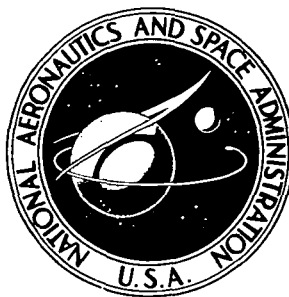


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**AERODYNAMIC PERFORMANCE OF
A 1.20-PRESSURE-RATIO FAN STAGE
DESIGNED FOR LOW NOISE**

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16. Abstract <p>This report presents both the aerodynamic design and the overall and blade-element performance of a 51-centimeter-diameter fan stage. The stage was designed to minimize the noise generated by rotor-stator interactions. The design pressure ratio was 1.20 at a flow of 30.6 kilograms per second and a rotor blade tip speed of 228.6 meters per second. At design speed the rotor peak efficiency was 0.935. The peak efficiency of the stage, however, was 0.824. The radial distribution of rotor performance parameters at peak efficiency and design speed indicated excellent agreement with design values.</p>					
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AERODYNAMIC PERFORMANCE OF A 1.20-PRESSURE-RATIO

FAN STAGE DESIGNED FOR LOW NOISE

by George W. Lewis, Jr., and Royce D. Moore

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SUMMARY

A 51-centimeter-diameter axial-flow fan stage with a design tip speed of 228.6 meters per second was tested. Detailed radial surveys of the flow conditions at the rotor blade inlet and outlet and the stator blade outlet were made. The flow and performance parameters were calculated at stations corresponding to the rotor and stator leading and trailing edges across nine selected blade elements. The radial surveys were made over the stable operating flow range at rotative speeds from 80 to 120 percent of design speed.

Rotor peak efficiency at design speed was 0.935 and was obtained at a weight flow of 29.8 kilograms per second; the pressure ratio was 1.206. Peak stage efficiency was 0.824 at the same flow rate and a pressure ratio of 1.186. The radial distribution of rotor performance parameters at peak efficiency and design speed indicated excellent agreement with design values.

INTRODUCTION

A research program on axial-flow fans and compressors for advanced airbreathing engines is currently being conducted at the NASA Lewis Research Center. This program is primarily directed toward providing the technology required to permit reductions in the size and weight of fans and compressors while maintaining high levels of performance. In support of this program experimental studies are being conducted on fan stages suitable for use in engines for quiet powered-lift aircraft using the externally blown flap (refs. 1 to 3). The externally blown flap aircraft will require a large flow of relatively low velocity air for effective lift augmentation and low noise during takeoff and landing (ref. 4).

To meet the low noise requirements, the fans will be required to have low tip speed and low pressure ratio. In addition, the fan blading can be designed to reduce noise.

For fans, in general, the rotor blade passing frequency noise appears to be the dominant noise source; the noise is caused by the interaction of the rotor blade wakes with the downstream stator blades. Thus spacing the stator further downstream tends to reduce the noise levels. Setting the stator incidence angles to minimize the fluctuating lift experienced by the stator blades due to the rotor wakes is another method favorable to reducing noise (ref. 5). Increasing the ratio of the number of stator blades to rotor blades has also been shown to be effective in reducing noise.

The fan stage presented herein was designed using the minimum fluctuating lift concept to set the stator incidence angles. The stators were spaced four rotor tip chords downstream of the rotor. Acoustic data obtained with a 1.83-meter-diameter model of this fan was presented in reference 6.

This report presents the aerodynamic performance of a 51-centimeter-diameter model of the 1.20-pressure-ratio fan stage. It has been designated stage 54-54 herein. Data were obtained over the stable operating range for five rotative speeds from 80 to 120 percent of design speed. Blade-element survey data were obtained at nine radial positions. The data presented in this report are in tabular and in machine plotted form. The symbols and equations are defined in appendixes A and B. The definitions and units used for the tabular data are defined in appendix C.

AERODYNAMIC DESIGN

The aerodynamic design for this fan stage is presented in reference 6. It incorporates features to reduce the noise caused by rotor-stator interactions. Basically, the stator blades were spaced four rotor tip chords downstream of the rotor, and the stator incidence angles were chosen to minimize the magnitude of lift fluctuations experienced by the stator blades due to the passing rotor wakes.

Both the rotor and stator blades were designed using multiple-circular-arc blade profiles. The overall design parameters for stage 54-54 are listed in table I, and the flow path is shown in figure 1. The stage was designed for an overall pressure ratio of 1.201 and an efficiency of 0.882 at a flow rate of 30.55 kilograms per second (182.3 (kg/sec)/m² of annulus area). The design tip speed was 228.6 meters per second. The blade-element design parameters for rotor 54 are presented in table II. The rotor was designed for a distribution of total pressure ratio which varies from 1.218 at the tip to 1.162 at the hub. The stator blade-element design parameters are given in table III. The blade geometries of the rotor and stator are presented in tables IV and V. The rotor tip solidity was 1.188, and the stator tip solidity was 1.00. This resulted in 42 rotor blades with an aspect ratio of 3.90 and 50 stator blades with an aspect ratio of 3.42. The stator blades had large turning on the forward portion of the blade suction surface as indicated by the high x-factors (greater than 1.0). The high x-factors resulted from an

attempt to obtain a uniform radial variation in area ratio over the height of the blade passage.

APPARATUS AND PROCEDURE

Compressor Test Facility

The compressor stage was tested in the Lewis single-stage compressor facility, which is described in detail in reference 7. A schematic diagram of the facility is shown in figure 2. Atmospheric air enters the test facility at an inlet located on the roof of the building and flows through the flow-measuring orifice and into the plenum chamber upstream of the test stage. The air passes through the experimental compressor stage into the collector and the vacuum exhaust system.

Test Stage

Photographs of the rotor and stator are presented in figures 3 and 4. The rotor blades were pin mounted in the hub. The nonrotating radial tip clearance of the rotor was a nominal 0.05 centimeter at ambient conditions. The stator blades were mounted in the outer casing and supported by a small retaining ring at the hub.

Instrumentation

The compressor weight flow was determined from measurements on a calibrated thin-plate orifice. The orifice air temperature was determined from an average of two Chromel-Constantan thermocouple readings.

Radial surveys of the flow were made upstream of the rotor, between the rotor and the stator, and downstream of the stator (fig. 1). The survey probes are shown in figure 5. Total pressure, total temperature, and flow angle were measured with the combination probe (fig. 5(a)), and static pressure was measured with an 8° C-shaped wedge probe (fig. 5(b)). Each probe was positioned with a null-balancing, stream-directional sensitive control system that automatically aligned the probe to the direction of the flow. The probes were angularly prelined in an air tunnel. The probe thermocouple material was Chromel-Constantan. Two combination probes and two wedge static probes were used at each of the measuring stations.

Inner and outer wall static pressure taps were located at the same axial stations as the survey probes. The circumferential locations of both types of survey probes, along

with inner and outer wall static pressure taps, are shown in figure 6. The combination probes downstream of the stator (station 3) were circumferentially traversed one stator blade passage (7.2°) counterclockwise from the nominal values shown. All pressures were obtained with calibrated strain-gage transducers.

An electronic speed counter, in conjunction with a magnetic pickup, was used to measure rotative speed (rpm).

The estimated errors of the data based on inherent accuracies of the instrumentation and recording system are as follows:

Weight flow, kg/sec	±0.3
Rotative speed, rpm	±30
Flow angle, deg	±1
Temperature, K	±0.6
Rotor-inlet total pressure, N/cm^2	±0.01
Rotor-outlet total pressure, N/cm^2	±0.10
Stator-outlet total pressure, N/cm^2	±0.10
Rotor-inlet static pressure, N/cm^2	±0.04
Rotor-outlet static pressure, N/cm^2	±0.07
Stator-outlet static pressure, N/cm^2	±0.07

An indication of the consistency of the data can be observed by comparing the integrated weight flow at each measuring station to the orifice weight flow in table VI.

Test Procedure

The stage survey data were taken over a range of weight flows from maximum flow to the near-stall conditions at speeds from 80 to 120 percent. For each speed radial surveys were taken at five or more weight flows. Data were recorded at nine radial positions for each weight flow.

At each radial position the two combination probes behind the stator were circumferentially traversed to nine different locations across the stator gap. The wedge probes were set at midgap because preliminary studies showed that the static pressure across the gap was constant. Values of pressure, temperature, and flow angle were recorded at each circumferential position at station 3. At the last circumferential position, values of pressure, temperature, and flow angle were also recorded at stations 1 and 2. All probes were then traversed to the next radial position, and the circumferential traverse procedure was repeated.

Calculation Procedure

Measured total temperatures and total pressures were corrected for Mach number and streamline slope. These corrections were based on instrument probe calibrations given in reference 8. The stream static pressure was corrected for Mach number and streamline slope based on an average calibration for the type of probe used.

Because of the physical construction of the C-shaped static pressure wedges, it was not possible to obtain static pressure measurements at 5, 10, and 95 percent of span. The static pressure at 95 percent of span was obtained by assuming a linear variation in static pressure between the values at the inner wall and the probe measurement at 90 percent of span. A linear variation was also assumed between the static pressure measurements at the outer wall and the 15-percent span to obtain the static pressure at 5 and 10 percent of span.

At each radial position averaged values of the nine circumferential measurements of pressure, temperature, and flow angle downstream of the stator (station 3) were obtained. The nine values of total temperature were mass averaged to obtain the stator-outlet total temperature presented. The nine values of total pressure were energy averaged. The measured values of pressure, temperature, and flow angle were used to calculate axial and tangential velocities at each circumferential position. The flow angles presented for each radial position were calculated based on these mass-averaged axial and tangential velocities. To obtain the overall performance, the radial values of total temperature were mass averaged and the values of total pressure were energy averaged. At each measuring station the integrated weight flow was computed based on the radial survey data.

The data, measured at the three measuring stations, have been translated to the blade leading and trailing edges by the method presented in reference 9.

The stall weight flow was not obtained because of a failure of several rotor blades at the conclusion of the blade-element tests.

Orifice weight flows, total pressures, static pressures, and temperatures were all corrected to standard-day conditions based on the rotor-inlet conditions.

RESULTS AND DISCUSSION

The results from this investigation are presented in three main sections. The overall performance for the rotor and the stage are presented first. Radial distributions of several performance parameters are then presented for both the rotor and the stator. Blade-element data are presented for both rotor and stator. The data are computer plotted, and occasionally a data point is omitted because it falls outside the range of the parameters shown in the figure.

All the plotted data together with some additional performance parameters for the fan stage are presented in tabular form. The overall performance data are presented in table VI. The blade-element data are presented first for the rotor in table VII and then for the stator in table VIII. The definitions and units used for the tabular data are presented in appendix C.

Overall Performance

The overall performance for rotor 54 and stage 54-54 are presented in figures 7 and 8. For both of these computer-plotted figures, data are presented for five speeds from 80 to 120 percent of design speed. Design-point values are shown as solid symbols on both figures.

Rotor. - The data of figure 7 indicate that the rotor met its overall design objective. The peak efficiency for rotor 54 was 0.935 at design speed. Peak efficiency was obtained at a flow rate of 29.75 kilograms per second and a pressure ratio of 1.206. There was no uniform trend of rotor efficiency with increasing tip speed. The inconsistency may be primarily due to the limitation in the inherent accuracy of temperature measurement. For this low pressure ratio fan, a 0.6 degree change in the temperature measurement results in an efficiency change of about 0.03.

Stage. - Overall efficiency of the stage was less favorable than that of the rotor. The stage peak efficiency was only 0.824. As with the rotor, peak efficiency occurred at a flow rate of 29.7 kilograms per second. At this flow rate stage pressure ratio was 1.183. Comparison of the stage and rotor temperature ratios at this flow rate indicate that three points in the difference in efficiency is due to the difference in temperature measurement.

Radial Distributions

The radial distributions of several parameters are presented for design speed in figure 9 for rotor 54 and in figure 10 for stator 54. In each figure data are presented for three weight flows: near choke, near design, and near stall. The design values are shown by the solid symbols. Temperature-rise efficiency, total temperature ratio, total pressure ratio, suction-surface incidence angle, meridional velocity ratio, deviation angle, total loss parameter, total loss coefficient, and diffusion factor are presented as functions of percent span from the blade tip.

Rotor. - At a flow rate of 29.7 kilograms per second the radial distribution of all parameters closely approximates the design values. However, at the near-stall flow rate of 22.2 kilograms per second, losses in the region from midspan to the rotor tip increase sharply. The total temperature ratio, deviation angle, and diffusion factor are increased while meridional velocity is decreased in this region, indicating premature

suction surface flow separation and incipient stall.

Stator. - At the near design flow rate of 29.7 kilograms per second, the radial distribution of incidence angle to the stator blades is approximately equal to design (fig. 10). However, the stator deviation angles are from 4° to 7° greater than design values. Although the diffusion factor is less than or equal to design over the blade span, higher than design losses are measured in both the tip and hub regions. Part of these total pressure losses can be attributed to increased wall boundary-layer flow and mixing losses resulting from the greater distance between the rotor exit and the stator inlet. The total pressure losses may also be due to premature flow separation on the suction surface as a result of the large turning on the forward portion of the blades (high x-factors).

Variation with Incidence Angle

The variations of selected blade-element parameters with suction surface incidence angle are presented in figure 11 for rotor 54 and in figure 12 for stator 54. The data are presented for 80, 100, and 120 percent of design speed for blade-element locations of 5, 10, 30, 50, 70, 90, and 95 percent span from the rotor blade tip. Design values are shown as solid symbols.

Rotor. - The blade-element data indicates that the rotor experimental results closely approximate the design values at design incidence angle. The minimum losses occurred at design incidence angle except near the hub (90 and 95 percent span) where the minimum loss occurred at higher incidence angles. The high total pressure losses observed in the tip region at high incidence angles of 80 and 100 percent of design speed are indicative of incipient stall.

Stator. - The variations of stator velocity ratio, deviation angle, losses, and diffusion factor with stator incidence angle are essentially independent of inlet Mach number (percent design speed). The deviation angle is greater than design for all span locations. For 5, 10, 30, and 95 percent spans minimum losses were greater than design values and minimum-loss incidence angles were less than design.

The overall results indicate that the stator losses caused a decrease in overall efficiency of over 10 percent. Probable causes of the high stator losses were discussed in the Radial Distributions section. The data from this stator and that of reference 3 indicate that minimum losses in the tip region occurred at negative incidence angles. The fact that this stator was designed for positive incidence angle in the tip region may have also contributed to the high losses.

SUMMARY OF RESULTS

This report presents the aerodynamic design and both the overall and blade-element

performances of a 51-centimeter-diameter fan stage having a design pressure ratio of 1.20 and tip speed of 228.6 meters per second. This stage was investigated to evaluate the effects of low noise design constraints on the aerodynamic performance of fan stages. Radial surveys of the flow condition at the rotor inlet, between the rotor and stator, and at the stator outlet were made over the stable operating flow range of the stage at rotational speeds from 80 to 120 percent of design speed. Survey data were obtained at nine radial positions. The following principal results were obtained:

1. Rotor peak efficiency at design speed was 0.935 and occurred at a flow of 29.8 kilograms per second and a pressure ratio of 1.206.
2. At design speed the stage peak efficiency was 0.824 and occurred at a flow of 29.8 kilograms per second and a pressure ratio of 1.186.
3. The radial distribution of rotor performance parameters at peak efficiency and design speed indicated good agreement with the design values.
4. The data indicated high stator losses in the tip region.

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APPENDIX A

SYMBOLS

A_{an}	annulus area at rotor leading edge, m^2
A_f	frontal area at rotor leading edge, m^2
C_p	specific heat at constant pressure, $1004 J/(kg)(K)$
D	diffusion factor
i_{mc}	mean incidence angle, angle between inlet air direction and line tangent to blade mean camber line at leading edge, deg
i_{ss}	suction-surface incidence angle, angle between inlet air direction and line tangent to blade suction at leading edge, deg
N	rotative speed, rpm
P	total pressure, N/cm^2
p	static pressure, N/cm^2
r	radius, cm
T	total temperature, K
U	wheel speed, m/sec
V	air velocity, m/sec
W	weight flow, kg/sec
Z	axial distance referenced from rotor blade hub leading edge, cm
α_c	cone angle, deg
α_s	slope of streamline, deg
β	air angle, angle between air velocity and axial direction, deg
β'_c	relative meridional air angle based on cone angle $\arctan(\tan \beta'_m \cos \alpha_c / \cos \alpha_s)$, deg
γ	ratio of specific heats
δ	ratio of rotor-inlet total pressure to standard pressure of $10.13 N/cm^2$
δ^0	deviation angle, angle between exit air direction and tangent to blade mean camber line at trailing edge, deg
η	efficiency
θ	ratio of rotor inlet total temperature to standard temperature of $288.2 K$

κ_{mc}	angle between the blade mean camber line and meridional plane, deg
κ_{ss}	angle between blade suction surface camber line at leading edge and meridional plane, deg
σ	solidity, ratio of chord to spacing
$\bar{\omega}$	total loss coefficient
$\bar{\omega}_p$	profile loss coefficient
$\bar{\omega}_s$	shock loss coefficient

Subscripts:

ad	adiabatic (temperature-rise)
id	ideal
LE	blade leading edge
m	meridional direction
mom	momentum-rise
p	polytropic
TE	blade trailing edge
z	axial direction
θ	tangential direction

Superscript:

'	relative to blade
---	-------------------

APPENDIX B

EQUATIONS

Suction-surface incidence angle

$$i_{ss} = (\beta'_c)_{LE} - \kappa_{ss} \quad (B1)$$

Mean incidence angle

$$i_{mc} = (\beta'_c)_{LE} - (\kappa_{mc})_{LE} \quad (B2)$$

Deviation angle

$$\delta^0 = (\beta'_c)_{TE} - (\kappa_{mc})_{TE} \quad (B3)$$

Diffusion factor

$$D = 1 - \frac{V'_{TE}}{V'_{LE}} + \frac{\left| (rV_\theta)_{TE} - (rV_\theta)_{LE} \right|}{(r_{TE} + r_{LE}) \sigma(V'_{LE})} \quad (B4)$$

Total loss coefficient

$$\bar{\omega} = \frac{(P'_{id})_{TE} - P'_{TE}}{P'_{LE} - p_{LE}} \quad (B5)$$

Profile loss coefficient

$$\bar{\omega}_p = \bar{\omega} - \bar{\omega}_s \quad (B6)$$

Total loss parameter

$$\frac{\bar{\omega} \cos(\beta'_m)_{TE}}{2\sigma} \quad (B7)$$

Profile loss parameter

$$\frac{\omega_p \cos(\beta'_m)_{TE}}{2\sigma} \quad (B8)$$

Adiabatic (temperature-rise) efficiency

$$\eta_{ad} = \frac{\left(\frac{P_{TE}}{P_{LE}}\right)^{(\gamma-1)/\gamma} - 1}{\frac{T_{TE}}{T_{LE}} - 1} \quad (B9)$$

Momentum-rise efficiency

$$\eta_{mom} = \frac{\left(\frac{P_{TE}}{P_{LE}}\right)^{(\gamma-1)/\gamma} - 1}{\frac{(UV_{\theta})_{TE} - (UV_{\theta})_{LE}}{T_{LE} C_p}} \quad (B10)$$

Equivalent weight flow

$$\frac{W\sqrt{\theta}}{\delta} \quad (B11)$$

Equivalent rotative speed

$$\frac{N}{\sqrt{\theta}} \quad (B12)$$

Weight flow per unit annulus area

$$\frac{\left(\frac{W\sqrt{\theta}}{\delta}\right)}{A_{an}} \quad (B13)$$

Weight flow per unit frontal area

$$\frac{\left(\frac{W\sqrt{\theta}}{\delta}\right)}{A_f} \quad (B14)$$

Head-rise coefficient

$$\frac{C_p T_{LE}}{U_{tip}^2} \left[\left(\frac{P_{TE}}{P_{LE}} \right)^{(\gamma-1)/\gamma} - 1 \right] \quad (B15)$$

Flow coefficient

$$\left(\frac{V_z}{U_{tip}} \right)_{LE} \quad (B16)$$

Polytropic efficiency

$$\eta_p = \frac{\ln \left(\frac{P_{TE}}{P_{LE}} \right)^{(\gamma-1)/\gamma}}{\ln \frac{T_{TE}}{T_{LE}}} \quad (B17)$$

APPENDIX C

DEFINITIONS AND UNITS USED IN TABLES

ABS	absolute
AERO CHORD	straight line between blade leading and trailing edges along design streamline, cm
AREA RATIO	ratio of actual flow area to critical area (where local Mach number is one)
BETAM	meridional air angle, deg
CONE ANGLE	angle between axial direction and conical surface representing blade element, deg
DEV	deviation angle (defined by eq. (B3)), deg
D-FACT	diffusion factor (defined by eq. (B4))
EFF	adiabatic efficiency (defined by eq. (B9))
IN	inlet (leading edge of blade)
INCIDENCE	incidence angle (suction surface defined by eq. (B1) and mean defined by eq. (B2)), deg
KIC	angle between blade mean camber line at leading edge and meridional plane, deg
KOC	angle between blade mean camber line at trailing edge and meridional plane, deg
KTC	angle between blade mean camber line at transition point and meridional plane, deg
LOSS COEFF	loss coefficient (total defined by eq. (B5) and profile defined by eq. (B6))
LOSS PARAM	loss parameter (total defined by eq. (B7) and profile defined by eq. (B8))
MERID	meridional
MERID VEL R	meridional velocity ratio
OUT	outlet (trailing edge of blade)
PERCENT SPAN	percent of blade span from tip at rotor outlet
PHISS	suction-surface camber ahead of assumed shock location, deg
PRESS	pressure, N/cm ²

PROF	profile
RADII	radius, cm
REL	relative to the blade
RI	inlet radius (leading edge of blade), cm
RO	outlet radius (trailing edge of blade), cm
RP	radial position
RPM	equivalent rotative speed, rpm
SETTING ANGLE	angle between aerodynamic chord and meridional plane, deg
SOLIDITY	ratio of aerodynamic chord to blade spacing
SPEED	speed, m/sec
SS	suction surface
STREAMLINE SLOPE	slope of streamline, deg
TANG	tangential
TEMP	temperature, K
TI	thickness of blade at leading edge, cm
TM	thickness of blade at maximum thickness, cm
TO	thickness of blade at trailing edge, cm
TOT	total
TOTAL CAMBER	difference between inlet and outlet blade mean camber lines, deg
VEL	velocity, m/sec
WT FLOW	equivalent weight flow, kg/sec
X FACTOR	ratio of suction-surface camber ahead of assumed shock loca- tion of a multiple circular arc blade section to that of a double circular arc blade section
ZIC	axial distance to blade leading edge from inlet, cm
ZMC	axial distance to blade maximum thickness point from inlet, cm
ZOC	axial distance to blade trailing edge from inlet, cm
ZTC	axial distance to transition point from inlet, cm

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TABLE II. - DESIGN BLADE-ELEMENT PARAMETERS FOR ROTOR 54

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
TIP	25.400	25.403	-0.	26.3	51.8	41.8	288.2	1.064	10.13	1.210
1	24.725	24.756	-0.	26.5	51.1	40.5	288.2	1.063	10.13	1.210
2	24.046	24.109	0.	26.8	50.5	39.0	288.2	1.062	10.13	1.210
3	23.362	23.462	0.	27.2	49.8	37.5	288.2	1.062	10.13	1.210
4	21.287	21.522	0.	28.9	47.5	31.8	288.2	1.061	10.13	1.211
5	18.455	18.934	0.	31.9	43.9	21.9	288.2	1.061	10.13	1.213
6	15.508	16.347	0.	35.7	39.4	8.6	288.2	1.062	10.13	1.217
7	13.187	14.407	0.	37.6	35.1	-1.4	288.2	1.060	10.13	1.214
8	12.582	13.760	0.	37.2	33.4	-3.2	288.2	1.057	10.13	1.203
9	11.559	13.113	0.	36.2	31.6	-4.0	288.2	1.053	10.13	1.186
HUB	10.566	12.466	-0.	34.6	29.1	-3.9	288.2	1.048	10.13	1.162

TABLE I. - DESIGN OVERALL PARAMETERS FOR STAGE 54-54

ROTOR TOTAL PRESSURE RATIO.....	1.210
STAGE TOTAL PRESSURE RATIO.....	1.201
ROTOR TOTAL TEMPERATURE RATIO.....	1.061
STAGE TOTAL TEMPERATURE RATIO.....	1.061
ROTOR ADIABATIC EFFICIENCY.....	0.921
STAGE ADIABATIC EFFICIENCY.....	0.882
ROTOR POLYTROPIC EFFICIENCY.....	0.923
STAGE POLYTROPIC EFFICIENCY.....	0.885
ROTOR HEAD RISE COEFFICIENT.....	0.310
STAGE HEAD RISE COEFFICIENT.....	0.297
FLOW COEFFICIENT.....	0.750
WT FLOW PER UNIT FRONTAL AREA.....	150.750
WT FLOW PER UNIT ANNULUS AREA.....	182.298
WT FLOW.....	30.554
RPM.....	8593.920
TIP SPEED.....	228.588

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
TIP	179.9	183.6	290.9	220.8	179.9	164.5	-0.	81.4	228.6	228.6
1	179.3	184.1	285.8	216.5	179.3	164.7	-0.	82.2	222.5	222.8
2	178.7	184.6	280.6	212.1	178.7	164.8	0.	83.4	216.4	217.0
3	177.9	185.4	275.4	207.7	177.9	164.8	0.	84.8	210.2	211.1
4	175.6	188.6	259.9	194.2	175.6	165.1	0.	91.3	191.6	193.7
5	172.6	195.8	239.5	179.2	172.6	166.2	0.	103.5	166.1	170.4
6	169.8	208.4	219.8	171.3	169.8	169.4	0.	121.5	139.6	147.1
7	168.6	219.7	206.2	174.2	168.6	174.1	0.	133.9	118.7	129.7
8	168.7	221.1	202.2	176.4	168.7	176.1	0.	135.8	111.4	123.8
9	169.3	220.9	198.7	178.7	169.3	178.3	0.	130.4	104.0	118.0
HUB	170.8	219.4	195.5	181.1	170.8	180.6	-0.	124.4	95.1	112.2

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		STREAMLINE SLOPE		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
TIP	0.544	0.538	0.880	0.647	0.544	0.482	0.24	0.73	0.914	1.277
1	0.542	0.540	0.864	0.635	0.542	0.483	0.62	1.23	0.918	1.255
2	0.540	0.542	0.848	0.622	0.540	0.483	1.08	1.74	0.922	1.234
3	0.538	0.544	0.832	0.609	0.538	0.484	1.61	2.27	0.926	1.214
4	0.530	0.554	0.785	0.571	0.530	0.485	3.56	4.01	0.940	1.155
5	0.521	0.577	0.723	0.528	0.521	0.490	11.79	6.77	0.963	1.071
6	0.512	0.617	0.663	0.507	0.512	0.501	11.79	10.35	0.997	0.975
7	0.508	0.653	0.621	0.518	0.508	0.518	17.07	13.78	1.033	0.897
8	0.508	0.659	0.609	0.525	0.508	0.525	19.43	15.09	1.044	0.866
9	0.510	0.659	0.599	0.533	0.510	0.532	22.21	16.48	1.053	0.831
HUB	0.515	0.656	0.589	0.542	0.515	0.540	25.98	17.95	1.058	0.781

RP	PERCENT SPAN		INCIDENCE MEAN SS		DEV		0-FACT EFF		LOSS COEFF		LOSS PARAM	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	TOT	PROF	TOT	PROF
TIP	0.	4.3	-0.0	3.2	0.359	0.870	0.069	0.067	0.021	0.021	0.021	0.021
1	5.00	4.3	-0.0	3.3	0.360	0.885	0.062	0.061	0.019	0.019	0.019	0.019
2	10.00	4.4	0.0	3.5	0.363	0.897	0.056	0.056	0.017	0.017	0.017	0.017
3	15.00	4.4	0.0	3.6	0.366	0.906	0.052	0.052	0.016	0.016	0.016	0.016
4	30.00	4.6	0.0	4.2	0.378	0.921	0.047	0.047	0.014	0.014	0.014	0.014
5	50.00	4.9	0.0	5.1	0.387	0.930	0.048	0.048	0.014	0.014	0.014	0.014
6	70.00	4.9	0.0	6.4	0.368	0.936	0.051	0.051	0.013	0.013	0.013	0.013
7	85.00	4.6	0.0	7.0	0.305	0.950	0.044	0.044	0.010	0.010	0.010	0.010
8	90.00	4.4	0.0	6.9	0.272	0.948	0.045	0.045	0.009	0.009	0.009	0.009
9	95.00	4.2	0.0	6.8	0.235	0.936	0.054	0.054	0.010	0.010	0.010	0.010
HUB	100.00	3.6	-0.2	6.4	0.195	0.911	0.070	0.070	0.012	0.012	0.012	0.012

TABLE III. - DESIGN BLADE-ELEMENT PARAMETERS FOR STATOR 54

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
TIP	25.895	25.895	23.8	-0.	23.8	-0.	306.7	1.000	12.26	0.995
1	25.308	25.314	23.9	-0.	23.9	-0.	306.4	1.000	12.26	0.995
2	24.723	24.734	24.0	0.	24.0	0.	306.2	1.000	12.26	0.995
3	24.140	24.155	24.3	0.	24.3	0.	306.0	1.000	12.26	0.995
4	22.410	22.434	25.4	0.	25.4	0.	305.8	1.000	12.27	0.994
5	20.151	20.189	27.6	0.	27.6	0.	305.7	1.000	12.29	0.993
6	17.960	18.020	30.4	0.	30.4	0.	306.0	1.000	12.33	0.990
7	16.375	16.450	32.0	0.	32.0	0.	305.5	1.000	12.30	0.986
8	15.859	15.924	31.8	0.	31.8	0.	304.7	1.000	12.19	0.984
9	15.348	15.389	31.0	0.	31.0	0.	303.5	1.000	12.01	0.984
HUB	14.778	14.778	29.5	-0.	29.5	-0.	301.9	1.000	11.74	0.983

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
TIP	197.7	176.5	197.7	178.5	180.9	178.5	79.8	-0.	0.	0.
1	198.6	178.4	198.6	178.4	181.6	178.4	80.4	-0.	0.	0.
2	199.5	178.3	199.5	178.3	182.2	178.3	81.3	0.	0.	0.
3	200.5	178.3	200.5	178.3	182.8	178.3	82.4	0.	0.	0.
4	204.0	178.6	204.0	178.6	184.2	178.6	87.6	0.	0.	0.
5	210.0	179.1	210.0	179.1	186.1	179.1	97.2	0.	0.	0.
6	218.2	180.0	218.2	180.0	188.1	180.0	110.6	0.	0.	0.
7	222.0	174.7	222.0	174.7	188.2	174.7	117.8	0.	0.	0.
8	220.3	169.7	220.3	169.7	187.2	169.7	116.1	0.	0.	0.
9	216.5	162.6	216.5	162.6	185.6	162.6	111.5	0.	0.	0.
HUB	210.3	152.1	210.3	152.1	183.1	152.1	103.5	-0.	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		STREAMLINE SLOPE		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
TIP	0.582	0.522	0.582	0.522	0.532	0.522	-0.02	0.00	0.986	0.883
1	0.585	0.522	0.585	0.522	0.535	0.522	0.10	0.05	0.982	0.887
2	0.588	0.522	0.588	0.522	0.537	0.522	0.21	0.09	0.979	0.894
3	0.591	0.522	0.591	0.522	0.539	0.522	0.29	0.13	0.976	0.901
4	0.603	0.523	0.603	0.523	0.544	0.523	0.50	0.23	0.969	0.930
5	0.622	0.525	0.622	0.525	0.551	0.525	0.74	0.37	0.962	0.966
6	0.648	0.527	0.648	0.527	0.559	0.527	1.03	0.56	0.957	0.986
7	0.661	0.512	0.661	0.512	0.560	0.512	1.13	0.63	0.928	0.972
8	0.656	0.497	0.656	0.497	0.558	0.497	0.91	0.54	0.906	0.943
9	0.645	0.476	0.645	0.476	0.553	0.476	0.48	0.35	0.876	0.897
HUB	0.627	0.445	0.627	0.445	0.546	0.445	-0.21	0.03	0.830	0.830

RP	PERCENT SPAN	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
		MEAN	SS				TOT	PROF	TOT	PROF
TIP	0.	10.9	5.0	2.6	0.299	0.	0.022	0.022	0.011	0.011
1	5.00	10.7	5.0	2.6	0.300	0.	0.023	0.023	0.011	0.011
2	10.00	10.6	5.0	2.7	0.301	0.	0.024	0.024	0.011	0.011
3	15.00	10.5	5.0	2.8	0.302	0.	0.024	0.024	0.011	0.011
4	30.00	9.0	3.7	3.2	0.311	0.	0.026	0.026	0.011	0.011
5	50.00	6.4	1.3	4.1	0.327	0.	0.031	0.031	0.012	0.012
6	70.00	4.2	-0.7	5.4	0.351	0.	0.040	0.040	0.014	0.014
7	85.00	2.7	-1.9	6.2	0.381	0.	0.057	0.057	0.018	0.018
8	90.00	2.3	-2.3	6.3	0.391	0.	0.063	0.063	0.019	0.019
9	95.00	1.8	-2.6	6.2	0.402	0.	0.068	0.068	0.020	0.020
HUB	100.00	1.2	-3.0	5.9	0.417	0.	0.075	0.075	0.021	0.021

TABLE IV. - BLADE GEOMETRY FOR ROTOR 54

RP	PERCENT RADII			BLADE ANGLES			DELTA	CONE
	SPAN	RI	RO	KIC	KTC	KOC	INC	ANGLE
TIP	0.	25.400	25.403	47.46	42.16	38.61	4.33	0.057
1	5.	24.725	24.756	46.79	41.25	37.16	4.34	0.523
2	10.	24.046	24.109	46.08	40.30	35.58	4.37	1.059
3	15.	23.362	23.462	45.34	39.29	33.86	4.41	1.662
4	30.	21.287	21.522	42.89	35.89	27.65	4.60	3.676
5	50.	18.455	18.934	39.05	30.78	16.80	4.86	6.937
6	70.	15.508	16.347	34.56	25.32	2.20	4.91	11.226
7	85.	13.187	14.407	30.73	20.78	-8.38	4.61	15.566
8	90.	12.392	13.760	29.35	19.45	-10.14	4.41	17.366
9	95.	11.579	13.113	27.89	18.39	-10.68	4.16	19.374
HUB	100.	10.506	12.466	26.09	17.41	-10.16	3.79	23.257

RP	BLADE THICKNESSES			AXIAL DIMENSIONS			
	TI	TM	TO	ZIC	ZMC	ZTC	ZOC
TIP	0.056	0.226	0.034	0.605	2.180	2.505	3.872
1	0.056	0.226	0.034	0.584	2.185	2.434	3.907
2	0.057	0.228	0.034	0.561	2.185	2.358	3.942
3	0.058	0.231	0.034	0.537	2.187	2.280	3.979
4	0.061	0.245	0.037	0.452	2.190	2.019	4.098
5	0.068	0.272	0.041	0.316	2.187	1.619	4.258
6	0.077	0.306	0.046	0.163	2.182	1.174	4.391
7	0.083	0.334	0.050	0.056	2.182	0.834	4.434
8	0.086	0.343	0.051	0.030	2.181	0.733	4.435
9	0.088	0.351	0.053	0.012	2.179	0.642	4.431
HUB	0.091	0.362	0.054	-0.000	2.176	0.547	4.421

RP	AERO SETTING TOTAL			X			AREA
	CHORD	ANGLE	CAMBER	SOLIDITY	FACTOR	PHISS	RATIO
TIP	4.514	43.03	8.86	1.188	1.000	10.47	1.083
1	4.515	41.97	9.63	1.220	1.000	10.51	1.085
2	4.515	40.83	10.51	1.253	1.000	10.58	1.087
3	4.516	39.60	11.49	1.289	1.000	10.68	1.091
4	4.521	35.22	15.24	1.412	1.000	11.07	1.104
5	4.540	27.74	22.25	1.623	1.000	11.37	1.126
6	4.593	17.95	32.36	1.928	1.000	10.96	1.141
7	4.681	9.93	39.11	2.268	1.087	10.24	1.117
8	4.729	8.02	39.48	2.419	1.129	9.62	1.099
9	4.787	6.77	38.57	2.594	1.163	8.65	1.077
HUB	4.910	5.99	36.25	2.850	1.202	7.11	1.045

TABLE V. - BLADE GEOMETRY FOR STATOR 54

RP	PERCENT RADII			BLADE ANGLES			DELTA INC	CONE ANGLE
	SPAN	R1	R0	KIC	KTC	KOC		
TIP	0.	25.895	25.895	12.95	4.60	-2.57	5.66	0.057
1	5.	25.308	25.314	13.18	4.65	-2.63	5.70	0.116
2	10.	24.723	24.734	13.46	5.13	-2.70	5.59	0.184
3	15.	24.140	24.155	13.78	5.44	-2.78	5.50	0.257
4	30.	22.410	22.434	16.40	6.78	-3.20	5.34	0.429
5	50.	20.151	20.189	21.21	9.62	-4.10	5.12	0.677
6	70.	17.960	18.020	26.26	14.30	-5.43	4.91	1.092
7	85.	16.375	16.450	29.33	17.63	-6.22	4.64	1.363
8	90.	15.859	15.924	29.53	18.64	-6.27	4.52	1.174
9	95.	15.348	15.389	29.19	19.16	-6.17	4.39	0.747
HUB	100.	14.778	14.778	28.25	19.49	-5.88	4.21	0.057

RP	BLADE THICKNESSES			AXIAL DIMENSIONS			
	TI	TM	TO	ZIC	ZMC	ZTC	ZOC
TIP	0.081	0.322	0.048	25.358	26.949	25.849	28.546
1	0.078	0.314	0.046	25.355	26.946	25.847	28.544
2	0.076	0.306	0.045	25.352	26.944	25.847	28.543
3	0.074	0.297	0.045	25.351	26.943	25.850	28.542
4	0.069	0.274	0.041	25.344	26.934	25.898	28.537
5	0.062	0.247	0.037	25.334	26.916	25.964	28.525
6	0.056	0.223	0.034	25.311	26.870	26.045	28.497
7	0.052	0.207	0.031	25.271	26.809	26.027	28.432
8	0.050	0.203	0.030	25.265	26.799	26.010	28.423
9	0.049	0.198	0.030	25.269	26.803	25.992	28.426
HUB	0.048	0.193	0.029	25.282	26.818	25.969	28.442

RP	AERO SETTING TOTAL			X		AREA RATIO
	CHORD	ANGLE	CAMBER	SOLIDITY FACTOR	PHISS	
TIP	3.254	2.22	15.52	1.000	1.500	7.40
1	3.254	2.34	15.81	1.023	1.500	7.41
2	3.254	2.48	16.15	1.047	1.500	7.46
3	3.254	2.64	16.55	1.072	1.500	7.61
4	3.254	3.52	19.60	1.155	1.500	9.49
5	3.254	5.40	25.31	1.284	1.420	12.24
6	3.255	8.25	31.69	1.440	1.228	13.29
7	3.255	10.30	35.55	1.578	1.108	12.99
8	3.254	10.66	35.80	1.630	1.071	12.31
9	3.254	10.79	35.35	1.685	1.037	11.31
HUB	3.254	10.73	34.13	1.752	1.000	9.62

