0302	.0827	.1681
4	7.485	-7.001	28.28	.90	-.0342	.0827	.1737
5	7.182	-7.008	27.68	2.50	-.0359	.0825	.1833
6	6.890	-7.014	27.31	4.42	-.0378	.0821	.1946
7	6.602	-7.022	27.89	6.38	-.0412	.0811	.2084
8	6.314	-7.030	28.45	8.20	-.0461	.0802	.2214
9	6.030	-7.037	28.97	9.97	-.0505	.0793	.2344
10	5.751	-7.036	29.60	11.77	-.0537	.0784	.2462
11	5.475	-7.034	29.55	13.63	-.0550	.0775	.2586
12	5.198	-7.036	28.92	15.58	-.0543	.0766	.2696
13	4.917	-7.049	28.24	17.67	-.0518	.0758	.2811
14	4.629	-7.073	27.58	19.86	-.0468	.0752	.2918
15	4.341	-7.099	27.07	22.05	-.0380	.0747	.3034
16	4.058	-7.125	26.73	24.13	-.0246	.0743	.3159
17	3.788	-7.151	26.50	25.99	-.0066	.0740	.3286
18	3.544	-7.175	26.28	27.49	.0166	.0737	.3416
19	3.345	-7.194	26.11	28.50	.0440	.0736	.3539
20	3.212	-7.207	26.01	29.01	.0694	.0735	.3630
21	3.165	-7.212	25.97	29.15	.0802	.0735	.3665

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED	LOSS COEF.
1	-61.07	-6.91	1499.3	.1611
2	-58.46	-3.63	1436.8	.1472
3	-55.54	-.81	1376.9	.1192
4	-52.46	1.43	1320.3	.0711
5	-48.92	1.15	1266.7	.0266
6	-45.66	.58	1215.2	-.0170
7	-42.66	-.41	1164.5	-.0303
8	-39.71	-1.33	1113.8	-.0464
9	-36.87	-2.19	1063.5	-.0719
10	-34.49	-2.96	1014.3	-.0995
11	-32.06	-3.60	965.8	-.1266
12	-30.23	-3.26	916.9	-.1526
13	-28.25	-2.95	867.2	-.1731
14	-26.51	-2.71	816.5	-.1907
15	-25.08	-1.79	765.6	-.2066
16	-23.84	-.36	715.7	-.2195
17	-22.87	1.60	668.1	-.2266
18	-22.21	3.50	625.1	-.2271
19	-21.95	4.40	590.0	-.2216
20	-21.82	4.88	566.5	-.2142
21	-21.78	5.05	558.2	-.2108

STATION---- 6.600 IS INSIDE OF A ROTOR WITH INDEX 9

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-6.594	564.3	564.1	497.2	752.2	642.66	595.69
2	8.142	-6.561	579.0	578.7	516.5	776.0	642.07	592.07
3	7.802	-6.535	611.2	610.9	530.1	809.1	640.03	585.67
4	7.489	-6.514	662.3	662.1	537.5	853.0	636.80	576.35
5	7.199	-6.497	696.5	696.8	543.6	883.9	633.53	568.61
6	6.925	-6.483	720.4	721.9	548.7	907.0	630.19	561.83
7	6.657	-6.472	712.4	715.8	561.0	909.6	628.28	559.51
8	6.388	-6.465	708.7	714.4	574.7	917.1	626.43	556.52
9	6.122	-6.458	715.0	723.6	591.5	934.8	624.97	552.33
10	5.864	-6.445	721.8	734.1	611.9	955.8	623.99	548.03
11	5.611	-6.429	713.9	730.5	611.1	952.6	619.34	543.88
12	5.359	-6.420	696.8	718.7	593.1	932.0	611.98	539.74
13	5.103	-6.426	675.2	703.9	571.7	907.0	604.36	535.92
14	4.842	-6.453	651.6	688.6	548.4	880.4	596.66	532.18
15	4.576	-6.497	625.8	672.3	524.4	852.8	589.17	528.66
16	4.312	-6.544	598.6	655.8	503.7	826.9	582.50	525.58
17	4.060	-6.589	571.4	639.3	486.8	803.5	576.76	523.01
18	3.831	-6.629	545.2	623.1	472.0	781.6	571.82	520.96
19	3.643	-6.662	522.8	608.6	459.8	762.7	567.90	519.47
20	3.515	-6.684	507.2	598.2	451.4	749.3	565.32	518.57
21	3.470	-6.692	501.5	594.3	448.4	744.4	564.41	518.27

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	26.12	20.01	1.7774	1.2390	1150.0	.629	.9609
2	8.142	26.56	19.98	1.8074	1.2378	1086.6	.650	.9107
3	7.802	27.11	19.86	1.8450	1.2339	1043.6	.682	.8795
4	7.489	27.89	19.66	1.8983	1.2277	1025.7	.725	.8713
5	7.199	28.38	19.43	1.9314	1.2214	1006.4	.756	.8607
6	6.925	28.67	19.17	1.9514	1.2149	986.8	.780	.8491
7	6.657	28.36	18.89	1.9300	1.2112	942.5	.784	.8126
8	6.388	28.12	18.57	1.9136	1.2077	902.9	.793	.7805
9	6.122	28.10	18.22	1.9121	1.2049	873.0	.811	.7576
10	5.864	28.12	17.85	1.9139	1.2030	846.9	.833	.7378
11	5.611	27.51	17.45	1.8725	1.1940	822.7	.833	.7195
12	5.359	26.48	17.05	1.8020	1.1798	800.4	.818	.7026
13	5.103	25.36	16.65	1.7258	1.1651	776.8	.799	.6843
14	4.842	24.25	16.25	1.6501	1.1503	753.4	.778	.6660
15	4.576	23.19	15.87	1.5784	1.1358	729.4	.756	.6469
16	4.312	22.28	15.54	1.5160	1.1230	704.3	.736	.6266
17	4.060	21.50	15.27	1.4635	1.1119	679.2	.717	.6057
18	3.831	20.85	15.05	1.4192	1.1024	655.6	.698	.5858
19	3.643	20.35	14.90	1.3847	1.0948	635.5	.682	.5686
20	3.515	20.02	14.80	1.3623	1.0899	621.5	.671	.5566
21	3.470	19.90	14.77	1.3545	1.0881	616.5	.667	.5523

STATION---- 6.600 IS INSIDE OF A ROTOR WITH INDEX 9

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-6.594	41.39	0.00	0.0000	.0907	.1409
2	8.142	-6.561	41.75	-.42	.0073	.0911	.1426
3	7.802	-6.535	40.95	-.24	.0177	.0915	.1462
4	7.489	-6.514	39.07	.73	.0223	.0921	.1511
5	7.199	-6.497	37.96	2.26	.0195	.0922	.1595
6	6.925	-6.483	37.24	4.03	.0126	.0921	.1688
7	6.657	-6.472	38.09	5.79	.0048	.0911	.1801
8	6.388	-6.465	38.81	7.41	-.0017	.0901	.1918
9	6.122	-6.458	39.26	8.98	-.0078	.0891	.2035
10	5.864	-6.445	39.81	10.60	-.0134	.0879	.2151
11	5.611	-6.429	39.92	12.33	-.0170	.0866	.2269
12	5.359	-6.420	39.53	14.29	-.0165	.0853	.2398
13	5.103	-6.426	39.08	16.49	-.0119	.0838	.2542
14	4.842	-6.453	38.53	18.92	-.0040	.0824	.2702
15	4.576	-6.497	37.95	21.51	.0078	.0810	.2882
16	4.312	-6.544	37.53	24.15	.0238	.0798	.3064
17	4.060	-6.589	37.29	26.70	.0432	.0788	.3253
18	3.831	-6.629	37.14	29.00	.0643	.0780	.3430
19	3.643	-6.662	37.07	30.85	.0846	.0774	.3588
20	3.515	-6.684	37.04	32.06	.1002	.0770	.3703
21	3.470	-6.692	37.03	32.49	.1065	.0769	.3745