TABLE VI. - OVERALL PERFORMANCE FOR STAGE 54-54

(a) 80 Percent design speed

Parameter	Reading					
	2960	2944	2945	2946	2947	2948
ROTOR TOTAL PRESSURE RATIO	1.113	1.126	1.131	1.135	1.135	1.132
STAGE TOTAL PRESSURE RATIO	1.104	1.116	1.120	1.121	1.117	1.111
ROTOR TOTAL TEMPERATURE RATIO	1.034	1.037	1.038	1.040	1.042	1.044
STAGE TOTAL TEMPERATURE RATIO	1.035	1.038	1.040	1.041	1.043	1.044
ROTOR TEMP. RISE EFFICIENCY	0.909	0.944	0.941	0.925	0.877	0.825
STAGE TEMP. RISE EFFICIENCY	0.812	0.835	0.831	0.809	0.750	0.661
ROTOR MOMENTUM RISE EFFICIENCY	0.962	0.971	0.962	0.949	0.888	0.809
ROTOR HEAD RISE COEFFICIENT	0.270	0.298	0.310	0.320	0.320	0.315
STAGE HEAD RISE COEFFICIENT	0.249	0.275	0.284	0.288	0.278	0.266
FLOW COEFFICIENT	0.769	0.695	0.650	0.607	0.547	0.486
WT FLOW PER UNIT FRONTAL AREA	133.05	121.95	115.31	108.29	98.71	88.72
WT FLOW PER UNIT ANNULUS AREA	160.90	147.48	139.45	130.95	119.38	107.28
WT FLOW AT ORIFICE	26.97	24.72	23.37	21.95	20.01	17.93
WT FLOW AT ROTOR INLET	27.54	25.33	23.90	22.44	20.46	18.36
WT FLOW AT ROTOR OUTLET	27.54	25.24	23.89	22.50	20.53	18.44
WT FLOW AT STATOR OUTLET	27.32	25.10	23.76	22.50	20.89	19.89
ROTATIVE SPEED	6874.1	6881.3	6888.5	6861.9	6865.7	6858.8
PERCENT OF DESIGN SPEED	80.0	80.1	80.2	79.8	79.9	79.8

(b) 90 Percent design speed

Parameter	Reading					
	2974	2963	2964	2972	2973	2942
ROTOR TOTAL PRESSURE RATIO	1.112	1.122	1.146	1.162	1.172	1.173
STAGE TOTAL PRESSURE RATIO	1.092	1.110	1.133	1.147	1.156	1.152
ROTOR TOTAL TEMPERATURE RATIO	1.039	1.040	1.044	1.048	1.051	1.052
STAGE TOTAL TEMPERATURE RATIO	1.042	1.042	1.045	1.048	1.052	1.053
ROTOR TEMP. RISE EFFICIENCY	0.785	0.832	0.893	0.910	0.910	0.901
STAGE TEMP. RISE EFFICIENCY	0.608	0.720	0.811	0.826	0.818	0.773
ROTOR MOMENTUM RISE EFFICIENCY	0.858	0.907	0.957	0.935	0.926	0.915
ROTOR HEAD RISE COEFFICIENT	0.208	0.227	0.271	0.297	0.313	0.321
STAGE HEAD RISE COEFFICIENT	0.172	0.206	0.249	0.271	0.285	0.283
FLOW COEFFICIENT	0.844	0.845	0.775	0.709	0.646	0.585
WT FLOW PER UNIT FRONTAL AREA	157.71	156.52	146.61	137.69	127.91	116.28
WT FLOW PER UNIT ANNULUS AREA	190.72	189.28	177.30	166.51	154.68	140.61
WT FLOW AT ORIFICE	31.97	31.72	29.72	27.91	25.93	23.57
WT FLOW AT ROTOR INLET	32.41	32.49	30.42	28.30	26.27	24.09
WT FLOW AT ROTOR OUTLET	32.67	32.40	30.46	28.59	26.48	24.12
WT FLOW AT STATOR OUTLET	33.18	32.60	30.29	28.36	26.40	24.32
ROTATIVE SPEED	7797.8	7756.2	7736.7	7770.2	7784.3	7719.1
PERCENT OF DESIGN SPEED	90.7	90.3	90.0	90.4	90.6	89.8

(c) 100 Percent design speed

Parameter	Reading					
	2977	2969	2922	2921	2930	2933
ROTOR TOTAL PRESSURE RATIO	1.159	1.192	1.206	1.212	1.218	1.207
STAGE TOTAL PRESSURE RATIO	1.141	1.177	1.186	1.191	1.194	1.175
ROTOR TOTAL TEMPERATURE RATIO	1.052	1.058	1.059	1.061	1.064	1.069
STAGE TOTAL TEMPERATURE RATIO	1.052	1.058	1.061	1.063	1.065	1.069
ROTOR TEMP. RISE EFFICIENCY	0.835	0.892	0.935	0.926	0.911	0.801
STAGE TEMP. RISE EFFICIENCY	0.735	0.815	0.824	0.816	0.795	0.675
ROTOR MOMENTUM RISE EFFICIENCY	0.830	0.929	0.930	0.920	0.930	0.779
ROTOR HEAD RISE COEFFICIENT	0.240	0.294	0.305	0.313	0.321	0.307
STAGE HEAD RISE COEFFICIENT	0.215	0.262	0.278	0.284	0.288	0.263
FLOW COEFFICIENT	0.798	0.753	0.703	0.665	0.633	0.489
WT FLOW PER UNIT FRONTAL AREA	162.01	155.30	146.78	141.01	135.91	109.44
WT FLOW PER UNIT ANNULUS AREA	195.92	187.81	177.50	170.52	164.35	152.35
WT FLOW AT ORIFICE	32.84	31.48	29.75	28.58	27.55	22.18
WT FLOW AT ROTOR INLET	33.31	32.25	30.52	29.31	28.19	22.62
WT FLOW AT ROTOR OUTLET	33.69	32.38	30.56	29.37	28.36	22.71
WT FLOW AT STATOR OUTLET	33.81	32.30	30.42	29.30	28.36	24.84
ROTATIVE SPEED	8576.5	8613.6	8579.4	8597.1	8597.9	8573.2
PERCENT OF DESIGN SPEED	99.8	100.7	99.8	100.0	100.0	99.8

TABLE VI. - Concluded.

(d) 110 Percent design speed

Parameter	Reading					
	2967	2966	2949	2950	2951	2953
ROTOR TOTAL PRESSURE RATIO	1.202	1.234	1.259	1.273	1.278	1.254
STAGE TOTAL PRESSURE RATIO	1.183	1.216	1.236	1.244	1.242	1.213
ROTOR TOTAL TEMPERATURE RATIO	1.065	1.070	1.075	1.079	1.082	1.081
STAGE TOTAL TEMPERATURE RATIO	1.066	1.071	1.076	1.080	1.085	1.080
ROTOR TEMP RISE EFFICIENCY	0.829	0.882	0.910	0.899	0.886	0.828
STAGE TEMP RISE EFFICIENCY	0.750	0.808	0.825	0.804	0.775	0.712
ROTOR MOMENTUM RISE EFFICIENCY	0.864	0.909	0.957	0.935	0.917	0.797
ROTOR HEAD RISE COEFFICIENT	0.247	0.282	0.309	0.323	0.328	0.305
STAGE HEAD RISE COEFFICIENT	0.225	0.262	0.283	0.292	0.289	0.260
FLOW COEFFICIENT	0.767	0.759	0.717	0.671	0.619	0.522
WT FLOW PER UNIT FRONTAL AREA	167.72	166.36	160.46	152.95	144.15	125.59
WT FLOW PER UNIT ANNULUS AREA	202.83	201.17	194.04	184.94	174.32	151.88
WT FLOW AT ORIFICE	33.99	33.72	32.52	31.00	29.22	25.46
WT FLOW AT ROTOR INLET	34.81	34.60	33.35	31.83	29.99	26.05
WT FLOW AT ROTOR OUTLET	34.92	34.69	33.46	31.83	30.17	26.32
WT FLOW AT STATOR OUTLET	35.21	34.85	33.51	32.13	30.73	27.87
ROTATIVE SPEED	9458.6	9472.3	9500.5	9499.5	9512.1	9453.4
PERCENT OF DESIGN SPEED	110.1	110.2	110.5	110.5	110.7	110.0

(e) 120 Percent design speed

Parameter	Reading				
	2968	2954	2955	2956	2957
ROTOR TOTAL PRESSURE RATIO	1.281	1.312	1.331	1.356	1.332
STAGE TOTAL PRESSURE RATIO	1.257	1.282	1.292	1.294	1.282
ROTOR TOTAL TEMPERATURE RATIO	1.087	1.086	1.091	1.094	1.096
STAGE TOTAL TEMPERATURE RATIO	1.087	1.087	1.091	1.095	1.096
ROTOR TEMP. RISE EFFICIENCY	0.844	0.940	0.934	0.920	0.888
STAGE TEMP. RISE EFFICIENCY	0.775	0.848	0.834	0.823	0.766
ROTOR MOMENTUM RISE EFFICIENCY	0.871	0.935	0.937	0.916	0.863
ROTOR HEAD RISE COEFFICIENT	0.281	0.311	0.328	0.335	0.329
STAGE HEAD RISE COEFFICIENT	0.258	0.284	0.293	0.295	0.284
FLOW COEFFICIENT	0.732	0.726	0.687	0.640	0.599
WT FLOW PER UNIT FRONTAL AREA	171.85	170.83	164.74	156.66	149.09
WT FLOW PER UNIT ANNULUS AREA	207.81	206.59	199.22	189.45	180.30
WT FLOW AT ORIFICE	34.83	34.63	33.39	31.75	30.22
WT FLOW AT ROTOR INLET	35.71	35.44	34.22	32.55	31.05
WT FLOW AT ROTOR OUTLET	35.90	35.70	34.51	32.75	31.31
WT FLOW AT STATOR OUTLET	36.07	35.91	34.93	33.92	32.62
ROTATIVE SPEED	10330.8	10303.7	10294.8	10289.8	10297.4
PERCENT OF DESIGN SPEED	120.2	119.9	119.8	119.7	119.8

TABLE VII. - BLADE-ELEMENT DATA AT BLADE EDGES FOR ROTOR 54

(a) 80 Percent of design speed; reading 2960

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	0.1	17.5	49.5	40.7	289.1	1.033	10.09	1.105
2	24.046	24.110	0.3	17.5	48.2	39.7	288.9	1.033	10.13	1.104
3	23.363	23.462	0.6	18.2	47.2	38.5	288.7	1.033	10.13	1.105
4	21.288	21.521	0.6	20.9	44.0	32.4	287.9	1.033	10.14	1.108
5	18.456	18.933	0.8	25.7	40.1	22.3	287.7	1.035	10.14	1.115
6	15.507	16.347	0.8	30.5	36.0	9.7	287.8	1.036	10.14	1.123
7	13.188	14.407	0.7	33.5	33.1	-0.5	287.9	1.038	10.14	1.127
8	12.382	13.759	0.6	34.0	31.9	-3.7	288.1	1.036	10.14	1.124
9	11.560	13.114	0.7	34.1	31.7	-5.4	288.1	1.034	10.12	1.118

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	151.6	159.1	233.6	200.2	151.6	151.8	0.4	47.8	178.2	178.4
2	154.3	159.3	231.5	197.4	154.3	151.9	0.9	47.9	173.5	174.0
3	154.3	158.8	227.1	192.3	154.3	150.8	1.5	49.6	168.2	168.9
4	156.9	163.1	218.1	180.4	156.9	152.3	1.7	58.2	153.2	154.9
5	156.0	170.1	203.8	165.7	156.0	153.3	2.1	73.9	133.3	136.8
6	151.0	180.2	186.5	157.6	151.0	155.4	2.2	91.4	111.8	117.8
7	143.5	191.2	171.3	159.4	143.5	159.4	1.6	105.5	95.3	104.1
8	139.5	194.2	164.4	161.3	139.5	161.0	1.6	108.8	88.4	98.3
9	131.6	195.0	154.6	162.2	131.6	161.4	1.7	109.3	82.9	94.1

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.454	0.469	0.699	0.591	0.454	0.448	1.001	0.978
2	0.462	0.470	0.694	0.583	0.462	0.448	0.984	0.956
3	0.463	0.469	0.681	0.568	0.463	0.445	0.978	0.933
4	0.472	0.482	0.655	0.534	0.472	0.451	0.971	0.885
5	0.469	0.504	0.613	0.491	0.469	0.454	0.982	0.826
6	0.453	0.535	0.560	0.468	0.453	0.462	1.029	0.755
7	0.430	0.569	0.513	0.475	0.430	0.475	1.111	0.704
8	0.417	0.580	0.491	0.481	0.417	0.480	1.154	0.672
9	0.393	0.582	0.461	0.484	0.393	0.482	1.227	0.642

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	TOT				PROF	TOT	PROF	
1	5.00	2.7	-1.6	3.5	0.227	0.886	0.045	0.045	0.014	0.014	
2	10.00	2.1	-2.2	4.1	0.228	0.881	0.048	0.049	0.015	0.015	
3	15.00	1.9	-2.5	4.5	0.236	0.886	0.047	0.047	0.014	0.014	
4	30.00	1.1	-3.5	4.8	0.265	0.888	0.050	0.050	0.015	0.015	
5	50.00	1.0	-3.9	5.5	0.297	0.917	0.043	0.043	0.012	0.012	
6	70.00	1.5	-3.4	7.4	0.282	0.935	0.041	0.041	0.011	0.011	
7	85.00	2.6	-2.0	7.9	0.209	0.922	0.061	0.061	0.013	0.013	
8	90.00	2.9	-1.5	6.5	0.161	0.950	0.040	0.040	0.008	0.008	
9	95.00	4.3	0.1	5.4	0.094	0.955	0.038	0.038	0.007	0.007	

TABLE VII. - Continued.

(b) 80 Percent of design speed; reading 2944

RP	RADI I		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	1.1	23.6	51.9	40.9	288.8	1.039	10.10	1.126
2	24.046	24.110	0.6	23.3	50.9	39.7	288.7	1.038	10.13	1.125
3	23.363	23.462	0.9	23.7	49.8	38.6	288.4	1.038	10.13	1.126
4	21.288	21.521	1.0	26.2	46.8	32.5	287.9	1.037	10.14	1.127
5	18.456	18.933	1.2	30.3	42.8	22.9	288.0	1.035	10.14	1.126
6	15.507	16.347	1.4	34.3	38.7	10.2	287.9	1.036	10.14	1.127
7	13.188	14.407	1.2	37.0	35.7	-0.7	288.0	1.036	10.13	1.129
8	12.382	13.759	1.4	37.6	34.7	-3.9	288.0	1.035	10.13	1.125
9	11.560	13.114	1.2	37.5	34.3	-5.9	288.1	1.033	10.12	1.120

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	137.8	149.5	223.3	181.2	137.8	136.9	2.7	60.0	178.4	178.6
2	139.0	149.4	220.4	178.2	139.0	137.2	1.5	59.1	172.5	172.9
3	140.2	149.0	217.3	174.7	140.2	136.5	2.2	59.8	168.3	169.0
4	141.8	153.1	207.1	162.8	141.8	137.3	2.4	67.7	153.4	155.1
5	140.7	157.4	191.8	147.5	140.6	135.9	3.0	79.5	133.4	136.8
6	135.6	165.5	173.6	138.6	135.6	136.7	3.3	93.3	111.8	117.8
7	128.4	175.6	158.2	140.4	128.4	140.3	2.7	105.6	95.1	103.9
8	124.9	178.3	151.8	141.5	124.9	141.2	3.1	108.9	89.4	99.4
9	118.3	179.3	143.1	143.0	118.2	142.3	2.5	109.0	83.1	94.3

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.411	0.439	0.666	0.532	0.411	0.402	0.994	0.985
2	0.415	0.439	0.658	0.523	0.415	0.403	0.987	0.968
3	0.419	0.438	0.649	0.513	0.419	0.401	0.974	0.949
4	0.424	0.451	0.620	0.479	0.424	0.405	0.969	0.897
5	0.421	0.464	0.574	0.435	0.421	0.401	0.966	0.829
6	0.405	0.490	0.519	0.411	0.405	0.404	1.008	0.748
7	0.383	0.521	0.472	0.416	0.383	0.416	1.093	0.691
8	0.372	0.529	0.452	0.420	0.372	0.419	1.131	0.662
9	0.352	0.533	0.426	0.425	0.352	0.423	1.203	0.632

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	SS				TOT	PROF	TOT	PROF
1	5.00	5.1	0.8	3.7	0.294	0.877	0.063	0.063	0.020	0.020	
2	10.00	4.8	0.4	4.1	0.296	0.905	0.048	0.048	0.015	0.015	
3	15.00	4.5	0.1	4.8	0.299	0.910	0.046	0.046	0.014	0.014	
4	30.00	3.9	-0.7	4.8	0.326	0.943	0.031	0.031	0.009	0.009	
5	50.00	3.8	-1.1	6.1	0.356	0.970	0.018	0.018	0.005	0.005	
6	70.00	4.1	-0.8	7.9	0.338	0.971	0.021	0.021	0.005	0.005	
7	85.00	5.2	0.6	7.7	0.263	0.975	0.022	0.022	0.005	0.005	
8	90.00	5.6	1.2	6.3	0.220	0.975	0.023	0.023	0.005	0.005	
9	95.00	6.9	2.8	4.9	0.154	0.993	0.007	0.007	0.001	0.001	

TABLE VII. - Continued.

(c) 80 Percent of design speed; reading 2945

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	1.0	27.9	53.8	41.1	288.7	1.043	10.10	1.135
2	24.046	24.110	0.8	26.7	52.9	39.9	288.6	1.042	10.13	1.140
3	23.363	23.462	1.0	26.7	51.7	38.8	288.4	1.041	10.13	1.137
4	21.288	21.521	1.0	28.8	48.7	33.1	288.0	1.039	10.14	1.134
5	18.456	18.933	1.4	33.0	44.7	23.1	287.9	1.036	10.14	1.129
6	15.507	16.347	1.5	36.7	40.6	10.4	288.0	1.036	10.13	1.128
7	13.188	14.407	1.3	39.3	37.8	-0.9	288.0	1.036	10.14	1.129
8	12.382	13.759	1.3	39.5	36.8	-3.9	287.9	1.035	10.13	1.126
9	11.560	13.114	1.0	39.7	36.5	-6.1	288.2	1.033	10.12	1.117

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	128.5	143.9	217.6	168.7	128.5	127.2	2.3	67.4	178.0	178.2
2	130.7	146.1	216.4	170.2	130.6	130.5	1.8	65.6	174.3	174.8
3	131.3	145.1	212.0	166.2	131.3	129.6	2.2	65.3	168.7	169.4
4	132.9	147.8	201.5	154.6	132.9	129.5	2.4	71.2	153.8	155.5
5	131.0	151.0	184.3	137.8	131.0	126.7	3.1	82.2	132.9	136.3
6	126.3	158.0	166.4	128.9	126.3	126.7	3.3	94.4	111.7	117.7
7	119.3	167.4	150.9	129.6	119.3	129.6	2.8	105.9	95.1	103.9
8	116.0	170.1	144.8	131.5	116.0	131.2	2.6	108.2	89.3	99.2
9	109.9	169.9	136.7	131.5	109.9	130.7	1.9	108.5	83.3	94.5

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.383	0.421	0.648	0.494	0.383	0.372	0.990	1.001
2	0.389	0.428	0.645	0.498	0.389	0.382	0.999	0.991
3	0.391	0.425	0.632	0.487	0.391	0.380	0.987	0.965
4	0.397	0.434	0.602	0.454	0.397	0.381	0.975	0.911
5	0.391	0.445	0.550	0.406	0.391	0.375	0.968	0.831
6	0.377	0.466	0.496	0.380	0.376	0.374	1.004	0.748
7	0.355	0.495	0.449	0.383	0.355	0.383	1.086	0.688
8	0.345	0.504	0.431	0.390	0.345	0.389	1.131	0.662
9	0.326	0.504	0.406	0.390	0.326	0.388	1.190	0.633

RP	PERCENT	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	7.0	2.7	3.9	0.347	0.865	0.078	0.078	0.024	0.024
2	10.00	6.8	2.4	4.3	0.332	0.912	0.051	0.051	0.015	0.015
3	15.00	6.4	2.0	4.9	0.332	0.907	0.054	0.054	0.016	0.016
4	30.00	5.9	1.3	5.4	0.355	0.941	0.036	0.036	0.011	0.011
5	50.00	5.7	0.8	6.3	0.386	0.973	0.018	0.018	0.005	0.005
6	70.00	6.1	1.2	8.2	0.371	0.963	0.030	0.030	0.008	0.008
7	85.00	7.2	2.6	7.5	0.299	0.977	0.021	0.021	0.005	0.005
8	90.00	7.8	3.4	6.3	0.251	0.993	0.007	0.007	0.001	0.001
9	95.00	9.1	5.0	4.7	0.198	0.989	0.012	0.012	0.002	0.002

TABLE VII. - Continued.

(d) 80 Percent of design speed; reading 2946

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	1.1	32.6	55.8	42.1	288.7	1.047	10.11	1.137
2	24.046	24.110	1.1	29.5	54.5	40.1	288.6	1.044	10.13	1.144
3	23.363	23.462	0.8	29.8	53.9	39.0	288.3	1.043	10.13	1.144
4	21.288	21.521	1.1	31.7	50.6	33.3	288.0	1.041	10.14	1.138
5	18.456	18.933	1.3	35.7	46.8	23.5	287.9	1.038	10.14	1.132
6	15.507	16.347	1.6	38.7	42.6	10.4	288.1	1.037	10.13	1.131
7	13.188	14.407	1.4	41.4	39.6	-1.3	288.0	1.037	10.14	1.129
8	12.382	13.759	1.3	41.3	38.6	-4.2	287.9	1.035	10.14	1.125
9	11.560	13.114	1.5	41.2	38.5	-6.1	288.0	1.033	10.13	1.120

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	118.8	136.4	211.6	154.9	118.8	114.9	2.3	73.6	177.3	177.5
2	120.9	140.6	208.2	160.1	120.9	122.5	2.3	69.2	171.9	172.3
3	121.3	140.3	205.6	156.5	121.2	121.7	1.6	69.8	167.6	168.3
4	123.6	142.3	194.7	144.9	123.5	121.1	2.3	74.8	152.8	154.4
5	122.3	145.5	178.5	128.8	122.3	118.1	2.8	85.0	132.8	136.3
6	117.8	153.1	160.1	121.6	117.8	119.6	3.2	95.7	111.6	117.7
7	111.6	161.3	144.7	121.1	111.6	121.0	2.8	106.5	95.0	103.8
8	108.3	163.2	138.5	122.8	108.2	122.5	2.4	107.8	88.9	98.7
9	101.8	163.8	130.0	124.0	101.7	123.3	2.6	107.9	83.6	94.8

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.353	0.398	0.629	0.451	0.353	0.335	0.967	1.014
2	0.360	0.411	0.619	0.468	0.360	0.358	1.013	0.986
3	0.361	0.410	0.612	0.458	0.361	0.356	1.003	0.977
4	0.368	0.417	0.580	0.425	0.368	0.355	0.980	0.915
5	0.364	0.428	0.532	0.378	0.364	0.347	0.966	0.839
6	0.351	0.451	0.476	0.358	0.350	0.352	1.015	0.751
7	0.332	0.476	0.430	0.357	0.332	0.357	1.085	0.686
8	0.322	0.482	0.411	0.363	0.322	0.362	1.132	0.658
9	0.302	0.485	0.386	0.367	0.302	0.365	1.212	0.627

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	SS				TOT	PROF	TOT	PROF
1	5.00	9.0	4.7	5.0	0.406	0.789	0.141	0.141	0.043	0.043	
2	10.00	8.4	4.1	4.5	0.359	0.885	0.075	0.075	0.023	0.023	
3	15.00	8.5	4.1	5.2	0.367	0.915	0.054	0.054	0.016	0.016	
4	30.00	7.7	3.1	5.7	0.388	0.927	0.049	0.049	0.014	0.014	
5	50.00	7.7	2.9	6.7	0.422	0.960	0.029	0.029	0.008	0.008	
6	70.00	8.1	3.2	8.2	0.395	0.966	0.030	0.030	0.008	0.008	
7	85.00	9.1	4.4	7.1	0.329	0.956	0.047	0.047	0.010	0.010	
8	90.00	9.6	5.2	6.0	0.279	0.980	0.022	0.022	0.005	0.005	
9	95.00	11.1	7.0	4.7	0.213	0.996	0.005	0.005	0.001	0.001	

TABLE VII. - Continued.

(e) 80 Percent of design speed; reading 2947

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	0.5	47.0	59.6	45.2	288.5	1.058	10.11	1.129
2	24.046	24.110	1.0	37.0	57.9	41.7	288.5	1.051	10.13	1.140
3	23.363	23.462	0.9	34.7	57.0	39.4	288.4	1.047	10.13	1.144
4	21.288	21.521	0.9	35.0	53.7	34.0	288.1	1.042	10.13	1.141
5	18.456	18.933	1.2	38.3	49.5	23.9	288.0	1.039	10.13	1.133
6	15.507	16.347	1.5	41.6	45.4	9.8	288.0	1.038	10.13	1.132
7	13.188	14.407	1.4	43.0	42.1	-1.7	288.0	1.037	10.14	1.131
8	12.382	13.759	1.6	43.0	41.0	-5.0	288.0	1.036	10.13	1.130
9	11.560	13.114	1.3	42.5	40.7	-6.1	288.1	1.033	10.13	1.119

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	105.0	126.8	207.1	122.7	105.0	86.5	0.9	92.7	179.5	179.7
2	107.8	132.6	202.7	141.7	107.7	105.8	1.8	79.8	173.5	174.0
3	107.7	135.3	197.9	143.9	107.7	111.2	1.7	77.0	167.7	168.4
4	111.0	137.1	187.4	135.5	111.0	112.3	1.8	78.7	152.8	154.4
5	110.4	139.6	170.2	119.8	110.4	109.5	2.3	86.6	131.8	135.2
6	107.0	147.9	152.4	112.2	107.0	110.5	2.9	98.2	111.3	117.4
7	102.0	156.5	137.4	114.4	102.0	114.4	2.5	106.8	94.6	103.4
8	99.3	159.8	131.5	117.2	99.3	116.8	2.7	109.0	89.0	98.8
9	94.1	158.2	124.2	117.2	94.1	116.6	2.2	106.9	83.2	94.4

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.311	0.367	0.614	0.355	0.311	0.250	0.824	1.068
2	0.320	0.385	0.601	0.412	0.320	0.308	0.982	1.027
3	0.320	0.394	0.587	0.419	0.320	0.324	1.032	1.001
4	0.330	0.401	0.557	0.396	0.330	0.328	1.012	0.936
5	0.328	0.409	0.506	0.351	0.328	0.321	0.992	0.846
6	0.318	0.435	0.452	0.330	0.318	0.325	1.033	0.756
7	0.303	0.461	0.408	0.337	0.302	0.337	1.122	0.685
8	0.295	0.472	0.390	0.346	0.294	0.345	1.176	0.654
9	0.279	0.467	0.368	0.346	0.279	0.344	1.239	0.626

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	SS				TOT	PROF	TOT	PROF
1	5.00	12.8	8.4	8.0	0.590	0.614	0.319	0.319	0.092	0.092	
2	10.00	11.8	7.4	6.1	0.455	0.752	0.190	0.190	0.057	0.057	
3	15.00	11.7	7.3	5.6	0.421	0.837	0.122	0.122	0.036	0.036	
4	30.00	10.8	6.2	6.4	0.423	0.914	0.064	0.064	0.019	0.019	
5	50.00	10.5	5.6	7.1	0.450	0.938	0.050	0.050	0.014	0.014	
6	70.00	10.9	6.0	7.6	0.431	0.940	0.060	0.060	0.015	0.015	
7	85.00	11.6	7.0	6.7	0.342	0.969	0.036	0.036	0.008	0.008	
8	90.00	12.0	7.6	5.2	0.285	0.992	0.010	0.010	0.002	0.002	
9	95.00	13.4	9.2	4.6	0.229	0.983	0.022	0.022	0.004	0.004	

TABLE VII. - Continued.

(f) 80 Percent of design speed; reading 2948

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	0.4	66.2	63.8	51.7	288.6	1.065	10.11	1.124
2	24.046	24.110	0.5	57.3	62.1	44.5	288.5	1.059	10.13	1.120
3	23.363	23.462	0.8	49.0	61.0	39.1	288.3	1.055	10.13	1.124
4	21.288	21.521	0.4	37.6	57.4	33.1	288.2	1.045	10.14	1.138
5	18.456	18.933	1.0	39.2	52.5	23.9	288.0	1.040	10.13	1.135
6	15.507	16.347	1.6	42.7	47.9	9.2	287.9	1.039	10.13	1.136
7	13.188	14.407	1.5	43.9	44.5	-2.4	288.0	1.038	10.14	1.135
8	12.382	13.759	1.4	43.8	43.6	-5.5	287.9	1.036	10.14	1.132
9	11.560	13.114	1.1	43.8	43.1	-7.1	288.0	1.033	10.13	1.118

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	87.9	125.6	198.7	81.8	87.9	50.7	0.6	114.9	178.9	179.1
2	90.8	125.9	194.0	95.3	90.8	68.0	0.9	106.0	172.3	172.8
3	91.9	130.1	189.4	109.9	91.9	85.3	1.3	98.3	166.8	167.5
4	97.0	137.1	180.3	129.6	97.0	108.6	0.8	83.6	152.7	154.4
5	100.7	139.8	165.4	118.5	100.7	108.3	1.8	88.4	133.0	136.5
6	98.6	148.1	147.1	110.3	98.6	108.9	2.7	100.4	111.9	118.0
7	94.1	156.5	131.8	112.9	94.0	112.8	2.5	108.5	94.9	103.7
8	91.1	158.7	125.6	115.2	91.0	114.6	2.3	109.8	88.8	98.7
9	86.3	155.4	118.2	113.1	86.2	112.2	1.7	107.5	82.5	93.5

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.260	0.362	0.587	0.236	0.260	0.146	0.577	1.107
2	0.269	0.364	0.574	0.276	0.269	0.196	0.748	1.063
3	0.272	0.378	0.560	0.319	0.272	0.248	0.928	1.031
4	0.287	0.400	0.534	0.379	0.287	0.317	1.120	0.967
5	0.299	0.410	0.490	0.347	0.299	0.317	1.076	0.870
6	0.292	0.435	0.436	0.324	0.292	0.320	1.105	0.766
7	0.279	0.461	0.391	0.333	0.279	0.332	1.199	0.688
8	0.270	0.468	0.372	0.340	0.270	0.338	1.259	0.657
9	0.255	0.459	0.350	0.334	0.255	0.331	1.301	0.624

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	TOT				PROF	TOT	PROF	
1	5.00	17.0	12.6	14.5	0.824	0.527	0.466	0.466	0.118	0.118	
2	10.00	16.0	11.6	8.9	0.725	0.554	0.423	0.423	0.120	0.120	
3	15.00	15.6	11.2	5.2	0.619	0.619	0.351	0.351	0.106	0.106	
4	30.00	14.5	9.9	5.4	0.445	0.840	0.136	0.136	0.040	0.040	
5	50.00	13.4	8.6	7.1	0.447	0.914	0.077	0.077	0.022	0.022	
6	70.00	13.4	8.5	7.0	0.427	0.943	0.062	0.062	0.016	0.016	
7	85.00	14.0	9.4	6.0	0.329	0.964	0.046	0.046	0.010	0.010	
8	90.00	14.6	10.1	4.7	0.270	1.001	-0.001	-0.001	-0.000	-0.000	
9	95.00	15.8	11.6	3.7	0.227	0.988	0.017	0.017	0.003	0.003	

TABLE VII. - Continued.

(g) 90 Percent of design speed; reading 2974

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	-0.0	10.5	46.9	42.2	289.6	1.027	10.07	1.062
2	24.046	24.110	-0.0	10.1	45.5	41.1	289.3	1.028	10.13	1.067
3	23.363	23.462	0.0	11.4	44.5	39.4	289.0	1.029	10.14	1.072
4	21.288	21.521	-0.0	15.2	41.3	32.4	287.8	1.036	10.14	1.095
5	18.456	18.933	0.0	20.9	37.2	21.2	287.7	1.042	10.14	1.127
6	15.507	16.347	-0.0	26.5	33.4	8.9	287.6	1.048	10.14	1.149
7	13.188	14.407	0.0	30.1	30.6	-0.8	287.7	1.050	10.14	1.158
8	12.382	13.759	0.0	31.0	29.8	-3.7	287.8	1.049	10.14	1.155
9	11.560	13.114	0.0	31.2	35.9	-5.3	287.4	1.050	10.12	1.147

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	189.1	188.0	276.4	249.6	189.1	184.8	-0.0	34.2	201.7	201.9
2	192.7	190.0	274.8	248.2	192.7	187.0	-0.0	33.3	196.0	196.5
3	193.7	190.8	271.8	242.0	193.7	187.0	0.0	37.8	190.6	191.4
4	198.4	201.2	264.0	229.9	198.4	194.1	-0.0	52.8	174.2	176.1
5	198.6	214.9	249.2	215.3	198.6	200.8	0.0	76.7	150.6	154.5
6	192.5	228.1	230.6	206.7	192.5	204.2	-0.0	101.7	126.9	133.8
7	182.2	240.7	211.7	208.2	182.2	208.2	0.0	120.7	107.8	117.7
8	176.9	244.7	203.8	210.1	176.9	209.7	0.0	126.1	101.2	112.4
9	130.1	244.6	160.7	210.2	130.1	209.3	0.0	126.6	94.3	107.0

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.572	0.561	0.837	0.744	0.572	0.551	0.978	1.089
2	0.584	0.567	0.833	0.741	0.584	0.558	0.971	1.066
3	0.588	0.570	0.825	0.723	0.588	0.558	0.966	1.051
4	0.604	0.602	0.804	0.688	0.604	0.581	0.978	1.006
5	0.605	0.644	0.759	0.646	0.605	0.602	1.011	0.944
6	0.585	0.685	0.701	0.621	0.585	0.614	1.061	0.879
7	0.552	0.726	0.641	0.628	0.552	0.628	1.143	0.822
8	0.535	0.740	0.616	0.635	0.535	0.634	1.185	0.795
9	0.389	0.740	0.480	0.636	0.389	0.633	1.609	0.739

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	TOT				PROF	TOT	PROF	
1	5.00	0.1	-4.3	5.1	0.148	0.638	0.090	0.090	0.027	0.027	
2	10.00	-0.6	-5.0	5.5	0.146	0.673	0.083	0.083	0.025	0.025	
3	15.00	-0.8	-5.2	5.6	0.163	0.699	0.081	0.081	0.024	0.024	
4	30.00	-1.6	-6.2	4.8	0.200	0.740	0.090	0.090	0.027	0.027	
5	50.00	-1.9	-6.7	4.4	0.232	0.816	0.082	0.082	0.024	0.024	
6	70.00	-1.1	-6.0	6.7	0.221	0.839	0.093	0.093	0.024	0.024	
7	85.00	0.1	-4.5	7.6	0.148	0.853	0.103	0.103	0.023	0.023	
8	90.00	0.7	-3.7	6.4	0.104	0.855	0.106	0.106	0.022	0.022	
9	95.00	8.6	4.4	5.4	-0.147	0.802	0.225	0.225	0.043	0.043	

TABLE VII. - Continued.

(h) 90 Percent of design speed; reading 2963

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	0.4	12.2	46.6	41.5	289.5	1.032	10.08	1.083
2	24.046	24.110	0.5	12.5	45.3	40.0	289.2	1.032	10.13	1.088
3	23.363	23.462	0.7	13.0	44.2	38.5	288.9	1.033	10.13	1.093
4	21.288	21.521	0.7	16.4	41.0	31.9	287.8	1.038	10.14	1.112
5	18.456	18.933	1.0	22.0	36.6	21.1	287.6	1.041	10.14	1.132
6	15.507	16.347	0.9	27.2	33.0	9.1	287.6	1.047	10.14	1.149
7	13.188	14.407	0.9	30.8	30.2	-0.7	287.8	1.049	10.14	1.153
8	12.382	13.759	0.7	31.3	29.4	-3.3	287.8	1.048	10.14	1.153
9	11.560	13.114	0.8	31.5	29.1	-5.2	288.1	1.045	10.12	1.148

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	189.1	186.9	274.9	244.0	189.1	182.7	1.3	39.5	200.9	201.2
2	192.0	189.2	272.8	241.1	192.0	184.7	1.8	41.1	195.6	196.1
3	192.1	189.9	267.9	236.5	192.1	185.1	2.5	42.7	189.2	190.0
4	196.5	199.0	260.3	224.7	196.5	190.8	2.3	56.3	173.0	174.9
5	196.7	209.6	245.0	208.3	196.6	194.3	3.5	78.6	149.7	153.6
6	190.0	222.0	226.5	200.0	190.0	197.5	2.8	101.4	126.1	132.9
7	179.5	233.7	207.5	200.8	179.4	200.8	2.8	119.6	107.1	117.0
8	174.5	237.8	200.4	203.4	174.5	203.1	2.1	123.7	100.6	111.8
9	164.3	239.1	188.1	204.7	164.3	203.8	2.3	125.0	93.8	106.5

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.572	0.556	0.832	0.725	0.572	0.543	0.966	1.075
2	0.582	0.563	0.827	0.718	0.582	0.550	0.962	1.052
3	0.583	0.566	0.812	0.705	0.583	0.551	0.963	1.024
4	0.598	0.594	0.793	0.671	0.598	0.570	0.971	0.983
5	0.599	0.628	0.746	0.624	0.599	0.582	0.988	0.912
6	0.577	0.666	0.688	0.600	0.577	0.592	1.040	0.852
7	0.543	0.704	0.628	0.605	0.543	0.605	1.119	0.795
8	0.527	0.717	0.605	0.614	0.527	0.613	1.164	0.774
9	0.495	0.722	0.566	0.618	0.494	0.616	1.241	0.736

RP	PERCENT	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	-0.2	-4.6	4.3	0.170	0.718	0.083	0.083	0.026	0.026
2	10.00	-0.8	-5.2	4.4	0.174	0.758	0.073	0.073	0.022	0.022
3	15.00	-1.2	-5.6	4.7	0.175	0.781	0.069	0.069	0.021	0.021
4	30.00	-1.9	-6.5	4.2	0.211	0.808	0.073	0.073	0.022	0.022
5	50.00	-2.4	-7.3	4.3	0.246	0.878	0.054	0.054	0.016	0.016
6	70.00	-1.5	-6.4	6.9	0.233	0.863	0.079	0.079	0.020	0.020
7	85.00	-0.4	-5.0	7.6	0.162	0.850	0.105	0.105	0.023	0.023
8	90.00	0.4	-4.0	6.8	0.117	0.864	0.100	0.100	0.021	0.021
9	95.00	1.7	-2.5	5.6	0.046	0.883	0.092	0.092	0.018	0.018

TABLE VII. - Continued.

(i) 90 Percent of design speed; reading 2964

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	0.2	18.3	49.1	40.3	289.4	1.042	10.09	1.132
2	24.046	24.110	0.6	18.4	47.8	39.4	289.2	1.042	10.13	1.136
3	23.363	23.462	0.4	18.5	47.0	38.2	288.6	1.042	10.13	1.139
4	21.288	21.521	0.6	20.9	43.5	32.3	287.8	1.044	10.14	1.140
5	18.456	18.933	0.9	26.1	39.5	22.1	287.7	1.044	10.14	1.147
6	15.507	16.347	0.7	30.3	35.8	9.8	287.7	1.046	10.14	1.157
7	13.188	14.407	1.0	33.7	32.6	-0.8	287.9	1.049	10.14	1.162
8	12.382	13.759	0.8	34.0	31.7	-3.4	287.9	1.047	10.14	1.155
9	11.560	13.114	0.7	34.3	31.6	-5.5	288.1	1.045	10.12	1.151

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	173.4	177.0	264.7	222.0	173.4	168.0	0.5	55.6	200.5	200.8
2	175.6	178.8	261.2	219.5	175.6	169.7	1.7	56.3	195.1	195.6
3	175.9	179.0	257.7	216.0	175.9	169.8	1.2	56.9	189.6	190.4
4	179.6	183.7	247.5	203.0	179.6	171.6	2.0	65.7	172.2	174.1
5	178.3	191.2	231.0	185.4	178.3	171.8	2.8	84.0	149.8	153.7
6	171.2	202.1	211.0	177.0	171.2	174.5	2.1	102.1	125.5	132.3
7	162.4	214.8	192.8	178.7	162.4	178.6	2.9	119.4	106.9	116.8
8	158.4	217.6	186.1	180.6	158.4	180.3	2.1	121.8	99.9	111.0
9	149.4	219.6	175.3	182.3	149.4	181.4	1.9	123.6	93.7	106.3

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.522	0.522	0.797	0.655	0.522	0.496	0.969	1.101
2	0.529	0.528	0.788	0.648	0.529	0.501	0.966	1.073
3	0.531	0.529	0.778	0.638	0.531	0.502	0.965	1.059
4	0.544	0.544	0.749	0.601	0.544	0.508	0.955	0.997
5	0.539	0.568	0.699	0.550	0.539	0.510	0.964	0.929
6	0.517	0.602	0.637	0.527	0.517	0.520	1.019	0.855
7	0.489	0.642	0.580	0.534	0.489	0.534	1.100	0.787
8	0.476	0.651	0.560	0.541	0.476	0.540	1.139	0.761
9	0.448	0.658	0.525	0.546	0.448	0.544	1.215	0.729

RP	PERCENT	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	2.3	-2.1	3.7	0.247	0.860	0.057	0.057	0.018	0.018
2	10.00	1.7	-2.7	3.8	0.243	0.895	0.043	0.043	0.013	0.013
3	15.00	1.6	-2.8	4.3	0.246	0.902	0.042	0.042	0.013	0.013
4	30.00	0.6	-4.0	4.6	0.271	0.871	0.061	0.061	0.018	0.018
5	50.00	0.5	-4.4	5.3	0.307	0.901	0.053	0.053	0.015	0.015
6	70.00	1.3	-3.6	7.6	0.287	0.920	0.052	0.052	0.013	0.013
7	85.00	2.1	-2.5	7.6	0.213	0.895	0.084	0.084	0.019	0.019
8	90.00	2.7	-1.8	6.7	0.170	0.891	0.090	0.090	0.019	0.019
9	95.00	4.2	-0.0	5.3	0.103	0.903	0.087	0.087	0.017	0.017

TABLE VII. - Continued.

(j) 90 Percent of design speed; reading 2972

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	-0.0	23.6	51.6	40.5	289.2	1.050	10.10	1.164
2	24.046	24.110	-0.0	23.1	50.4	39.4	289.0	1.049	10.13	1.165
3	23.363	23.462	-0.0	23.2	49.5	38.4	288.6	1.049	10.13	1.162
4	21.288	21.521	-0.0	25.8	46.4	32.3	287.9	1.048	10.14	1.161
5	18.456	18.933	0.0	29.7	42.5	22.5	287.8	1.047	10.14	1.160
6	15.507	16.347	-0.0	34.0	38.7	9.7	287.8	1.047	10.13	1.164
7	13.188	14.407	-0.0	36.7	35.8	-0.9	287.9	1.049	10.14	1.165
8	12.382	13.759	0.0	37.0	34.8	-3.9	288.0	1.048	10.14	1.162
9	11.560	13.114	0.0	37.3	41.3	-6.1	287.7	1.046	10.12	1.153

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	159.1	170.0	256.3	204.8	159.1	155.7	-0.0	68.2	201.0	201.2
2	162.1	171.3	254.4	203.9	162.1	157.6	-0.0	67.1	196.0	196.5
3	162.0	169.9	249.5	199.2	162.0	156.2	-0.0	66.9	189.7	190.5
4	164.8	173.9	238.8	185.2	164.8	156.5	-0.0	75.8	172.9	174.8
5	163.8	180.1	222.1	169.4	163.8	156.5	0.0	89.2	150.1	154.0
6	157.6	189.9	201.9	159.7	157.6	157.5	-0.0	106.2	126.3	133.1
7	149.0	200.8	183.7	161.1	149.0	161.1	-0.0	119.9	107.4	117.3
8	145.4	204.8	177.0	163.9	145.4	163.6	0.0	123.3	101.0	112.2
9	107.1	205.0	142.6	164.0	107.1	163.1	0.0	124.1	94.1	106.8

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.477	0.498	0.769	0.601	0.477	0.457	0.979	1.150
2	0.487	0.503	0.764	0.599	0.487	0.463	0.972	1.110
3	0.487	0.499	0.750	0.585	0.487	0.459	0.964	1.087
4	0.496	0.512	0.719	0.546	0.496	0.461	0.950	1.031
5	0.493	0.532	0.669	0.500	0.493	0.462	0.956	0.959
6	0.474	0.563	0.607	0.473	0.474	0.467	0.999	0.876
7	0.447	0.597	0.551	0.479	0.447	0.479	1.081	0.807
8	0.435	0.610	0.530	0.488	0.435	0.487	1.125	0.778
9	0.318	0.611	0.424	0.489	0.318	0.486	1.522	0.729

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	TOT				PROF	TOT	PROF	
1	5.00	4.8	0.5	3.4	0.310	0.880	0.062	0.062	0.019	0.019	
2	10.00	4.3	-0.0	3.8	0.304	0.908	0.047	0.047	0.014	0.014	
3	15.00	4.2	-0.2	4.5	0.306	0.892	0.057	0.057	0.017	0.017	
4	30.00	3.5	-1.1	4.7	0.338	0.905	0.052	0.052	0.016	0.016	
5	50.00	3.5	-1.4	5.7	0.363	0.923	0.046	0.046	0.013	0.013	
6	70.00	4.2	-0.7	7.5	0.349	0.934	0.047	0.047	0.012	0.012	
7	85.00	5.3	0.6	7.5	0.273	0.917	0.073	0.073	0.016	0.016	
8	90.00	5.7	1.3	6.3	0.225	0.912	0.082	0.082	0.017	0.017	
9	95.00	13.9	9.8	4.7	0.028	0.903	0.130	0.130	0.025	0.025	

TABLE VII. - Continued.

(k) 90 Percent of design speed; reading 2973

RP	RADI I		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	0.0	28.8	54.2	41.4	289.1	1.056	10.11	1.177
2	24.046	24.110	0.0	27.9	53.0	39.7	288.9	1.055	10.13	1.183
3	23.363	23.462	0.0	27.9	52.2	38.7	288.5	1.054	10.13	1.182
4	21.288	21.521	0.0	30.0	49.1	33.1	287.9	1.053	10.13	1.175
5	18.456	18.933	0.0	33.9	45.4	23.2	287.8	1.049	10.14	1.169
6	15.507	16.347	0.	37.5	41.4	10.0	287.8	1.049	10.14	1.168
7	13.188	14.407	0.0	39.6	38.3	-1.3	288.0	1.049	10.14	1.167
8	12.382	13.759	0.0	39.9	37.3	-4.2	288.0	1.047	10.14	1.161
9	11.560	13.114	0.0	39.7	44.3	-6.1	287.8	1.045	10.11	1.154

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	145.0	160.4	247.7	187.3	145.0	140.6	0.0	77.3	200.9	201.1
2	147.5	163.5	245.2	187.7	147.5	144.5	0.0	76.6	195.8	196.4
3	147.9	162.6	241.2	184.2	147.9	143.7	0.0	76.1	190.5	191.3
4	150.2	164.6	229.4	170.4	150.2	142.6	0.0	82.2	173.4	175.3
5	148.7	169.1	211.6	152.6	148.7	140.3	0.0	94.4	150.6	154.5
6	143.5	178.4	191.4	143.8	143.5	141.6	0.	108.5	126.7	133.5
7	136.2	189.3	173.5	145.9	136.2	145.8	0.0	120.8	107.6	117.6
8	132.4	191.5	166.5	147.4	132.4	147.0	0.0	122.8	100.9	112.1
9	96.6	191.9	135.0	148.4	96.6	147.6	0.0	122.7	94.3	107.0

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.433	0.468	0.740	0.547	0.433	0.410	0.969	1.152
2	0.441	0.478	0.734	0.549	0.441	0.422	0.979	1.131
3	0.443	0.476	0.722	0.539	0.443	0.420	0.972	1.113
4	0.450	0.483	0.688	0.499	0.450	0.418	0.950	1.050
5	0.446	0.497	0.634	0.449	0.446	0.413	0.944	0.971
6	0.430	0.526	0.573	0.424	0.430	0.418	0.987	0.881
7	0.407	0.560	0.519	0.432	0.407	0.432	1.071	0.805
8	0.395	0.568	0.497	0.437	0.395	0.436	1.110	0.772
9	0.286	0.570	0.400	0.441	0.286	0.438	1.528	0.731

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS					TOT	PROF	TOT	PROF
1	5.00	7.4	3.0	4.2	0.372	0.857	0.086	0.086	0.026	0.026	
2	10.00	6.9	2.6	4.1	0.359	0.900	0.060	0.060	0.019	0.019	
3	15.00	6.8	2.4	4.9	0.359	0.900	0.061	0.061	0.018	0.018	
4	30.00	6.2	1.6	5.5	0.385	0.895	0.067	0.067	0.020	0.020	
5	50.00	6.3	1.4	6.4	0.418	0.934	0.046	0.046	0.013	0.013	
6	70.00	6.9	2.0	7.8	0.400	0.934	0.054	0.054	0.014	0.014	
7	85.00	7.8	3.2	7.1	0.320	0.930	0.068	0.068	0.015	0.015	
8	90.00	8.3	3.9	6.0	0.275	0.932	0.069	0.069	0.014	0.014	
9	95.00	17.0	12.8	4.7	0.087	0.924	0.111	0.111	0.021	0.021	

TABLE VII. - Continued.

(l) 90 Percent of design speed; reading 2942

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	0.3	39.0	57.2	43.1	288.7	1.066	10.10	1.172
2	24.046	24.110	0.5	32.6	55.9	40.6	288.6	1.060	10.13	1.188
3	23.363	23.462	0.5	32.0	55.0	39.2	288.4	1.057	10.14	1.188
4	21.288	21.521	1.1	33.9	51.6	33.7	288.0	1.053	10.13	1.179
5	18.456	18.933	1.3	37.5	47.7	23.9	287.9	1.048	10.14	1.170
6	15.507	16.347	1.7	40.7	43.5	10.1	287.9	1.047	10.14	1.167
7	13.188	14.407	1.8	42.4	40.3	-1.6	288.0	1.046	10.14	1.165
8	12.382	13.759	1.9	42.3	39.2	-4.8	287.9	1.045	10.14	1.162
9	11.560	13.114	1.6	41.9	39.2	-6.2	288.2	1.043	10.12	1.154

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	128.5	148.1	237.5	157.6	128.5	115.1	0.7	93.2	200.5	200.7
2	130.9	154.9	233.5	171.8	130.9	130.5	1.2	83.5	194.6	195.1
3	131.2	154.9	228.7	169.6	131.2	131.4	1.2	82.1	188.5	189.3
4	134.1	156.4	215.9	156.1	134.1	129.9	2.6	87.2	171.8	173.7
5	133.3	159.6	198.0	138.6	133.2	126.7	3.0	97.1	149.4	153.3
6	127.8	167.9	176.3	129.3	127.8	127.3	3.8	109.5	125.3	132.1
7	121.2	178.0	158.8	131.5	121.1	131.4	3.8	120.0	106.5	116.3
8	117.6	181.2	151.6	134.4	117.5	133.9	4.0	122.0	99.8	110.9
9	110.8	181.0	143.0	135.5	110.8	134.7	3.1	120.8	93.6	106.2

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.383	0.429	0.708	0.456	0.383	0.333	0.896	1.174
2	0.390	0.451	0.696	0.500	0.390	0.380	0.997	1.142
3	0.391	0.452	0.682	0.494	0.391	0.383	1.002	1.116
4	0.401	0.457	0.645	0.456	0.401	0.380	0.968	1.038
5	0.398	0.468	0.591	0.407	0.398	0.372	0.951	0.952
6	0.381	0.494	0.526	0.380	0.381	0.375	0.996	0.846
7	0.361	0.526	0.473	0.388	0.361	0.388	1.085	0.765
8	0.350	0.536	0.451	0.397	0.350	0.396	1.140	0.730
9	0.329	0.535	0.425	0.401	0.329	0.399	1.216	0.702

RP	PERCENT SPAN		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	MEAN	SS	TOT	PROF				TOT	PROF		
1	5.00	10.5	6.1	5.9	0.496	0.700	0.224	0.224	0.067	0.067	
2	10.00	9.8	5.5	5.0	0.405	0.839	0.115	0.115	0.035	0.035	
3	15.00	9.7	5.2	5.4	0.396	0.886	0.080	0.080	0.024	0.024	
4	30.00	8.7	4.1	6.0	0.417	0.915	0.061	0.061	0.018	0.018	
5	50.00	8.7	3.8	7.1	0.448	0.954	0.035	0.035	0.010	0.010	
6	70.00	9.0	4.1	7.8	0.426	0.952	0.045	0.045	0.011	0.011	
7	85.00	9.8	5.2	6.8	0.341	0.966	0.038	0.038	0.008	0.008	
8	90.00	10.2	5.8	5.4	0.284	0.970	0.035	0.035	0.007	0.007	
9	95.00	11.9	7.7	4.6	0.222	0.970	0.037	0.037	0.007	0.007	

TABLE VII. - Continued.

(m) 100 Percent of design speed, reading 2977

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	-0.0	15.7	48.2	41.5	289.6	1.044	10.08	1.128
2	24.046	24.110	0.0	15.3	46.8	40.4	289.3	1.045	10.13	1.127
3	23.363	23.462	0.0	16.0	45.9	39.1	289.0	1.045	10.14	1.131
4	21.288	21.521	0.0	18.8	42.5	32.4	287.8	1.049	10.14	1.148
5	18.456	18.933	0.0	23.6	38.6	22.1	287.7	1.053	10.14	1.169
6	15.507	16.347	-0.0	28.8	34.9	9.8	287.6	1.058	10.14	1.185
7	13.188	14.407	-0.0	32.4	32.3	-0.4	287.8	1.060	10.14	1.190
8	12.382	13.759	0.0	33.1	31.3	-3.6	287.8	1.059	10.14	1.189
9	11.560	13.114	-0.0	32.9	37.8	-5.2	287.4	1.059	10.11	1.184

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	199.0	198.3	298.4	255.0	199.0	190.9	-0.0	53.6	222.3	222.5
2	202.4	199.2	295.9	252.4	202.4	192.1	0.0	52.7	215.9	216.5
3	203.2	199.5	292.0	247.1	203.2	191.8	0.0	54.8	209.8	210.7
4	207.9	208.8	282.1	234.3	207.9	197.7	0.0	67.1	190.7	192.8
5	207.4	220.1	265.5	217.6	207.4	201.6	0.0	88.3	165.7	170.0
6	199.8	232.0	243.7	206.3	199.8	203.2	-0.0	111.9	139.6	147.1
7	188.1	244.9	222.5	206.8	188.1	206.8	-0.0	131.2	118.8	129.8
8	182.5	250.1	213.7	209.9	182.5	209.4	0.0	136.8	111.2	123.5
9	133.6	251.2	169.0	211.7	133.6	210.8	-0.0	136.6	103.5	117.5

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.604	0.588	0.906	0.757	0.604	0.567	0.959	1.222
2	0.616	0.591	0.900	0.749	0.616	0.570	0.949	1.197
3	0.619	0.592	0.889	0.734	0.619	0.570	0.944	1.178
4	0.635	0.622	0.862	0.698	0.635	0.589	0.951	1.119
5	0.634	0.657	0.812	0.650	0.634	0.602	0.972	1.052
6	0.609	0.695	0.743	0.618	0.609	0.609	1.017	0.974
7	0.571	0.737	0.675	0.622	0.571	0.622	1.099	0.907
8	0.553	0.754	0.647	0.633	0.553	0.632	1.148	0.873
9	0.399	0.758	0.505	0.639	0.399	0.636	1.578	0.809

RP	PERCENT	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	1.4	-3.0	4.4	0.219	0.803	0.069	0.068	0.021	0.021
2	10.00	0.8	-3.6	4.9	0.218	0.777	0.081	0.081	0.025	0.024
3	15.00	0.6	-3.8	5.2	0.227	0.793	0.077	0.077	0.023	0.023
4	30.00	-0.4	-5.0	4.8	0.254	0.820	0.076	0.076	0.023	0.023
5	50.00	-0.4	-5.3	5.3	0.284	0.852	0.075	0.075	0.021	0.021
6	70.00	0.4	-4.5	7.6	0.276	0.858	0.089	0.089	0.023	0.023
7	85.00	1.8	-2.9	8.0	0.206	0.855	0.110	0.110	0.024	0.024
8	90.00	2.3	-2.1	6.6	0.157	0.861	0.111	0.111	0.023	0.023
9	95.00	10.4	6.3	5.6	-0.087	0.832	0.207	0.207	0.040	0.040

TABLE VII - Continued.

(n) 100 Percent of design speed; reading 2969

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	-0.1	21.0	49.8	40.3	289.4	1.058	10.09	1.193
2	24.046	24.110	-0.1	20.9	48.6	39.2	289.2	1.057	10.13	1.192
3	23.363	23.462	-0.1	21.1	47.7	38.1	288.8	1.057	10.13	1.190
4	21.288	21.521	-0.1	23.8	44.5	32.2	287.8	1.058	10.14	1.190
5	18.456	18.933	-0.1	28.0	40.8	22.4	287.6	1.057	10.14	1.191
6	15.507	16.347	-0.1	32.0	37.0	10.1	287.7	1.059	10.14	1.197
7	13.188	14.407	-0.1	35.2	34.1	-0.8	287.8	1.059	10.14	1.199
8	12.382	13.759	-0.1	35.6	33.3	-3.4	288.0	1.057	10.14	1.193
9	11.560	13.114	-0.1	35.3	32.9	-5.1	288.2	1.056	10.12	1.184

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	189.1	194.2	292.7	237.8	189.1	181.2	-0.3	69.6	223.2	223.5
2	191.9	194.7	289.9	234.6	191.9	181.9	-0.3	69.5	217.1	217.6
3	192.0	194.0	285.4	230.1	192.0	181.1	-0.3	69.7	210.9	211.8
4	195.7	198.3	274.4	214.5	195.7	181.5	-0.2	79.9	192.2	194.3
5	193.3	205.2	255.3	196.0	193.3	181.2	-0.2	96.3	166.6	170.9
6	186.0	216.4	232.9	186.5	186.0	183.6	-0.2	114.6	139.8	147.4
7	175.4	229.8	211.9	187.9	175.4	187.9	-0.2	132.3	118.8	129.7
8	170.6	233.1	204.1	190.0	170.6	189.7	-0.2	135.6	111.8	124.2
9	161.1	233.7	191.9	191.4	161.1	190.7	-0.2	135.1	104.0	118.0

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.572	0.571	0.886	0.700	0.572	0.533	0.959	1.246
2	0.582	0.573	0.879	0.691	0.582	0.536	0.948	1.221
3	0.583	0.572	0.866	0.678	0.583	0.533	0.943	1.202
4	0.595	0.586	0.835	0.634	0.595	0.536	0.927	1.143
5	0.588	0.609	0.777	0.581	0.588	0.537	0.938	1.068
6	0.564	0.644	0.706	0.555	0.564	0.546	0.987	0.978
7	0.530	0.687	0.640	0.562	0.530	0.562	1.071	0.902
8	0.515	0.698	0.616	0.569	0.515	0.568	1.112	0.872
9	0.484	0.700	0.577	0.574	0.484	0.571	1.183	0.827

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	TOT				PROF	TOT	PROF	
1	5.00	3.0	-1.4	3.2	0.286	0.890	0.053	0.052	0.016	0.016	
2	10.00	2.5	-1.9	3.6	0.287	0.903	0.046	0.046	0.014	0.014	
3	15.00	2.4	-2.0	4.3	0.289	0.889	0.054	0.054	0.017	0.017	
4	30.00	1.6	-3.0	4.6	0.322	0.875	0.065	0.065	0.020	0.020	
5	50.00	1.8	-3.1	5.6	0.350	0.904	0.055	0.055	0.016	0.016	
6	70.00	2.5	-2.4	7.9	0.330	0.899	0.069	0.069	0.018	0.018	
7	85.00	3.6	-1.0	7.6	0.257	0.897	0.084	0.084	0.019	0.019	
8	90.00	4.2	-0.2	6.7	0.214	0.903	0.083	0.083	0.017	0.017	
9	95.00	5.5	1.3	5.6	0.147	0.883	0.109	0.109	0.021	0.021	

TABLE VII. - Continued.

(o) 100 Percent of design speed; reading 2922

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	-0.1	25.4	51.7	40.5	289.1	1.063	10.09	1.213
2	24.046	24.110	-0.1	24.8	50.6	39.2	289.0	1.062	10.12	1.216
3	23.363	23.462	-0.1	25.2	49.7	38.1	288.6	1.062	10.14	1.214
4	21.288	21.521	-0.1	27.6	46.7	32.4	287.9	1.060	10.14	1.208
5	18.456	18.933	-0.1	31.5	42.9	22.7	287.8	1.056	10.14	1.202
6	15.507	16.347	-0.1	35.5	39.2	9.9	287.8	1.057	10.14	1.205
7	13.188	14.407	-0.1	37.7	36.4	-0.6	287.8	1.056	10.14	1.198
8	12.382	13.759	-0.1	38.0	35.5	-3.6	287.9	1.056	10.14	1.194
9	11.560	13.114	-0.1	38.3	35.1	-6.0	288.0	1.053	10.12	1.185

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	175.5	185.5	283.5	220.3	175.5	167.5	-0.2	79.6	222.4	222.6
2	178.3	187.3	280.7	219.4	178.3	170.0	-0.2	78.5	216.5	217.1
3	178.3	185.6	275.5	213.4	178.3	168.0	-0.2	79.0	209.8	210.7
4	161.2	188.9	264.1	198.4	181.2	167.4	-0.2	87.5	191.9	194.0
5	178.5	193.5	243.7	178.8	178.5	165.0	-0.2	101.1	165.8	170.0
6	172.0	204.7	222.1	169.2	172.0	166.7	-0.2	118.9	140.3	147.9
7	160.4	213.8	199.2	169.2	160.4	169.2	-0.2	130.6	117.9	128.8
8	156.0	218.1	191.5	172.3	156.0	171.9	-0.2	134.1	110.9	123.3
9	147.2	218.5	179.9	172.5	147.2	171.6	-0.2	135.3	103.3	117.2

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.529	0.543	0.855	0.645	0.529	0.491	0.955	1.259
2	0.538	0.549	0.847	0.643	0.538	0.499	0.953	1.236
3	0.539	0.544	0.832	0.626	0.539	0.493	0.942	1.211
4	0.549	0.556	0.800	0.584	0.549	0.493	0.924	1.154
5	0.540	0.572	0.737	0.528	0.540	0.487	0.925	1.068
6	0.519	0.607	0.670	0.501	0.519	0.494	0.969	0.980
7	0.482	0.636	0.599	0.503	0.482	0.503	1.055	0.890
8	0.468	0.650	0.575	0.513	0.468	0.512	1.103	0.858
9	0.441	0.652	0.539	0.515	0.441	0.512	1.166	0.814

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	SS				TOT	PROF	TOT	PROF
1	5.00	5.0	0.6	3.3	0.339	0.905	0.052	0.051	0.016	0.016	
2	10.00	4.5	0.1	3.6	0.331	0.921	0.043	0.043	0.013	0.013	
3	15.00	4.3	-0.1	4.2	0.337	0.920	0.045	0.045	0.014	0.014	
4	30.00	3.8	-0.8	4.8	0.367	0.924	0.044	0.044	0.013	0.013	
5	50.00	3.9	-1.0	5.9	0.396	0.964	0.022	0.022	0.006	0.006	
6	70.00	4.7	-0.2	7.6	0.381	0.958	0.031	0.031	0.008	0.008	
7	85.00	5.8	1.2	7.8	0.301	0.940	0.052	0.052	0.011	0.011	
8	90.00	6.4	2.0	6.6	0.253	1.932	0.063	0.063	0.013	0.013	
9	95.00	7.7	3.6	4.8	0.195	0.931	0.070	0.070	0.013	0.013	

TABLE VII. - Continued.

(p) 100 Percent of design speed; reading 2921

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	-0.1	28.5	53.4	40.6	289.1	1.070	10.09	1.228
2	24.046	24.110	-0.1	27.4	52.2	39.6	288.9	1.067	10.13	1.228
3	23.363	23.462	-0.1	27.5	51.3	38.6	288.4	1.066	10.13	1.225
4	21.288	21.521	-0.1	30.5	48.2	32.5	288.0	1.061	10.14	1.216
5	18.456	18.933	-0.1	33.7	44.4	22.8	287.8	1.058	10.14	1.207
6	15.507	16.347	-0.1	37.1	40.7	10.1	287.8	1.058	10.14	1.204
7	13.188	14.407	-0.1	39.2	37.9	-0.9	288.0	1.059	10.14	1.204
8	12.382	13.759	-0.1	39.8	37.0	-4.2	288.0	1.057	10.14	1.198
9	11.560	13.114	-0.1	39.8	36.6	-6.1	288.1	1.053	10.12	1.187

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	165.3	181.0	277.4	209.6	165.3	159.1	-0.2	86.4	222.6	222.8
2	168.4	182.2	274.8	209.7	168.4	161.7	-0.2	83.9	216.9	217.5
3	168.5	180.5	269.5	205.0	168.5	160.2	-0.2	83.2	210.2	211.1
4	171.2	183.1	256.9	187.2	171.2	157.8	-0.2	92.8	191.4	193.5
5	169.5	188.1	237.2	169.8	169.5	156.5	-0.2	104.2	165.7	170.0
6	162.3	197.5	214.1	160.1	162.3	157.6	-0.2	119.1	139.5	147.1
7	153.0	209.5	194.0	162.3	153.0	162.3	-0.2	132.5	119.0	130.0
8	148.4	212.3	185.8	163.5	148.4	163.1	-0.2	136.0	111.6	124.0
9	140.1	211.7	174.6	163.5	140.1	162.6	-0.1	135.6	104.1	118.1

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.497	0.528	0.834	0.611	0.497	0.464	0.962	1.276
2	0.507	0.532	0.827	0.613	0.507	0.472	0.960	1.252
3	0.507	0.528	0.812	0.599	0.507	0.468	0.951	1.227
4	0.516	0.537	0.775	0.549	0.516	0.463	0.922	1.160
5	0.511	0.554	0.716	0.500	0.511	0.461	0.923	1.072
6	0.488	0.584	0.645	0.473	0.488	0.466	0.971	0.975
7	0.459	0.621	0.582	0.481	0.459	0.481	1.060	0.895
8	0.445	0.631	0.557	0.486	0.445	0.485	1.099	0.859
9	0.419	0.630	0.522	0.487	0.419	0.484	1.160	0.816

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	SS				TOT	PROF	TOT	PROF
1	5.00	6.6	2.3	3.5	0.372	0.867	0.082	0.081	0.025	0.025	
2	10.00	6.1	1.8	4.0	0.359	0.910	0.054	0.054	0.017	0.017	
3	15.00	6.0	1.6	4.8	0.360	0.906	0.058	0.058	0.017	0.017	
4	30.00	5.3	0.7	4.9	0.400	0.934	0.040	0.040	0.012	0.012	
5	50.00	5.3	0.5	6.0	0.422	0.953	0.031	0.031	0.009	0.009	
6	70.00	6.2	1.3	7.8	0.401	0.946	0.042	0.042	0.011	0.011	
7	85.00	7.4	2.8	7.5	0.321	0.925	0.072	0.072	0.016	0.016	
8	90.00	8.0	3.5	6.0	0.279	0.932	0.068	0.068	0.014	0.014	
9	95.00	9.3	5.1	4.6	0.223	0.950	0.052	0.052	0.010	0.010	

TABLE VII. - Continued.

(q) 100 Percent of design speed; reading 2930

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	-0.2	32.1	55.0	41.4	289.0	1.075	10.10	1.229
2	24.046	24.110	-0.2	29.7	53.8	40.0	288.8	1.072	10.13	1.237
3	23.363	23.462	-0.0	29.4	52.7	38.8	288.5	1.069	10.13	1.232
4	21.288	21.521	0.4	31.8	49.5	32.9	287.9	1.065	10.13	1.226
5	18.456	18.933	0.6	35.7	45.6	23.1	287.9	1.060	10.14	1.213
6	15.507	16.347	1.1	38.5	41.5	10.2	287.8	1.059	10.14	1.208
7	13.188	14.407	1.4	40.9	38.3	-1.6	288.0	1.058	10.13	1.207
8	12.382	13.759	1.5	40.9	37.3	-4.2	288.0	1.057	10.14	1.200
9	11.560	13.114	1.3	40.9	37.0	-6.4	288.1	1.053	10.12	1.189

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	156.3	174.7	272.7	197.3	156.3	148.0	-0.5	92.8	223.1	223.3
2	159.6	177.7	270.1	201.7	159.6	154.4	-0.7	88.0	217.2	217.8
3	159.7	176.5	263.5	197.2	159.7	153.7	-0.1	86.8	209.4	210.3
4	162.9	180.0	250.8	182.1	162.9	153.0	1.0	94.9	191.6	193.7
5	161.3	183.6	230.5	162.0	161.3	149.1	1.6	107.1	166.3	170.6
6	154.6	192.7	206.3	153.2	154.6	150.8	3.0	120.1	139.7	147.2
7	145.6	204.1	185.5	154.2	145.5	154.1	3.6	133.7	118.6	129.5
8	141.6	206.8	178.0	156.7	141.5	156.3	3.6	135.5	111.6	124.0
9	133.9	206.5	167.7	157.0	133.9	156.0	3.0	135.3	103.9	117.9

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.469	0.507	0.818	0.573	0.469	0.430	0.947	1.296
2	0.479	0.517	0.811	0.587	0.479	0.449	0.967	1.271
3	0.480	0.515	0.791	0.575	0.480	0.448	0.963	1.233
4	0.490	0.527	0.755	0.533	0.490	0.448	0.939	1.162
5	0.485	0.539	0.693	0.476	0.485	0.438	0.924	1.067
6	0.464	0.568	0.620	0.452	0.464	0.444	0.975	0.953
7	0.436	0.604	0.555	0.456	0.436	0.456	1.059	0.862
8	0.424	0.613	0.533	0.465	0.423	0.463	1.104	0.828
9	0.400	0.613	0.501	0.466	0.400	0.463	1.165	0.789

RP	PERCENT	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	8.3	3.9	4.3	0.417	0.814	0.125	0.125	0.039	0.038
2	10.00	7.7	3.3	4.5	0.384	0.867	0.089	0.088	0.027	0.027
3	15.00	7.4	2.9	4.9	0.380	0.887	0.075	0.075	0.023	0.023
4	30.00	6.6	2.0	5.2	0.407	0.926	0.050	0.050	0.015	0.015
5	50.00	6.6	1.7	6.3	0.440	0.943	0.042	0.042	0.012	0.012
6	70.00	7.0	2.1	8.0	0.409	0.938	0.054	0.054	0.014	0.014
7	85.00	7.8	3.2	6.8	0.331	0.943	0.059	0.059	0.013	0.013
8	90.00	8.3	3.9	6.0	0.282	0.938	0.067	0.067	0.014	0.014
9	95.00	9.6	5.5	4.4	0.226	0.960	0.045	0.045	0.009	0.009

TABLE VII. - Continued.

(r) 100 Percent of design speed; reading 2933

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	-1.0	67.9	64.0	53.1	288.8	1.101	10.10	1.184
2	24.046	24.110	-0.5	59.7	62.3	45.7	288.7	1.093	10.13	1.178
3	23.363	23.462	-0.7	52.0	61.4	39.6	288.5	1.087	10.13	1.185
4	21.288	21.521	-0.5	37.4	57.3	33.0	288.2	1.072	10.14	1.215
5	18.456	18.933	0.6	39.0	52.2	23.3	287.9	1.063	10.13	1.216
6	15.507	16.347	1.4	42.6	47.4	8.8	287.8	1.061	10.14	1.212
7	13.188	14.407	1.8	44.0	44.0	-2.7	287.8	1.060	10.14	1.211
8	12.382	13.759	1.8	43.6	43.1	-5.8	287.9	1.058	10.14	1.211
9	11.560	13.114	1.3	42.9	42.9	-6.6	288.0	1.053	10.13	1.192

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	109.1	155.8	249.2	97.6	109.1	58.6	-1.9	144.4	222.1	222.4
2	113.9	157.0	245.2	113.5	113.9	79.3	-1.1	135.5	216.1	216.7
3	115.3	162.6	240.7	129.7	115.3	100.0	-1.3	128.2	209.9	210.8
4	123.0	171.8	227.9	162.6	123.0	136.4	-1.0	104.4	190.9	192.9
5	127.7	176.7	208.4	149.5	127.7	137.3	1.4	111.2	166.1	170.4
6	124.6	184.8	184.2	137.6	124.6	136.0	3.0	125.1	138.7	146.2
7	118.7	195.8	165.0	141.0	118.6	140.9	3.6	136.0	118.4	129.3
8	115.4	200.7	157.8	146.1	115.3	145.3	3.6	138.4	111.3	123.7
9	108.9	197.2	148.5	145.4	108.8	144.4	2.5	134.3	103.6	117.6

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.324	0.445	0.739	0.278	0.323	0.167	0.537	1.400
2	0.338	0.450	0.728	0.325	0.338	0.227	0.696	1.355
3	0.342	0.468	0.715	0.374	0.342	0.288	0.868	1.327
4	0.366	0.500	0.679	0.473	0.366	0.397	1.109	1.226
5	0.381	0.517	0.622	0.438	0.381	0.402	1.075	1.097
6	0.372	0.543	0.549	0.404	0.371	0.400	1.092	0.956
7	0.353	0.578	0.491	0.416	0.353	0.416	1.188	0.858
8	0.343	0.594	0.469	0.432	0.343	0.430	1.260	0.821
9	0.323	0.584	0.441	0.430	0.323	0.428	1.327	0.784

RP	PERCENT	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	17.3	12.9	15.9	0.849	0.493	0.503	0.502	0.124	0.124
2	10.00	16.2	11.9	10.1	0.760	0.513	0.465	0.465	0.130	0.130
3	15.00	16.0	11.6	5.7	0.670	0.575	0.394	0.394	0.118	0.118
4	30.00	14.5	9.9	5.3	0.451	0.789	0.186	0.186	0.055	0.055
5	50.00	13.2	8.3	6.5	0.447	0.910	0.082	0.082	0.023	0.023
6	70.00	12.9	8.0	6.6	0.429	0.921	0.087	0.087	0.022	0.022
7	85.00	13.5	8.9	5.7	0.330	0.938	0.081	0.081	0.018	0.018
8	90.00	14.1	9.6	4.4	0.261	0.969	0.043	0.043	0.009	0.009
9	95.00	15.5	11.4	4.2	0.203	0.980	0.029	0.029	0.006	0.006

TABLE VII. - Continued.

(s) 110 Percent of design speed; reading 2967

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	-0.1	18.9	49.2	41.8	289.7	1.064	10.08	1.180
2	24.046	24.110	-0.1	18.4	47.9	40.3	289.3	1.062	10.13	1.187
3	23.363	23.462	-0.1	18.8	47.0	39.1	289.0	1.061	10.13	1.189
4	21.288	21.521	-0.1	21.8	43.7	33.4	287.7	1.062	10.13	1.188
5	18.456	18.933	-0.1	25.9	39.7	23.0	287.6	1.064	10.14	1.209
6	15.507	16.347	-0.1	30.2	36.1	11.1	287.6	1.069	10.14	1.219
7	13.188	14.407	-0.1	33.9	33.4	-0.2	287.7	1.073	10.14	1.228
8	12.382	13.759	-0.1	34.4	32.5	-3.1	287.8	1.072	10.15	1.226
9	11.560	13.114	-0.1	34.4	32.3	-5.0	288.0	1.069	10.12	1.220

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	211.9	210.0	324.3	266.5	211.9	198.7	-0.3	67.9	245.2	245.5
2	215.0	212.6	320.7	264.6	215.0	201.7	-0.3	67.2	237.7	238.3
3	215.8	212.5	316.5	259.3	215.8	201.1	-0.3	68.5	231.3	232.3
4	220.9	216.6	305.4	240.9	220.9	201.1	-0.3	80.3	210.6	212.9
5	220.2	229.2	286.4	223.9	220.2	206.1	-0.3	100.1	182.8	187.5
6	211.3	240.8	261.4	212.0	211.3	208.0	-0.2	121.3	153.6	161.9
7	198.4	256.9	237.6	213.3	198.4	213.3	-0.2	143.2	130.6	142.6
8	192.8	262.4	228.7	216.9	192.8	216.6	-0.2	148.1	122.8	136.5
9	181.6	264.0	214.9	218.6	181.6	217.7	-0.2	149.2	114.7	130.1

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.647	0.619	0.989	0.786	0.647	0.586	0.938	1.371
2	0.657	0.628	0.980	0.782	0.657	0.596	0.938	1.340
3	0.660	0.629	0.968	0.767	0.660	0.595	0.932	1.321
4	0.679	0.643	0.939	0.715	0.679	0.597	0.910	1.256
5	0.677	0.683	0.880	0.668	0.677	0.615	0.936	1.177
6	0.647	0.720	0.800	0.633	0.647	0.622	0.984	1.082
7	0.604	0.772	0.724	0.641	0.604	0.641	1.075	1.001
8	0.586	0.791	0.695	0.654	0.586	0.653	1.124	0.967
9	0.550	0.797	0.651	0.660	0.550	0.657	1.199	0.920

RP	PERCENT	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	2.4	-1.9	4.6	0.264	0.763	0.105	0.093	0.032	0.029
2	10.00	1.8	-2.5	4.7	0.259	0.805	0.086	0.077	0.026	0.024
3	15.00	1.7	-2.7	5.3	0.265	0.828	0.076	0.069	0.023	0.021
4	30.00	0.8	-3.8	5.8	0.305	0.813	0.087	0.085	0.026	0.025
5	50.00	0.7	-4.2	6.2	0.328	0.866	0.072	0.072	0.020	0.020
6	70.00	1.5	-3.4	8.8	0.313	0.844	0.105	0.103	0.026	0.026
7	85.00	2.9	-1.7	8.2	0.241	0.830	0.138	0.138	0.030	0.030
8	90.00	3.5	-0.9	7.1	0.192	0.835	0.141	0.141	0.029	0.029
9	95.00	4.9	0.7	5.8	0.125	0.845	0.143	0.143	0.027	0.027

TABLE VII - Continued.