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED	LOSS COEF.
1	-57.40	-11.17	1499.3	.2128
2	-54.79	-4.99	1436.2	.1953
3	-51.64	.34	1376.2	.1593
4	-48.33	4.62	1320.9	.0963
5	-44.81	4.48	1269.8	.0370
6	-41.51	3.93	1221.5	-.0219
7	-38.33	2.37	1174.2	-.0408
8	-35.21	1.05	1126.8	-.0637
9	-32.39	.07	1079.9	-.0991
10	-29.68	-.87	1034.3	-.1378
11	-26.82	-1.76	989.7	-.1771
12	-24.08	-1.85	945.2	-.2176
13	-21.41	-1.33	900.2	-.2534
14	-18.96	-.85	854.1	-.2871
15	-16.99	-.39	807.1	-.3183
16	-15.56	.53	760.6	-.3454
17	-14.39	1.59	716.2	-.3654
18	-13.87	2.59	675.8	-.3753
19	-13.64	3.42	642.5	-.3746
20	-13.53	3.98	620.1	-.3682
21	-13.50	4.07	612.1	-.3646

STATION---- 6.800 IS INSIDE OF A ROTOR WITH INDEX 10

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-6.196	512.4	511.9	603.2	791.5	669.01	617.06
2	8.140	-6.127	531.5	531.1	622.2	818.3	667.17	611.62
3	7.802	-6.069	570.2	569.8	633.1	852.1	663.52	603.29
4	7.497	-6.023	629.1	629.0	636.2	894.9	658.57	592.09
5	7.222	-5.986	664.0	664.7	637.4	921.2	653.69	583.23
6	6.964	-5.954	686.3	688.4	637.4	938.4	648.89	575.75
7	6.713	-5.928	668.6	672.4	646.0	932.8	645.90	573.64
8	6.460	-5.906	656.4	662.3	656.5	932.8	643.11	570.83
9	6.211	-5.887	656.9	665.1	670.2	944.5	640.81	566.69
10	5.970	-5.865	658.8	669.9	687.8	960.5	639.16	562.51
11	5.737	-5.837	652.4	667.2	694.3	963.3	635.57	558.46
12	5.510	-5.814	641.4	661.1	690.1	956.0	630.25	554.30
13	5.284	-5.806	626.4	652.8	683.4	945.4	624.68	550.37
14	5.059	-5.819	610.8	646.0	675.9	935.3	619.04	546.31
15	4.830	-5.856	593.9	640.2	666.7	924.6	613.23	542.13
16	4.602	-5.912	574.6	634.3	657.8	914.0	607.56	538.08
17	4.383	-5.970	553.8	628.0	651.5	905.1	602.53	534.38
18	4.185	-6.021	533.1	622.0	647.1	897.7	598.21	531.16
19	4.023	-6.063	515.0	616.6	644.0	891.7	594.77	528.60
20	3.914	-6.091	502.5	613.0	641.9	887.6	592.48	526.91
21	3.876	-6.101	498.0	611.7	641.1	886.2	591.66	526.31

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	29.09	21.90	1.9799	1.2898	1032.0	.650	.8473
2	8.140	29.54	21.77	2.0102	1.2862	971.6	.675	.8012
3	7.802	30.11	21.56	2.0494	1.2792	936.4	.707	.7775
4	7.497	30.98	21.33	2.1086	1.2696	930.9	.750	.7802
5	7.222	31.46	21.09	2.1413	1.2602	920.3	.778	.7771
6	6.964	31.70	20.84	2.1575	1.2510	907.3	.798	.7711
7	6.713	31.18	20.57	2.1222	1.2452	861.1	.794	.7333
8	6.460	30.78	20.26	2.0945	1.2398	819.7	.796	.6997
9	6.211	30.65	19.92	2.0860	1.2354	789.5	.809	.6764
10	5.970	30.60	19.55	2.0824	1.2322	763.0	.826	.6561
11	5.737	30.15	19.16	2.0520	1.2253	739.0	.831	.6377
12	5.510	29.40	18.75	2.0010	1.2150	718.7	.828	.6225
13	5.284	28.54	18.31	1.9421	1.2043	698.6	.822	.6073
14	5.059	27.66	17.85	1.8825	1.1934	681.3	.816	.5945
15	4.830	26.77	17.39	1.8218	1.1822	666.5	.810	.5838
16	4.602	25.91	16.93	1.7633	1.1713	652.7	.804	.5738
17	4.383	25.16	16.53	1.7121	1.1616	639.7	.799	.5643
18	4.185	24.52	16.17	1.6689	1.1533	628.6	.794	.5562
19	4.023	24.02	15.90	1.6349	1.1466	620.1	.791	.5501
20	3.914	23.69	15.72	1.6125	1.1422	614.9	.789	.5463
21	3.876	23.58	15.65	1.6046	1.1407	613.1	.788	.5451

STATION---- 6.800 IS INSIDE OF A ROTOR WITH INDEX 10

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-6.196	49.68	0.00	0.0000	.0958	.1141
2	8.140	-6.127	49.52	-.00	.0256	.0961	.1160
3	7.802	-6.069	48.01	.69	.0515	.0965	.1187
4	7.497	-6.023	45.32	1.91	.0609	.0972	.1218
5	7.222	-5.986	43.80	3.39	.0576	.0976	.1260
6	6.964	-5.954	42.80	4.96	.0485	.0977	.1306
7	6.713	-5.928	43.85	6.48	.0392	.0968	.1365
8	6.460	-5.906	44.75	7.90	.0326	.0958	.1428
9	6.211	-5.887	45.22	9.29	.0266	.0949	.1489
10	5.970	-5.865	45.75	10.70	.0195	.0938	.1555
11	5.737	-5.837	46.14	12.27	.0140	.0926	.1629
12	5.510	-5.814	46.23	14.19	.0117	.0913	.1708
13	5.284	-5.806	46.31	16.49	.0123	.0898	.1824
14	5.059	-5.819	46.29	19.12	.0149	.0882	.1950
15	4.830	-5.856	46.16	22.04	.0190	.0866	.2126
16	4.602	-5.912	46.04	25.13	.0253	.0849	.2330
17	4.383	-5.970	46.05	28.22	.0328	.0835	.2541
18	4.185	-6.021	46.14	31.07	.0397	.0822	.2748
19	4.023	-6.063	46.24	33.43	.0450	.0812	.2932
20	3.914	-6.091	46.32	35.00	.0475	.0805	.3054
21	3.876	-6.101	46.35	35.56	.0480	.0803	.3099

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED	LOSS COEF.
1	-55.50	-17.43	1499.3	.2492
2	-53.27	-6.96	1435.7	.2282
3	-50.09	2.02	1376.1	.1855
4	-46.80	8.61	1322.4	.1111
5	-42.93	9.48	1273.8	.0405
6	-39.37	9.53	1228.3	-.0299
7	-35.92	7.56	1184.0	-.0542
8	-32.34	5.79	1139.5	-.0833
9	-28.88	4.71	1095.5	-.1270
10	-25.57	3.79	1053.0	-.1749
11	-22.17	3.43	1011.9	-.2252
12	-18.64	3.10	971.8	-.2804
13	-14.98	3.47	932.1	-.3341
14	-11.37	3.84	892.3	-.3903
15	-8.54	3.58	852.0	-.4474
16	-6.19	3.14	811.7	-.5006
17	-4.89	2.93	773.0	-.5455
18	-4.26	2.88	738.2	-.5779
19	-3.77	2.83	709.6	-.5940
20	-3.80	2.90	690.4	-.5970
21	-3.83	2.92	683.6	-.5964

ROTOR 1 STATION 7.000 FLOW 59.52 ASPECT RATIO 1.45
STA NO. 11 RPM 20212. TIP SPEED 1499. NO. OF BLADES 20

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-5.777	478.8	478.2	669.4	823.1	685.45	629.31
2	8.142	-5.673	507.6	507.1	681.4	849.8	681.31	621.44
3	7.813	-5.589	550.4	550.3	684.0	878.3	675.36	611.39
4	7.522	-5.522	611.3	612.2	678.5	914.2	668.32	598.97
5	7.260	-5.469	644.0	646.2	671.7	932.5	661.69	589.53
6	7.017	-5.424	663.2	667.0	664.3	941.8	655.40	581.76
7	6.780	-5.385	638.9	644.3	666.3	927.2	651.19	579.80
8	6.542	-5.351	620.3	627.6	670.1	918.5	647.29	577.23
9	6.308	-5.322	614.7	624.3	677.1	921.4	643.98	573.46
10	6.081	-5.292	610.0	622.4	687.9	928.1	641.42	569.87
11	5.866	-5.256	606.5	622.4	706.3	941.8	640.25	566.55
12	5.662	-5.222	603.0	623.6	725.3	956.9	639.16	563.08
13	5.467	-5.199	595.5	622.1	742.6	969.2	637.80	559.75
14	5.279	-5.192	588.4	622.9	760.5	983.4	636.50	556.13
15	5.100	-5.203	582.0	626.4	779.6	1000.5	635.35	552.16
16	4.928	-5.233	575.2	631.9	801.2	1020.8	634.55	547.94
17	4.765	-5.277	566.1	637.3	825.7	1043.4	634.14	543.65
18	4.619	-5.324	554.5	641.4	849.5	1064.8	633.82	539.58
19	4.501	-5.366	542.0	643.6	870.1	1082.6	633.60	536.16
20	4.422	-5.393	532.0	644.3	884.5	1094.5	633.46	533.86
21	4.395	-5.403	528.2	644.3	889.7	1098.7	633.41	533.04

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	RELAT. VELOC.	ABSOL. MACH NUMBER	RELAT. MACH NUMBER
1	8.500	31.05	22.99	2.1132	1.3215	957.8	.669	.7786
2	8.142	31.31	22.66	2.1306	1.3135	909.3	.695	.7439
3	7.813	31.71	22.35	2.1577	1.3020	885.9	.724	.7307
4	7.522	32.44	22.08	2.2077	1.2884	891.6	.762	.7430
5	7.260	32.75	21.84	2.2288	1.2757	887.8	.783	.7457
6	7.017	32.81	21.60	2.2328	1.2635	879.5	.796	.7437
7	6.780	32.07	21.34	2.1824	1.2554	834.0	.785	.7064
8	6.542	31.47	21.06	2.1417	1.2479	792.5	.780	.6727
9	6.308	31.18	20.76	2.1222	1.2415	761.2	.785	.6483
10	6.081	30.98	20.46	2.1085	1.2366	731.7	.793	.6251
11	5.866	30.94	20.16	2.1059	1.2343	703.7	.807	.6029
12	5.662	30.91	19.82	2.1035	1.2322	680.9	.822	.5858
13	5.467	30.73	19.45	2.0917	1.2296	660.4	.835	.5693
14	5.279	30.55	19.04	2.0794	1.2271	645.8	.850	.5585
15	5.100	30.39	18.59	2.0685	1.2249	637.8	.868	.5536
16	4.928	30.28	18.11	2.0609	1.2233	635.5	.889	.5537
17	4.765	30.23	17.62	2.0570	1.2225	637.5	.913	.5576
18	4.619	30.18	17.17	2.0540	1.2219	642.4	.935	.5640
19	4.501	30.15	16.80	2.0518	1.2215	648.1	.953	.5708
20	4.422	30.13	16.55	2.0505	1.2212	652.7	.966	.5761
21	4.395	30.12	16.46	2.0501	1.2211	654.4	.971	.5781

ROTOR 1 STATION 7.000 FLOW 59.52 ASPECT RATIO 1.45
STA NO. 11 RPM 20212. TIP SPEED 1499. NO. OF BLADES 20

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE	D-FACTOR
1	8.500	-5.777	54.46	0.00	0.0000	.0986	.0833	.5751
2	8.142	-5.673	53.34	1.14	.0435	.0984	.0835	.5847
3	7.813	-5.589	51.18	2.60	.0645	.0987	.0840	.5821
4	7.522	-5.522	47.94	4.04	.0673	.0995	.0843	.5621
5	7.260	-5.469	46.11	5.37	.0599	.1000	.0841	.5453
6	7.017	-5.424	44.88	6.62	.0490	.1002	.0839	.5299
7	6.780	-5.385	45.96	7.84	.0397	.0993	.0838	.5416
8	6.542	-5.351	46.88	9.09	.0356	.0985	.0837	.5506
9	6.308	-5.322	47.32	10.38	.0352	.0977	.0838	.5519
10	6.081	-5.292	47.86	11.72	.0378	.0969	.0840	.5506
11	5.866	-5.256	48.62	13.22	.0395	.0960	.0840	.5483
12	5.662	-5.222	49.31	14.98	.0336	.0950	.0841	.5429
13	5.467	-5.199	50.04	17.03	.0182	.0938	.0851	.5339
14	5.279	-5.192	50.68	19.32	-.0050	.0924	.0880	.5205
15	5.100	-5.203	51.22	21.84	-.0340	.0909	.0910	.4985
16	4.928	-5.233	51.74	24.57	-.0631	.0892	.1006	.4693
17	4.765	-5.277	52.34	27.45	-.0838	.0875	.1172	.4357
18	4.619	-5.324	52.94	30.28	-.0929	.0859	.1331	.3995
19	4.501	-5.366	53.51	32.73	-.0934	.0846	.1469	.3692
20	4.422	-5.393	53.93	34.41	-.0895	.0837	.1615	.3500
21	4.395	-5.403	54.09	35.01	-.0872	.0834	.1667	.3436

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	WHEEL SPEED	INCID-ENCE	DEVIA-TION	LOSS COEF.	ADIAB. EFFIC.	POLYT. EFFIC.
1	-53.66	-20.74	1499.3	-9.215	-6.389	.2705	74.01	76.56
2	-50.09	-8.02	1436.1	-8.947	-6.012	.2435	76.83	79.13
3	-47.13	4.64	1378.2	-8.149	-4.460	.1993	81.24	83.14
4	-44.23	12.91	1326.7	-8.003	-2.402	.1310	87.91	89.17
5	-40.85	15.62	1280.5	-8.231	-2.443	.0752	93.23	93.94
6	-37.64	16.73	1237.6	-8.261	-3.039	.0257	97.78	98.01
7	-34.11	14.63	1195.9	-8.235	-5.309	.0276	97.70	97.93
8	-30.41	12.63	1154.0	-8.252	-7.227	.0255	97.97	98.18
9	-26.24	12.29	1112.6	-8.365	-8.655	.0108	99.22	99.30
10	-22.34	11.95	1072.7	-8.605	-9.385	-.0036	100.32	100.29
11	-17.69	13.17	1034.7	-8.979	-10.121	-.0157	101.11	101.00
12	-13.11	14.62	998.6	-9.197	-10.557	-.0291	101.85	101.67
13	-8.15	15.85	964.2	-9.542	-11.459	-.0373	102.16	101.95
14	-2.20	16.74	931.2	-9.801	-13.123	-.0452	102.37	102.14
15	2.77	17.58	899.5	-9.729	-13.606	-.0541	102.56	102.31
16	7.00	17.30	869.2	-9.220	-13.136	-.0629	102.69	102.43
17	10.82	15.94	840.5	-9.264	-12.151	-.0707	102.76	102.49
18	14.00	14.70	814.8	-8.920	-10.903	-.0776	102.81	102.54
19	16.58	13.69	793.9	-8.633	-9.824	-.0825	102.85	102.58
20	17.61	13.14	780.1	-8.168	-8.410	-.0852	102.87	102.60
21	17.96	12.94	775.2	-7.952	-7.889	-.0860	102.88	102.60