(t) 110 Percent of design speed, reading 2966

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	-0.1	22.2	49.4	40.2	289.6	1.073	10.08	1.242
2	24.046	24.110	-0.1	21.9	48.1	38.8	289.3	1.071	10.13	1.245
3	23.363	23.462	-0.1	22.5	47.2	37.7	288.9	1.071	10.13	1.239
4	21.288	21.521	-0.1	24.6	43.9	32.2	287.8	1.070	10.14	1.233
5	18.456	18.933	-0.1	28.2	40.1	23.0	287.6	1.067	10.14	1.227
6	15.507	16.347	-0.1	32.3	36.6	10.7	287.6	1.069	10.14	1.231
7	13.188	14.407	-0.1	35.4	33.9	-0.6	287.7	1.073	10.14	1.237
8	12.382	13.759	-0.1	35.8	33.0	-3.5	287.8	1.072	10.14	1.232
9	11.560	13.114	-0.1	36.2	32.8	-5.6	288.0	1.067	10.12	1.221

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	211.2	212.0	324.4	257.0	211.2	196.3	-0.3	80.3	245.9	246.2
2	213.9	213.5	320.5	254.2	213.9	198.1	-0.3	79.7	238.4	239.0
3	214.4	211.8	315.8	247.4	214.4	195.6	-0.3	81.2	231.6	232.5
4	219.8	216.3	305.0	232.4	219.8	196.7	-0.3	89.9	211.2	213.5
5	217.7	222.0	284.7	212.5	217.7	195.6	-0.3	104.9	183.2	187.9
6	208.0	234.1	259.0	201.4	208.0	197.9	-0.2	125.1	154.0	162.4
7	194.6	249.8	234.4	203.6	194.6	203.6	-0.2	144.8	130.5	142.5
8	189.0	254.4	225.5	206.7	189.0	206.3	-0.2	148.9	122.8	136.4
9	178.0	254.7	211.8	206.6	178.0	205.6	-0.2	150.2	114.7	130.1

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.644	0.623	0.990	0.755	0.644	0.576	0.929	1.377
2	0.654	0.629	0.979	0.748	0.654	0.583	0.926	1.346
3	0.656	0.624	0.966	0.728	0.656	0.576	0.913	1.324
4	0.675	0.640	0.937	0.687	0.675	0.582	0.895	1.262
5	0.668	0.659	0.874	0.631	0.668	0.581	0.899	1.181
6	0.636	0.698	0.792	0.600	0.636	0.590	0.951	1.084
7	0.592	0.748	0.713	0.609	0.592	0.609	1.046	0.999
8	0.574	0.764	0.685	0.620	0.574	0.619	1.091	0.964
9	0.538	0.766	0.640	0.621	0.538	0.618	1.155	0.917

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN		MEAN	SS				TOT	PROF	TOT	PROF
1	5.00		2.6	-1.8	3.1	0.310	0.868	0.067	0.055	0.021	0.017
2	10.00		2.1	-2.3	3.2	0.306	0.903	0.049	0.040	0.015	0.012
3	15.00		1.9	-2.5	3.9	0.317	0.893	0.055	0.048	0.017	0.015
4	30.00		1.0	-3.6	4.5	0.343	0.880	0.063	0.061	0.019	0.018
5	50.00		1.1	-3.8	6.2	0.369	0.897	0.058	0.058	0.017	0.017
6	70.00		2.1	-2.9	8.4	0.351	0.885	0.078	0.078	0.020	0.020
7	85.00		3.4	-1.2	7.7	0.274	0.853	0.123	0.123	0.027	0.027
8	90.00		4.0	-0.4	6.7	0.227	0.853	0.130	0.130	0.027	0.027
9	95.00		5.4	1.3	5.2	0.170	0.870	0.120	0.120	0.023	0.023

TABLE VII. - Continued.

(u) 110 Percent of design speed; reading 2949

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	0.7	26.8	50.6	39.9	289.3	1.082	10.08	1.279
2	24.046	24.110	0.5	25.8	49.4	38.7	289.0	1.080	10.13	1.280
3	23.363	23.462	0.7	25.8	48.5	37.5	288.6	1.079	10.13	1.278
4	21.288	21.521	1.1	28.3	45.1	31.8	287.9	1.076	10.14	1.267
5	18.456	18.933	1.2	31.5	41.2	22.6	287.8	1.071	10.14	1.251
6	15.507	16.347	1.3	35.7	37.6	10.1	287.8	1.072	10.14	1.243
7	13.188	14.407	1.2	37.9	35.0	-0.8	287.8	1.073	10.14	1.247
8	12.382	13.759	1.0	38.1	34.1	-3.6	287.9	1.070	10.15	1.238
9	11.560	13.114	1.1	38.6	33.9	-6.0	287.9	1.067	10.12	1.227

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	199.9	205.6	315.2	239.4	199.8	185.5	2.3	92.6	246.0	246.3
2	203.2	207.5	312.4	239.2	203.2	186.8	1.9	90.3	239.2	239.8
3	203.5	207.1	307.1	234.9	203.5	186.3	2.4	90.3	232.4	233.4
4	207.7	210.3	294.0	217.8	207.7	185.2	3.9	99.7	212.0	214.3
5	204.0	214.0	271.2	197.6	203.9	182.4	4.4	111.9	183.2	187.9
6	194.7	223.1	245.6	184.1	194.6	181.2	4.3	130.2	154.1	162.5
7	182.6	238.0	222.8	187.8	182.6	187.8	3.7	146.2	131.4	143.5
8	177.2	241.0	214.0	190.0	177.1	189.6	3.1	148.8	123.2	136.9
9	166.6	241.5	200.6	189.8	166.6	188.8	3.3	150.6	115.2	130.7

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.607	0.600	0.958	0.699	0.607	0.536	0.918	1.375
2	0.619	0.607	0.951	0.700	0.619	0.547	0.919	1.350
3	0.620	0.606	0.936	0.688	0.620	0.546	0.916	1.324
4	0.635	0.619	0.899	0.641	0.635	0.545	0.892	1.247
5	0.623	0.632	0.828	0.583	0.622	0.539	0.894	1.150
6	0.592	0.661	0.747	0.545	0.592	0.537	0.931	1.050
7	0.553	0.709	0.675	0.559	0.553	0.559	1.029	0.970
8	0.536	0.720	0.647	0.567	0.536	0.566	1.070	0.936
9	0.502	0.722	0.605	0.568	0.502	0.565	1.133	0.888

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	TOT				PROF	TOT	PROF	
1	5.00	3.9	-0.5	2.8	0.358	0.890	0.065	0.055	0.020	0.017	
2	10.00	3.3	-1.0	3.1	0.347	0.913	0.051	0.043	0.016	0.013	
3	15.00	3.1	-1.3	3.7	0.346	0.915	0.050	0.045	0.015	0.014	
4	30.00	2.2	-2.4	4.1	0.375	0.924	0.046	0.045	0.014	0.014	
5	50.00	2.2	-2.7	5.8	0.395	0.932	0.044	0.044	0.012	0.012	
6	70.00	3.1	-1.8	7.9	0.387	0.888	0.085	0.085	0.022	0.022	
7	85.00	4.4	-0.2	7.6	0.304	0.895	0.095	0.095	0.021	0.021	
8	90.00	5.1	0.7	6.6	0.261	0.899	0.095	0.095	0.020	0.020	
9	95.00	6.5	2.3	4.8	0.205	0.892	0.110	0.110	0.021	0.021	

TABLE VII - Continued.

(v) 110 Percent of design speed; reading 2950

RP	RADI I		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	0.3	31.8	52.9	40.0	289.3	1.091	10.08	1.297
2	24.046	24.110	0.5	30.4	51.7	38.6	289.0	1.089	10.13	1.305
3	23.363	23.462	0.4	29.8	50.8	37.5	288.6	1.087	10.14	1.300
4	21.288	21.521	0.8	31.6	47.4	31.9	287.8	1.081	10.14	1.284
5	18.456	18.933	1.2	35.0	43.3	22.7	287.8	1.074	10.14	1.261
6	15.507	16.347	1.1	37.9	39.4	10.0	287.8	1.073	10.13	1.252
7	13.188	14.407	1.0	40.1	36.9	-1.3	287.8	1.072	10.14	1.250
8	12.382	13.759	1.3	40.5	35.7	-4.5	288.0	1.071	10.15	1.243
9	11.560	13.114	1.3	40.1	35.5	-6.1	288.1	1.068	10.12	1.230

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	184.7	197.9	306.2	219.7	184.7	168.2	1.1	104.4	245.4	245.7
2	187.4	200.8	302.5	221.5	187.3	173.1	1.8	101.7	239.2	239.9
3	188.2	200.6	297.9	219.3	188.2	174.0	1.3	99.8	232.3	233.2
4	192.0	202.9	283.5	203.6	192.0	172.9	2.8	106.2	211.5	213.8
5	191.2	206.0	262.6	182.9	191.2	168.8	3.9	118.2	183.9	188.6
6	183.3	216.3	237.3	173.4	183.3	170.7	3.6	132.7	154.3	162.7
7	171.1	229.0	213.9	175.3	171.1	175.3	2.9	147.4	131.3	143.5
8	165.9	232.5	204.4	177.4	165.9	176.9	3.8	150.9	123.2	136.9
9	156.6	232.2	192.3	178.5	156.6	177.5	3.5	149.7	115.1	130.6

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.558	0.574	0.926	0.637	0.558	0.488	0.911	1.401
2	0.567	0.583	0.916	0.644	0.567	0.503	0.924	1.372
3	0.570	0.584	0.903	0.638	0.570	0.506	0.924	1.350
4	0.583	0.594	0.862	0.596	0.583	0.506	0.900	1.265
5	0.581	0.606	0.798	0.538	0.581	0.496	0.883	1.165
6	0.555	0.638	0.719	0.512	0.555	0.504	0.932	1.056
7	0.516	0.680	0.645	0.520	0.516	0.520	1.024	0.970
8	0.500	0.691	0.616	0.528	0.500	0.526	1.066	0.924
9	0.470	0.691	0.578	0.531	0.470	0.528	1.134	0.880

RP	PERCENT SPAN	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
		MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	6.1	1.8	2.9	0.421	0.851	0.101	0.091	0.032	0.029
2	10.00	5.7	1.3	3.0	0.400	0.884	0.079	0.072	0.025	0.022
3	15.00	5.5	1.1	3.6	0.393	0.890	0.075	0.069	0.023	0.021
4	30.00	4.5	-0.1	4.2	0.412	0.909	0.062	0.062	0.019	0.019
5	50.00	4.2	-0.6	5.9	0.439	0.926	0.052	0.052	0.015	0.015
6	70.00	4.9	0.0	7.7	0.414	0.906	0.078	0.078	0.020	0.020
7	85.00	6.4	1.8	7.1	0.336	0.912	0.086	0.086	0.019	0.019
8	90.00	6.7	2.3	5.7	0.289	0.908	0.095	0.095	0.020	0.020
9	95.00	8.1	4.0	4.6	0.228	0.893	0.120	0.120	0.023	0.023

TABLE VII. - Continued.

(w) 110 Percent of design speed; reading 2951

RP	RADI I		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	0.1	35.2	55.3	40.8	289.2	1.096	10.09	1.305
2	24.046	24.110	0.5	33.1	53.9	39.3	289.0	1.094	10.13	1.309
3	23.363	23.462	0.5	32.6	53.1	38.2	288.5	1.091	10.13	1.307
4	21.288	21.521	0.9	34.6	49.8	33.1	288.0	1.083	10.14	1.284
5	18.456	18.933	0.9	37.6	45.9	23.3	287.9	1.077	10.14	1.266
6	15.507	16.347	0.9	40.0	42.1	10.0	287.8	1.075	10.14	1.261
7	13.188	14.407	1.0	42.2	39.2	-1.8	287.6	1.074	10.14	1.257
8	12.382	13.759	1.2	42.1	38.1	-4.7	289.2	1.067	10.15	1.249
9	11.560	13.114	1.1	41.9	38.0	-6.6	286.5	1.073	10.12	1.237

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	170.2	191.8	298.7	207.1	170.2	156.7	0.3	110.7	245.7	246.0
2	173.1	194.5	294.0	210.5	173.1	162.9	1.5	106.3	239.1	239.7
3	173.5	194.0	288.8	208.0	173.5	163.4	1.4	104.6	232.3	233.3
4	176.4	193.8	273.5	190.5	176.4	159.6	2.7	110.0	211.7	214.0
5	175.3	198.0	251.9	170.8	175.3	156.8	2.8	120.9	183.8	188.6
6	167.8	209.3	226.1	162.9	167.8	160.4	2.7	134.5	154.3	162.7
7	158.0	222.1	204.0	164.6	158.0	164.5	2.8	149.1	131.8	144.0
8	153.8	225.2	195.4	167.5	153.7	166.9	3.1	151.1	123.7	137.4
9	144.3	224.9	183.0	168.4	144.3	167.3	2.7	150.3	115.4	130.9

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.512	0.554	0.899	0.598	0.512	0.452	0.921	1.432
2	0.521	0.563	0.886	0.609	0.521	0.471	0.941	1.394
3	0.523	0.563	0.871	0.603	0.523	0.474	0.942	1.369
4	0.533	0.565	0.827	0.555	0.533	0.465	0.904	1.282
5	0.530	0.580	0.761	0.500	0.529	0.459	0.895	1.180
6	0.506	0.616	0.682	0.479	0.506	0.472	0.956	1.063
7	0.475	0.657	0.613	0.487	0.475	0.487	1.042	0.971
8	0.460	0.667	0.585	0.496	0.460	0.495	1.086	0.925
9	0.433	0.668	0.549	0.500	0.433	0.497	1.160	0.884

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	SS				TOT	PROF	TOT	PROF
1	5.00	8.5	4.1	3.7	0.458	0.822	0.131	0.121	0.041	0.037	
2	10.00	7.9	3.5	3.8	0.426	0.856	0.107	0.100	0.033	0.031	
3	15.00	7.7	3.3	4.4	0.419	0.875	0.092	0.088	0.028	0.027	
4	30.00	6.9	2.3	5.5	0.443	0.887	0.084	0.083	0.025	0.025	
5	50.00	6.9	2.0	6.5	0.468	0.906	0.074	0.074	0.021	0.021	
6	70.00	7.6	2.7	7.8	0.435	0.918	0.076	0.076	0.019	0.019	
7	85.00	8.7	4.1	6.6	0.358	0.912	0.096	0.096	0.021	0.021	
8	90.00	9.1	4.7	5.5	0.308	0.983	0.019	0.019	0.004	0.004	
9	95.00	10.6	6.5	4.2	0.245	0.856	0.187	0.187	0.036	0.036	

TABLE VII. - Continued.

(x) 110 Percent of design speed; reading 2953

RP	RADI I		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	-0.7	62.4	61.7	51.0	288.9	1.113	10.09	1.212
2	24.046	24.110	-0.2	53.4	60.3	44.2	288.7	1.107	10.13	1.215
3	23.363	23.462	-0.3	44.5	59.2	39.1	288.5	1.099	10.14	1.235
4	21.288	21.521	0.1	35.4	55.2	33.7	288.1	1.083	10.13	1.265
5	18.456	18.933	0.6	38.1	50.4	23.1	287.9	1.075	10.14	1.267
6	15.507	16.347	1.2	41.7	46.0	9.3	287.9	1.071	10.14	1.259
7	13.188	14.407	1.1	43.5	42.9	-2.8	287.9	1.069	10.14	1.258
8	12.382	13.759	1.2	43.3	41.9	-5.9	287.9	1.068	10.14	1.257
9	11.560	13.114	1.3	42.8	41.6	-7.1	288.0	1.065	10.13	1.240

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	132.3	167.6	279.2	123.6	132.3	77.8	-1.6	148.5	244.2	244.5
2	136.3	172.5	274.7	143.5	136.3	102.8	-0.4	138.5	238.0	238.7
3	138.3	181.6	270.4	167.0	138.3	129.6	-0.7	127.2	231.6	232.6
4	146.1	189.5	256.0	185.7	146.1	154.5	0.3	109.8	210.6	212.9
5	149.9	196.8	235.2	168.3	149.9	154.8	1.6	121.4	182.8	187.5
6	145.4	205.3	209.2	155.3	145.4	153.3	3.1	136.5	153.4	161.7
7	137.6	218.2	187.9	158.4	137.6	158.2	2.7	150.3	130.6	142.7
8	133.4	223.1	179.2	163.2	133.4	162.4	2.9	153.0	122.5	136.1
9	125.9	221.5	168.3	163.8	125.9	162.5	3.0	150.4	114.6	130.1

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.394	0.477	0.832	0.352	0.394	0.221	0.588	1.508
2	0.407	0.493	0.820	0.410	0.407	0.294	0.754	1.466
3	0.413	0.522	0.808	0.480	0.413	0.373	0.937	1.438
4	0.437	0.551	0.767	0.540	0.437	0.449	1.058	1.329
5	0.450	0.576	0.705	0.493	0.450	0.453	1.033	1.200
6	0.436	0.604	0.627	0.457	0.436	0.451	1.054	1.059
7	0.412	0.646	0.562	0.469	0.411	0.468	1.150	0.959
8	0.398	0.662	0.535	0.484	0.398	0.482	1.217	0.915
9	0.375	0.658	0.502	0.486	0.375	0.483	1.291	0.868

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	SS				TOT	PROF	TOT	PROF
1	5.00	14.9	10.6	13.9	0.778	0.500	0.457	0.444	0.118	0.114	
2	10.00	14.2	9.8	8.7	0.680	0.536	0.415	0.407	0.119	0.116	
3	15.00	13.9	9.5	5.3	0.566	0.630	0.321	0.315	0.097	0.095	
4	30.00	12.3	7.7	6.1	0.427	0.842	0.129	0.129	0.038	0.038	
5	50.00	11.3	6.5	6.3	0.443	0.936	0.055	0.055	0.016	0.016	
6	70.00	11.5	6.5	7.1	0.427	0.959	0.042	0.042	0.011	0.011	
7	85.00	12.4	7.8	5.6	0.338	0.979	0.025	0.025	0.005	0.005	
8	90.00	12.9	8.5	4.3	0.272	0.988	0.015	0.015	0.003	0.003	
9	95.00	14.2	10.1	3.6	0.207	0.973	0.037	0.037	0.007	0.007	

TABLE VII. - Continued.

(y) 120 Percent of design speed; reading 2968

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	-0.1	25.7	50.4	41.3	289.7	1.093	10.07	1.274
2	24.046	24.110	-0.1	24.7	49.2	39.5	289.3	1.093	10.13	1.289
3	23.363	23.462	-0.1	24.9	48.3	38.3	288.9	1.091	10.13	1.292
4	21.288	21.521	-0.1	27.3	44.8	32.1	287.9	1.089	10.14	1.289
5	18.456	18.933	-0.1	30.4	40.8	22.6	287.6	1.084	10.14	1.284
6	15.507	16.347	-0.1	33.4	37.2	11.5	287.5	1.082	10.14	1.268
7	13.188	14.407	-0.1	36.4	34.7	0.1	287.6	1.084	10.14	1.273
8	12.382	13.759	-0.1	36.9	33.8	-3.4	287.8	1.086	10.15	1.276
9	11.560	13.114	-0.1	37.0	33.6	-5.4	287.9	1.082	10.12	1.264

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	221.1	218.1	347.0	261.8	221.1	196.6	-0.3	94.6	267.2	267.5
2	224.8	223.0	343.8	262.7	224.8	202.6	-0.3	93.3	259.9	260.6
3	226.0	223.5	339.5	258.4	226.0	202.8	-0.3	94.0	253.1	254.1
4	232.8	229.3	327.8	240.6	232.8	203.8	-0.3	105.0	230.5	233.0
5	232.0	237.2	306.5	221.6	232.0	204.6	-0.3	120.0	200.0	205.2
6	220.8	244.8	277.2	208.4	220.8	204.3	-0.3	134.9	167.3	176.4
7	206.3	261.4	250.8	210.4	206.3	210.4	-0.2	155.2	142.4	155.6
8	200.5	269.7	241.3	216.2	200.5	215.8	-0.2	161.8	134.0	148.9
9	188.6	270.4	226.5	217.1	188.6	216.1	-0.2	162.6	125.3	142.2

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.677	0.636	1.063	0.763	0.677	0.573	0.889	1.452
2	0.690	0.652	1.055	0.768	0.690	0.592	0.901	1.430
3	0.695	0.654	1.043	0.757	0.695	0.594	0.897	1.421
4	0.719	0.675	1.012	0.708	0.719	0.600	0.875	1.379
5	0.716	0.703	0.947	0.657	0.716	0.606	0.882	1.302
6	0.679	0.728	0.852	0.620	0.679	0.608	0.925	1.186
7	0.631	0.783	0.767	0.630	0.631	0.630	1.019	1.094
8	0.611	0.809	0.736	0.649	0.611	0.648	1.076	1.055
9	0.572	0.813	0.687	0.653	0.572	0.650	1.146	1.004

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF.		LOSS PARAM	
	SPAN	MEAN	SS	TOT				PROF.	TOT	PROF.	
1	5.00	3.6	-0.7	4.2	0.358	0.770	0.131	0.104	0.040	0.032	
2	10.00	3.1	-1.3	4.0	0.345	0.814	0.107	0.084	0.033	0.026	
3	15.00	2.9	-1.5	4.5	0.347	0.834	0.096	0.074	0.029	0.023	
4	30.00	1.9	-2.7	4.5	0.380	0.848	0.090	0.076	0.027	0.023	
5	50.00	1.8	-3.1	5.8	0.399	0.886	0.070	0.066	0.020	0.019	
6	70.00	2.7	-2.2	9.2	0.378	0.859	0.099	0.099	0.025	0.025	
7	85.00	4.1	-0.5	8.5	0.304	0.853	0.125	0.125	0.027	0.027	
8	90.00	4.8	0.4	6.8	0.250	0.841	0.147	0.147	0.030	0.030	
9	95.00	6.3	2.1	5.4	0.189	0.842	0.157	0.157	0.030	0.030	

TABLE VII. - Continued.

(z) 120 Percent of design speed; reading 2954

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	0.2	29.7	50.5	40.3	289.4	1.095	10.06	1.321
2	24.046	24.110	0.6	27.3	49.0	39.0	289.0	1.095	10.13	1.332
3	23.363	23.462	0.7	28.0	48.0	37.3	288.5	1.093	10.13	1.336
4	21.288	21.521	1.0	29.1	44.4	31.4	288.0	1.087	10.14	1.329
5	18.456	18.933	1.1	32.7	40.4	22.1	287.9	1.081	10.15	1.304
6	15.507	16.347	1.0	35.4	37.1	10.5	287.7	1.081	10.14	1.296
7	13.188	14.407	1.2	37.8	34.5	-0.4	287.6	1.082	10.15	1.295
8	12.382	13.759	1.1	38.3	33.6	-3.8	287.7	1.081	10.15	1.284
9	11.560	13.114	1.1	38.5	33.5	-5.8	287.7	1.077	10.12	1.270

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	218.8	216.8	344.2	246.9	218.8	188.4	0.8	107.3	266.6	266.9
2	223.9	221.3	341.4	252.9	223.9	196.6	2.3	101.6	260.1	260.8
3	224.5	221.8	335.6	246.2	224.5	195.9	2.6	104.0	252.0	253.1
4	230.8	227.8	322.9	233.1	230.8	199.0	3.9	110.7	229.6	232.2
5	228.6	231.4	300.2	210.1	228.6	194.7	4.3	125.0	198.9	204.0
6	216.8	242.0	271.7	200.5	216.7	197.2	3.8	140.3	167.6	176.7
7	201.6	256.8	244.6	203.0	201.6	203.0	4.1	157.3	142.6	155.7
8	195.3	261.0	234.5	205.1	195.3	204.7	3.6	161.9	133.4	148.2
9	183.1	260.3	219.5	204.8	183.1	203.8	3.4	162.0	124.5	141.2

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.670	0.631	1.054	0.719	0.670	0.549	0.861	1.451
2	0.687	0.646	1.048	0.739	0.687	0.574	0.878	1.422
3	0.690	0.649	1.031	0.720	0.690	0.573	0.873	1.407
4	0.712	0.670	0.996	0.686	0.712	0.586	0.862	1.358
5	0.705	0.684	0.925	0.622	0.705	0.576	0.852	1.259
6	0.665	0.719	0.834	0.596	0.665	0.586	0.910	1.157
7	0.615	0.768	0.746	0.607	0.615	0.607	1.007	1.060
8	0.594	0.782	0.714	0.615	0.594	0.613	1.048	1.019
9	0.555	0.782	0.665	0.615	0.555	0.612	1.113	0.967

RP	PERCENT SPAN	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
		MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	3.7	-0.6	3.1	0.410	0.869	0.078	0.052	0.024	0.016
2	10.00	2.9	-1.4	3.4	0.375	0.902	0.059	0.037	0.018	0.011
3	15.00	2.7	-1.7	3.4	0.384	0.932	0.041	0.022	0.013	0.007
4	30.00	1.5	-3.1	3.7	0.396	0.971	0.017	0.006	0.005	0.002
5	50.00	1.4	-3.5	5.3	0.425	0.973	0.017	0.015	0.005	0.004
6	70.00	2.6	-2.3	8.2	0.396	0.955	0.033	0.033	0.008	0.008
7	85.00	4.0	-0.6	8.0	0.315	0.927	0.064	0.064	0.014	0.014
8	90.00	4.6	0.2	6.3	0.272	0.914	0.080	0.080	0.017	0.017
9	95.00	6.1	1.9	4.9	0.215	0.923	0.076	0.076	0.015	0.015

TABLE VII. - Continued.

(aa) 120 Percent of design speed; reading 2955

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	0.3	32.9	52.3	39.8	289.2	1.107	10.08	1.365
2	24.046	24.110	0.8	31.4	50.9	38.2	288.7	1.106	10.13	1.370
3	23.363	23.462	0.5	31.4	50.0	37.3	288.5	1.102	10.14	1.363
4	21.288	21.521	1.0	32.1	46.3	31.3	287.9	1.093	10.14	1.350
5	18.456	18.933	1.0	34.8	42.2	22.3	287.7	1.085	10.14	1.319
6	15.507	16.347	0.9	37.4	38.6	10.5	288.2	1.080	10.14	1.300
7	13.188	14.407	1.0	39.8	35.9	-1.1	287.7	1.084	10.14	1.297
8	12.382	13.759	0.9	40.2	35.2	-4.3	287.7	1.081	10.14	1.288
9	11.560	13.114	1.1	40.3	34.9	-6.2	287.8	1.076	10.12	1.270

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	205.2	214.6	335.5	234.6	205.2	180.2	1.2	116.6	266.6	266.9
2	208.0	217.3	329.8	236.1	208.0	185.4	2.8	113.3	258.7	259.4
3	210.0	215.9	326.7	231.6	210.0	184.2	1.8	112.6	252.0	253.1
4	215.1	221.1	311.5	219.2	215.1	187.2	3.8	117.6	229.1	231.6
5	215.3	225.0	290.7	199.9	215.3	184.9	3.7	128.3	199.1	204.3
6	205.2	234.0	262.7	189.1	205.2	185.9	3.2	142.0	167.3	176.3
7	191.6	248.5	236.6	191.0	191.6	191.0	3.4	159.0	142.2	155.4
8	185.1	252.6	226.5	193.5	185.1	193.0	2.9	162.9	133.5	148.4
9	173.9	251.1	212.0	192.7	173.9	191.5	3.4	162.4	124.7	141.5

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.625	0.621	1.022	0.679	0.625	0.521	0.878	1.497
2	0.635	0.630	1.007	0.685	0.635	0.538	0.891	1.471
3	0.642	0.627	0.998	0.673	0.642	0.535	0.877	1.464
4	0.659	0.647	0.955	0.642	0.659	0.548	0.870	1.367
5	0.660	0.663	0.891	0.588	0.660	0.544	0.859	1.270
6	0.626	0.693	0.802	0.560	0.626	0.550	0.906	1.156
7	0.582	0.740	0.719	0.568	0.582	0.568	0.997	1.057
8	0.561	0.754	0.687	0.578	0.561	0.576	1.043	1.019
9	0.525	0.751	0.640	0.576	0.525	0.573	1.101	0.963

RP	PERCENT	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	5.5	1.2	2.7	0.442	0.870	0.089	0.060	0.028	0.019
2	10.00	4.8	0.4	2.7	0.418	0.891	0.076	0.052	0.024	0.016
3	15.00	4.6	0.2	3.5	0.423	0.908	0.063	0.041	0.019	0.013
4	30.00	3.4	-1.2	3.7	0.426	0.961	0.026	0.017	0.008	0.005
5	50.00	3.2	-1.7	5.5	0.446	0.963	0.025	0.024	0.007	0.007
6	70.00	4.1	-0.8	8.2	0.421	0.971	0.023	0.023	0.006	0.006
7	85.00	5.4	0.8	7.3	0.344	0.923	0.073	0.073	0.016	0.016
8	90.00	6.2	1.8	5.9	0.300	0.928	0.071	0.071	0.015	0.015
9	95.00	7.5	3.4	4.5	0.245	0.927	0.076	0.076	0.015	0.015

TABLE VII. - Continued.

(bb) 120 Percent of design speed; reading 2956

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	0.3	36.3	54.3	40.5	289.3	1.115	10.08	1.376
2	24.046	24.110	0.3	34.6	53.1	38.7	288.8	1.112	10.14	1.384
3	23.363	23.462	0.4	34.3	52.2	37.2	288.5	1.108	10.14	1.383
4	21.288	21.521	0.8	35.0	48.7	31.8	287.9	1.097	10.14	1.359
5	18.456	18.933	0.9	37.5	44.6	23.1	287.8	1.086	10.13	1.321
6	15.507	16.347	0.9	40.4	41.0	10.2	287.9	1.083	10.14	1.300
7	13.188	14.407	0.9	42.2	38.3	-1.5	287.7	1.081	10.14	1.296
8	12.382	13.759	1.1	42.3	37.2	-4.9	287.8	1.080	10.14	1.291
9	11.560	13.114	1.2	42.0	37.0	-6.2	287.9	1.076	10.12	1.272

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	191.1	208.3	327.1	220.7	191.1	167.8	1.0	123.5	266.5	266.8
2	194.7	212.4	324.1	223.8	194.7	174.8	0.9	120.8	259.9	260.6
3	194.5	212.4	317.0	220.3	194.5	175.5	1.3	119.6	251.6	252.7
4	199.1	214.6	301.7	206.7	199.1	175.8	2.7	123.1	229.4	231.9
5	198.3	215.3	278.5	185.7	198.2	170.8	3.2	131.1	198.7	203.9
6	188.2	223.7	249.3	173.1	188.2	170.4	3.1	144.9	166.6	175.7
7	176.3	238.0	224.7	176.4	176.3	176.3	2.8	159.9	142.1	155.3
8	170.8	242.8	214.5	180.3	170.8	179.7	3.3	163.3	133.2	148.0
9	161.1	241.0	201.6	180.3	161.0	179.2	3.5	161.1	124.8	141.6

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.579	0.599	0.991	0.634	0.579	0.482	0.878	1.544
2	0.591	0.613	0.984	0.646	0.591	0.505	0.898	1.519
3	0.591	0.615	0.963	0.637	0.591	0.508	0.903	1.483
4	0.607	0.625	0.919	0.603	0.606	0.512	0.883	1.390
5	0.604	0.631	0.848	0.544	0.604	0.501	0.861	1.277
6	0.571	0.659	0.757	0.510	0.571	0.502	0.905	1.151
7	0.533	0.706	0.679	0.523	0.533	0.523	1.000	1.054
8	0.515	0.722	0.647	0.536	0.515	0.534	1.052	1.005
9	0.485	0.717	0.607	0.537	0.484	0.533	1.113	0.955

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	TOT				PROF	TOT	PROF	
1	5.00	7.5	3.1	3.4	0.479	0.829	0.130	0.097	0.041	0.030	
2	10.00	7.0	2.6	3.1	0.457	0.871	0.097	0.069	0.030	0.021	
3	15.00	6.8	2.4	3.3	0.450	0.898	0.077	0.055	0.024	0.017	
4	30.00	5.8	1.2	4.1	0.457	0.944	0.041	0.033	0.012	0.010	
5	50.00	5.6	0.7	6.3	0.477	0.963	0.028	0.027	0.008	0.008	
6	70.00	6.5	1.6	8.0	0.457	0.939	0.052	0.052	0.013	0.013	
7	85.00	7.8	3.2	6.9	0.376	0.945	0.055	0.055	0.012	0.012	
8	90.00	8.2	3.8	5.3	0.322	0.941	0.063	0.063	0.013	0.013	
9	95.00	9.6	5.5	4.6	0.267	0.941	0.068	0.068	0.013	0.013	

TABLE VII. - Concluded.

(cc) 120 Percent of design speed; reading 2957

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	24.724	24.755	0.0	40.5	56.3	41.1	289.0	1.121	10.09	1.362
2	24.046	24.110	0.2	37.1	55.0	39.2	288.9	1.115	10.13	1.371
3	23.363	23.462	0.3	36.0	54.1	38.5	288.4	1.109	10.13	1.363
4	21.288	21.521	0.8	36.8	50.7	32.9	287.9	1.098	10.13	1.350
5	18.456	18.933	0.9	39.4	46.8	23.6	288.0	1.089	10.14	1.316
6	15.507	16.347	1.1	41.9	42.9	10.1	287.8	1.085	10.14	1.306
7	13.188	14.407	1.1	43.0	40.0	-2.1	287.8	1.084	10.14	1.306
8	12.382	13.759	1.1	42.9	39.2	-5.4	287.9	1.082	10.14	1.301
9	11.560	13.114	0.9	42.5	38.9	-6.5	287.9	1.075	10.12	1.276

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	177.7	203.4	320.3	205.2	177.7	154.7	0.0	132.1	266.5	266.8
2	180.7	207.2	315.5	213.3	180.7	165.2	0.7	125.1	259.3	260.0
3	181.5	205.3	309.5	212.2	181.5	166.2	0.8	120.6	251.5	252.6
4	186.0	208.1	293.5	198.4	186.0	166.7	2.7	124.6	229.8	232.3
5	184.2	208.9	269.0	176.6	184.2	161.4	3.0	132.6	199.0	204.2
6	176.2	220.2	240.5	166.6	176.1	164.0	3.3	147.0	167.1	176.1
7	165.6	237.2	216.1	173.7	165.6	173.6	3.1	161.6	142.1	155.2
8	160.5	242.7	206.9	178.5	160.5	177.7	3.1	165.3	133.8	148.7
9	151.7	239.3	194.9	177.5	151.6	176.4	2.4	161.8	124.8	141.5

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.536	0.583	0.967	0.588	0.536	0.443	0.871	1.573
2	0.546	0.596	0.953	0.613	0.546	0.475	0.914	1.535
3	0.549	0.592	0.936	0.612	0.549	0.480	0.916	1.503
4	0.564	0.605	0.890	0.577	0.564	0.484	0.896	1.406
5	0.558	0.610	0.815	0.516	0.558	0.471	0.877	1.287
6	0.533	0.647	0.727	0.490	0.532	0.482	0.931	1.153
7	0.499	0.702	0.651	0.514	0.499	0.514	1.048	1.048
8	0.483	0.721	0.622	0.530	0.483	0.528	1.107	1.006
9	0.455	0.712	0.585	0.528	0.455	0.525	1.163	0.959

RP	PERCENT	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	9.5	5.2	3.9	0.528	0.766	0.189	0.154	0.058	0.048
2	10.00	9.0	4.6	3.7	0.482	0.821	0.143	0.116	0.044	0.036
3	15.00	8.8	4.3	4.6	0.465	0.847	0.120	0.099	0.036	0.030
4	30.00	7.8	3.2	5.2	0.472	0.915	0.066	0.058	0.020	0.017
5	50.00	7.7	2.9	7.1	0.494	0.919	0.066	0.065	0.019	0.018
6	70.00	8.4	3.5	7.8	0.467	0.932	0.063	0.063	0.016	0.016
7	85.00	9.5	4.9	6.3	0.365	0.944	0.063	0.063	0.014	0.014
8	90.00	10.1	5.7	4.8	0.308	0.951	0.058	0.058	0.012	0.012
9	95.00	11.5	7.4	4.2	0.257	0.959	0.050	0.050	0.010	0.010

TABLE VIII. - BLADE-ELEMENT DATA AT BLADE EDGES FOR STATOR 54

(a) 80 Percent of design speed; reading 2960

RP	RADI I		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	15.7	4.1	15.7	4.1	298.6	0.999	11.15	0.967
2	24.724	24.735	15.6	3.5	15.6	3.5	298.4	0.999	11.19	0.987
3	24.140	24.155	16.1	3.2	16.1	3.2	298.1	1.000	11.20	0.991
4	22.410	22.433	18.2	3.5	18.2	3.5	297.5	1.000	11.23	0.993
5	20.152	20.188	22.1	3.0	22.1	3.0	297.6	1.001	11.31	0.994
6	17.960	18.021	25.7	2.4	25.7	2.4	298.1	1.002	11.38	0.998
7	16.375	16.452	28.2	2.9	28.2	2.9	298.8	1.002	11.43	0.999
8	15.860	15.923	28.8	3.8	28.8	3.8	298.4	1.004	11.40	0.998
9	15.349	15.390	28.9	5.9	28.9	5.9	297.9	1.004	11.32	0.985

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	173.2	149.2	173.2	149.2	166.8	148.9	46.8	10.6	0.	0.
2	173.8	158.1	173.8	158.1	167.4	157.8	46.7	9.8	0.	0.
3	173.5	158.2	173.5	158.2	166.6	158.0	48.2	8.8	0.	0.
4	178.5	162.2	178.5	162.2	169.5	161.9	55.9	9.9	0.	0.
5	184.8	168.4	184.8	168.4	171.2	168.2	69.4	8.7	0.	0.
6	191.7	176.0	191.7	176.0	172.7	175.8	83.2	7.4	0.	0.
7	196.4	181.1	196.4	181.1	173.1	180.8	92.8	9.2	0.	0.
8	196.1	181.0	196.1	181.0	171.9	180.6	94.3	12.1	0.	0.
9	193.2	173.9	193.2	173.9	169.1	173.0	93.4	17.8	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.513	0.439	0.513	0.439	0.494	0.438	0.892	0.629
2	0.515	0.467	0.515	0.467	0.496	0.466	0.943	0.627
3	0.514	0.467	0.514	0.467	0.494	0.466	0.948	0.636
4	0.530	0.480	0.530	0.480	0.504	0.479	0.955	0.686
5	0.550	0.499	0.550	0.499	0.510	0.498	0.982	0.751
6	0.572	0.521	0.572	0.521	0.515	0.521	1.018	0.777
7	0.586	0.537	0.586	0.537	0.516	0.536	1.045	0.784
8	0.586	0.537	0.586	0.537	0.513	0.535	1.050	0.779
9	0.577	0.515	0.577	0.515	0.505	0.512	1.023	0.759

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	SS				TOT	PROF	TOT	PROF
1	5.00	2.5	-3.2	6.7	0.241	0.	0.198	0.198	0.096	0.096	
2	10.00	2.1	-3.5	6.2	0.192	0.	0.081	0.081	0.038	0.038	
3	15.00	2.4	-3.1	6.0	0.194	0.	0.053	0.053	0.025	0.025	
4	30.00	1.8	-3.5	6.7	0.202	0.	0.042	0.042	0.018	0.018	
5	50.00	0.9	-4.3	7.1	0.216	0.	0.030	0.030	0.012	0.012	
6	70.00	-0.5	-5.5	7.8	0.219	0.	0.009	0.009	0.003	0.003	
7	85.00	-1.1	-5.8	9.1	0.213	0.	0.006	0.006	0.002	0.002	
8	90.00	-0.8	-5.3	10.1	0.205	0.	0.009	0.009	0.003	0.003	
9	95.00	-0.3	-4.7	12.0	0.216	0.	0.074	0.074	0.022	0.022	

TABLE VIII - Continued.