FREE STATION 8.000 IS INDEX 12

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-4.889	532.4	531.7	669.4	855.4	685.45	624.81
2	8.171	-4.818	562.6	562.5	679.0	882.2	681.31	616.79
3	7.868	-4.763	602.3	603.4	679.2	909.0	675.36	606.83
4	7.596	-4.715	657.6	660.6	671.8	942.6	668.32	594.59
5	7.350	-4.675	687.1	691.9	663.5	959.1	661.69	585.34
6	7.119	-4.647	704.1	710.7	654.7	966.7	655.40	577.80
7	6.894	-4.627	681.2	689.3	655.2	951.5	651.19	576.01
8	6.669	-4.613	664.2	674.3	657.3	942.2	647.29	573.56
9	6.447	-4.606	660.2	673.0	662.5	944.8	643.98	569.83
10	6.232	-4.609	658.4	674.5	671.3	952.1	641.42	566.11
11	6.023	-4.621	658.7	679.0	687.9	967.0	640.25	562.55
12	5.823	-4.642	658.7	684.1	705.2	982.9	639.16	558.88
13	5.631	-4.672	653.7	684.9	720.9	994.9	637.80	555.54
14	5.447	-4.712	647.8	685.9	737.2	1007.4	636.50	552.15
15	5.272	-4.762	642.0	688.1	754.2	1021.4	635.35	548.63
16	5.108	-4.817	636.4	692.0	773.0	1037.9	634.55	545.01
17	4.961	-4.875	631.2	697.6	793.2	1056.7	634.14	541.31
18	4.833	-4.931	626.2	704.7	811.8	1075.5	633.82	537.67
19	4.734	-4.977	621.7	712.0	827.2	1091.8	633.60	534.49
20	4.671	-5.006	618.4	717.5	837.4	1103.1	633.46	532.28
21	4.649	-5.016	617.1	719.6	841.0	1107.2	633.41	531.49

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	31.05	22.42	2.1132	1.3215	855.4	.698	.6979
2	8.171	31.31	22.07	2.1306	1.3135	882.2	.724	.7244
3	7.868	31.71	21.77	2.1577	1.3020	909.0	.753	.7526
4	7.596	32.44	21.52	2.2077	1.2884	942.6	.788	.7884
5	7.350	32.75	21.30	2.2288	1.2757	959.1	.808	.8085
6	7.119	32.81	21.09	2.2328	1.2635	966.7	.820	.8202
7	6.894	32.07	20.86	2.1824	1.2554	951.5	.809	.8085
8	6.669	31.47	20.59	2.1417	1.2479	942.2	.802	.8023
9	6.447	31.18	20.31	2.1222	1.2415	944.8	.807	.8072
10	6.232	30.98	20.00	2.1085	1.2366	952.1	.816	.8161
11	6.023	30.94	19.66	2.1059	1.2343	967.0	.832	.8315
12	5.823	30.91	19.31	2.1035	1.2322	982.9	.848	.8479
13	5.631	30.73	18.94	2.0917	1.2296	994.9	.861	.8608
14	5.447	30.55	18.57	2.0794	1.2271	1007.4	.874	.8744
15	5.272	30.39	18.17	2.0685	1.2249	1021.4	.889	.8894
16	5.108	30.28	17.77	2.0609	1.2233	1037.9	.907	.9067
17	4.961	30.23	17.36	2.0570	1.2225	1056.7	.926	.9263
18	4.833	30.18	16.96	2.0540	1.2219	1075.5	.946	.9459
19	4.734	30.15	16.61	2.0518	1.2215	1091.8	.963	.9631
20	4.671	30.13	16.38	2.0505	1.2212	1103.1	.975	.9751
21	4.649	30.12	16.29	2.0501	1.2211	1107.2	.979	.9795

FREE STATION 8.000 IS INDEX 12

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-4.889	51.54	0.00	0.0000	.0969	.0877
2	8.171	-4.818	50.36	2.39	.0227	.0966	.0872
3	7.868	-4.763	48.38	4.47	.0357	.0969	.0869
4	7.596	-4.715	45.48	6.05	.0415	.0977	.0868
5	7.350	-4.675	43.80	7.25	.0420	.0982	.0868
6	7.119	-4.647	42.65	8.21	.0383	.0985	.0868
7	6.894	-4.627	43.55	9.16	.0333	.0977	.0870
8	6.669	-4.613	44.27	10.26	.0297	.0969	.0871
9	6.447	-4.606	44.55	11.48	.0268	.0962	.0874
10	6.232	-4.609	44.86	12.80	.0240	.0953	.0877
11	6.023	-4.621	45.37	14.26	.0214	.0943	.0882
12	5.823	-4.642	45.87	15.85	.0187	.0933	.0887
13	5.631	-4.672	46.47	17.55	.0147	.0920	.0892
14	5.447	-4.712	47.06	19.36	.0083	.0908	.0899
15	5.272	-4.762	47.62	21.25	-.0010	.0894	.0906
16	5.108	-4.817	48.16	23.24	-.0165	.0880	.0914
17	4.961	-4.875	48.67	25.33	-.0422	.0866	.0921
18	4.833	-4.931	49.04	27.41	-.0754	.0851	.0928
19	4.734	-4.977	49.28	29.26	-.1080	.0839	.0934
20	4.671	-5.006	49.41	30.56	-.1321	.0831	.0938
21	4.649	-5.016	49.45	31.04	-.1411	.0827	.0939

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE
1	41.53	5.73
2	39.07	3.82
3	37.56	2.04
4	37.42	.50
5	37.55	-.85
6	37.15	-1.99
7	36.61	-3.28
8	35.94	-4.70
9	36.22	-6.66
10	36.60	-8.67
11	37.17	-10.84
12	37.86	-13.14
13	38.63	-15.61
14	39.60	-18.56
15	40.77	-21.83
16	41.82	-25.27
17	42.75	-28.78
18	43.43	-31.62
19	44.35	-33.73
20	44.91	-35.02
21	45.10	-35.46

STATOR 1 STATION 9.000 FLOW 59.52 ASPECT RATIO 1.40
STA NO. 13 NO VANES 31

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-2.220	717.9	717.8	0.0	717.8	685.45	642.77
2	8.260	-2.240	717.0	717.1	0.0	717.1	681.31	638.70
3	8.027	-2.262	720.4	720.6	0.0	720.7	675.36	632.31
4	7.805	-2.284	741.3	741.9	0.0	741.9	668.32	622.68
5	7.596	-2.305	739.4	740.4	0.0	740.4	661.69	616.22
6	7.392	-2.326	729.6	730.9	0.0	731.0	655.40	611.07
7	7.194	-2.347	714.3	716.1	0.0	716.2	651.19	608.63
8	7.001	-2.368	706.2	708.6	0.0	708.6	647.29	605.62
9	6.816	-2.386	704.9	707.9	0.0	707.9	643.98	602.38
10	6.641	-2.403	708.4	712.2	0.0	712.2	641.42	599.31
11	6.479	-2.419	715.1	719.7	0.0	719.8	640.25	597.23
12	6.328	-2.433	718.2	723.8	0.0	723.9	639.16	595.66
13	6.190	-2.447	716.0	722.6	0.0	722.7	637.80	594.43
14	6.064	-2.459	714.5	722.1	0.0	722.2	636.50	593.18
15	5.953	-2.470	715.1	723.8	0.0	723.8	635.35	591.84
16	5.856	-2.480	717.9	727.7	0.0	727.8	634.55	590.55
17	5.776	-2.489	720.7	731.5	0.0	731.6	634.14	589.69
18	5.713	-2.496	722.9	734.7	0.0	734.8	633.82	588.98
19	5.667	-2.502	724.6	737.1	0.0	737.2	633.60	588.46
20	5.639	-2.506	725.6	738.6	0.0	738.7	633.46	588.14
21	5.630	-2.507	726.0	739.1	0.0	739.2	633.41	588.03

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	30.36	24.22	.9779	1.0000	717.8	.577	.5774
2	8.260	30.37	24.20	.9700	1.0000	717.1	.579	.5787
3	8.027	30.44	24.15	.9601	1.0000	720.7	.584	.5845
4	7.805	30.87	24.08	.9516	1.0000	741.9	.606	.6064
5	7.596	30.80	23.99	.9405	1.0000	740.4	.608	.6083
6	7.392	30.55	23.89	.9313	1.0000	731.0	.603	.6031
7	7.194	30.17	23.80	.9408	1.0000	716.2	.592	.5920
8	7.001	29.93	23.70	.9512	1.0000	708.6	.587	.5872
9	6.816	29.82	23.59	.9563	1.0000	707.9	.588	.5883
10	6.641	29.78	23.47	.9614	1.0000	712.2	.593	.5933
11	6.479	29.79	23.34	.9626	1.0000	719.8	.601	.6007
12	6.328	29.70	23.20	.9610	1.0000	723.9	.605	.6049
13	6.190	29.51	23.05	.9602	1.0000	722.7	.604	.6045
14	6.064	29.33	22.91	.9601	1.0000	722.2	.605	.6048
15	5.953	29.21	22.77	.9609	1.0000	723.8	.607	.6068
16	5.856	29.14	22.65	.9623	1.0000	727.8	.611	.6108
17	5.776	29.08	22.54	.9622	1.0000	731.6	.614	.6144
18	5.713	29.04	22.45	.9621	1.0000	734.8	.617	.6175
19	5.667	29.01	22.38	.9621	1.0000	737.2	.620	.6198
20	5.639	28.99	22.34	.9620	1.0000	738.7	.621	.6212
21	5.630	28.98	22.33	.9620	1.0000	739.2	.622	.6217

STATOR 1 STATION 9.000 FLOW 59.52 ASPECT RATIO 1.40
STA NO. 13 NO VANES 31

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE	D-FACTOR
1	8.500	-2.220	0.00	0.00	0.0000	.1017	.0970	.4157
2	8.260	-2.240	0.00	.87	-.0127	.1023	.0969	.4369
3	8.027	-2.262	0.00	1.68	-.0228	.1031	.0969	.4481
4	7.805	-2.284	0.00	2.40	-.0303	.1044	.0969	.4402
5	7.596	-2.305	0.00	3.04	-.0352	.1051	.0969	.4432
6	7.392	-2.326	0.00	3.60	-.0372	.1055	.0969	.4509
7	7.194	-2.347	0.00	4.13	-.0394	.1055	.0970	.4551
8	7.001	-2.368	0.00	4.70	-.0449	.1056	.0971	.4570
9	6.816	-2.386	0.00	5.30	-.0528	.1057	.0972	.4596
10	6.641	-2.403	0.00	5.92	-.0620	.1057	.0973	.4561
11	6.479	-2.419	0.00	6.55	-.0718	.1055	.0975	.4555
12	6.328	-2.433	0.00	7.17	-.0813	.1051	.0977	.4575
13	6.190	-2.447	0.00	7.77	-.0900	.1047	.0979	.4621
14	6.064	-2.459	0.00	8.36	-.0980	.1042	.0981	.4654
15	5.953	-2.470	0.00	8.91	-.1053	.1039	.0984	.4674
16	5.856	-2.480	0.00	9.44	-.1116	.1035	.0985	.4689
17	5.776	-2.489	0.00	9.91	-.1170	.1032	.0985	.4718
18	5.713	-2.496	0.00	10.30	-.1212	.1029	.0986	.4756
19	5.667	-2.502	0.00	10.60	-.1241	.1027	.0986	.4793
20	5.639	-2.506	0.00	10.79	-.1258	.1025	.0986	.4821
21	5.630	-2.507	0.00	10.85	-.1264	.1025	.0986	.4832

STRM-LINE NUMBER	BLADE SECT. ANGLE	BLADE LEAN ANGLE	INCID-ENCE	DEVIA-TION	LOSS COEF.	ADIAB. EFFIC.	POLYT. EFFIC.
1	-8.96	-.02	10.008	8.961	.0796	71.56	74.28
2	-8.27	-.02	11.290	8.270	.1018	73.40	75.94
3	-7.71	-.01	10.826	7.711	.1275	76.47	78.73
4	-7.33	-.00	8.064	7.327	.1440	81.79	83.58
5	-7.07	.00	6.244	7.066	.1701	85.32	86.76
6	-6.85	.00	5.503	6.849	.1923	88.18	89.33
7	-6.72	.00	6.934	6.715	.1692	89.26	90.28
8	-6.59	-.00	8.333	6.594	.1412	90.86	91.72
9	-6.50	-.00	8.331	6.504	.1253	92.71	93.40
10	-6.42	-.00	8.269	6.416	.1090	94.47	94.99
11	-6.38	-.01	8.204	6.377	.1026	95.40	95.83
12	-6.35	-.01	8.014	6.346	.1039	95.85	96.24
13	-6.34	-.01	7.835	6.336	.1039	95.95	96.33
14	-6.35	-.01	7.463	6.345	.1018	96.09	96.45
15	-6.35	-.01	6.852	6.347	.0971	96.37	96.70
16	-6.37	-.01	6.340	6.366	.0913	96.68	96.98
17	-6.45	-.02	5.920	6.451	.0888	96.72	97.02
18	-6.51	-.03	5.611	6.513	.0864	96.75	97.04
19	-6.55	-.04	4.937	6.555	.0845	96.76	97.06
20	-6.58	-.04	4.501	6.578	.0832	96.77	97.07
21	-6.59	-.04	4.351	6.586	.0827	96.78	97.07