(b) 80 Percent of design speed; reading 2944

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	21.4	5.4	21.4	5.4	300.2	1.001	11.37	0.972
2	24.724	24.735	21.0	4.8	21.0	4.8	299.6	1.001	11.40	0.987
3	24.140	24.155	21.2	4.1	21.2	4.1	299.3	1.000	11.41	0.991
4	22.410	22.433	23.2	3.7	23.2	3.7	298.5	1.001	11.42	0.992
5	20.152	20.188	26.4	3.5	26.4	3.5	298.2	1.002	11.41	0.997
6	17.960	18.021	29.4	3.4	29.4	3.4	298.2	1.003	11.42	0.999
7	16.375	16.452	31.5	3.8	31.5	3.8	298.4	1.002	11.44	0.995
8	15.860	15.923	32.2	4.8	32.2	4.8	298.2	1.001	11.41	0.987
9	15.349	15.390	32.1	6.7	32.1	6.7	297.7	1.001	11.34	0.975

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	160.8	136.7	160.8	136.7	149.7	136.1	58.6	12.8	0.	0.
2	161.0	144.3	161.0	144.3	150.3	143.8	57.7	12.0	0.	0.
3	160.8	144.5	160.8	144.5	149.9	144.1	58.2	10.3	0.	0.
4	165.1	147.3	165.1	147.3	151.8	147.0	65.0	9.5	0.	0.
5	168.2	150.8	168.2	150.8	150.6	150.5	74.7	9.3	0.	0.
6	173.1	154.6	173.1	154.6	150.8	154.3	84.9	9.1	0.	0.
7	177.7	155.2	177.7	155.2	151.5	154.9	92.9	10.2	0.	0.
8	177.4	150.0	177.4	150.0	150.1	149.5	94.5	12.7	0.	0.
9	175.4	141.2	175.4	141.2	148.6	140.3	93.2	16.5	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.473	0.400	0.473	0.400	0.440	0.398	0.909	0.678
2	0.474	0.423	0.474	0.423	0.443	0.422	0.957	0.671
3	0.474	0.424	0.474	0.424	0.442	0.423	0.961	0.673
4	0.488	0.433	0.488	0.433	0.449	0.432	0.968	0.716
5	0.498	0.444	0.498	0.444	0.446	0.443	0.999	0.753
6	0.513	0.455	0.513	0.455	0.447	0.454	1.023	0.763
7	0.527	0.457	0.527	0.457	0.450	0.456	1.022	0.766
8	0.527	0.442	0.527	0.442	0.446	0.440	0.996	0.763
9	0.521	0.415	0.521	0.415	0.441	0.412	0.944	0.744

RP	PERCENT SPAN	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
		MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	8.2	2.5	8.0	0.289	0.	0.195	0.195	0.095	0.095
2	10.00	7.5	1.9	7.5	0.239	0.	0.090	0.090	0.043	0.043
3	15.00	7.4	1.9	6.9	0.240	0.	0.066	0.066	0.031	0.031
4	30.00	6.8	1.4	6.9	0.254	0.	0.050	0.050	0.022	0.022
5	50.00	5.2	0.0	7.6	0.255	0.	0.020	0.020	0.008	0.008
6	70.00	3.1	-1.8	8.8	0.259	0.	0.006	0.006	0.002	0.002
7	85.00	2.2	-2.5	10.0	0.274	0.	0.031	0.031	0.010	0.010
8	90.00	2.6	-1.9	11.1	0.295	0.	0.076	0.076	0.023	0.023
9	95.00	2.9	-1.5	12.9	0.324	0.	0.148	0.148	0.044	0.044

TABLE VIII. - Continued.

(c) 80 Percent of design speed; reading 2945

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	25.4	5.7	25.4	5.7	301.1	1.001	11.47	0.974
2	24.724	24.735	24.1	5.2	24.1	5.2	300.7	1.001	11.55	0.981
3	24.140	24.155	24.1	4.8	24.1	4.8	300.3	1.000	11.52	0.987
4	22.410	22.433	25.6	4.4	25.6	4.4	299.2	1.001	11.49	0.991
5	20.152	20.188	28.9	4.0	28.9	4.0	298.4	1.002	11.45	0.997
6	17.960	18.021	31.6	3.6	31.6	3.6	298.4	1.003	11.43	1.000
7	16.375	16.452	33.7	4.5	33.7	4.5	298.4	1.001	11.44	0.989
8	15.860	15.925	34.0	6.7	34.0	6.7	297.9	1.002	11.41	0.984
9	15.349	15.390	34.2	7.1	34.2	7.1	297.5	1.002	11.31	0.981

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	153.5	129.3	153.5	129.3	138.6	128.7	65.9	12.8	0.	0.
2	156.4	135.7	156.4	135.7	142.7	135.1	64.0	12.3	0.	0.
3	155.6	136.4	155.6	136.4	142.0	135.9	63.5	11.3	0.	0.
4	158.3	138.7	158.3	138.7	142.8	138.3	68.4	10.5	0.	0.
5	159.9	141.3	159.9	141.3	140.1	141.0	77.2	9.9	0.	0.
6	163.7	143.9	163.7	143.9	139.3	143.6	85.9	8.9	0.	0.
7	167.8	139.9	167.8	139.9	139.5	139.5	93.2	11.0	0.	0.
8	168.0	135.5	168.0	135.5	139.3	134.6	93.9	15.8	0.	0.
9	164.9	129.6	164.9	129.6	136.3	128.6	92.7	16.1	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.450	0.377	0.450	0.377	0.407	0.375	0.928	0.707
2	0.459	0.396	0.459	0.396	0.419	0.395	0.947	0.699
3	0.457	0.399	0.457	0.399	0.417	0.398	0.957	0.693
4	0.466	0.406	0.466	0.406	0.421	0.405	0.968	0.722
5	0.472	0.415	0.472	0.415	0.413	0.414	1.006	0.754
6	0.484	0.422	0.484	0.422	0.412	0.421	1.031	0.756
7	0.496	0.411	0.496	0.411	0.413	0.409	1.000	0.759
8	0.497	0.397	0.497	0.397	0.412	0.395	0.966	0.752
9	0.488	0.380	0.488	0.380	0.404	0.377	0.943	0.733

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	TOT				PROF	TOT	PROF	
1	5.00	12.2	6.5	8.3	0.327	0.	0.203	0.203	0.099	0.099	
2	10.00	10.7	5.1	7.9	0.290	0.	0.145	0.145	0.069	0.069	
3	15.00	10.3	4.8	7.5	0.279	0.	0.094	0.094	0.044	0.044	
4	30.00	9.2	3.8	7.6	0.282	0.	0.063	0.063	0.027	0.027	
5	50.00	7.6	2.5	8.1	0.280	0.	0.024	0.024	0.009	0.009	
6	70.00	5.4	0.5	9.0	0.284	0.	0.003	0.003	0.001	0.001	
7	85.00	4.4	-0.2	10.7	0.321	0.	0.071	0.071	0.022	0.022	
8	90.00	4.4	-0.1	13.0	0.336	0.	0.105	0.105	0.032	0.032	
9	95.00	5.0	0.6	13.3	0.352	0.	0.126	0.126	0.037	0.037	

TABLE VIII - Continued.

(d) 80 Percent of design speed; reading 2946

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	30.0	5.9	30.0	5.9	302.3	1.000	11.49	0.975
2	24.724	24.735	26.8	5.7	26.8	5.7	301.4	1.001	11.60	0.976
3	24.140	24.155	27.0	5.4	27.0	5.4	300.7	1.001	11.59	0.981
4	22.410	22.433	28.3	4.7	28.3	4.7	299.8	1.001	11.54	0.989
5	20.152	20.188	31.5	4.1	31.5	4.1	298.8	1.002	11.48	0.994
6	17.960	18.021	33.6	3.7	33.6	3.7	298.8	1.002	11.46	0.997
7	16.375	16.452	35.8	5.3	35.8	5.3	298.6	1.001	11.44	0.989
8	15.860	15.923	35.8	7.7	35.8	7.7	298.0	1.002	11.40	0.986
9	15.349	15.390	35.6	7.7	35.6	7.7	297.5	1.003	11.34	0.983

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	144.1	121.3	144.1	121.3	124.8	120.6	72.0	12.5	0.	0.
2	149.7	125.4	149.7	125.4	133.6	124.8	67.4	12.4	0.	0.
3	149.3	127.0	149.3	127.0	133.0	126.5	67.8	11.9	0.	0.
4	151.2	130.7	151.2	130.7	133.1	130.3	71.8	10.6	0.	0.
5	152.7	132.4	152.7	132.4	130.2	132.1	79.8	9.6	0.	0.
6	157.5	135.7	157.5	135.7	131.2	135.4	87.1	8.7	0.	0.
7	160.3	131.6	160.3	131.6	130.1	131.0	93.7	12.1	0.	0.
8	160.0	127.4	160.0	127.4	129.9	126.2	93.5	17.0	0.	0.
9	158.1	123.0	158.1	123.0	128.5	121.9	92.2	16.4	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.421	0.352	0.421	0.352	0.364	0.350	0.956	0.725
2	0.438	0.365	0.438	0.365	0.391	0.363	0.934	0.706
3	0.438	0.370	0.438	0.370	0.390	0.369	0.951	0.708
4	0.444	0.382	0.444	0.382	0.391	0.381	0.979	0.730
5	0.450	0.388	0.450	0.388	0.383	0.387	1.014	0.758
6	0.464	0.397	0.464	0.397	0.387	0.397	1.032	0.756
7	0.473	0.385	0.473	0.385	0.384	0.384	1.007	0.756
8	0.473	0.373	0.473	0.373	0.384	0.370	0.972	0.743
9	0.467	0.360	0.467	0.360	0.380	0.357	0.949	0.724

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	SS				TOT	PROF	TOT	PROF
1	5.00	16.8	11.1	8.5	0.360	0.	0.218	0.218	0.106	0.106	
2	10.00	13.3	7.7	8.4	0.338	0.	0.198	0.198	0.094	0.094	
3	15.00	13.2	7.7	8.2	0.324	0.	0.151	0.151	0.070	0.070	
4	30.00	11.9	6.6	7.9	0.311	0.	0.085	0.085	0.037	0.037	
5	50.00	10.3	5.2	8.2	0.312	0.	0.048	0.048	0.019	0.019	
6	70.00	7.3	2.4	9.1	0.311	0.	0.022	0.022	0.008	0.008	
7	85.00	6.4	1.8	11.5	0.340	0.	0.076	0.076	0.024	0.024	
8	90.00	6.2	1.7	13.9	0.350	0.	0.099	0.099	0.030	0.030	
9	95.00	6.5	2.1	13.9	0.364	0.	0.122	0.122	0.036	0.036	

TABLE VIII. - Continued.

(e) 80 Percent of design speed; reading 2947

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	44.1	6.9	44.1	6.9	305.2	0.996	11.42	0.972
2	24.724	24.735	34.1	6.8	34.1	6.8	303.1	0.999	11.55	0.965
3	24.140	24.155	31.7	6.0	31.7	6.0	302.0	1.000	11.59	0.965
4	22.410	22.433	31.5	5.7	31.5	5.7	300.2	1.001	11.56	0.982
5	20.152	20.188	34.0	4.7	34.0	4.7	299.1	1.003	11.48	0.994
6	17.960	18.021	36.5	3.7	36.5	3.7	299.0	1.000	11.48	0.994
7	16.375	16.452	37.4	5.9	37.4	5.9	298.6	1.001	11.47	0.992
8	15.860	15.923	37.4	8.0	37.4	8.0	298.3	1.001	11.45	0.984
9	15.349	15.390	37.0	7.9	37.0	7.9	297.7	1.002	11.33	0.985

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	130.2	107.2	130.2	107.2	93.5	106.5	90.7	12.8	0.	0.
2	138.9	109.0	138.9	109.0	115.0	108.2	77.8	13.0	0.	0.
3	142.5	110.4	142.5	110.4	121.2	109.8	74.9	11.6	0.	0.
4	144.5	121.0	144.5	121.0	123.2	120.4	75.5	12.1	0.	0.
5	145.4	126.7	145.4	126.7	120.5	126.2	81.4	10.3	0.	0.
6	150.4	127.6	150.4	127.6	120.9	127.3	89.4	8.3	0.	0.
7	154.6	127.3	154.6	127.3	122.8	126.7	93.9	13.1	0.	0.
8	155.7	121.7	155.7	121.7	123.6	120.5	94.6	17.0	0.	0.
9	152.0	116.4	152.0	116.4	121.4	115.2	91.4	16.0	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.377	0.310	0.377	0.310	0.271	0.308	1.139	0.843
2	0.404	0.316	0.404	0.316	0.335	0.313	0.941	0.753
3	0.416	0.320	0.416	0.320	0.354	0.318	0.906	0.739
4	0.423	0.352	0.423	0.352	0.361	0.351	0.977	0.741
5	0.427	0.370	0.427	0.370	0.354	0.369	1.048	0.757
6	0.442	0.373	0.442	0.373	0.356	0.372	1.053	0.764
7	0.455	0.372	0.455	0.372	0.362	0.370	1.032	0.753
8	0.459	0.356	0.459	0.356	0.365	0.352	0.975	0.747
9	0.448	0.340	0.448	0.340	0.358	0.337	0.949	0.714

RP	PERCENT SPAN	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
		MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	31.0	25.3	9.5	0.469	0.	0.304	0.304	0.148	0.148
2	10.00	20.6	15.0	9.5	0.438	0.	0.326	0.326	0.155	0.155
3	15.00	17.9	12.4	8.8	0.432	0.	0.310	0.310	0.144	0.144
4	30.00	15.1	9.8	8.9	0.353	0.	0.157	0.157	0.068	0.068
5	50.00	12.8	7.7	8.8	0.319	0.	0.049	0.049	0.019	0.019
6	70.00	10.2	5.3	9.1	0.338	0.	0.049	0.049	0.017	0.017
7	85.00	8.1	3.4	12.1	0.341	0.	0.062	0.062	0.020	0.020
8	90.00	7.9	3.4	14.3	0.371	0.	0.119	0.119	0.036	0.036
9	95.00	7.8	3.4	14.1	0.381	0.	0.119	0.119	0.035	0.035

TABLE VIII. - Continued.

(f) 80 Percent of design speed; reading 2948

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	64.1	6.4	64.1	6.4	307.3	0.992	11.37	0.969
2	24.724	24.735	54.6	6.8	54.6	6.8	305.6	0.995	11.34	0.973
3	24.140	24.155	45.9	6.9	45.9	6.9	304.0	0.997	11.38	0.970
4	22.410	22.433	34.0	6.6	34.0	6.6	301.2	1.001	11.54	0.970
5	20.152	20.188	34.9	5.2	34.9	5.2	299.6	1.002	11.51	0.990
6	17.960	18.021	37.5	4.2	37.5	4.2	299.3	1.000	11.51	0.990
7	16.375	16.452	38.3	6.4	38.3	6.4	299.0	1.000	11.50	0.991
8	15.860	15.923	38.1	8.5	38.1	8.5	298.3	1.001	11.47	0.982
9	15.349	15.390	38.2	7.9	38.2	7.9	297.4	1.003	11.32	0.986

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	124.9	101.6	124.9	101.6	54.6	101.0	112.4	11.4	0.	0.
2	126.7	101.9	126.7	101.9	73.4	101.2	103.3	12.0	0.	0.
3	133.0	102.1	133.0	102.1	92.9	101.4	95.5	12.2	0.	0.
4	143.6	110.7	143.6	110.7	119.0	110.0	80.3	12.6	0.	0.
5	145.2	123.6	145.2	123.6	119.1	123.1	83.1	11.3	0.	0.
6	150.1	124.8	150.1	124.8	119.1	124.4	91.3	9.2	0.	0.
7	154.1	126.1	154.1	126.1	121.0	125.3	95.4	14.0	0.	0.
8	154.2	119.1	154.2	119.1	121.3	117.8	95.2	17.7	0.	0.
9	148.6	113.1	148.6	113.1	116.9	112.1	91.8	15.5	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.360	0.293	0.360	0.293	0.157	0.291	1.850	1.135
2	0.366	0.294	0.366	0.294	0.212	0.292	1.379	0.980
3	0.386	0.295	0.386	0.295	0.269	0.293	1.096	0.887
4	0.420	0.321	0.420	0.321	0.348	0.319	0.924	0.771
5	0.426	0.361	0.426	0.361	0.349	0.359	1.034	0.768
6	0.441	0.365	0.441	0.365	0.350	0.364	1.045	0.777
7	0.454	0.369	0.454	0.369	0.356	0.366	1.036	0.763
8	0.455	0.348	0.455	0.348	0.358	0.344	0.971	0.751
9	0.438	0.330	0.438	0.330	0.344	0.327	0.959	0.716

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	TOT				PROF	TOT	PROF	
1	5.00	50.9	45.2	9.1	0.582	0.	0.356	0.356	0.173	0.173	
2	10.00	41.2	35.6	9.5	0.540	0.	0.306	0.306	0.145	0.145	
3	15.00	32.1	26.6	9.6	0.524	0.	0.309	0.309	0.143	0.143	
4	30.00	17.6	12.3	9.8	0.433	0.	0.262	0.262	0.113	0.113	
5	50.00	13.7	8.6	9.3	0.341	0.	0.082	0.082	0.032	0.032	
6	70.00	11.2	6.3	9.7	0.358	0.	0.079	0.079	0.027	0.027	
7	85.00	8.9	4.3	12.6	0.349	0.	0.071	0.071	0.022	0.022	
8	90.00	8.6	4.1	14.8	0.382	0.	0.133	0.133	0.040	0.040	
9	95.00	9.0	4.6	14.1	0.391	0.	0.116	0.116	0.034	0.034	

TABLE VIII - Continued.

(g) 90 Percent of design speed; reading 2974

RP	RAD II		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	9.2	2.3	9.2	2.3	297.5	1.000	10.70	0.957
2	24.724	24.735	8.8	2.0	8.8	2.0	297.3	1.001	10.81	0.978
3	24.140	24.155	9.9	2.0	9.9	2.0	297.3	1.002	10.87	0.983
4	22.410	22.433	12.9	3.3	12.9	3.3	298.1	1.003	11.11	0.985
5	20.152	20.188	17.2	2.8	17.2	2.8	299.9	0.999	11.42	0.983
6	17.960	18.021	21.5	2.6	21.5	2.6	301.5	1.001	11.65	0.986
7	16.375	16.452	24.7	4.0	24.7	4.0	302.2	1.007	11.75	0.982
8	15.860	15.923	25.7	4.3	25.7	4.3	302.0	1.009	11.72	0.983
9	15.349	15.390	26.1	5.1	26.1	5.1	301.7	1.009	11.60	0.979

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	209.5	204.4	209.5	204.4	206.8	204.2	33.5	8.4	0.	0.
2	212.8	212.1	212.8	212.1	210.3	212.0	32.5	7.6	0.	0.
3	214.2	212.5	214.2	212.5	211.0	212.4	36.7	7.5	0.	0.
4	228.1	223.3	228.1	223.3	222.3	223.0	50.8	12.8	0.	0.
5	243.7	234.4	243.7	234.4	232.8	234.1	72.1	11.5	0.	0.
6	252.5	246.5	252.5	246.5	234.9	246.2	92.6	11.4	0.	0.
7	254.3	253.4	254.3	253.4	231.1	252.8	106.2	17.5	0.	0.
8	252.0	254.9	252.0	254.9	227.0	254.2	109.4	19.0	0.	0.
9	245.4	253.9	245.4	253.9	220.3	252.9	108.1	22.7	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.629	0.613	0.629	0.613	0.621	0.613	0.987	0.629
2	0.640	0.638	0.640	0.638	0.633	0.638	1.008	0.640
3	0.645	0.639	0.645	0.639	0.635	0.638	1.006	0.645
4	0.690	0.673	0.690	0.673	0.672	0.672	1.003	0.730
5	0.740	0.709	0.740	0.709	0.706	0.708	1.005	0.874
6	0.767	0.746	0.767	0.746	0.714	0.745	1.048	0.923
7	0.772	0.766	0.772	0.766	0.702	0.764	1.094	0.931
8	0.765	0.770	0.765	0.770	0.689	0.768	1.120	0.931
9	0.743	0.768	0.743	0.768	0.667	0.765	1.148	0.901

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	TOT				PROF	TOT	PROF	
1	5.00	-4.0	-9.7	5.0	0.083	0.	0.183	0.183	0.089	0.089	
2	10.00	-4.7	-10.3	4.7	0.059	0.	0.092	0.092	0.044	0.044	
3	15.00	-3.9	-9.4	4.8	0.072	0.	0.071	0.071	0.033	0.033	
4	30.00	-3.5	-8.9	6.5	0.093	0.	0.056	0.056	0.024	0.024	
5	50.00	-4.0	-9.1	6.9	0.135	0.	0.055	0.055	0.022	0.022	
6	70.00	-4.8	-9.7	8.1	0.135	0.	0.044	0.044	0.015	0.015	
7	85.00	-4.6	-9.3	10.2	0.114	0.	0.054	0.054	0.017	0.017	
8	90.00	-3.8	-8.3	10.5	0.098	0.	0.052	0.052	0.016	0.016	
9	95.00	-3.0	-7.4	11.3	0.068	0.	0.068	0.068	0.020	0.020	

TABLE VIII. - Continued.

(h) 90 Percent of design speed; reading 2963

RP	RADI		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	10.7	2.7	10.7	2.7	298.9	0.999	10.92	0.957
2	24.724	24.735	10.9	2.2	10.9	2.2	298.6	0.999	11.03	0.982
3	24.140	24.155	11.3	2.3	11.3	2.3	298.4	0.999	11.07	0.988
4	22.410	22.433	13.9	3.0	13.9	3.0	298.8	0.999	11.27	0.987
5	20.152	20.188	18.3	2.4	18.3	2.4	299.4	1.000	11.47	0.988
6	17.960	18.021	22.3	1.7	22.3	1.7	301.1	1.002	11.65	0.995
7	16.375	16.452	25.4	2.7	25.4	2.7	301.8	1.007	11.69	1.007
8	15.860	15.923	26.1	3.4	26.1	3.4	301.6	1.009	11.69	1.010
9	15.349	15.390	26.5	5.4	26.5	5.4	301.2	1.009	11.62	0.985

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	207.6	189.6	207.6	189.6	204.0	189.4	38.6	9.0	0.	0.
2	211.0	200.1	211.0	200.1	207.1	199.9	40.1	7.6	0.	0.
3	212.5	201.2	212.5	201.2	208.4	201.0	41.5	8.0	0.	0.
4	224.4	209.1	224.4	209.1	217.8	208.8	54.1	10.9	0.	0.
5	235.4	218.8	235.4	218.8	223.5	218.6	73.9	9.1	0.	0.
6	243.6	231.9	243.6	231.9	225.5	231.8	92.3	7.0	0.	0.
7	245.3	243.5	245.3	243.5	221.6	243.3	105.2	11.6	0.	0.
8	244.1	244.8	244.1	244.8	219.3	244.4	107.3	14.7	0.	0.
9	239.4	236.2	239.4	236.2	214.3	235.1	106.8	22.0	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.622	0.565	0.622	0.565	0.611	0.564	0.929	0.622
2	0.633	0.598	0.633	0.598	0.622	0.598	0.965	0.633
3	0.638	0.602	0.638	0.602	0.626	0.601	0.965	0.638
4	0.677	0.627	0.677	0.627	0.657	0.626	0.959	0.756
5	0.712	0.658	0.712	0.658	0.676	0.657	0.978	0.873
6	0.738	0.698	0.738	0.698	0.683	0.697	1.028	0.909
7	0.742	0.733	0.742	0.733	0.671	0.732	1.098	0.916
8	0.739	0.737	0.739	0.737	0.663	0.736	1.114	0.909
9	0.723	0.709	0.723	0.709	0.647	0.706	1.097	0.887

RP	PERCENT SPAN		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	MEAN	SS	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	-2.5	-8.2	5.4	0.156	0.	0.186	0.186	0.091	0.091	
2	10.00	-2.5	-8.1	4.9	0.125	0.	0.078	0.078	0.037	0.037	
3	15.00	-2.5	-8.0	5.0	0.127	0.	0.050	0.050	0.023	0.023	
4	30.00	-2.5	-7.8	6.2	0.151	0.	0.048	0.048	0.021	0.021	
5	50.00	-2.9	-8.0	6.5	0.177	0.	0.043	0.043	0.017	0.017	
6	70.00	-4.0	-8.9	7.2	0.170	0.	0.016	0.016	0.006	0.006	
7	85.00	-3.9	-8.6	8.9	0.128	0.	-0.024	-0.024	-0.008	-0.008	
8	90.00	-3.5	-8.0	9.7	0.113	0.	-0.033	-0.033	-0.010	-0.010	
9	95.00	-2.7	-7.1	11.5	0.119	0.	0.049	0.049	0.015	0.015	

TABLE VIII - Continued.

(i) 90 Percent of design speed; reading 2964

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	16.3	4.4	16.3	4.4	301.5	0.999	11.42	0.963
2	24.724	24.735	16.3	3.9	16.3	3.9	301.2	0.999	11.51	0.983
3	24.140	24.155	16.3	3.4	16.3	3.4	300.8	0.999	11.54	0.986
4	22.410	22.433	18.1	3.5	18.1	3.5	300.5	0.999	11.56	0.990
5	20.152	20.188	22.2	3.1	22.2	3.1	300.5	1.000	11.63	0.992
6	17.960	18.021	25.4	2.5	25.4	2.5	301.0	1.003	11.73	0.999
7	16.375	16.452	28.4	2.9	28.4	2.9	302.0	1.003	11.79	0.999
8	15.860	15.923	28.7	3.9	28.7	3.9	301.4	1.004	11.71	1.000
9	15.349	15.390	29.1	5.7	29.1	5.7	301.1	1.003	11.64	0.979

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	193.7	168.2	193.7	168.2	185.9	167.7	54.4	12.9	0.	0.
2	196.2	178.4	196.2	178.4	188.4	178.0	54.9	12.1	0.	0.
3	197.0	178.0	197.0	178.0	189.1	177.7	55.3	10.6	0.	0.
4	202.8	182.3	202.8	182.3	192.7	182.0	63.1	11.1	0.	0.
5	209.1	188.6	209.1	188.6	193.6	188.4	78.9	10.2	0.	0.
6	216.4	198.3	216.4	198.3	195.4	198.1	92.9	8.5	0.	0.
7	221.1	204.5	221.1	204.5	194.6	204.3	105.0	10.5	0.	0.
8	219.9	203.9	219.9	203.9	192.9	203.4	105.7	13.9	0.	0.
9	217.2	195.0	217.2	195.0	189.7	194.0	105.6	19.2	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.574	0.495	0.574	0.495	0.551	0.494	0.902	0.718
2	0.583	0.527	0.583	0.527	0.560	0.526	0.945	0.726
3	0.586	0.526	0.586	0.526	0.562	0.526	0.940	0.728
4	0.605	0.540	0.605	0.540	0.575	0.539	0.944	0.779
5	0.625	0.560	0.625	0.560	0.579	0.559	0.973	0.855
6	0.648	0.589	0.648	0.589	0.585	0.588	1.014	0.874
7	0.662	0.608	0.662	0.608	0.583	0.607	1.050	0.889
8	0.659	0.606	0.659	0.606	0.578	0.604	1.055	0.876
9	0.650	0.578	0.650	0.578	0.568	0.575	1.023	0.861

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	TOT				PROF	TOT	PROF	
1	5.00	3.1	-2.6	7.0	0.236	0.	0.185	0.185	0.090	0.090	
2	10.00	2.8	-2.8	6.6	0.195	0.	0.084	0.084	0.040	0.040	
3	15.00	2.5	-3.0	6.2	0.202	0.	0.067	0.067	0.031	0.031	
4	30.00	1.7	-3.6	6.7	0.212	0.	0.047	0.047	0.020	0.020	
5	50.00	1.0	-4.2	7.2	0.226	0.	0.035	0.035	0.014	0.014	
6	70.00	-0.8	-5.7	7.9	0.219	0.	0.004	0.004	0.001	0.001	
7	85.00	-1.0	-5.6	9.2	0.210	0.	0.003	0.003	0.001	0.001	
8	90.00	-0.8	-5.3	10.2	0.201	0.	-0.000	-0.000	-0.000	-0.000	
9	95.00	-0.1	-4.5	11.8	0.220	0.	0.084	0.084	0.025	0.025	

TABLE VIII. - Continued.

(j) 90 Percent of design speed; reading 2972

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	21.3	5.7	21.3	5.7	303.8	1.000	11.75	0.961
2	24.724	24.735	20.6	5.3	20.6	5.3	303.2	1.000	11.80	0.980
3	24.140	24.155	20.6	4.6	20.6	4.6	302.8	0.999	11.77	0.987
4	22.410	22.433	22.7	4.1	22.7	4.1	301.8	1.000	11.77	0.990
5	20.152	20.188	25.6	3.7	25.6	3.7	301.2	1.001	11.76	0.993
6	17.960	18.021	29.0	3.4	29.0	3.4	301.5	1.003	11.80	0.999
7	16.375	16.452	31.2	3.6	31.2	3.6	301.9	1.001	11.81	0.995
8	15.860	15.923	31.6	4.8	31.6	4.8	301.8	0.999	11.78	0.985
9	15.349	15.390	32.0	6.4	32.0	6.4	301.0	0.999	11.67	0.968

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	183.7	154.9	183.7	154.9	171.2	154.2	66.7	15.3	0.	0.
2	185.8	163.9	185.8	163.9	173.9	163.2	65.4	15.1	0.	0.
3	184.6	164.2	184.6	164.2	172.8	163.7	65.0	13.1	0.	0.
4	188.8	167.0	188.8	167.0	174.3	166.6	72.8	11.9	0.	0.
5	193.8	171.0	193.8	171.0	174.8	170.6	83.8	11.1	0.	0.
6	199.6	178.2	199.6	178.2	174.6	177.8	96.6	10.5	0.	0.
7	203.7	179.8	203.7	179.8	174.2	179.5	105.5	11.3	0.	0.
8	204.2	174.7	204.2	174.7	174.0	174.1	106.9	14.5	0.	0.
9	200.3	162.5	200.3	162.5	169.9	161.5	106.1	18.0	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.541	0.452	0.541	0.452	0.504	0.450	0.901	0.773
2	0.548	0.480	0.548	0.480	0.513	0.478	0.939	0.769
3	0.545	0.482	0.545	0.482	0.510	0.480	0.947	0.762
4	0.559	0.491	0.559	0.491	0.516	0.490	0.956	0.810
5	0.575	0.504	0.575	0.504	0.519	0.503	0.976	0.855
6	0.593	0.525	0.593	0.525	0.519	0.524	1.019	0.873
7	0.606	0.530	0.606	0.530	0.518	0.529	1.030	0.874
8	0.608	0.515	0.608	0.515	0.518	0.513	1.001	0.869
9	0.596	0.478	0.596	0.478	0.506	0.475	0.951	0.849

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	TOT				PROF	TOT	PROF	
1	5.00	8.1	2.4	8.3	0.293	0.	0.215	0.215	0.105	0.105	
2	10.00	7.2	1.6	8.0	0.247	0.	0.111	0.111	0.053	0.053	
3	15.00	6.8	1.3	7.4	0.241	0.	0.069	0.069	0.032	0.032	
4	30.00	6.3	0.9	7.3	0.255	0.	0.053	0.053	0.023	0.023	
5	50.00	4.4	-0.7	7.8	0.264	0.	0.032	0.032	0.013	0.013	
6	70.00	2.7	-2.2	8.8	0.257	0.	0.004	0.004	0.001	0.001	
7	85.00	1.9	-2.8	9.8	0.263	0.	0.020	0.020	0.006	0.006	
8	90.00	2.0	-2.5	11.0	0.283	0.	0.066	0.066	0.020	0.020	
9	95.00	2.8	-1.6	12.5	0.319	0.	0.152	0.152	0.045	0.045	

TABLE VIII. - Continued.

(k) 90 Percent of design speed; reading 2973

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	26.2	6.0	26.2	6.0	305.2	1.001	11.90	0.967
2	24.724	24.735	25.2	5.6	25.2	5.6	304.7	1.000	11.99	0.974
3	24.140	24.155	25.1	5.2	25.1	5.2	304.2	0.999	11.98	0.981
4	22.410	22.433	26.6	5.2	26.6	5.2	303.0	1.000	11.90	0.989
5	20.152	20.188	29.7	4.4	29.7	4.4	301.9	1.002	11.84	0.995
6	17.960	18.021	32.3	3.7	32.3	3.7	301.8	1.003	11.84	0.998
7	16.375	16.452	34.1	4.8	34.1	4.8	302.0	0.998	11.83	0.983
8	15.860	15.923	34.4	6.2	34.4	6.2	301.5	0.999	11.77	0.979
9	15.349	15.390	34.3	8.0	34.3	8.0	300.8	1.000	11.67	0.970

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	171.3	143.8	171.3	143.8	153.7	143.0	75.6	15.0	0.	0.
2	175.3	150.1	175.3	150.1	158.6	149.3	74.7	14.7	0.	0.
3	174.6	150.8	174.6	150.8	158.1	150.2	74.0	13.7	0.	0.
4	176.5	153.6	176.5	153.6	157.8	152.9	79.0	14.0	0.	0.
5	179.0	156.5	179.0	156.5	155.5	156.1	88.6	11.9	0.	0.
6	184.6	161.1	184.6	161.1	155.9	160.8	98.8	10.3	0.	0.
7	189.6	155.4	189.6	155.4	157.0	154.8	106.3	12.9	0.	0.
8	188.7	150.9	188.7	150.9	155.8	150.1	106.6	16.2	0.	0.
9	185.9	142.6	185.9	142.6	153.5	141.2	104.8	19.8	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.501	0.417	0.501	0.417	0.450	0.415	0.930	0.799
2	0.514	0.437	0.514	0.437	0.465	0.435	0.942	0.801
3	0.512	0.440	0.512	0.440	0.464	0.438	0.950	0.794
4	0.519	0.449	0.519	0.449	0.464	0.447	0.969	0.821
5	0.528	0.458	0.528	0.458	0.459	0.457	1.003	0.858
6	0.546	0.472	0.546	0.472	0.461	0.471	1.031	0.866
7	0.561	0.456	0.561	0.456	0.465	0.454	0.986	0.864
8	0.559	0.442	0.559	0.442	0.461	0.440	0.963	0.852
9	0.551	0.417	0.551	0.417	0.455	0.413	0.919	0.829

RP	PERCENT	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	13.0	7.3	8.6	0.333	0.	0.208	0.208	0.101	0.101
2	10.00	11.7	6.2	8.3	0.307	0.	0.155	0.155	0.074	0.074
3	15.00	11.3	5.8	8.0	0.297	0.	0.115	0.115	0.054	0.054
4	30.00	10.2	4.8	8.4	0.289	0.	0.064	0.064	0.028	0.028
5	50.00	8.5	3.4	8.5	0.293	0.	0.030	0.030	0.012	0.012
6	70.00	6.1	1.2	9.1	0.293	0.	0.009	0.009	0.003	0.003
7	85.00	4.8	0.1	11.0	0.336	0.	0.088	0.088	0.028	0.028
8	90.00	4.8	0.3	12.4	0.347	0.	0.111	0.111	0.034	0.034
9	95.00	5.1	0.7	14.2	0.369	0.	0.162	0.162	0.048	0.048

TABLE VIII. - Continued.

(Z) 90 Percent of design speed; reading 2942

RP	RADI		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	36.1	6.3	36.1	6.3	307.9	0.998	11.84	0.965
2	24.724	24.735	29.7	5.8	29.7	5.8	306.0	1.000	12.03	0.958
3	24.140	24.155	29.0	5.7	29.0	5.7	304.8	1.002	12.04	0.965
4	22.410	22.433	30.3	5.3	30.3	5.3	303.3	1.001	11.95	0.982
5	20.152	20.188	33.1	4.7	33.1	4.7	301.8	1.004	11.86	0.993
6	17.960	18.021	35.5	3.7	35.5	3.7	301.5	1.002	11.83	0.995
7	16.375	16.452	36.8	5.8	36.8	5.8	301.3	1.002	11.81	0.990
8	15.860	15.923	36.8	8.5	36.8	8.5	300.9	1.001	11.78	0.981
9	15.349	15.390	36.4	7.7	36.4	7.7	300.6	1.002	11.68	0.979

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	154.7	127.4	154.7	127.4	125.0	126.6	91.1	14.0	0.	0.
2	164.1	130.9	164.1	130.9	142.6	130.2	81.4	13.1	0.	0.
3	164.6	133.3	164.6	133.3	143.9	132.6	79.8	13.2	0.	0.
4	165.7	140.6	165.7	140.6	143.0	140.0	83.7	13.1	0.	0.
5	166.9	145.1	166.9	145.1	139.8	144.6	91.2	11.9	0.	0.
6	171.5	147.1	171.5	147.1	139.6	146.7	99.7	9.4	0.	0.
7	176.2	144.6	176.2	144.6	141.0	143.9	105.6	14.7	0.	0.
8	176.8	139.1	176.8	139.1	141.6	137.5	105.8	20.5	0.	0.
9	174.0	134.0	174.0	134.0	140.0	132.8	103.2	18.1	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.449	0.367	0.449	0.367	0.362	0.365	1.013	0.869
2	0.479	0.379	0.479	0.379	0.416	0.377	0.914	0.819
3	0.481	0.386	0.481	0.386	0.421	0.384	0.922	0.810
4	0.486	0.409	0.486	0.409	0.419	0.407	0.979	0.831
5	0.491	0.423	0.491	0.423	0.411	0.422	1.034	0.855
6	0.505	0.430	0.505	0.430	0.411	0.429	1.051	0.856
7	0.520	0.423	0.520	0.423	0.416	0.420	1.020	0.849
8	0.522	0.406	0.522	0.406	0.418	0.402	0.971	0.838
9	0.514	0.391	0.514	0.391	0.413	0.388	0.948	0.809

RP	PERCENT SPAN		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	TOT				PROF	TOT	PROF	
1	5.00	22.9	17.2	8.9	0.420	0.	0.270	0.270	0.131	0.131	
2	10.00	16.3	10.7	8.5	0.401	0.	0.286	0.286	0.136	0.136	
3	15.00	15.2	9.7	8.5	0.379	0.	0.238	0.238	0.111	0.111	
4	30.00	13.9	8.6	8.5	0.336	0.	0.124	0.124	0.053	0.053	
5	50.00	11.9	6.8	8.8	0.316	0.	0.047	0.047	0.018	0.018	
6	70.00	9.3	4.4	9.1	0.325	0.	0.030	0.030	0.010	0.010	
7	85.00	7.5	2.8	12.1	0.342	0.	0.061	0.061	0.019	0.019	
8	90.00	7.2	2.7	14.8	0.361	0.	0.111	0.111	0.034	0.034	
9	95.00	7.2	2.8	13.9	0.375	0.	0.127	0.127	0.037	0.037	

TABLE VIII. - Continued.