FREE STATION 10.000 IS INDEX 14

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-1.650	706.3	706.3	0.0	706.3	685.45	644.13
2	8.267	-1.650	704.9	704.9	0.0	704.9	681.31	640.13
3	8.041	-1.650	707.1	707.2	0.0	707.2	675.36	633.90
4	7.827	-1.650	726.9	727.2	0.0	727.2	668.32	624.47
5	7.624	-1.650	723.5	723.9	0.0	724.0	661.69	618.22
6	7.428	-1.650	712.5	713.1	0.0	713.1	655.40	613.20
7	7.236	-1.650	696.4	697.3	0.0	697.3	651.19	610.85
8	7.050	-1.650	688.1	689.2	0.0	689.2	647.29	607.86
9	6.873	-1.650	687.0	688.3	0.0	688.3	643.98	604.66
10	6.705	-1.650	690.9	692.4	0.0	692.5	641.42	601.62
11	6.550	-1.650	698.3	700.0	0.0	700.1	640.25	599.56
12	6.407	-1.650	702.5	704.4	0.0	704.5	639.16	597.96
13	6.276	-1.650	701.9	703.9	0.0	703.9	637.80	596.65
14	6.158	-1.650	702.8	704.9	0.0	705.0	636.50	595.23
15	6.053	-1.650	706.8	708.9	0.0	709.0	635.35	593.61
16	5.964	-1.650	713.9	716.1	0.0	716.1	634.55	591.96
17	5.890	-1.650	721.4	723.5	0.0	723.6	634.14	590.66
18	5.832	-1.650	728.3	730.4	0.0	730.4	633.82	589.51
19	5.790	-1.650	733.9	736.0	0.0	736.0	633.60	588.60
20	5.765	-1.650	737.7	739.7	0.0	739.7	633.46	588.01
21	5.757	-1.650	738.9	740.9	0.0	741.0	633.41	587.81

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	30.36	24.40	2.0665	1.3215	706.3	.568	.5676
2	8.267	30.37	24.39	2.0666	1.3135	704.9	.568	.5682
3	8.041	30.44	24.36	2.0715	1.3020	707.2	.573	.5729
4	7.827	30.87	24.32	2.1008	1.2884	727.2	.593	.5935
5	7.624	30.80	24.26	2.0962	1.2757	724.0	.594	.5938
6	7.428	30.55	24.19	2.0794	1.2635	713.1	.587	.5873
7	7.236	30.17	24.10	2.0533	1.2554	697.3	.575	.5754
8	7.050	29.93	24.01	2.0372	1.2479	689.2	.570	.5701
9	6.873	29.82	23.91	2.0295	1.2415	688.3	.571	.5709
10	6.705	29.78	23.79	2.0270	1.2366	692.5	.576	.5758
11	6.550	29.79	23.66	2.0271	1.2343	700.1	.583	.5831
12	6.407	29.70	23.51	2.0215	1.2322	704.5	.588	.5875
13	6.276	29.51	23.36	2.0083	1.2296	703.9	.588	.5877
14	6.158	29.33	23.19	1.9963	1.2271	705.0	.589	.5893
15	6.053	29.21	23.01	1.9877	1.2249	709.0	.593	.5935
16	5.964	29.14	22.84	1.9831	1.2233	716.1	.600	.6003
17	5.890	29.08	22.67	1.9792	1.2225	723.6	.607	.6072
18	5.832	29.04	22.52	1.9762	1.2219	730.4	.614	.6135
19	5.790	29.01	22.40	1.9740	1.2215	736.0	.619	.6187
20	5.765	28.99	22.33	1.9727	1.2212	739.7	.622	.6221
21	5.757	28.98	22.30	1.9723	1.2211	741.0	.623	.6233

FREE STATION 10.000 IS INDEX 14

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-1.650	0.00	0.00	0.0000	.1022	.0607
2	8.267	-1.650	0.00	.58	-.0073	.1028	.0607
3	8.041	-1.650	0.00	1.13	-.0139	.1037	.0607
4	7.827	-1.650	0.00	1.63	-.0210	.1051	.0607
5	7.624	-1.650	0.00	2.07	-.0286	.1059	.0607
6	7.428	-1.650	0.00	2.48	-.0356	.1065	.0607
7	7.236	-1.650	0.00	2.87	-.0424	.1065	.0607
8	7.050	-1.650	0.00	3.22	-.0495	.1066	.0607
9	6.873	-1.650	0.00	3.54	-.0580	.1067	.0607
10	6.705	-1.650	0.00	3.82	-.0683	.1067	.0607
11	6.550	-1.650	0.00	4.06	-.0809	.1065	.0607
12	6.407	-1.650	0.00	4.25	-.0956	.1061	.0607
13	6.276	-1.650	0.00	4.39	-.1126	.1057	.0607
14	6.158	-1.650	0.00	4.48	-.1323	.1051	.0607
15	6.053	-1.650	0.00	4.51	-.1542	.1046	.0607
16	5.964	-1.650	0.00	4.50	-.1774	.1041	.0607
17	5.890	-1.650	0.00	4.45	-.2005	.1036	.0607
18	5.832	-1.650	0.00	4.38	-.2217	.1031	.0607
19	5.790	-1.650	0.00	4.31	-.2388	.1027	.0607
20	5.765	-1.650	0.00	4.26	-.2500	.1025	.0607
21	5.757	-1.650	0.00	4.24	-.2539	.1024	.0607

FREE STATION 11.000 IS INDEX 15

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-1.350	721.8	721.7	0.0	721.8	685.45	642.30
2	8.269	-1.350	720.1	720.1	0.0	720.1	681.31	638.34
3	8.046	-1.350	721.6	721.7	0.0	721.7	675.36	632.19
4	7.834	-1.350	740.1	740.3	0.0	740.3	668.32	622.88
5	7.633	-1.350	735.6	735.9	0.0	735.9	661.69	616.77
6	7.438	-1.350	723.4	723.7	0.0	723.7	655.40	611.94
7	7.248	-1.350	705.9	706.3	0.0	706.4	651.19	609.79
8	7.063	-1.350	695.9	696.4	0.0	696.5	647.29	607.03
9	6.887	-1.350	692.8	693.3	0.0	693.4	643.98	604.08
10	6.720	-1.350	694.3	694.9	0.0	694.9	641.42	601.34
11	6.565	-1.350	698.7	699.3	0.0	699.4	640.25	599.64
12	6.421	-1.350	699.3	699.8	0.0	699.9	639.16	598.50
13	6.290	-1.350	694.0	694.5	0.0	694.5	637.80	597.75
14	6.170	-1.350	689.2	689.5	0.0	689.6	636.50	597.01
15	6.064	-1.350	686.3	686.5	0.0	686.5	635.35	596.21
16	5.972	-1.350	685.6	685.8	0.0	685.8	634.55	595.49
17	5.896	-1.350	684.8	684.8	0.0	684.9	634.14	595.19
18	5.835	-1.350	683.6	683.6	0.0	683.6	633.82	595.01
19	5.792	-1.350	682.4	682.4	0.0	682.4	633.60	594.93
20	5.766	-1.350	681.4	681.4	0.0	681.4	633.46	594.90
21	5.757	-1.350	681.1	681.1	0.0	681.1	633.41	594.89

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	30.36	24.16	2.0665	1.3215	721.8	.581	.5808
2	8.269	30.37	24.15	2.0666	1.3135	720.1	.581	.5813
3	8.046	30.44	24.13	2.0715	1.3020	721.7	.585	.5854
4	7.834	30.87	24.10	2.1008	1.2884	740.3	.605	.6050
5	7.633	30.80	24.06	2.0962	1.2757	735.9	.604	.6043
6	7.438	30.55	24.01	2.0794	1.2635	723.7	.597	.5967
7	7.248	30.17	23.96	2.0533	1.2554	706.4	.583	.5834
8	7.063	29.93	23.89	2.0372	1.2479	696.5	.576	.5765
9	6.887	29.82	23.83	2.0295	1.2415	693.4	.575	.5753
10	6.720	29.78	23.75	2.0270	1.2366	694.9	.578	.5779
11	6.565	29.79	23.67	2.0271	1.2343	699.4	.582	.5825
12	6.421	29.70	23.59	2.0215	1.2322	699.9	.583	.5834
13	6.290	29.51	23.51	2.0083	1.2296	694.5	.579	.5793
14	6.170	29.33	23.43	1.9963	1.2271	689.6	.576	.5756
15	6.064	29.21	23.37	1.9877	1.2249	686.5	.573	.5734
16	5.972	29.14	23.32	1.9831	1.2233	685.8	.573	.5732
17	5.896	29.08	23.29	1.9792	1.2225	684.9	.573	.5725
18	5.835	29.04	23.27	1.9762	1.2219	683.6	.572	.5716
19	5.792	29.01	23.26	1.9740	1.2215	682.4	.571	.5706
20	5.766	28.99	23.26	1.9727	1.2212	681.4	.570	.5698
21	5.757	28.98	23.26	1.9723	1.2211	681.1	.569	.5695