(m) 100 Percent of design speed; reading 2977

RP	RADI		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	13.7	3.8	13.7	3.8	302.2	0.999	11.37	0.948
2	24.724	24.735	13.4	3.4	13.4	3.4	302.3	0.998	11.42	0.978
3	24.140	24.155	13.8	3.1	13.8	3.1	302.0	0.998	11.46	0.984
4	22.410	22.433	15.9	3.3	15.9	3.3	302.0	0.999	11.64	0.983
5	20.152	20.188	19.6	3.1	19.6	3.1	303.0	0.998	11.85	0.984
6	17.960	18.021	23.6	1.7	23.6	1.7	304.2	1.001	12.01	0.994
7	16.375	16.452	26.9	2.2	26.9	2.2	304.9	1.006	12.07	1.001
8	15.860	15.923	27.8	3.4	27.8	3.4	304.8	1.006	12.06	0.998
9	15.349	15.390	27.9	4.5	27.9	4.5	304.5	1.005	11.97	0.971

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	220.6	198.4	220.6	198.4	214.2	197.9	52.4	13.1	0.	0.
2	222.6	208.3	222.6	208.3	216.6	207.9	51.4	12.3	0.	0.
3	223.3	208.6	223.3	208.6	216.9	208.3	53.3	11.1	0.	0.
4	235.9	216.0	235.9	216.0	226.9	215.7	64.5	12.6	0.	0.
5	247.7	225.8	247.7	225.8	233.4	225.5	82.9	12.4	0.	0.
6	253.9	237.9	253.9	237.9	232.6	237.8	101.8	7.0	0.	0.
7	255.5	246.7	255.5	246.7	227.9	246.5	115.5	9.6	0.	0.
8	254.7	246.8	254.7	246.8	225.4	246.4	118.7	14.5	0.	0.
9	249.6	237.0	249.6	237.0	220.7	236.3	116.7	18.7	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.660	0.589	0.660	0.589	0.641	0.588	0.924	0.756
2	0.666	0.621	0.666	0.621	0.648	0.620	0.960	0.748
3	0.669	0.622	0.669	0.622	0.650	0.621	0.960	0.762
4	0.711	0.646	0.711	0.646	0.683	0.645	0.950	0.854
5	0.748	0.677	0.748	0.677	0.705	0.676	0.966	0.954
6	0.768	0.714	0.768	0.714	0.703	0.713	1.022	0.987
7	0.772	0.740	0.772	0.740	0.689	0.740	1.081	0.996
8	0.770	0.741	0.770	0.741	0.681	0.740	1.093	0.997
9	0.753	0.709	0.753	0.709	0.666	0.707	1.071	0.963

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN		MEAN	SS				TOT	PROF	TOT	PROF
1	5.00		0.6	-5.1	6.4	0.188	0.	0.205	0.205	0.100	0.100
2	10.00		-0.1	-5.7	6.1	0.148	0.	0.087	0.087	0.042	0.042
3	15.00		0.0	-5.5	5.8	0.154	0.	0.062	0.062	0.029	0.029
4	30.00		-0.5	-5.9	6.5	0.179	0.	0.058	0.058	0.025	0.025
5	50.00		-1.6	-6.8	7.2	0.199	0.	0.052	0.052	0.020	0.020
6	70.00		-2.6	-7.5	7.1	0.193	0.	0.019	0.019	0.007	0.007
7	85.00		-2.5	-7.1	8.5	0.165	0.	-0.003	-0.003	-0.001	-0.001
8	90.00		-1.8	-6.3	9.6	0.156	0.	0.007	0.007	0.002	0.002
9	95.00		-1.3	-5.7	10.7	0.167	0.	0.091	0.091	0.027	0.027

TABLE VIII. - Continued.

(n)100 Percent of design speed; reading 2969

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	18.7	5.0	18.7	5.0	306.2	0.999	12.03	0.951
2	24.724	24.735	18.4	4.7	18.4	4.7	305.7	0.999	12.08	0.977
3	24.140	24.155	18.5	4.1	18.5	4.1	305.4	0.998	12.06	0.986
4	22.410	22.433	20.5	3.9	20.5	3.9	304.6	0.999	12.06	0.989
5	20.152	20.188	23.8	3.4	23.8	3.4	303.9	1.001	12.08	0.993
6	17.969	18.021	26.8	2.7	26.8	2.7	304.6	1.004	12.13	1.001
7	16.375	16.452	29.6	3.2	29.6	3.2	304.9	1.004	12.16	0.999
8	15.860	15.923	30.2	4.1	30.2	4.1	304.4	1.003	12.10	0.993
9	15.349	15.390	30.2	5.6	30.2	5.6	304.3	1.000	11.98	0.967

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	212.9	180.7	212.9	180.7	201.8	180.0	68.1	15.8	0.	0.
2	214.2	190.9	214.2	190.9	203.1	190.3	67.8	15.5	0.	0.
3	213.8	190.7	213.8	190.7	202.8	190.2	67.8	13.5	0.	0.
4	218.8	194.3	218.8	194.3	204.9	193.9	76.7	13.2	0.	0.
5	224.2	199.8	224.2	199.8	205.2	199.4	90.4	12.0	0.	0.
6	231.0	209.1	231.0	209.1	206.1	208.8	104.3	9.8	0.	0.
7	235.3	213.3	235.3	213.3	204.5	212.9	116.4	11.8	0.	0.
8	234.0	210.0	234.0	210.0	202.3	209.4	117.6	15.1	0.	0.
9	229.8	196.9	229.8	196.9	198.7	196.0	115.5	19.3	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS VEL R MACH NO	
	IN	OUT	IN	OUT	IN	OUT		
1	0.631	0.530	0.631	0.530	0.598	0.528	0.892	0.843
2	0.635	0.562	0.635	0.562	0.603	0.560	0.937	0.842
3	0.635	0.562	0.635	0.562	0.602	0.560	0.938	0.840
4	0.651	0.574	0.651	0.574	0.610	0.573	0.946	0.896
5	0.670	0.591	0.670	0.591	0.613	0.590	0.972	0.954
6	0.691	0.619	0.691	0.619	0.617	0.618	1.013	0.967
7	0.705	0.632	0.705	0.632	0.613	0.631	1.041	0.979
8	0.701	0.622	0.701	0.622	0.606	0.620	1.035	0.968
9	0.688	0.582	0.688	0.582	0.594	0.579	0.986	0.936

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS					TOT	PROF	TOT	PROF
1	5.00	5.5	-0.2	7.7	0.271	0.	0.207	0.207	0.101	0.101	
2	10.00	5.0	-0.6	7.4	0.225	0.	0.095	0.095	0.045	0.045	
3	15.00	4.7	-0.8	6.8	0.227	0.	0.061	0.061	0.028	0.028	
4	30.00	4.1	-1.2	7.1	0.237	0.	0.043	0.043	0.019	0.019	
5	50.00	2.6	-2.5	7.5	0.245	0.	0.028	0.028	0.011	0.011	
6	70.00	0.6	-4.3	8.1	0.237	0.	-0.004	-0.004	-0.001	-0.001	
7	85.00	0.3	-4.3	9.4	0.234	0.	0.005	0.005	0.001	0.001	
8	90.00	0.6	-3.9	10.4	0.237	0.	0.025	0.025	0.008	0.008	
9	95.00	1.0	-3.4	11.8	0.267	0.	0.120	0.120	0.035	0.035	

TABLE VIII. - Continued.

(o) 100 Percent of design speed; reading 2922

RP	RADI I		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	22.8	5.4	22.8	5.4	307.3	1.002	12.24	0.955
2	24.724	24.735	22.1	5.2	22.1	5.2	307.0	1.001	12.31	0.974
3	24.140	24.155	22.4	4.6	22.4	4.6	306.6	1.000	12.31	0.981
4	22.410	22.433	24.2	4.4	24.2	4.4	305.1	1.001	12.24	0.988
5	20.152	20.188	27.2	3.9	27.2	3.9	303.9	1.004	12.19	0.994
6	17.960	18.021	30.3	3.3	30.3	3.3	304.2	1.005	12.21	0.997
7	16.375	16.452	32.2	3.9	32.2	3.9	304.0	1.002	12.15	0.990
8	15.860	15.923	32.5	5.5	32.5	5.5	303.9	0.999	12.11	0.974
9	15.349	15.390	33.0	6.9	33.0	6.9	303.4	0.999	11.99	0.960

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	200.8	168.3	200.8	168.3	185.0	167.6	77.9	15.9	0.	0.
2	203.5	177.2	203.5	177.2	188.5	176.5	76.5	16.1	0.	0.
3	201.8	177.7	201.8	177.7	186.6	177.2	76.8	14.2	0.	0.
4	205.2	179.5	205.2	179.5	187.2	179.0	84.1	13.9	0.	0.
5	207.8	183.4	207.8	183.4	184.8	183.0	95.0	12.4	0.	0.
6	214.3	188.5	214.3	188.5	185.0	188.2	108.2	10.7	0.	0.
7	216.0	184.9	216.0	184.9	182.9	184.5	114.9	12.6	0.	0.
8	216.5	177.0	216.5	177.0	182.5	176.2	116.3	16.9	0.	0.
9	212.4	167.1	212.4	167.1	178.2	165.9	115.6	20.0	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.591	0.490	0.591	0.490	0.545	0.488	0.906	0.876
2	0.600	0.518	0.600	0.518	0.556	0.516	0.936	0.872
3	0.595	0.520	0.595	0.520	0.550	0.518	0.949	0.868
4	0.607	0.527	0.607	0.527	0.554	0.525	0.956	0.911
5	0.617	0.539	0.617	0.539	0.548	0.538	0.990	0.950
6	0.637	0.554	0.637	0.554	0.550	0.553	1.017	0.968
7	0.643	0.544	0.643	0.544	0.544	0.543	1.009	0.948
8	0.645	0.520	0.645	0.520	0.544	0.518	0.965	0.942
9	0.632	0.490	0.632	0.490	0.530	0.487	0.931	0.923

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	SS				TOT	PROF	TOT	PROF
1	5.00	9.7	4.0	8.0	0.312	0.	0.212	0.212	0.103	0.103	
2	10.00	8.6	3.0	7.9	0.271	0.	0.119	0.119	0.056	0.056	
3	15.00	8.6	3.1	7.4	0.264	0.	0.088	0.088	0.041	0.041	
4	30.00	7.8	2.4	7.6	0.273	0.	0.056	0.056	0.024	0.024	
5	50.00	6.0	0.9	8.0	0.272	0.	0.025	0.025	0.010	0.010	
6	70.00	4.1	-0.9	8.7	0.278	0.	0.012	0.012	0.004	0.004	
7	85.00	2.8	-1.8	10.1	0.294	0.	0.043	0.043	0.014	0.014	
8	90.00	3.0	-1.5	11.8	0.323	0.	0.109	0.109	0.033	0.033	
9	95.00	3.8	-0.6	13.0	0.347	0.	0.169	0.169	0.050	0.050	

TABLE VIII. - Continued.

(p) 100 Percent of design speed; reading 2921

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	25.8	5.8	25.8	5.8	309.2	1.001	12.39	0.955
2	24.724	24.735	24.6	5.6	24.6	5.6	308.1	1.001	12.45	0.971
3	24.140	24.155	24.5	5.0	24.5	5.0	307.4	1.000	12.42	0.977
4	22.410	22.433	26.9	4.6	26.9	4.6	305.6	1.002	12.32	0.986
5	20.152	20.188	29.3	4.2	29.3	4.2	304.5	1.004	12.24	0.995
6	17.960	18.021	31.9	3.5	31.9	3.5	304.4	1.005	12.21	0.999
7	16.375	16.452	33.7	4.7	33.7	4.7	304.9	0.998	12.21	0.979
8	15.860	15.923	34.3	6.0	34.3	6.0	304.4	0.999	12.15	0.972
9	15.349	15.390	34.5	7.7	34.5	7.7	303.4	1.001	12.01	0.968

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	194.3	160.4	194.3	160.4	175.0	159.6	84.5	16.2	0.	0.
2	196.4	168.4	196.4	168.4	178.6	167.6	81.8	16.3	0.	0.
3	194.8	167.6	194.8	167.6	177.2	167.0	80.9	14.7	0.	0.
4	196.8	170.4	196.8	170.4	175.5	169.8	89.1	13.7	0.	0.
5	200.0	175.0	200.0	175.0	174.4	174.6	97.9	12.7	0.	0.
6	205.2	178.7	205.2	178.7	174.2	178.4	108.4	10.9	0.	0.
7	210.1	171.2	210.1	171.2	174.8	170.6	116.6	13.9	0.	0.
8	209.1	166.1	209.1	166.1	172.6	165.2	117.9	17.4	0.	0.
9	204.5	160.0	204.5	160.0	168.6	158.5	115.8	21.4	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.569	0.465	0.569	0.465	0.512	0.462	0.912	0.900
2	0.576	0.490	0.576	0.490	0.524	0.487	0.939	0.887
3	0.572	0.488	0.572	0.488	0.520	0.486	0.942	0.876
4	0.580	0.498	0.580	0.498	0.517	0.496	0.968	0.925
5	0.592	0.512	0.592	0.512	0.516	0.511	1.001	0.954
6	0.608	0.523	0.608	0.523	0.516	0.523	1.024	0.955
7	0.623	0.502	0.623	0.502	0.519	0.500	0.976	0.952
8	0.620	0.486	0.620	0.486	0.512	0.484	0.957	0.945
9	0.607	0.468	0.607	0.468	0.500	0.464	0.941	0.917

RP	PERCENT	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	12.6	6.9	8.4	0.347	0.	0.230	0.230	0.112	0.112
2	10.00	11.2	5.6	8.3	0.302	0.	0.146	0.146	0.069	0.069
3	15.00	10.7	5.2	7.8	0.298	0.	0.117	0.117	0.054	0.054
4	30.00	10.5	5.2	7.8	0.300	0.	0.071	0.071	0.031	0.031
5	50.00	8.1	3.0	8.3	0.291	0.	0.023	0.023	0.009	0.009
6	70.00	5.6	0.7	8.9	0.294	0.	0.004	0.004	0.001	0.001
7	85.00	4.4	-0.3	10.9	0.340	0.	0.091	0.091	0.029	0.029
8	90.00	4.8	0.3	12.3	0.353	0.	0.121	0.121	0.037	0.037
9	95.00	5.3	0.9	13.9	0.354	0.	0.143	0.143	0.042	0.042

TABLE VIII. - Continued.

(q) 100 Percent of design speed; reading 2930

RP	RADI I		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	29.3	6.0	29.3	6.0	310.6	1.002	12.42	0.957
2	24.724	24.735	26.8	5.7	26.8	5.7	309.7	1.000	12.53	0.963
3	24.140	24.155	26.4	5.5	26.4	5.5	308.4	1.001	12.48	0.972
4	22.410	22.433	28.2	5.2	28.2	5.2	306.6	1.001	12.43	0.979
5	20.152	20.188	31.3	4.2	31.3	4.2	305.3	1.003	12.30	0.993
6	17.960	18.021	33.3	3.6	33.3	3.6	304.8	1.004	12.25	0.997
7	16.375	16.452	35.4	5.4	35.4	5.4	304.8	1.000	12.23	0.980
8	15.860	15.923	35.4	7.6	35.4	7.6	304.4	1.000	12.17	0.977
9	15.349	15.390	35.6	7.9	35.6	7.9	303.3	1.003	12.04	0.974

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	185.7	154.7	185.7	154.7	162.1	153.9	90.8	16.1	0.	0.
2	190.3	159.4	190.3	159.4	169.9	158.6	85.8	15.9	0.	0.
3	189.4	159.6	189.4	159.6	169.6	158.8	84.3	15.3	0.	0.
4	192.6	163.0	192.6	163.0	169.7	162.4	91.1	14.8	0.	0.
5	193.7	168.4	193.7	168.4	165.5	168.0	100.7	12.4	0.	0.
6	198.9	171.2	198.9	171.2	166.2	170.9	109.3	10.7	0.	0.
7	203.1	164.0	203.1	164.0	165.6	163.2	117.6	15.4	0.	0.
8	202.7	160.5	202.7	160.5	165.2	159.1	117.5	21.2	0.	0.
9	198.7	154.5	198.7	154.5	161.6	153.1	115.6	21.3	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.541	0.446	0.541	0.446	0.472	0.444	0.949	0.919
2	0.556	0.461	0.556	0.461	0.496	0.459	0.933	0.896
3	0.554	0.463	0.554	0.463	0.496	0.461	0.936	0.885
4	0.566	0.475	0.566	0.475	0.499	0.473	0.957	0.927
5	0.571	0.492	0.571	0.492	0.488	0.490	1.015	0.959
6	0.588	0.500	0.588	0.500	0.491	0.499	1.028	0.952
7	0.601	0.479	0.601	0.479	0.490	0.477	0.986	0.953
8	0.600	0.469	0.600	0.469	0.489	0.465	0.963	0.937
9	0.589	0.451	0.589	0.451	0.479	0.447	0.947	0.911

RP	PERCENT	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	16.1	10.4	8.6	0.364	0.	0.236	0.236	0.114	0.114
2	10.00	13.3	7.7	8.4	0.338	0.	0.196	0.196	0.093	0.093
3	15.00	12.7	7.2	8.3	0.328	0.	0.151	0.151	0.070	0.070
4	30.00	11.8	6.5	8.4	0.325	0.	0.110	0.110	0.047	0.047
5	50.00	10.1	5.0	8.3	0.308	0.	0.033	0.033	0.013	0.013
6	70.00	7.1	2.2	9.0	0.311	0.	0.013	0.013	0.004	0.004
7	85.00	6.1	1.4	11.6	0.352	0.	0.090	0.090	0.028	0.028
8	90.00	5.9	1.4	13.9	0.354	0.	0.105	0.105	0.032	0.032
9	95.00	6.4	2.0	14.1	0.363	0.	0.126	0.126	0.037	0.037

TABLE VIII. - Continued.

(r) 100 Percent of design speed; reading 2933

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	66.0	6.2	66.0	6.2	317.9	0.987	11.96	0.959
2	24.724	24.735	57.1	7.2	57.1	7.2	315.7	0.990	11.93	0.963
3	24.140	24.155	48.9	9.1	48.9	9.1	313.4	0.994	12.01	0.957
4	22.410	22.433	33.7	7.2	33.7	7.2	309.0	1.000	12.31	0.952
5	20.152	20.188	34.6	5.8	34.6	5.8	306.1	1.003	12.33	0.983
6	17.960	18.021	37.4	4.2	37.4	4.2	305.4	1.000	12.28	0.987
7	16.375	16.452	38.5	6.6	38.5	6.6	305.0	1.001	12.27	0.990
8	15.860	15.923	36.1	8.6	38.1	8.6	304.6	1.000	12.28	0.974
9	15.349	15.390	37.5	7.9	37.5	7.9	303.1	1.003	12.08	0.977

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	154.6	126.9	154.6	126.9	63.0	126.1	141.2	13.8	0.	0.
2	157.4	127.0	157.4	127.0	85.6	126.1	132.1	15.8	0.	0.
3	165.2	127.2	165.2	127.2	108.5	125.6	124.6	20.1	0.	0.
4	180.7	136.5	180.7	136.5	150.3	135.4	100.3	17.1	0.	0.
5	184.2	155.2	184.2	155.2	151.7	154.4	104.5	15.7	0.	0.
6	187.5	156.4	187.5	156.4	149.0	155.9	113.9	11.6	0.	0.
7	192.5	159.1	192.5	159.1	150.7	158.0	119.7	18.2	0.	0.
8	194.6	151.5	194.6	151.5	153.1	149.8	120.1	22.6	0.	0.
9	188.4	145.1	188.4	145.1	149.5	143.7	114.7	20.0	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.441	0.362	0.441	0.362	0.180	0.360	2.002	1.437
2	0.451	0.363	0.451	0.363	0.245	0.360	1.473	1.257
3	0.476	0.364	0.476	0.364	0.313	0.360	1.157	1.153
4	0.527	0.393	0.527	0.393	0.438	0.390	0.901	0.962
5	0.540	0.451	0.540	0.451	0.445	0.448	1.018	0.968
6	0.551	0.455	0.551	0.455	0.438	0.454	1.047	0.969
7	0.567	0.464	0.567	0.464	0.444	0.461	1.048	0.958
8	0.574	0.441	0.574	0.441	0.452	0.436	0.978	0.948
9	0.556	0.422	0.556	0.422	0.441	0.418	0.962	0.897

RP	PERCENT	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	52.8	47.1	8.9	0.582	0.	0.325	0.325	0.158	0.158
2	10.00	43.6	38.0	9.9	0.546	0.	0.288	0.288	0.136	0.136
3	15.00	35.2	29.7	11.9	0.525	0.	0.299	0.299	0.138	0.138
4	30.00	17.3	12.0	10.4	0.444	0.	0.281	0.281	0.121	0.121
5	50.00	13.4	8.2	9.9	0.345	0.	0.095	0.095	0.037	0.037
6	70.00	11.1	6.2	9.7	0.355	0.	0.069	0.069	0.024	0.024
7	85.00	9.1	4.5	12.8	0.340	0.	0.049	0.049	0.015	0.015
8	90.00	8.6	4.1	14.9	0.375	0.	0.127	0.127	0.039	0.039
9	95.00	8.3	3.9	14.1	0.379	0.	0.120	0.120	0.035	0.035

TABLE VIII. - Continued.

(s) 110 Percent of design speed; reading 2967

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	16.5	4.9	16.5	4.9	308.1	0.997	11.89	0.950
2	24.724	24.735	16.0	4.3	16.0	4.3	307.3	0.998	12.02	0.975
3	24.140	24.155	16.2	4.0	16.2	4.0	306.7	0.998	12.05	0.983
4	22.410	22.433	18.4	4.1	18.4	4.1	305.6	0.999	12.04	0.988
5	20.152	20.188	21.5	3.7	21.5	3.7	306.1	1.000	12.26	0.987
6	17.960	18.021	24.8	2.2	24.8	2.2	307.5	1.003	12.37	0.998
7	16.375	16.452	28.2	2.7	28.2	2.7	308.7	1.004	12.46	0.995
8	15.860	15.923	28.9	3.7	28.9	3.7	308.4	1.003	12.44	0.989
9	15.349	15.390	29.4	5.6	29.4	5.6	307.9	1.002	12.35	0.957

RP	ABS VEL		REL VEL		MERID VEL		TANG. VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	233.7	207.8	233.7	207.8	224.1	207.0	66.4	17.7	0.	0.
2	238.2	217.8	238.2	217.8	229.0	217.2	65.5	16.5	0.	0.
3	238.6	217.6	238.6	217.6	229.1	217.1	66.6	15.2	0.	0.
4	243.7	222.8	243.7	222.8	231.2	222.2	77.1	15.8	0.	0.
5	257.1	230.1	257.1	230.1	239.3	229.6	94.1	14.7	0.	0.
6	262.8	242.4	262.8	242.4	238.5	242.2	110.4	9.5	0.	0.
7	266.4	249.3	266.4	249.3	234.7	249.1	126.0	11.7	0.	0.
8	265.6	248.3	265.6	248.3	232.4	247.8	128.5	16.1	0.	0.
9	260.0	236.4	260.0	236.4	226.6	235.2	127.5	23.0	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.696	0.613	0.696	0.613	0.667	0.611	0.924	0.875
2	0.711	0.646	0.711	0.646	0.684	0.644	0.948	0.877
3	0.713	0.646	0.713	0.646	0.685	0.644	0.948	0.884
4	0.732	0.663	0.732	0.663	0.694	0.662	0.961	0.952
5	0.776	0.686	0.776	0.686	0.722	0.685	0.959	1.043
6	0.793	0.724	0.793	0.724	0.720	0.723	1.016	1.054
7	0.804	0.745	0.804	0.745	0.708	0.744	1.061	1.076
8	0.801	0.742	0.801	0.742	0.701	0.740	1.066	1.071
9	0.783	0.704	0.783	0.704	0.683	0.701	1.038	1.044

RP	PERCENT SPAN		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	SS				TOT	PROF	TOT	PROF
1	5.00	3.3	-2.4	7.5	0.213	0.	0.181	0.181	0.088	0.088	
2	10.00	2.5	-3.1	7.0	0.184	0.	0.086	0.086	0.041	0.041	
3	15.00	2.4	-3.1	6.8	0.188	0.	0.060	0.060	0.028	0.028	
4	30.00	2.0	-3.3	7.3	0.195	0.	0.041	0.041	0.018	0.018	
5	50.00	0.2	-4.9	7.8	0.225	0.	0.039	0.039	0.015	0.015	
6	70.00	-1.4	-6.3	7.7	0.211	0.	0.005	0.005	0.002	0.002	
7	85.00	-1.1	-5.7	8.9	0.200	0.	0.013	0.013	0.004	0.004	
8	90.00	-0.6	-5.1	10.0	0.195	0.	0.032	0.032	0.010	0.010	
9	95.00	0.2	-4.2	11.8	0.210	0.	0.130	0.130	0.038	0.038	

TABLE VIII. - Continued.

(t) 110 Percent of design speed; reading 2966

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL	PRESS
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	19.6	5.5	19.6	5.5	310.9	0.998	12.52	0.943
2	24.724	24.735	19.1	4.8	19.1	4.8	310.0	0.998	12.61	0.970
3	24.140	24.155	19.6	4.4	19.6	4.4	309.4	0.998	12.55	0.984
4	22.410	22.433	21.0	4.1	21.0	4.1	307.9	1.000	12.49	0.990
5	20.152	20.188	23.8	3.6	23.8	3.6	306.9	1.003	12.45	0.998
6	17.960	18.021	26.9	2.5	26.9	2.5	307.5	1.006	12.49	1.005
7	16.375	16.452	29.8	3.2	29.8	3.2	308.8	1.002	12.54	0.997
8	15.860	15.923	30.4	4.3	30.4	4.3	308.5	1.001	12.50	0.986
9	15.349	15.390	31.1	5.7	31.1	5.7	307.4	0.999	12.35	0.955

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	234.1	197.6	234.1	197.6	220.6	196.7	78.5	18.9	0.	0.
2	236.9	208.9	236.9	208.9	223.8	208.2	77.7	17.6	0.	0.
3	235.0	209.3	235.0	209.3	221.3	208.7	78.9	15.9	0.	0.
4	240.7	212.4	240.7	212.4	224.7	211.8	86.3	15.3	0.	0.
5	244.6	217.4	244.6	217.4	223.9	216.9	98.6	13.5	0.	0.
6	251.3	226.5	251.3	226.5	224.1	226.3	113.9	10.0	0.	0.
7	256.2	229.7	256.2	229.7	222.2	229.4	127.4	12.8	0.	0.
8	255.2	225.7	255.2	225.7	220.0	225.1	129.2	16.8	0.	0.
9	248.9	210.9	248.9	210.9	213.2	209.9	128.4	21.0	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.694	0.578	0.694	0.578	0.653	0.575	0.892	0.950
2	0.704	0.615	0.704	0.615	0.665	0.612	0.930	0.950
3	0.698	0.616	0.698	0.616	0.658	0.615	0.943	0.952
4	0.719	0.627	0.719	0.627	0.671	0.625	0.943	1.001
5	0.733	0.643	0.733	0.643	0.671	0.642	0.969	1.044
6	0.755	0.671	0.755	0.671	0.673	0.670	1.010	1.058
7	0.769	0.681	0.769	0.681	0.667	0.680	1.032	1.073
8	0.766	0.669	0.766	0.669	0.661	0.667	1.023	1.064
9	0.746	0.623	0.746	0.623	0.639	0.620	0.985	1.040

RP	PERCENT	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	6.4	0.7	8.1	0.280	0.	0.206	0.206	0.100	0.100
2	10.00	5.7	0.1	7.5	0.239	0.	0.106	0.106	0.051	0.051
3	15.00	5.8	0.3	7.1	0.234	0.	0.057	0.057	0.026	0.026
4	30.00	4.6	-0.7	7.3	0.245	0.	0.033	0.033	0.014	0.014
5	50.00	2.6	-2.6	7.7	0.247	0.	0.007	0.007	0.003	0.003
6	70.00	0.7	-4.2	8.0	0.242	0.	-0.015	-0.015	-0.005	-0.005
7	85.00	0.5	-4.1	9.4	0.245	0.	0.009	0.009	0.003	0.003
8	90.00	0.9	-3.6	10.5	0.250	0.	0.045	0.045	0.014	0.014
9	95.00	1.9	-2.5	11.9	0.280	0.	0.146	0.146	0.043	0.043

TABLE VIII. - Continued.

(u) 110 Percent of design speed; reading 2949

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	23.9	5.9	23.9	5.9	312.9	1.000	12.89	0.946
2	24.724	24.735	22.9	5.7	22.9	5.7	312.1	0.999	12.96	0.968
3	24.140	24.155	22.8	5.2	22.8	5.2	311.5	0.999	12.95	0.977
4	22.410	22.433	24.6	4.8	24.6	4.8	309.7	1.000	12.85	0.985
5	20.152	20.188	27.0	4.1	27.0	4.1	308.3	1.004	12.69	0.996
6	17.960	18.021	30.4	3.4	30.4	3.4	308.5	1.005	12.60	1.005
7	16.375	16.452	32.3	3.9	32.3	3.9	308.7	1.000	12.65	0.984
8	15.860	15.923	32.7	5.6	32.7	5.6	308.0	0.998	12.56	0.969
9	15.349	15.390	33.4	7.0	33.4	7.0	307.3	0.997	12.41	0.951

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	223.4	187.7	223.4	187.7	204.2	186.7	90.5	19.2	0.	0.
2	226.8	197.0	226.8	197.0	208.9	196.0	88.1	19.7	0.	0.
3	226.7	196.8	226.7	196.8	209.0	196.0	87.7	18.0	0.	0.
4	229.9	199.2	229.9	199.2	209.0	198.5	95.7	16.5	0.	0.
5	231.3	202.1	231.3	202.1	206.0	201.6	105.2	14.4	0.	0.
6	234.3	206.4	234.3	206.4	202.1	206.1	118.5	12.1	0.	0.
7	240.4	202.3	240.4	202.3	203.1	201.8	128.6	13.8	0.	0.
8	238.9	193.3	238.9	193.3	201.0	192.4	129.1	18.8	0.	0.
9	233.7	181.7	233.7	181.7	195.1	180.4	128.7	22.3	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.656	0.545	0.656	0.545	0.600	0.542	0.914	0.997
2	0.668	0.575	0.668	0.575	0.616	0.572	0.938	0.988
3	0.669	0.575	0.669	0.575	0.617	0.572	0.938	0.985
4	0.681	0.584	0.681	0.584	0.620	0.582	0.950	1.033
5	0.688	0.593	0.688	0.593	0.612	0.592	0.978	1.056
6	0.697	0.606	0.697	0.606	0.601	0.605	1.019	1.060
7	0.717	0.594	0.717	0.594	0.606	0.593	0.994	1.062
8	0.713	0.567	0.713	0.567	0.600	0.565	0.957	1.047
9	0.697	0.532	0.697	0.532	0.581	0.528	0.925	1.027

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	TOT				PROF	TOT	PROF	
1	5.00	10.7	5.0	8.5	0.316	0.	0.216	0.216	0.105	0.105	
2	10.00	9.4	3.8	8.4	0.275	0.	0.123	0.123	0.058	0.058	
3	15.00	9.0	3.5	8.0	0.275	0.	0.090	0.090	0.042	0.042	
4	30.00	8.2	2.9	8.0	0.282	0.	0.055	0.055	0.024	0.024	
5	50.00	5.8	0.7	8.2	0.279	0.	0.014	0.014	0.005	0.005	
6	70.00	4.1	-0.8	8.8	0.276	0.	-0.018	-0.018	-0.006	-0.006	
7	85.00	3.0	-1.6	10.1	0.310	0.	0.054	0.054	0.017	0.017	
8	90.00	3.2	-1.3	11.8	0.332	0.	0.108	0.108	0.033	0.033	
9	95.00	4.2	-0.2	13.2	0.357	0.	0.176	0.176	0.052	0.052	

TABLE VIII. - Continued.

(v) 110 Percent of design speed, reading 2950

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	28.8	5.9	28.8	5.9	315.6	1.000	13.07	0.949
2	24.724	24.735	27.3	6.2	27.3	6.2	314.8	0.998	13.21	0.957
3	24.140	24.155	26.6	5.7	26.6	5.7	313.8	0.998	13.18	0.962
4	22.410	22.433	27.8	5.9	27.8	5.9	311.2	1.001	13.02	0.977
5	20.152	20.188	30.5	4.3	30.5	4.3	309.1	1.005	12.79	0.998
6	17.960	18.021	32.6	3.4	32.6	3.4	308.9	1.003	12.69	1.001
7	16.375	16.452	34.5	4.4	34.5	4.4	308.6	0.998	12.68	0.975
8	15.860	15.923	35.0	6.7	35.0	6.7	308.3	0.998	12.61	0.969
9	15.349	15.390	34.9	7.5	34.9	7.5	307.7	0.999	12.45	0.964

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	211.7	177.7	211.7	177.7	185.4	176.8	102.1	18.4	0.	0.
2	216.0	183.6	216.0	183.6	191.9	182.5	99.2	19.7	0.	0.
3	216.4	182.2	216.4	182.2	193.5	181.3	97.0	18.2	0.	0.
4	218.6	186.0	218.6	186.0	193.4	185.1	102.0	19.2	0.	0.
5	219.0	191.8	219.0	191.8	188.8	191.3	111.0	14.2	0.	0.
6	224.5	194.1	224.5	194.1	189.2	193.8	120.8	11.4	0.	0.
7	228.8	184.9	228.8	184.9	188.5	184.3	129.7	14.2	0.	0.
8	227.9	180.1	227.9	180.1	186.6	178.9	130.9	20.9	0.	0.
9	223.4	173.7	223.4	173.7	183.2	172.2	127.9	22.7	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS VEL R MACH NO	
	IN	OUT	IN	OUT	IN	OUT		
1	0.617	0.512	0.617	0.512	0.540	0.509	0.953	1.039
2	0.631	0.531	0.631	0.531	0.561	0.528	0.951	1.029
3	0.634	0.528	0.634	0.528	0.566	0.525	0.937	1.016
4	0.643	0.541	0.643	0.541	0.569	0.538	0.957	1.045
5	0.647	0.560	0.647	0.560	0.558	0.558	1.013	1.068
6	0.665	0.567	0.665	0.567	0.560	0.566	1.024	1.059
7	0.679	0.541	0.679	0.541	0.559	0.539	0.978	1.056
8	0.677	0.526	0.677	0.526	0.554	0.522	0.958	1.047
9	0.663	0.507	0.663	0.507	0.543	0.502	0.940	1.011

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN		MEAN	SS				TOT	PROF	TOT	PROF
1	5.00		15.7	10.0	8.6	0.354	0.	0.227	0.227	0.111	0.111
2	10.00		13.9	8.3	8.9	0.326	0.	0.184	0.184	0.087	0.087
3	15.00		12.8	7.3	8.5	0.328	0.	0.158	0.158	0.074	0.074
4	30.00		11.4	6.1	9.1	0.313	0.	0.094	0.094	0.041	0.041
5	50.00		9.3	4.1	8.4	0.296	0.	0.010	0.010	0.004	0.004
6	70.00		6.3	1.4	8.8	0.304	0.	-0.002	-0.002	-0.001	-0.001
7	85.00		5.2	0.5	10.6	0.351	0.	0.093	0.093	0.029	0.029
8	90.00		5.5	1.0	12.9	0.358	0.	0.117	0.117	0.036	0.036
9	95.00		5.7	1.3	13.7	0.362	0.	0.139	0.139	0.041	0.041

TABLE VIII. - Continued.

(w) 110 Percent of design speed; reading 2951

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	32.2	6.5	32.2	6.5	317.0	1.001	13.17	0.937
2	24.724	24.735	30.0	6.7	30.0	6.7	316.0	0.999	13.26	0.944
3	24.140	24.155	29.4	6.7	29.4	6.7	314.7	0.999	13.24	0.953
4	22.410	22.433	30.8	6.2	30.8	6.2	312.0	1.001	13.01	0.975
5	20.152	20.188	33.1	4.7	33.1	4.7	310.1	1.003	12.84	0.992
6	17.960	18.021	34.7	3.4	34.7	3.4	309.3	1.001	12.79	0.991
7	16.375	16.452	36.7	5.8	36.7	5.8	308.9	1.000	12.74	0.981
8	15.860	15.923	36.7	8.0	36.7	8.0	308.6	1.000	12.67	0.973
9	15.349	15.390	36.7	7.9	36.7	7.9	307.5	1.001	12.52	0.968

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	203.1	168.1	203.1	168.1	171.9	167.0	108.2	19.1	0.	0.
2	207.3	171.3	207.3	171.3	179.6	170.1	103.7	20.1	0.	0.
3	207.3	171.9	207.3	171.9	180.7	170.8	101.6	20.0	0.	0.
4	206.3	176.1	206.3	176.1	177.2	175.1	105.6	18.9	0.	0.
5	208.0	181.4	208.0	181.4	174.3	180.8	113.6	14.9	0.	0.
6	215.0	181.8	215.0	181.8	176.8	181.5	122.4	10.8	0.	0.
7	219.7	178.2	219.7	178.2	176.3	177.3	131.2	18.1	0.	0.
8	219.2	172.2	219.2	172.2	175.7	170.5	131.1	24.1	0.	0.
9	215.0	165.4	215.0	165.4	172.5	163.8	128.4	22.7	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.589	0.482	0.589	0.482	0.498	0.478	0.971	1.059
2	0.603	0.492	0.603	0.492	0.522	0.489	0.947	1.037
3	0.604	0.495	0.604	0.495	0.526	0.492	0.945	1.024
4	0.603	0.510	0.603	0.510	0.518	0.507	0.988	1.041
5	0.611	0.527	0.611	0.527	0.512	0.525	1.038	1.064
6	0.634	0.530	0.634	0.530	0.521	0.529	1.027	1.056
7	0.649	0.519	0.649	0.519	0.521	0.517	1.006	1.057
8	0.648	0.501	0.648	0.501	0.520	0.496	0.970	1.040
9	0.636	0.481	0.636	0.481	0.510	0.476	0.950	1.008

RP	PERCENT	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	19.0	13.3	9.2	0.387	0.	0.299	0.299	0.145	0.145
2	10.00	16.5	10.9	9.4	0.366	0.	0.257	0.257	0.122	0.122
3	15.00	15.6	10.1	9.5	0.354	0.	0.215	0.215	0.100	0.100
4	30.00	14.4	9.1	9.4	0.328	0.	0.116	0.116	0.050	0.050
5	50.00	11.9	6.8	8.8	0.312	0.	0.034	0.034	0.013	0.013
6	70.00	8.4	3.5	8.9	0.334	0.	0.040	0.040	0.014	0.014
7	85.00	7.3	2.7	12.0	0.351	0.	0.076	0.076	0.024	0.024
8	90.00	7.2	2.7	14.3	0.364	0.	0.111	0.111	0.034	0.034
9	95.00	7.5	3.1	14.1	0.376	0.	0.135	0.135	0.040	0.040

TABLE VIII. - Continued.

(x) 110 Percent of design speed; reading 2953

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	60.0	7.3	60.0	7.3	321.5	0.987	12.22	0.960
2	24.724	24.735	50.5	9.0	50.5	9.0	319.5	0.989	12.31	0.956
3	24.140	24.155	41.2	8.2	41.2	8.2	317.0	0.993	12.52	0.943
4	22.410	22.433	31.6	6.7	31.6	6.7	311.8	1.000	12.82	0.946
5	20.152	20.188	33.6	5.6	33.6	5.6	309.4	1.003	12.84	0.980
6	17.960	18.021	36.4	3.8	36.4	3.8	308.3	1.001	12.77	0.989
7	16.375	16.452	38.0	6.3	38.0	6.3	307.8	1.001	12.76	0.987
8	15.860	15.923	37.9	8.2	37.9	8.2	307.6	1.000	12.74	0.971
9	15.349	15.390	37.5	8.2	37.5	8.2	306.7	1.000	12.56	0.967

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	167.6	141.0	167.6	141.0	83.7	139.9	145.2	17.8	0.	0.
2	175.0	141.6	175.0	141.6	111.3	139.9	135.1	22.1	0.	0.
3	187.9	142.5	187.9	142.5	141.4	141.0	123.7	20.4	0.	0.
4	201.0	154.3	201.0	154.3	171.2	153.2	105.4	18.1	0.	0.
5	206.3	172.9	206.3	172.9	171.9	172.1	114.1	16.8	0.	0.
6	209.3	176.1	209.3	176.1	168.4	175.7	124.3	11.7	0.	0.
7	214.7	176.5	214.7	176.5	169.1	175.5	132.2	19.2	0.	0.
8	216.1	168.7	216.1	168.7	170.6	166.9	132.7	24.2	0.	0.
9	211.0	161.1	211.0	161.1	167.4	159.5	128.5	22.9	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.477	0.401	0.477	0.401	0.238	0.398	1.671	1.402
2	0.501	0.404	0.501	0.404	0.318	0.399	1.257	1.248
3	0.542	0.407	0.542	0.407	0.408	0.403	0.997	1.145
4	0.587	0.444	0.587	0.444	0.500	0.441	0.895	1.030
5	0.606	0.502	0.606	0.502	0.505	0.500	1.001	1.065
6	0.617	0.513	0.617	0.513	0.496	0.512	1.044	1.064
7	0.634	0.515	0.634	0.515	0.501	0.512	1.038	1.062
8	0.639	0.491	0.639	0.491	0.505	0.486	0.979	1.051
9	0.624	0.469	0.624	0.469	0.495	0.464	0.953	1.007

RP	PERCENT		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	SS				TOT	PROF	TOT	PROF
1	5.00	46.9	41.2	9.9	0.530	0.	0.278	0.278	0.135	0.135	
2	10.00	37.1	31.5	11.7	0.499	0.	0.278	0.278	0.131	0.131	
3	15.00	27.4	21.9	11.0	0.498	0.	0.314	0.314	0.145	0.145	
4	30.00	15.2	9.9	9.9	0.420	0.	0.261	0.261	0.112	0.112	
5	50.00	12.4	7.2	9.7	0.345	0.	0.093	0.093	0.036	0.036	
6	70.00	10.2	5.3	9.3	0.345	0.	0.049	0.049	0.017	0.017	
7	85.00	8.7	4.1	12.5	0.344	0.	0.056	0.056	0.018	0.018	
8	90.00	8.4	3.8	14.5	0.373	0.	0.122	0.122	0.037	0.037	
9	95.00	8.3	3.9	14.3	0.385	0.	0.141	0.141	0.041	0.041	

TABLE VIII, - Continued.

(y) 120 Percent of design speed; reading 2968

RP	RAD II		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	22.8	5.9	22.8	5.9	316.6	0.998	12.83	0.947
2	24.724	24.735	21.7	5.8	21.7	5.8	316.1	0.997	13.06	0.964
3	24.140	24.155	21.6	5.0	21.6	5.0	315.1	0.998	13.09	0.977
4	22.410	22.433	23.3	4.3	23.3	4.3	313.5	0.998	13.06	0.986
5	20.152	20.188	25.6	3.5	25.6	3.5	311.6	1.004	13.02	0.995
6	17.960	18.021	27.9	2.6	27.9	2.6	311.0	1.007	12.86	1.004
7	16.375	16.452	30.8	3.3	30.8	3.3	311.7	1.002	12.92	0.990
8	15.860	15.923	31.5	4.3	31.5	4.3	312.5	0.996	12.95	0.965
9	15.349	15.390	31.9	6.1	31.9	6.1	311.6	0.993	12.79	0.932

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	239.1	203.5	239.1	203.5	220.5	202.4	92.5	20.8	0.	0.
2	246.7	213.6	246.7	213.6	229.3	212.5	91.0	21.4	0.	0.
3	247.9	215.7	247.9	215.7	230.5	214.8	91.3	18.8	0.	0.
4	254.6	219.7	254.6	219.7	233.8	219.1	100.9	16.3	0.	0.
5	261.2	226.0	261.2	226.0	235.6	225.6	112.8	14.0	0.	0.
6	262.3	229.8	262.3	229.8	231.8	229.6	122.8	10.4	0.	0.
7	266.9	231.1	266.9	231.1	229.3	230.7	136.5	13.4	0.	0.
8	268.8	223.4	268.8	223.4	229.3	222.8	140.4	16.7	0.	0.
9	262.5	206.5	262.5	206.5	222.8	205.3	138.9	22.0	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.703	0.591	0.703	0.591	0.648	0.588	0.918	1.040
2	0.728	0.623	0.728	0.623	0.677	0.620	0.927	1.047
3	0.733	0.630	0.733	0.630	0.682	0.628	0.932	1.051
4	0.757	0.645	0.757	0.645	0.695	0.643	0.937	1.115
5	0.782	0.665	0.782	0.665	0.705	0.664	0.958	1.162
6	0.786	0.677	0.786	0.677	0.695	0.676	0.991	1.130
7	0.801	0.682	0.801	0.682	0.688	0.681	1.006	1.144
8	0.807	0.659	0.807	0.659	0.688	0.657	0.972	1.150
9	0.786	0.607	0.786	0.607	0.667	0.603	0.922	1.120

RP	PERCENT SPAN		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	TOT				PROF	TOT	PROF	
1	5.00	9.6	3.9	8.5	0.296	0.	0.187	0.187	0.091	0.091	
2	10.00	8.2	2.6	8.5	0.269	0.	0.122	0.122	0.058	0.058	
3	15.00	7.8	2.3	7.8	0.266	0.	0.076	0.076	0.035	0.035	
4	30.00	6.9	1.6	7.5	0.281	0.	0.045	0.045	0.020	0.020	
5	50.00	4.4	-0.8	7.6	0.282	0.	0.016	0.016	0.006	0.006	
6	70.00	1.7	-3.3	8.0	0.272	0.	-0.012	-0.012	-0.004	-0.004	
7	85.00	1.4	-3.2	9.5	0.280	0.	0.029	0.029	0.009	0.009	
8	90.00	1.9	-2.6	10.6	0.310	0.	0.101	0.101	0.031	0.031	
9	95.00	2.8	-1.6	12.3	0.345	0.	0.204	0.204	0.060	0.060	

TABLE VIII, - Continued.

(z) 120 Percent of design speed; reading 2954

RP	RADI		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	26.6	6.2	26.6	6.2	316.9	1.001	13.29	0.944
2	24.724	24.735	24.1	6.0	24.1	6.0	316.3	0.999	13.49	0.953
3	24.140	24.155	24.6	5.7	24.6	5.7	315.2	1.000	13.54	0.966
4	22.410	22.433	25.1	5.3	25.1	5.3	313.2	1.001	13.48	0.982
5	20.152	20.188	27.9	3.8	27.9	3.8	311.1	1.004	13.23	1.002
6	17.960	18.021	29.9	3.0	29.9	3.0	310.9	1.005	13.14	0.998
7	16.375	16.452	32.2	3.8	32.2	3.8	311.2	0.997	13.12	0.973
8	15.860	15.923	33.0	5.2	33.0	5.2	311.0	0.994	13.03	0.953
9	15.349	15.390	33.4	6.8	33.4	6.8	309.7	0.994	12.85	0.933

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	234.7	199.2	234.7	199.2	209.9	198.0	105.0	21.7	0.	0.
2	242.4	207.5	242.4	207.5	221.2	206.4	99.1	21.7	0.	0.
3	243.1	208.4	243.1	208.4	221.1	207.4	101.1	20.6	0.	0.
4	250.7	215.0	250.7	215.0	227.0	214.0	106.3	19.8	0.	0.
5	250.8	219.4	250.8	219.4	221.6	218.9	117.5	14.6	0.	0.
6	255.9	220.0	255.9	220.0	221.8	219.7	127.7	11.4	0.	0.
7	259.9	213.0	259.9	213.0	220.0	212.6	138.4	14.0	0.	0.
8	258.1	203.0	258.1	203.0	216.5	202.2	140.5	18.6	0.	0.
9	251.2	190.0	251.2	190.0	209.6	188.7	138.4	22.4	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.688	0.576	0.688	0.576	0.616	0.573	0.943	1.107
2	0.714	0.603	0.714	0.603	0.651	0.600	0.933	1.087
3	0.717	0.607	0.717	0.607	0.652	0.604	0.938	1.100
4	0.745	0.629	0.745	0.629	0.674	0.626	0.943	1.141
5	0.748	0.644	0.748	0.644	0.661	0.643	0.988	1.171
6	0.765	0.646	0.765	0.646	0.663	0.646	0.991	1.152
7	0.778	0.627	0.778	0.627	0.659	0.625	0.966	1.148
8	0.772	0.596	0.772	0.596	0.648	0.594	0.934	1.141
9	0.751	0.557	0.751	0.557	0.627	0.553	0.900	1.108

RP	PERCENT	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	13.4	7.7	8.9	0.325	0.	0.207	0.207	0.101	0.101
2	10.00	10.7	5.1	8.7	0.296	0.	0.146	0.146	0.069	0.069
3	15.00	10.8	5.3	8.5	0.297	0.	0.118	0.118	0.055	0.055
4	30.00	8.7	3.4	8.5	0.292	0.	0.058	0.058	0.025	0.025
5	50.00	6.7	1.6	7.9	0.285	0.	-0.008	-0.008	-0.003	-0.003
6	70.00	3.7	-1.2	8.4	0.298	0.	0.007	0.007	0.002	0.002
7	85.00	2.8	-1.8	10.0	0.331	0.	0.082	0.082	0.026	0.026
8	90.00	3.5	-1.1	11.5	0.358	0.	0.144	0.144	0.044	0.044
9	95.00	4.2	-0.1	12.9	0.380	0.	0.214	0.214	0.063	0.063

TABLE VIII. - Continued.

(aa) 120 Percent of design speed; reading 2955

RP	RADI		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	29.8	6.4	29.8	6.4	320.2	0.999	13.77	0.935
2	24.724	24.735	28.1	6.4	28.1	6.4	319.2	0.997	13.88	0.944
3	24.140	24.155	28.0	5.7	28.0	5.7	317.9	0.997	13.82	0.953
4	22.410	22.433	28.1	6.2	28.1	6.2	314.7	1.001	13.68	0.970
5	20.152	20.188	30.0	4.5	30.0	4.5	312.3	1.005	13.37	1.000
6	17.960	18.021	32.0	3.1	32.0	3.1	311.3	1.003	13.18	0.997
7	16.375	16.452	34.2	4.3	34.2	4.3	311.8	0.994	13.16	0.967
8	15.860	15.923	34.8	6.8	34.8	6.8	311.0	0.995	13.07	0.960
9	15.349	15.390	35.2	8.0	35.2	8.0	309.8	0.998	12.85	0.956

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	229.9	194.8	229.9	194.8	199.6	193.6	114.1	21.8	0.	0.
2	234.3	197.9	234.3	197.9	206.7	196.7	110.5	21.9	0.	0.
3	233.1	195.9	233.1	195.9	205.8	194.9	109.5	19.6	0.	0.
4	239.4	202.1	239.4	202.1	211.1	200.9	112.9	21.8	0.	0.
5	240.8	209.8	240.8	209.8	208.4	209.2	120.6	16.6	0.	0.
6	244.2	208.9	244.2	208.9	207.2	208.6	129.3	11.2	0.	0.
7	248.7	198.6	248.7	198.6	205.6	198.1	139.9	14.8	0.	0.
8	247.5	193.5	247.5	193.5	203.2	192.2	141.3	22.8	0.	0.
9	240.7	186.0	240.7	186.0	196.7	184.2	138.8	25.8	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.669	0.560	0.669	0.560	0.581	0.557	0.970	1.148
2	0.684	0.571	0.684	0.571	0.603	0.568	0.952	1.134
3	0.682	0.566	0.682	0.566	0.602	0.563	0.947	1.125
4	0.706	0.587	0.706	0.587	0.622	0.584	0.952	1.154
5	0.713	0.613	0.713	0.613	0.618	0.611	1.003	1.168
6	0.726	0.611	0.726	0.611	0.616	0.610	1.007	1.142
7	0.740	0.582	0.740	0.582	0.612	0.580	0.963	1.144
8	0.737	0.566	0.737	0.566	0.605	0.562	0.945	1.135
9	0.716	0.543	0.716	0.543	0.585	0.538	0.936	1.100

RP	PERCENT SPAN		INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS	TOT				PROF	TOT	PROF	
1	5.00	16.6	10.9	9.0	0.349	0.	0.249	0.249	0.121	0.121	
2	10.00	14.7	9.1	9.1	0.336	0.	0.208	0.208	0.099	0.099	
3	15.00	14.2	8.7	8.5	0.339	0.	0.178	0.178	0.082	0.082	
4	30.00	11.7	6.4	9.4	0.321	0.	0.106	0.106	0.046	0.046	
5	50.00	8.8	3.7	8.6	0.297	0.	0.001	0.001	0.001	0.001	
6	70.00	5.7	0.8	8.5	0.312	0.	0.009	0.009	0.003	0.003	
7	85.00	4.9	0.3	10.5	0.360	0.	0.108	0.108	0.034	0.034	
8	90.00	5.3	0.8	13.0	0.365	0.	0.132	0.132	0.040	0.040	
9	95.00	6.0	1.6	14.1	0.366	0.	0.153	0.153	0.045	0.045	

TABLE VIII. - Continued.

(bb) 120 Percent of design speed; reading 2956

RP	RADI I		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	33.2	7.3	33.2	7.3	322.7	1.000	13.87	0.931
2	24.724	24.735	31.3	7.7	31.3	7.7	321.1	0.998	14.03	0.933
3	24.140	24.155	30.8	7.9	30.8	7.9	319.7	0.998	14.02	0.939
4	22.410	22.433	31.0	6.5	31.0	6.5	315.9	1.002	13.78	0.965
5	20.152	20.188	32.8	4.7	32.8	4.7	312.5	1.006	13.38	0.995
6	17.960	18.021	35.0	3.2	35.0	3.2	311.7	1.001	13.18	0.994
7	16.375	16.452	36.7	5.6	36.7	5.6	311.2	0.999	13.14	0.981
8	15.860	15.923	36.9	7.6	36.9	7.6	310.9	0.999	13.10	0.970
9	15.349	15.390	36.8	8.1	36.8	8.1	309.7	1.001	12.87	0.968

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	220.6	190.7	220.6	190.7	184.6	189.2	120.8	24.1	0.	0.
2	226.5	191.9	226.5	191.9	193.5	190.2	117.8	25.8	0.	0.
3	227.0	190.2	227.0	190.2	195.0	188.4	116.2	26.1	0.	0.
4	229.3	195.6	229.3	195.6	196.5	194.4	118.2	22.3	0.	0.
5	227.0	199.9	227.0	199.9	190.7	199.2	123.1	16.5	0.	0.
6	229.7	196.3	229.7	196.3	188.0	196.0	131.9	11.0	0.	0.
7	235.3	192.0	235.3	192.0	188.6	191.1	140.7	18.7	0.	0.
8	235.8	186.4	235.8	186.4	188.5	184.8	141.6	24.6	0.	0.
9	229.7	179.3	229.7	179.3	183.9	177.5	137.6	25.4	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.637	0.545	0.637	0.545	0.533	0.541	1.024	1.169
2	0.657	0.551	0.657	0.551	0.562	0.546	0.983	1.161
3	0.660	0.547	0.660	0.547	0.567	0.542	0.966	1.152
4	0.672	0.566	0.672	0.566	0.576	0.562	0.989	1.165
5	0.669	0.581	0.669	0.581	0.562	0.579	1.044	1.158
6	0.678	0.572	0.678	0.572	0.555	0.571	1.042	1.138
7	0.697	0.560	0.697	0.560	0.559	0.557	1.013	1.136
8	0.699	0.543	0.699	0.543	0.559	0.538	0.980	1.126
9	0.681	0.522	0.681	0.522	0.545	0.516	0.965	1.082

RP	PERCENT		INCIDENCE		DEV	D-FACT.	EFF	LOSS COEFF		LOSS PARAM.	
	SPAN	MEAN	SS	SS				TOT	PROF	TOT	PROF
1	5.00	20.0	14.3	9.9	0.350	0.	0.291	0.291	0.141	0.141	
2	10.00	17.9	12.3	10.4	0.346	0.	0.268	0.268	0.127	0.127	
3	15.00	17.0	11.5	10.7	0.347	0.	0.241	0.241	0.111	0.111	
4	30.00	14.6	9.3	9.7	0.328	0.	0.133	0.133	0.057	0.057	
5	50.00	11.6	6.5	8.8	0.302	0.	0.020	0.020	0.008	0.008	
6	70.00	8.8	3.9	8.7	0.328	0.	0.022	0.022	0.008	0.008	
7	85.00	7.4	2.7	11.8	0.348	0.	0.069	0.069	0.022	0.022	
8	90.00	7.4	2.9	13.9	0.361	0.	0.108	0.108	0.033	0.033	
9	95.00	7.6	3.2	14.3	0.364	0.	0.121	0.121	0.035	0.035	

TABLE VIII. - Concluded.

(cc) 120 Percent of design speed; reading 2957

RP	RADII		ABS BETAM		REL BETAM		TOTAL TEMP		TOTAL PRESS	
	IN	OUT	IN	OUT	IN	OUT	IN	RATIO	IN	RATIO
1	25.309	25.314	37.3	7.1	37.3	7.1	323.9	0.999	13.75	0.922
2	24.724	24.735	33.8	8.3	33.8	8.3	322.1	0.996	13.89	0.926
3	24.140	24.155	32.5	8.3	32.5	8.3	319.9	0.996	13.81	0.936
4	22.410	22.433	32.8	6.8	32.8	6.8	316.1	1.003	13.68	0.957
5	20.152	20.188	34.8	5.0	34.8	5.0	313.6	1.003	13.34	0.991
6	17.960	18.021	36.6	3.7	36.6	3.7	312.3	0.999	13.24	0.986
7	16.375	16.452	37.5	6.0	37.5	6.0	311.9	0.999	13.24	0.982
8	15.860	15.923	37.6	8.1	37.6	8.1	311.5	0.998	13.20	0.967
9	15.349	15.390	37.4	8.3	37.4	8.3	309.6	1.002	12.91	0.967

RP	ABS VEL		REL VEL		MERID VEL		TANG VEL		WHEEL SPEED	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1	213.0	179.7	213.0	179.7	169.4	178.3	129.2	22.3	0.	0.
2	219.1	182.1	219.1	182.1	182.0	180.2	122.0	26.2	0.	0.
3	217.9	180.6	217.9	180.6	183.7	178.7	117.2	26.0	0.	0.
4	220.6	185.9	220.6	185.9	185.4	184.6	119.7	21.9	0.	0.
5	218.4	192.2	218.4	192.2	179.4	191.4	124.6	16.7	0.	0.
6	224.6	189.4	224.6	189.4	180.4	189.0	133.8	12.1	0.	0.
7	233.7	190.8	233.7	190.8	185.4	189.8	142.2	19.9	0.	0.
8	235.1	183.5	235.1	183.5	186.2	181.6	143.4	25.8	0.	0.
9	227.7	175.0	227.7	175.0	180.9	173.1	138.2	25.4	0.	0.

RP	ABS MACH NO		REL MACH NO		MERID MACH NO		MERID PEAK SS	
	IN	OUT	IN	OUT	IN	OUT	VEL R	MACH NO
1	0.612	0.511	0.612	0.511	0.487	0.507	1.053	1.213
2	0.633	0.520	0.633	0.520	0.526	0.515	0.990	1.173
3	0.632	0.517	0.632	0.517	0.533	0.512	0.973	1.140
4	0.644	0.536	0.644	0.536	0.541	0.532	0.996	1.157
5	0.640	0.557	0.640	0.557	0.526	0.555	1.067	1.151
6	0.661	0.551	0.661	0.551	0.531	0.550	1.048	1.144
7	0.691	0.556	0.691	0.556	0.548	0.553	1.023	1.144
8	0.696	0.534	0.696	0.534	0.551	0.528	0.975	1.137
9	0.674	0.508	0.674	0.508	0.536	0.503	0.957	1.084

RP	PERCENT	INCIDENCE		DEV	D-FACT	EFF	LOSS COEFF		LOSS PARAM	
	SPAN	MEAN	SS				TOT	PROF	TOT	PROF
1	5.00	24.2	18.5	9.8	0.401	0.	0.347	0.347	0.168	0.168
2	10.00	20.4	14.8	11.0	0.377	0.	0.315	0.315	0.149	0.149
3	15.00	18.8	13.3	11.0	0.366	0.	0.271	0.271	0.125	0.125
4	30.00	16.4	11.1	10.0	0.349	0.	0.176	0.176	0.076	0.076
5	50.00	13.6	8.4	9.1	0.312	0.	0.038	0.038	0.015	0.015
6	70.00	10.3	5.4	9.1	0.344	0.	0.054	0.054	0.019	0.019
7	85.00	8.1	3.5	12.2	0.349	0.	0.066	0.066	0.021	0.021
8	90.00	8.1	3.6	14.4	0.373	0.	0.121	0.121	0.037	0.037
9	95.00	8.2	3.8	14.5	0.378	0.	0.127	0.127	0.037	0.037

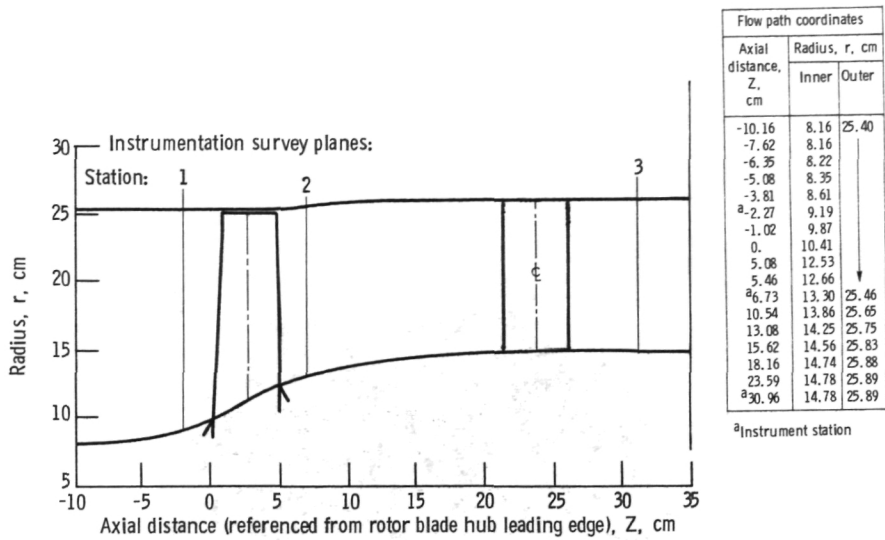


Figure 1. - Flow path for stage 54-54 showing axial location of instrumentation.

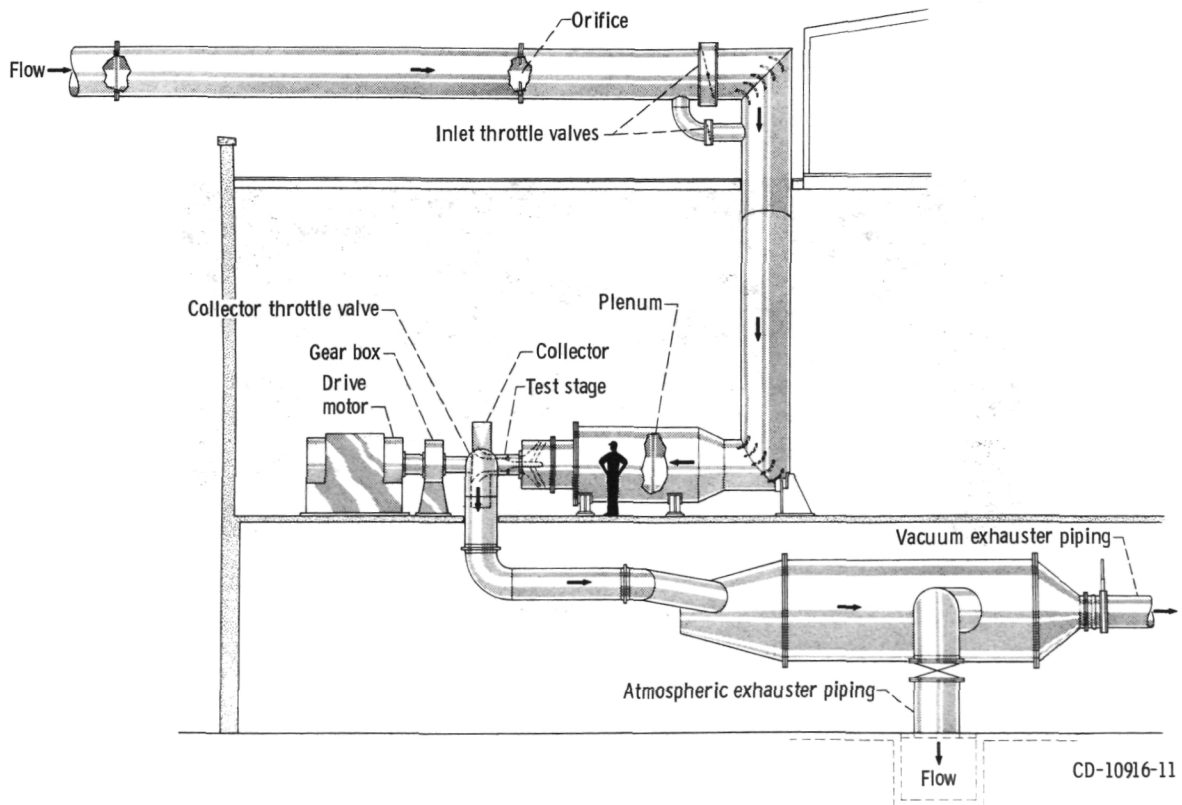


Figure 2. - Single-stage compressor facility.

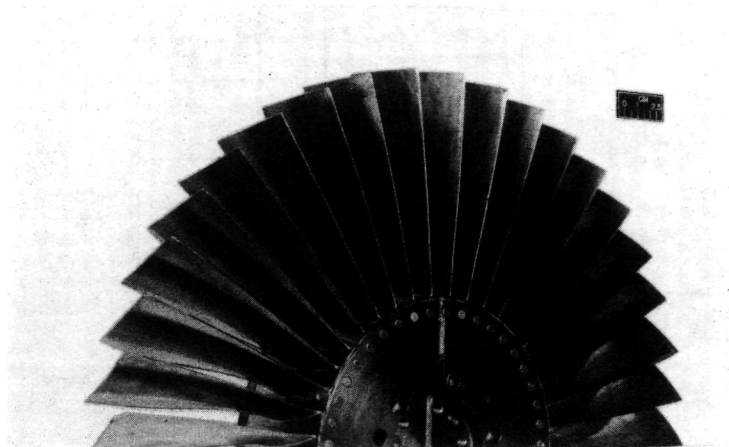


Figure 3. - Rotor 54.

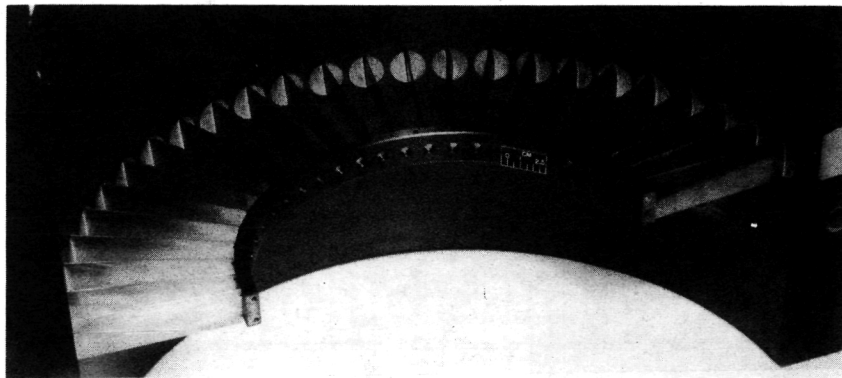
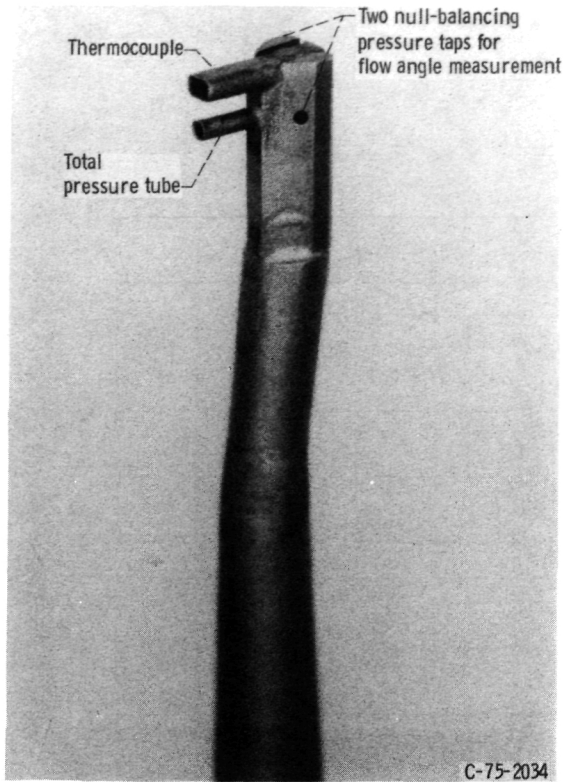
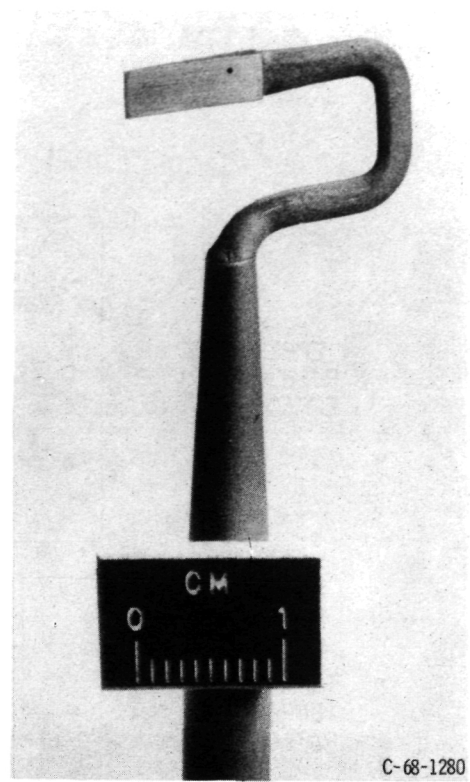


Figure 4. - Stator 54.



(a) Combination total pressure, total temperature, and flow angle probe.



(b) Static pressure probe; 8° C-shaped wedge.

Figure 5. - Survey probes.

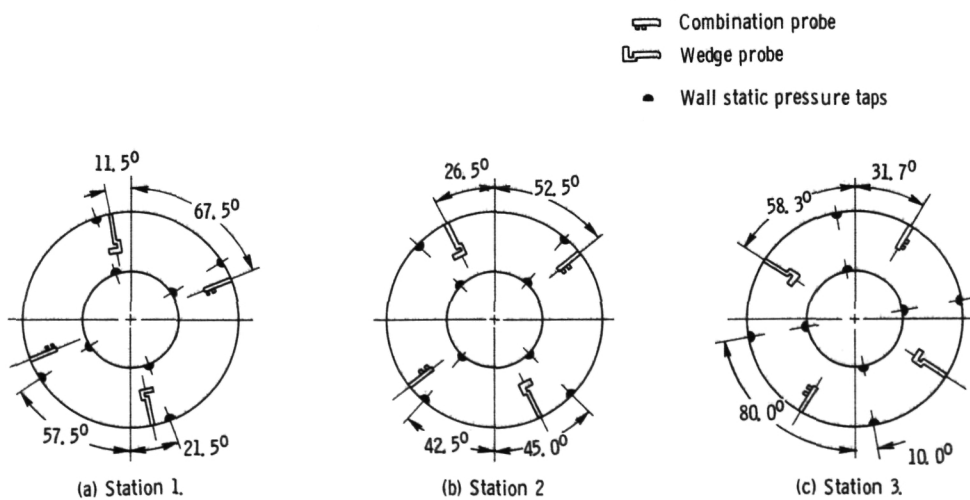


Figure 6. - Circumferential location of instrumentation at measuring stations (looking downstream).

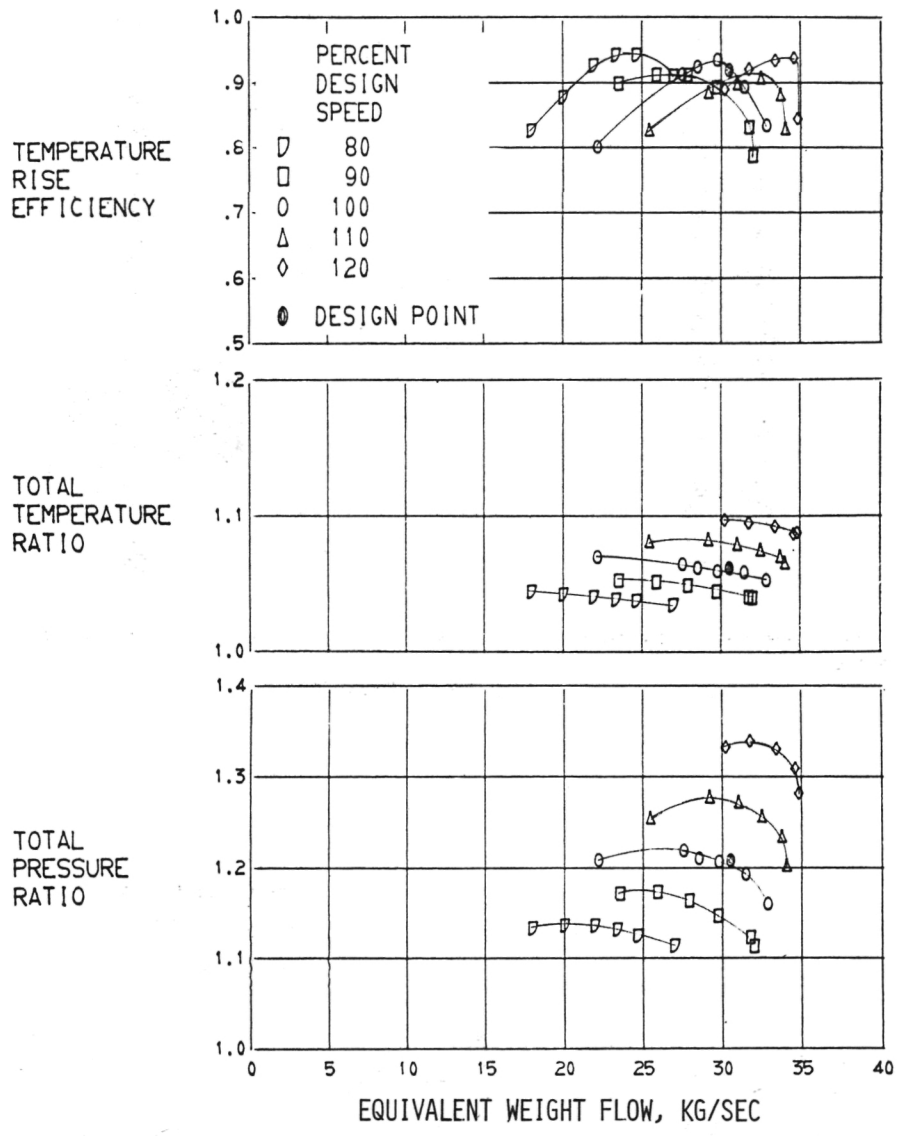


FIGURE 7. - OVERALL PERFORMANCE FOR ROTOR 54.