FREE STATION 11.000 IS INDEX 15

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-1.350	0.00	0.00	0.0000	.1015	.0640
2	8.269	-1.350	0.00	.44	-.0052	.1021	.0640
3	8.046	-1.350	0.00	.86	-.0104	.1030	.0640
4	7.834	-1.350	0.00	1.22	-.0153	.1044	.0640
5	7.633	-1.350	0.00	1.51	-.0200	.1053	.0640
6	7.438	-1.350	0.00	1.77	-.0248	.1059	.0640
7	7.248	-1.350	0.00	2.01	-.0296	.1060	.0640
8	7.063	-1.350	0.00	2.20	-.0344	.1062	.0640
9	6.887	-1.350	0.00	2.34	-.0394	.1065	.0640
10	6.720	-1.350	0.00	2.40	-.0444	.1066	.0640
11	6.565	-1.350	0.00	2.39	-.0491	.1065	.0640
12	6.421	-1.350	0.00	2.30	-.0529	.1064	.0640
13	6.290	-1.350	0.00	2.14	-.0551	.1061	.0640
14	6.170	-1.350	0.00	1.89	-.0549	.1059	.0640
15	6.064	-1.350	0.00	1.58	-.0514	.1058	.0640
16	5.972	-1.350	0.00	1.23	-.0444	.1057	.0640
17	5.896	-1.350	0.00	.86	-.0342	.1056	.0640
18	5.835	-1.350	0.00	.52	-.0224	.1055	.0640
19	5.792	-1.350	0.00	.25	-.0111	.1055	.0640
20	5.766	-1.350	0.00	.06	-.0030	.1055	.0640
21	5.757	-1.350	0.00	0.00	0.0000	.1055	.0640

FREE STATION 12.000 IS INDEX 16

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-1.050	736.9	737.0	0.0	736.9	685.45	640.46
2	8.271	-1.050	735.0	735.1	0.0	735.0	681.31	636.54
3	8.050	-1.050	735.9	735.9	0.0	735.9	675.36	630.47
4	7.839	-1.050	753.0	753.2	0.0	753.1	668.32	621.28
5	7.640	-1.050	747.4	747.6	0.0	747.5	661.69	615.34
6	7.446	-1.050	733.8	734.0	0.0	734.0	655.40	610.69
7	7.257	-1.050	714.9	715.2	0.0	715.2	651.19	608.74
8	7.073	-1.050	703.1	703.5	0.0	703.4	647.29	606.22
9	6.897	-1.050	697.8	698.2	0.0	698.2	643.98	603.52
10	6.730	-1.050	696.9	697.3	0.0	697.3	641.42	601.06
11	6.575	-1.050	698.7	699.0	0.0	699.0	640.25	599.68
12	6.431	-1.050	696.3	696.6	0.0	696.6	639.16	598.87
13	6.298	-1.050	688.0	688.2	0.0	688.2	637.80	598.47
14	6.178	-1.050	680.2	680.3	0.0	680.3	636.50	598.07
15	6.070	-1.050	674.5	674.6	0.0	674.6	635.35	597.56
16	5.976	-1.050	671.6	671.6	0.0	671.6	634.55	597.09
17	5.899	-1.050	669.0	669.1	0.0	669.1	634.14	596.97
18	5.837	-1.050	666.9	666.9	0.0	666.9	633.82	596.89
19	5.793	-1.050	665.2	665.2	0.0	665.2	633.60	596.85
20	5.766	-1.050	664.1	664.1	0.0	664.1	633.46	596.84
21	5.757	-1.050	663.7	663.7	0.0	663.7	633.41	596.83

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	30.36	23.92	2.0665	1.3215	736.9	.594	.5939
2	8.271	30.37	23.91	2.0666	1.3135	735.0	.594	.5942
3	8.050	30.44	23.90	2.0715	1.3020	735.9	.598	.5977
4	7.839	30.87	23.89	2.1008	1.2884	753.1	.616	.6162
5	7.640	30.80	23.87	2.0962	1.2757	747.5	.615	.6146
6	7.446	30.55	23.84	2.0794	1.2635	734.0	.606	.6058
7	7.257	30.17	23.81	2.0533	1.2554	715.2	.591	.5912
8	7.073	29.93	23.78	2.0372	1.2479	703.4	.583	.5827
9	6.897	29.82	23.75	2.0295	1.2415	698.2	.580	.5796
10	6.730	29.78	23.71	2.0270	1.2366	697.3	.580	.5800
11	6.575	29.79	23.67	2.0271	1.2343	699.0	.582	.5821
12	6.431	29.70	23.64	2.0215	1.2322	696.6	.581	.5805
13	6.298	29.51	23.61	2.0083	1.2296	688.2	.574	.5737
14	6.178	29.33	23.58	1.9963	1.2271	680.3	.567	.5673
15	6.070	29.21	23.56	1.9877	1.2249	674.6	.563	.5628
16	5.976	29.14	23.54	1.9831	1.2233	671.6	.561	.5606
17	5.899	29.08	23.53	1.9792	1.2225	669.1	.558	.5585
18	5.837	29.04	23.52	1.9762	1.2219	666.9	.557	.5567
19	5.793	29.01	23.52	1.9740	1.2215	665.2	.555	.5553
20	5.766	28.99	23.52	1.9727	1.2212	664.1	.554	.5544
21	5.757	28.98	23.52	1.9723	1.2211	663.7	.554	.5541

FREE STATION 12.000 IS INDEX 16

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-1.050	0.00	0.00	0.0000	.1008	.0684
2	8.271	-1.050	0.00	.37	-.0028	.1014	.0684
3	8.050	-1.050	0.00	.72	-.0056	.1023	.0684
4	7.839	-1.050	0.00	1.01	-.0081	.1038	.0684
5	7.640	-1.050	0.00	1.25	-.0105	.1047	.0684
6	7.446	-1.050	0.00	1.45	-.0128	.1054	.0684
7	7.257	-1.050	0.00	1.62	-.0151	.1056	.0684
8	7.073	-1.050	0.00	1.76	-.0174	.1059	.0684
9	6.897	-1.050	0.00	1.83	-.0194	.1062	.0684
10	6.730	-1.050	0.00	1.84	-.0211	.1065	.0684
11	6.575	-1.050	0.00	1.78	-.0222	.1066	.0684
12	6.431	-1.050	0.00	1.65	-.0226	.1065	.0684
13	6.298	-1.050	0.00	1.48	-.0220	.1065	.0684
14	6.178	-1.050	0.00	1.25	-.0202	.1064	.0684
15	6.070	-1.050	0.00	.99	-.0172	.1064	.0684
16	5.976	-1.050	0.00	.73	-.0134	.1064	.0684
17	5.899	-1.050	0.00	.49	-.0093	.1064	.0684
18	5.837	-1.050	0.00	.28	-.0055	.1064	.0684
19	5.793	-1.050	0.00	.13	-.0025	.1064	.0684
20	5.766	-1.050	0.00	.03	-.0006	.1064	.0684
21	5.757	-1.050	0.00	0.00	0.0000	.1064	.0684

FREE STATION 13.000 IS INDEX 17

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	AXIAL VELOC.	MERID. VELOC.	TANG. VELOC.	ABSOL. VELOC.	TOTAL TEMP.	STATIC TEMP.
1	8.500	-.750	752.0	752.0	0.0	752.0	685.45	638.60
2	8.273	-.750	749.8	749.9	0.0	749.8	681.31	634.71
3	8.053	-.750	749.9	750.0	0.0	750.0	675.36	628.73
4	7.844	-.750	765.7	765.8	0.0	765.8	668.32	619.69
5	7.646	-.750	758.8	759.0	0.0	759.0	661.69	613.91
6	7.453	-.750	743.9	744.1	0.0	744.1	655.40	609.45
7	7.265	-.750	723.6	723.8	0.0	723.8	651.19	607.72
8	7.082	-.750	709.9	710.2	0.0	710.2	647.29	605.42
9	6.906	-.750	702.5	702.8	0.0	702.8	643.98	602.98
10	6.739	-.750	699.3	699.6	0.0	699.6	641.42	600.79
11	6.583	-.750	698.8	699.1	0.0	699.1	640.25	599.67
12	6.439	-.750	694.2	694.4	0.0	694.4	639.16	599.13
13	6.305	-.750	683.7	683.9	0.0	683.9	637.80	598.96
14	6.183	-.750	674.0	674.1	0.0	674.1	636.50	598.77
15	6.074	-.750	666.8	666.9	0.0	666.9	635.35	598.42
16	5.980	-.750	662.8	662.9	0.0	662.9	634.55	598.06
17	5.901	-.750	659.6	659.7	0.0	659.7	634.14	598.01
18	5.838	-.750	657.1	657.1	0.0	657.1	633.82	597.97
19	5.793	-.750	655.3	655.3	0.0	655.3	633.60	597.94
20	5.766	-.750	654.1	654.1	0.0	654.1	633.46	597.93
21	5.757	-.750	653.8	653.8	0.0	653.8	633.41	597.92

STRM-LINE NUMBER	RADIUS	TOTAL PRESS.	STATIC PRESS.	TOTAL PRESS. RATIO	TOTAL TEMP. RATIO	ABSOL. VELOC.	ABSOL. MACH NUMBER	ABSOL. MACH NUMBER
1	8.500	30.36	23.67	2.0665	1.3215	752.0	.607	.6069
2	8.273	30.37	23.67	2.0666	1.3135	749.8	.607	.6070
3	8.053	30.44	23.67	2.0715	1.3020	750.0	.610	.6100
4	7.844	30.87	23.67	2.1008	1.2884	765.8	.627	.6274
5	7.646	30.80	23.67	2.0962	1.2757	759.0	.625	.6247
6	7.453	30.55	23.67	2.0794	1.2635	744.1	.615	.6147
7	7.265	30.17	23.67	2.0533	1.2554	723.8	.599	.5988
8	7.082	29.93	23.67	2.0372	1.2479	710.2	.589	.5887
9	6.906	29.82	23.67	2.0295	1.2415	702.8	.584	.5837
10	6.739	29.78	23.67	2.0270	1.2366	699.6	.582	.5821
11	6.583	29.79	23.67	2.0271	1.2343	699.1	.582	.5822
12	6.439	29.70	23.67	2.0215	1.2322	694.4	.579	.5786
13	6.305	29.51	23.67	2.0083	1.2296	683.9	.570	.5699
14	6.183	29.33	23.67	1.9963	1.2271	674.1	.562	.5618
15	6.074	29.21	23.67	1.9877	1.2249	666.9	.556	.5560
16	5.980	29.14	23.67	1.9831	1.2233	662.9	.553	.5528
17	5.901	29.08	23.67	1.9792	1.2225	659.7	.550	.5501
18	5.838	29.04	23.67	1.9762	1.2219	657.1	.548	.5480
19	5.793	29.01	23.67	1.9740	1.2215	655.3	.546	.5465
20	5.766	28.99	23.67	1.9727	1.2212	654.1	.546	.5456
21	5.757	28.98	23.67	1.9723	1.2211	653.8	.545	.5453

FREE STATION 13.000 IS INDEX 17

STRM-LINE NUMBER	RADIUS	AXIAL COORD.	ABSOL. FLOW ANGLE	STRM-LINE SLOPE	CURVA-TURE	DENS-ITY	BLOC-KAGE
1	8.500	-.750	0.00	0.00	0.0000	.1001	.0730
2	8.273	-.750	0.00	.35	0.0000	.1007	.0730
3	8.053	-.750	0.00	.68	0.0000	.1016	.0730
4	7.844	-.750	0.00	.94	0.0000	.1031	.0730
5	7.646	-.750	0.00	1.16	0.0000	.1041	.0730
6	7.453	-.750	0.00	1.34	0.0000	.1048	.0730
7	7.265	-.750	0.00	1.49	0.0000	.1051	.0730
8	7.082	-.750	0.00	1.61	0.0000	.1055	.0730
9	6.906	-.750	0.00	1.66	0.0000	.1060	.0730
10	6.739	-.750	0.00	1.66	0.0000	.1064	.0730
11	6.583	-.750	0.00	1.59	0.0000	.1066	.0730
12	6.439	-.750	0.00	1.46	0.0000	.1067	.0730
13	6.305	-.750	0.00	1.28	0.0000	.1067	.0730
14	6.183	-.750	0.00	1.07	0.0000	.1067	.0730
15	6.074	-.750	0.00	.84	0.0000	.1068	.0730
16	5.980	-.750	0.00	.62	0.0000	.1068	.0730
17	5.901	-.750	0.00	.41	0.0000	.1069	.0730
18	5.838	-.750	0.00	.24	0.0000	.1069	.0730
19	5.793	-.750	0.00	.11	0.0000	.1069	.0730
20	5.766	-.750	0.00	.03	0.0000	.1069	.0730
21	5.757	-.750	0.00	0.00	0.0000	.1069	.0730

870901005 - PBS ROTOR #1 AERODYNAMIC ANALYSIS - THRU BLADE

THE MAXIMUM ROTOR D-FACTOR .585 OCCURED AT STAGE 1 ON STREAMLINE 2.
THE MAXIMUM VANE D-FACTOR .483 OCCURED AT STAGE 1 ON STREAMLINE 21.

THE MAXIMUM MERIDINAL MACH NO. .766 OCCURED AT STATION 6 ON STREAMLINE 5.

PERFORMANCE SUMMARY FOR 870901005:

	SPEC FLOW IN	FLOW RATE IN	CORR FLOW IN	-------S T A G E----- P/P	ADIA EFF.	POLY EFF.	VANE TO VANE	---CUMULATIVE--- P/P	ADIA EFF.	POLY EFF.
REFERENCE		59.52	59.53							
ROTOR 1	41.86	59.52	59.53	2.144	92.3	93.1	93.1	2.144	92.3	93.1
STAGE 1	28.24	59.52	31.21	2.048	86.2	87.5		2.048	86.2	87.5

	ENTROPY RISE	MASS AVERAGED TOTAL PRESS -URE	TOTAL TEMP -ATURE	ROTOR TIP MACH NO.	VANE HUB MACH NO.	RESET ANGLE
REFERENCE		14.69	518.71			
ROTOR 1	1.6	31.50	655.35	.78		
STAGE 1	2.9	30.10	655.39		.62	

CORRECTED RPM 20212.
FLOW COEF. .231
OVERALL ADIA. EFF. 86.18
PT COEF. .797
WORK COEF. .924
FLOW 59.52
RPM 20212.2
PRESSURE RATIO 2.048
EFFICIENCY 86.18

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