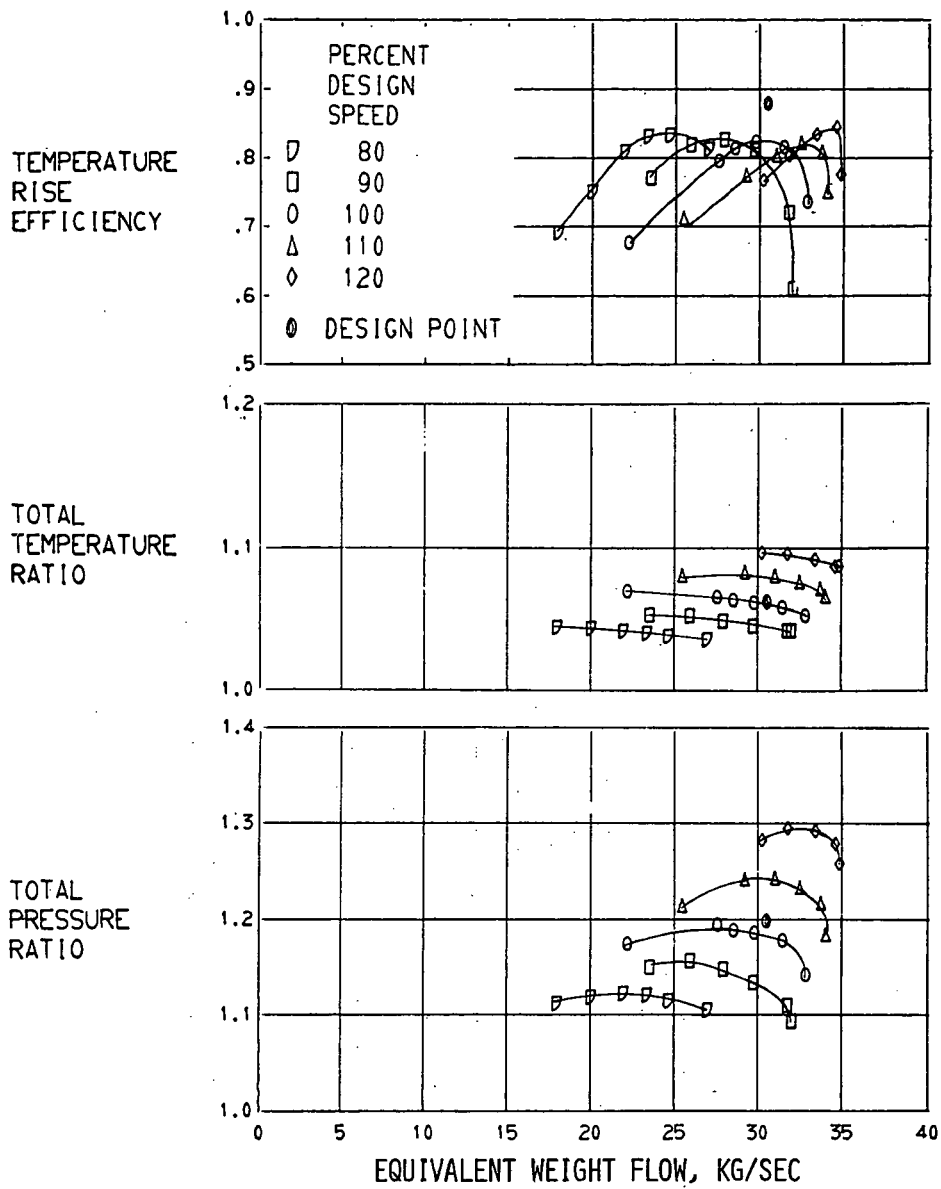
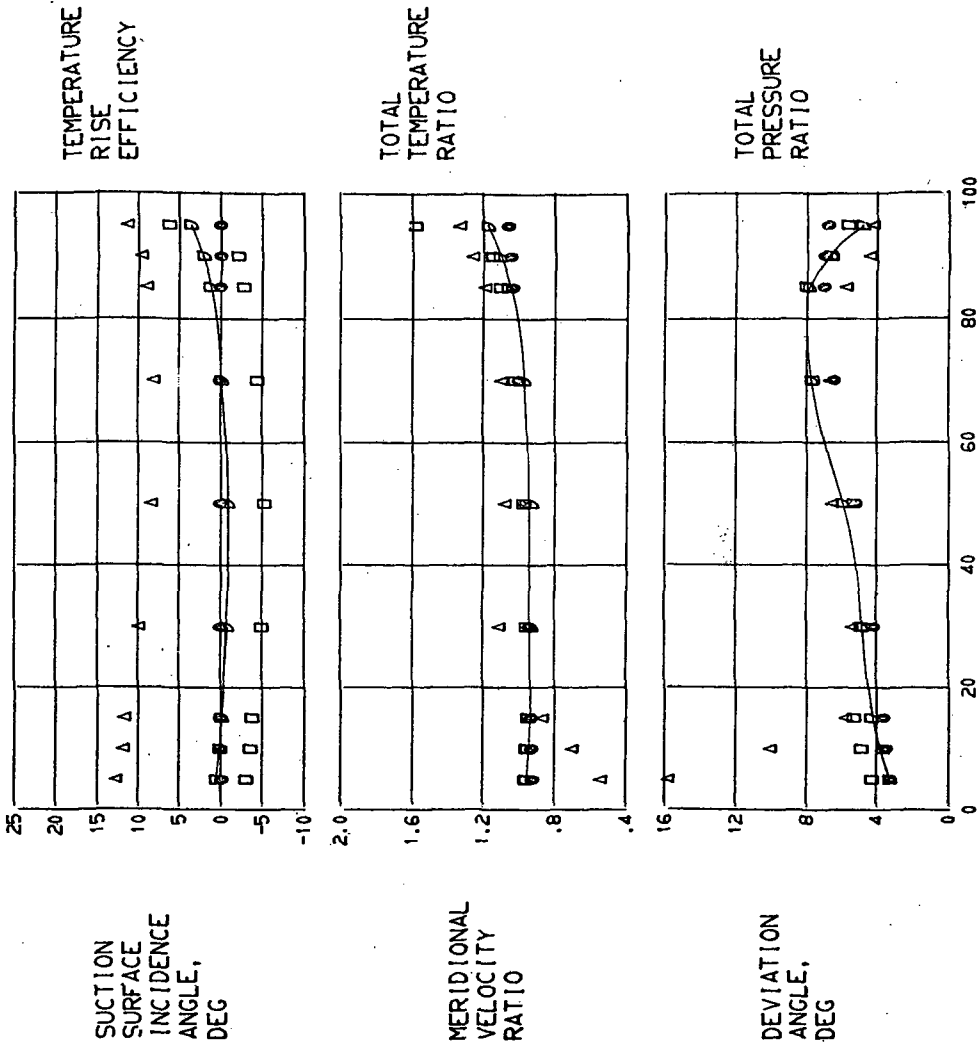
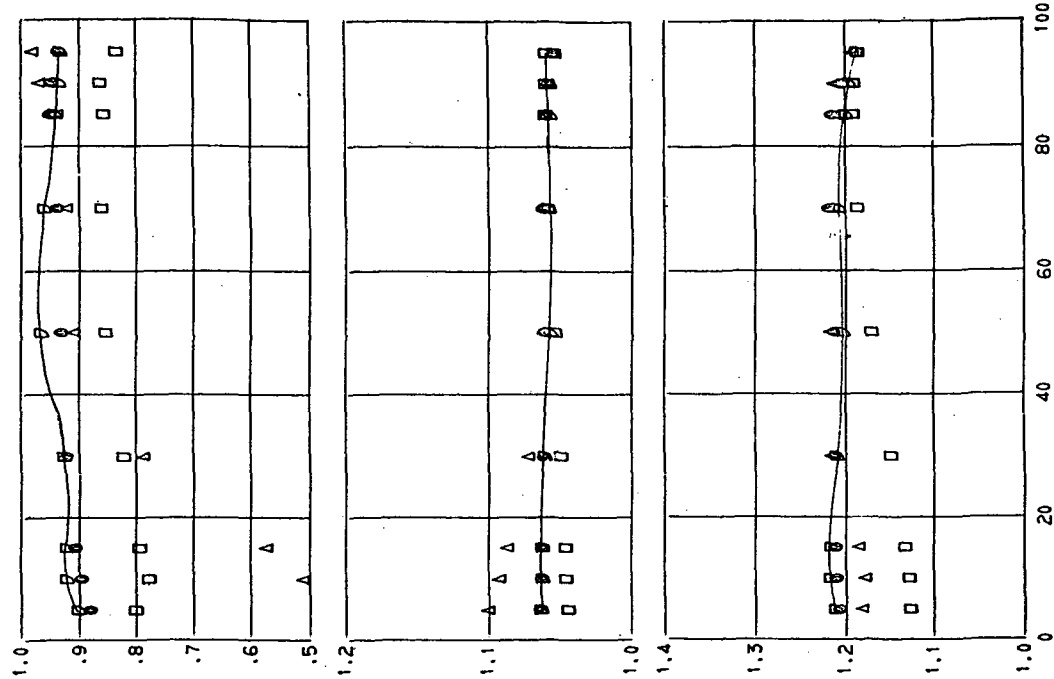


FIGURE 8. - OVERALL PERFORMANCE FOR STAGE 54-54.



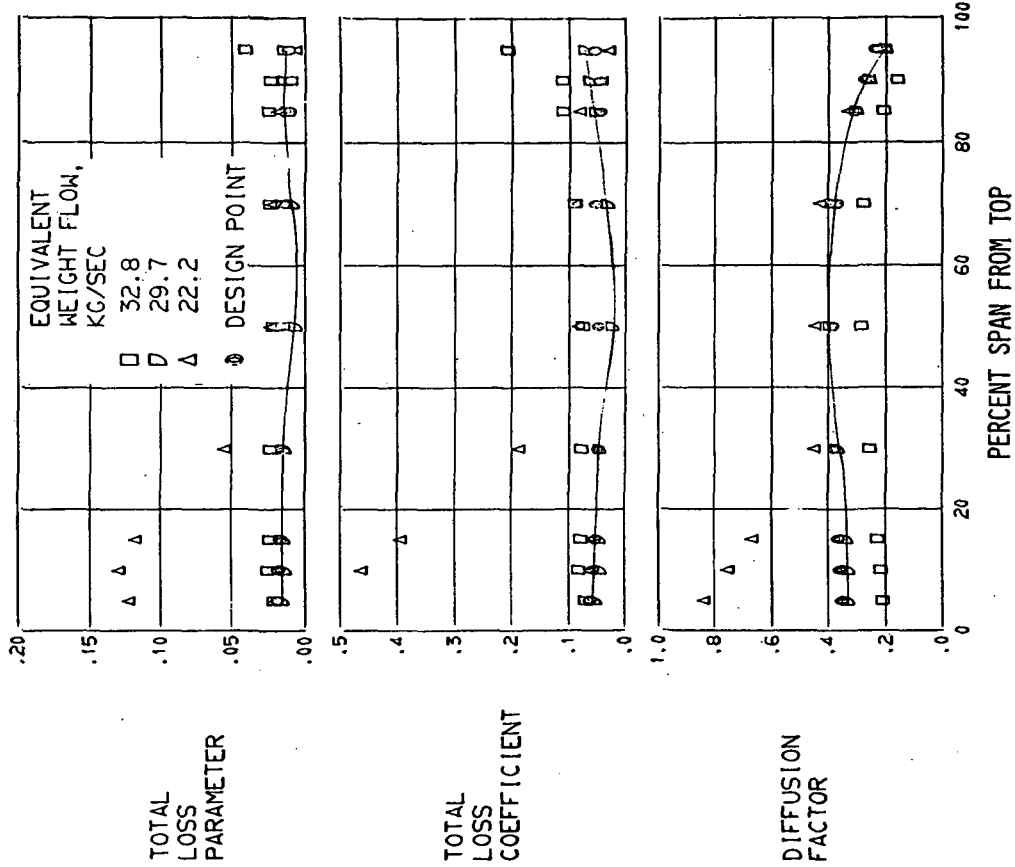


FIGURE 9. - RADIAL DISTRIBUTION OF PERFORMANCE FOR ROTOR 54, 100 PERCENT OF DESIGN SPEED.

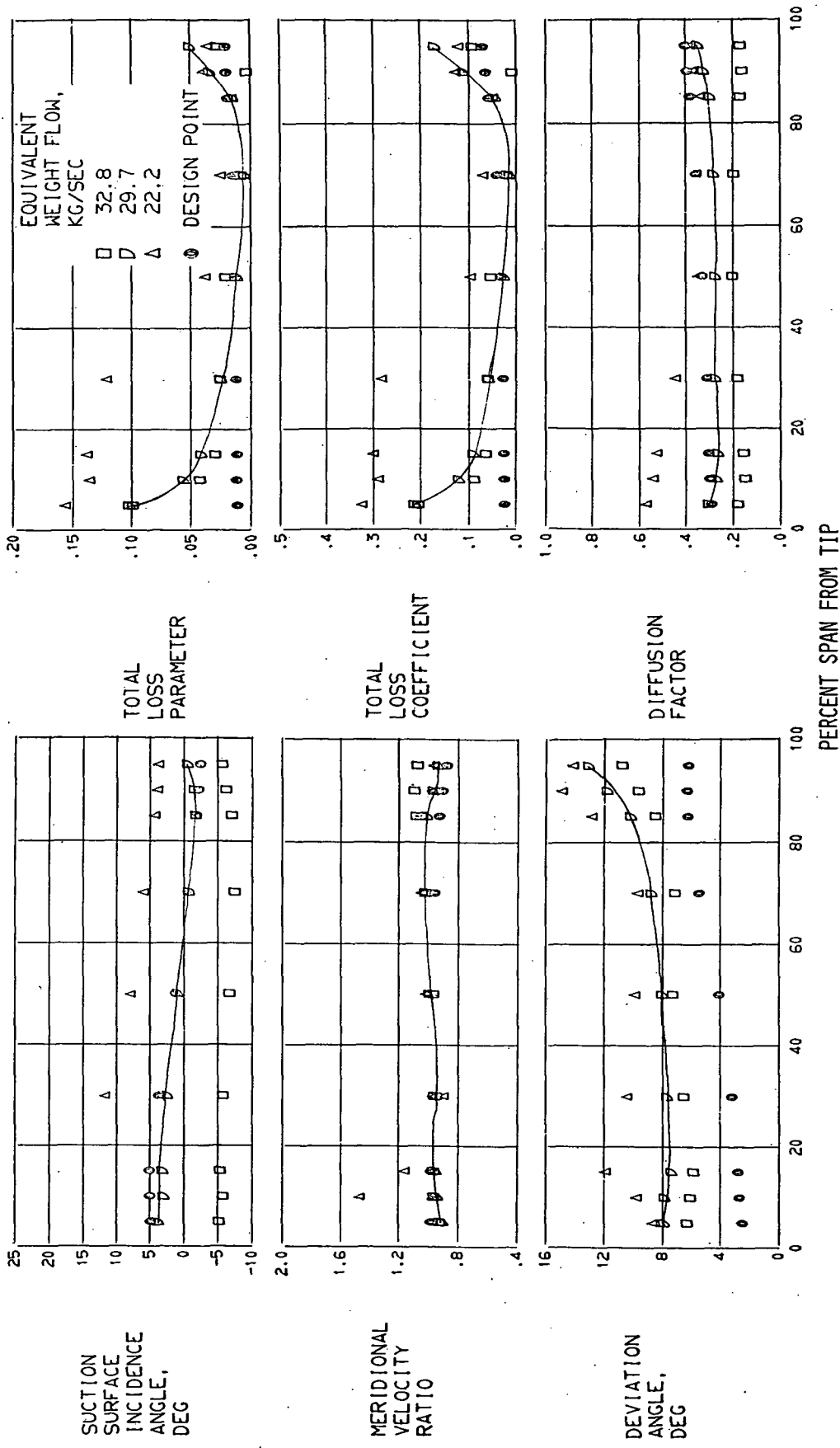
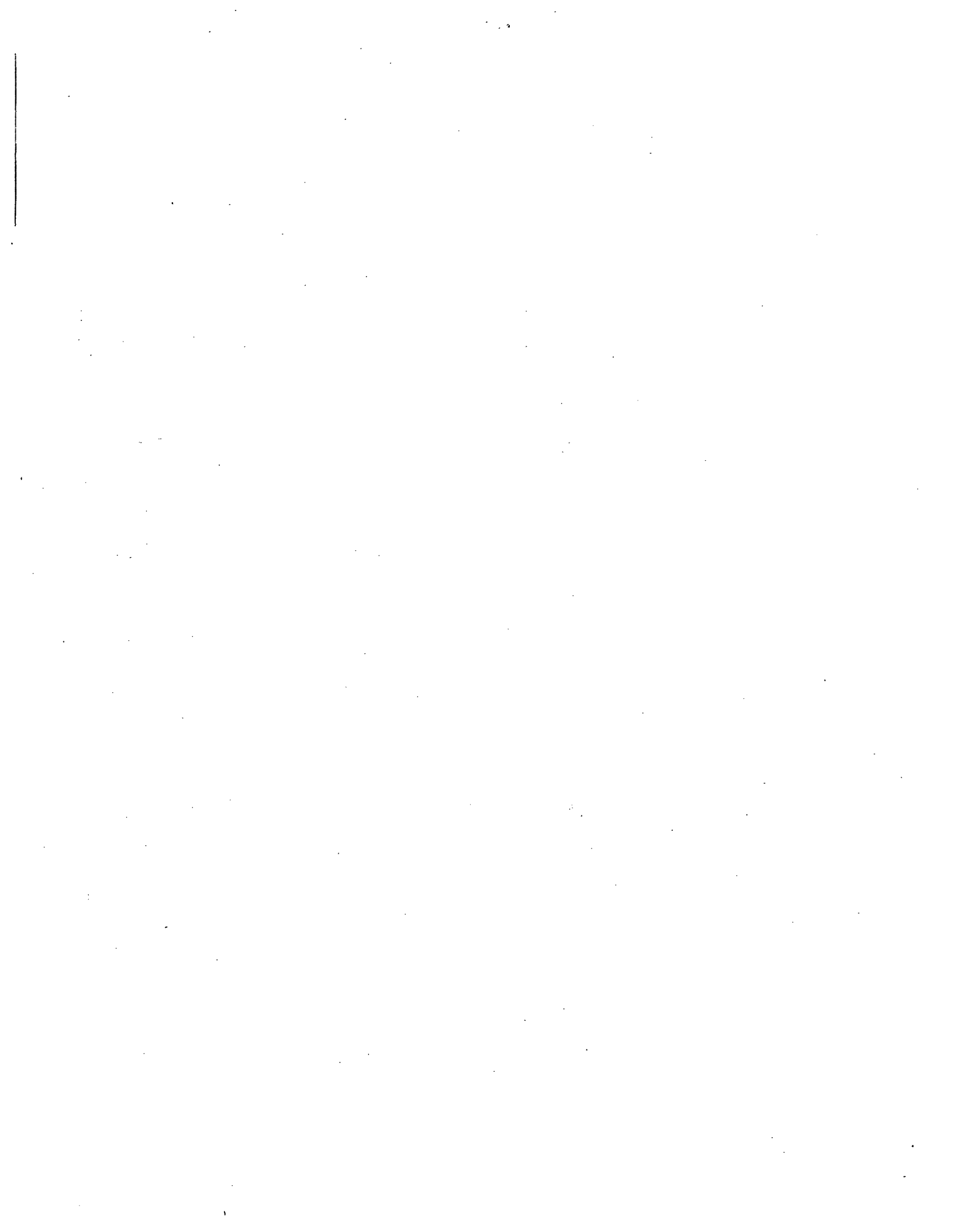
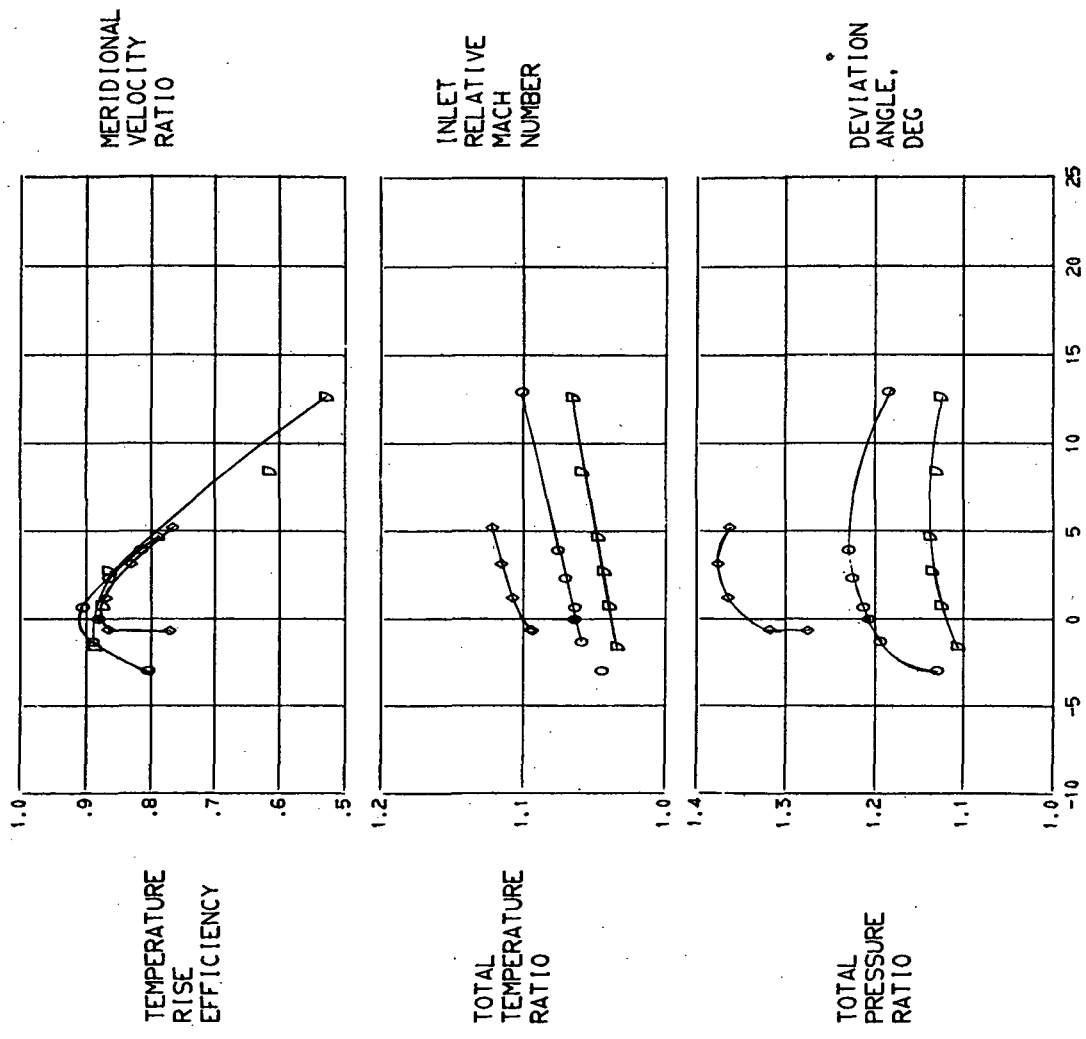
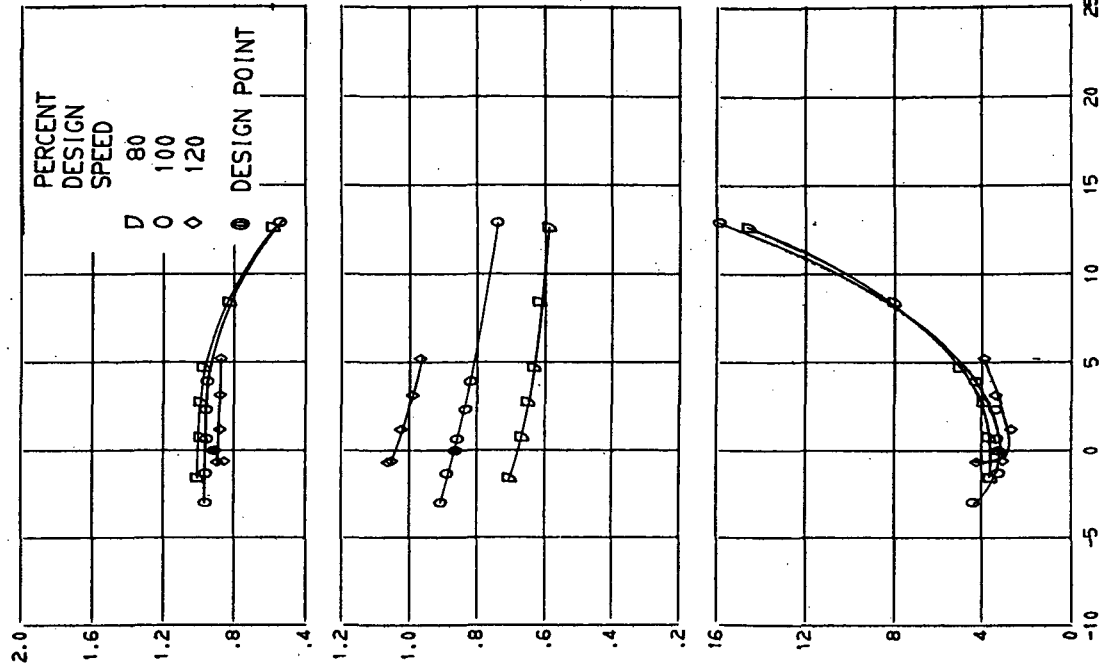
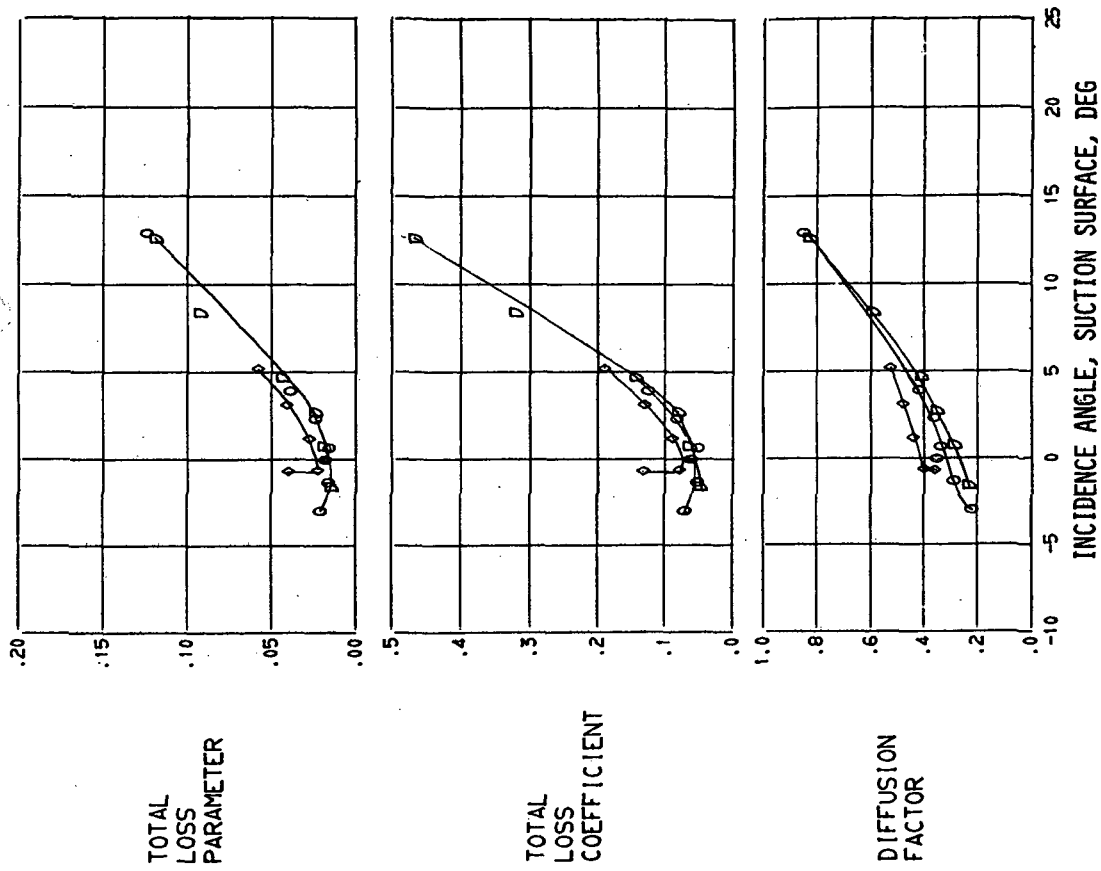


FIGURE 10. - RADIAL DISTRIBUTION OF PERFORMANCE FOR STATOR 54. 100 PERCENT OF DESIGN SPEED.

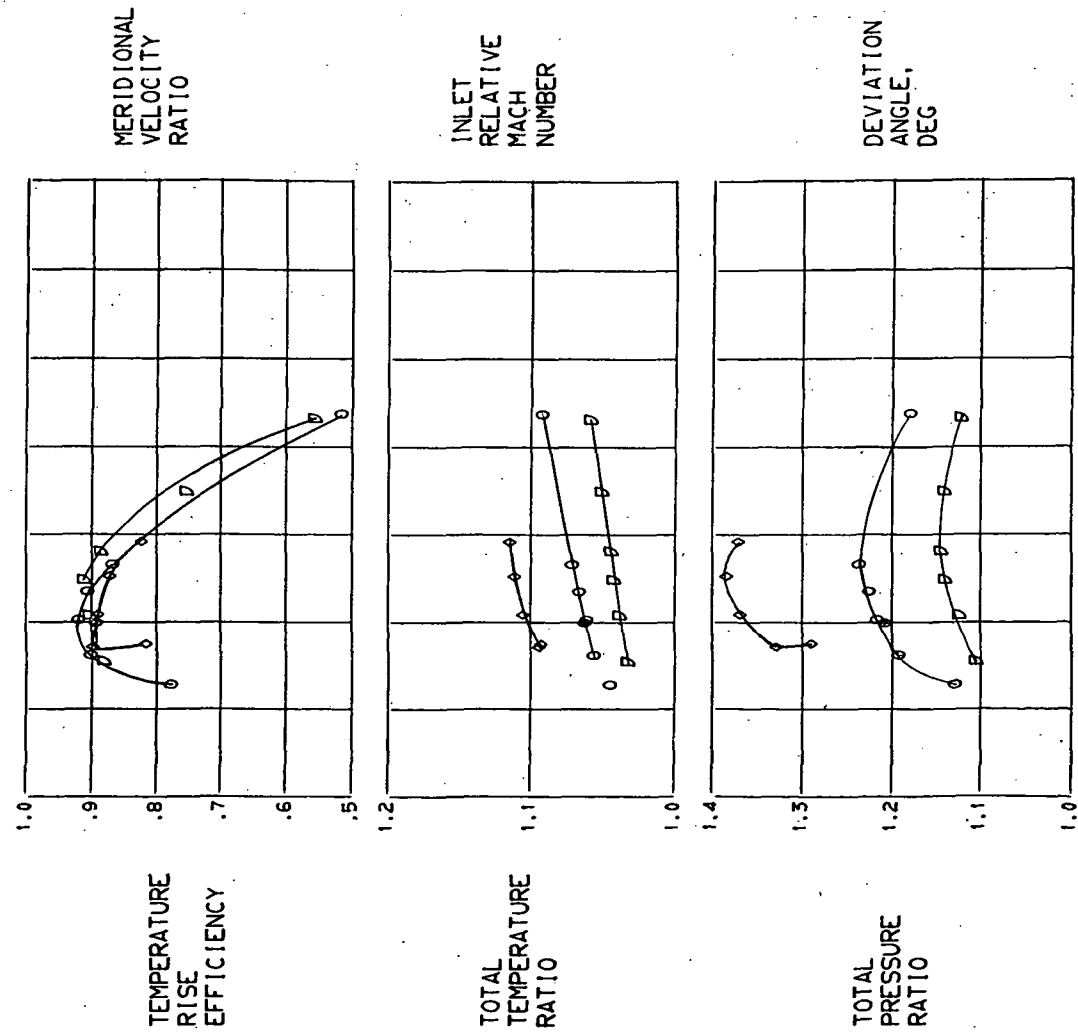
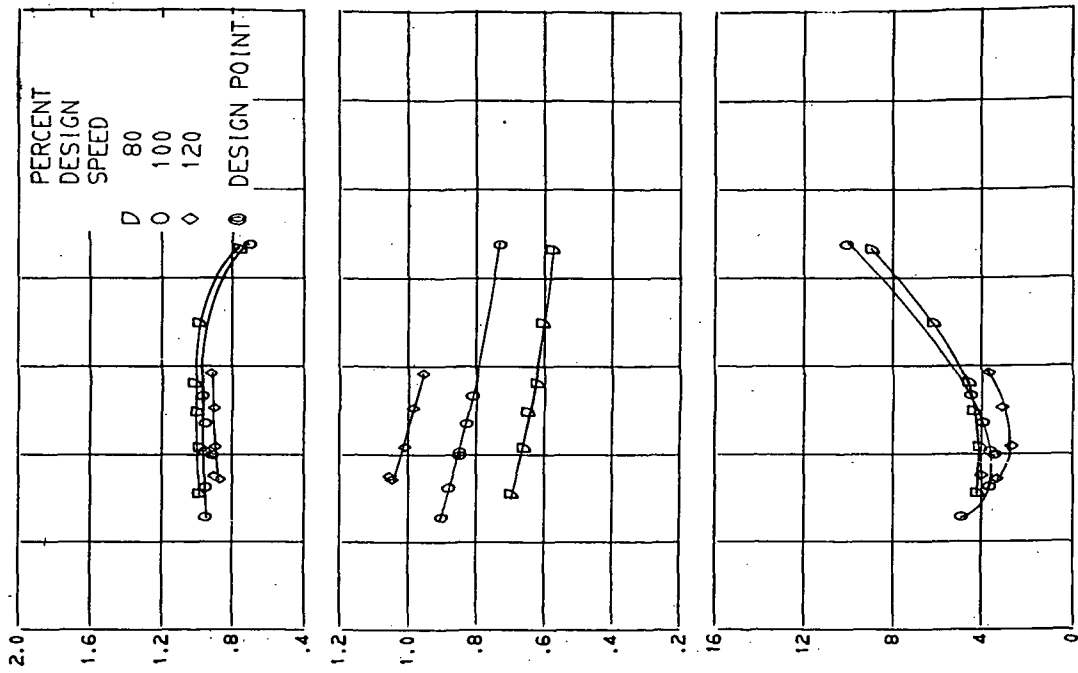


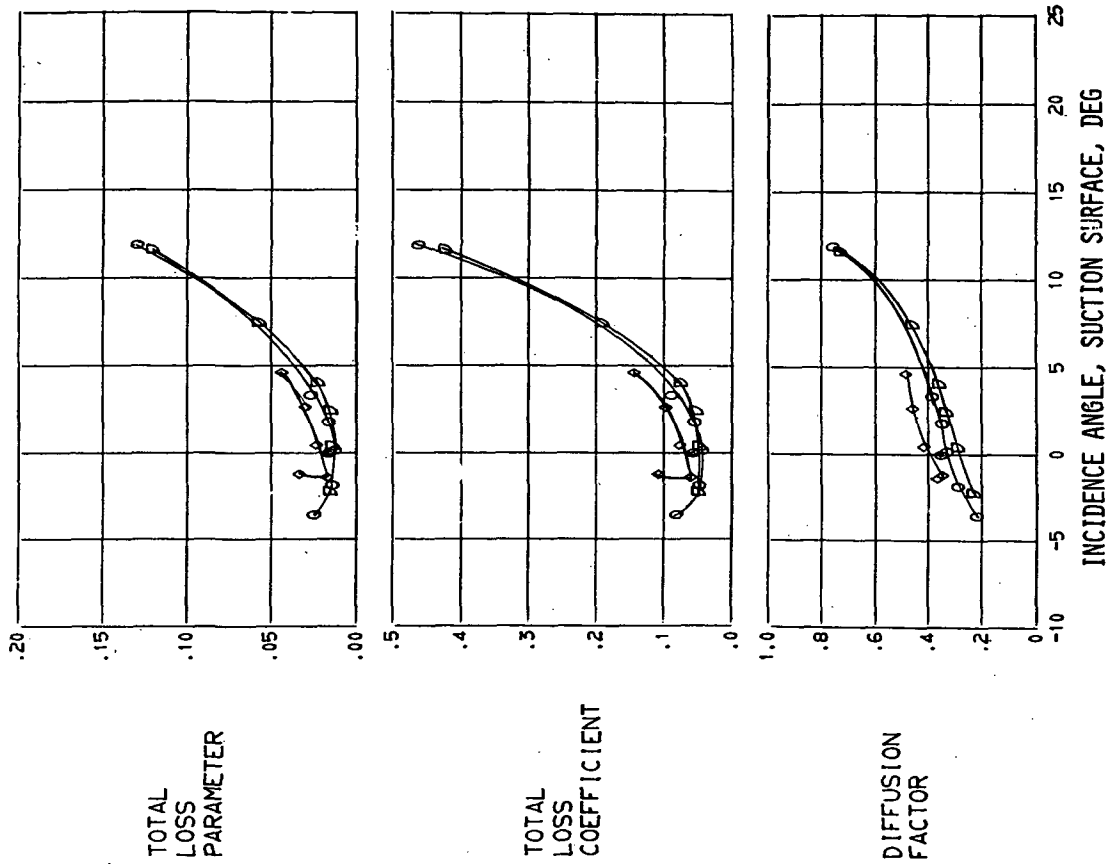




(A) 5.0 PERCENT SPAN.

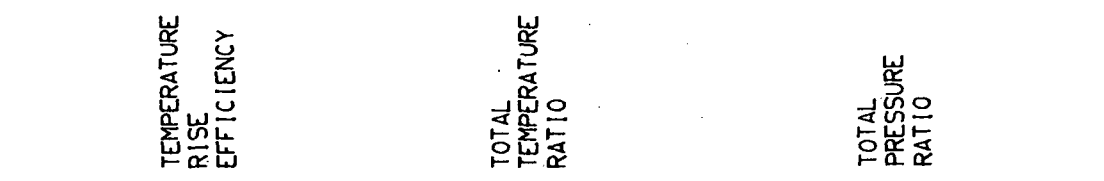
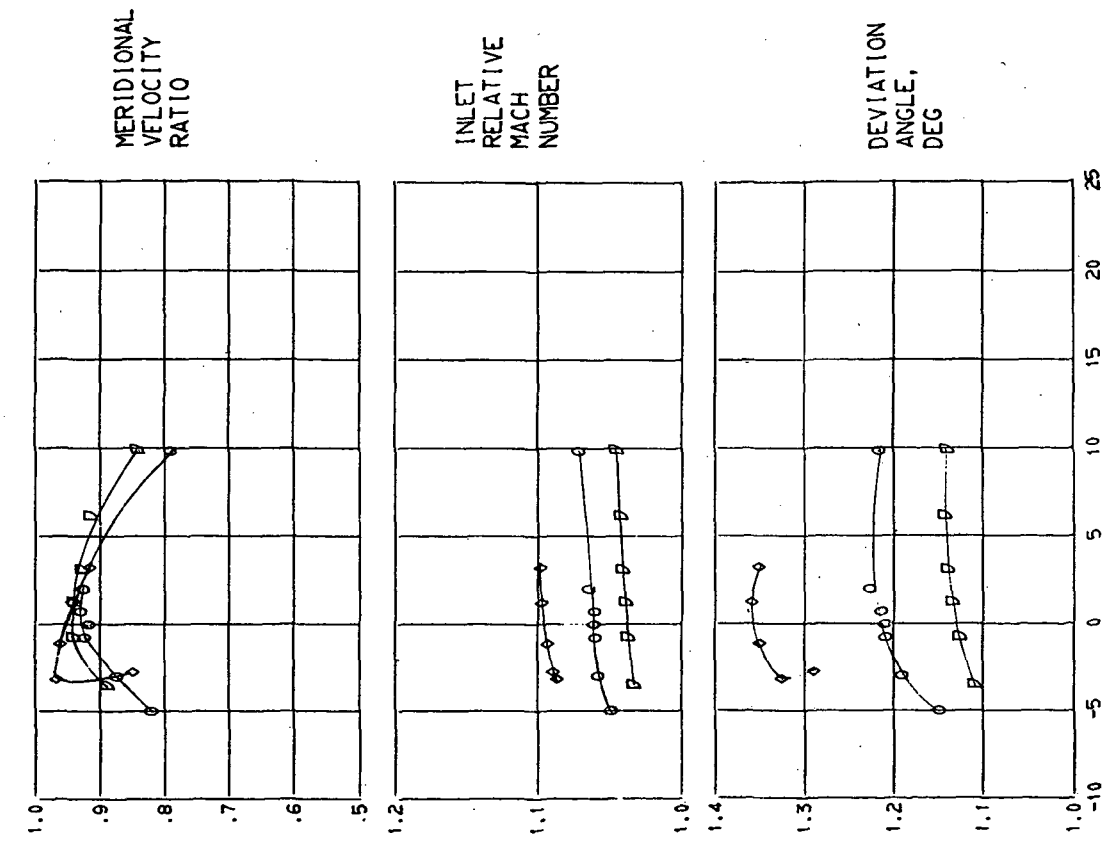
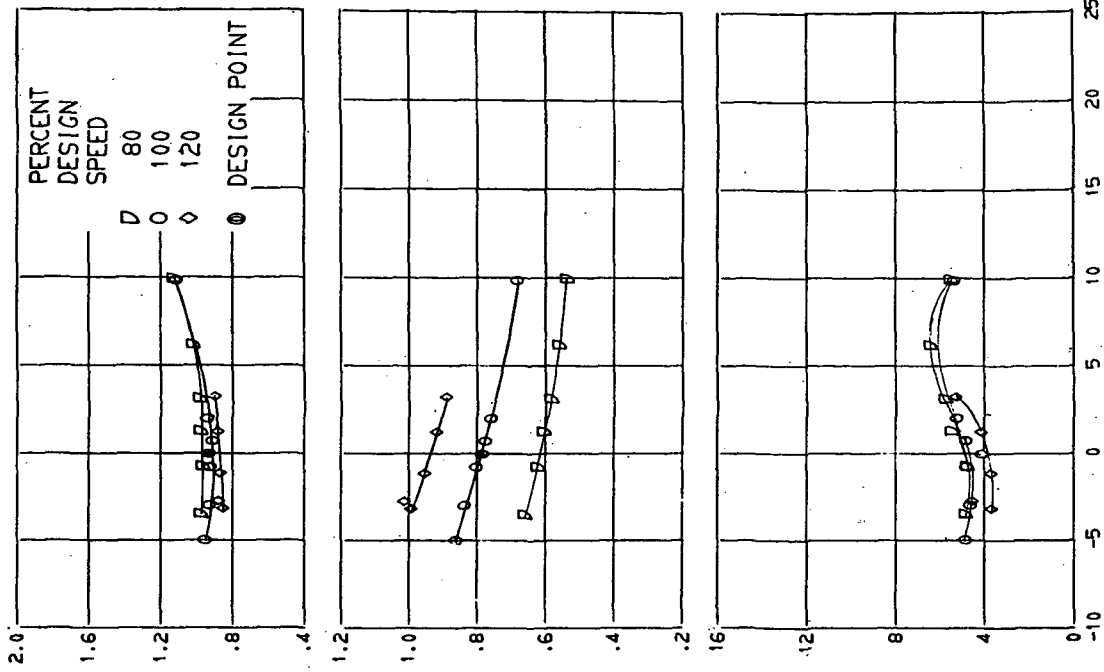
FIGURE 11. - BLADE-ELEMENT PERFORMANCE FOR ROTOR 54.

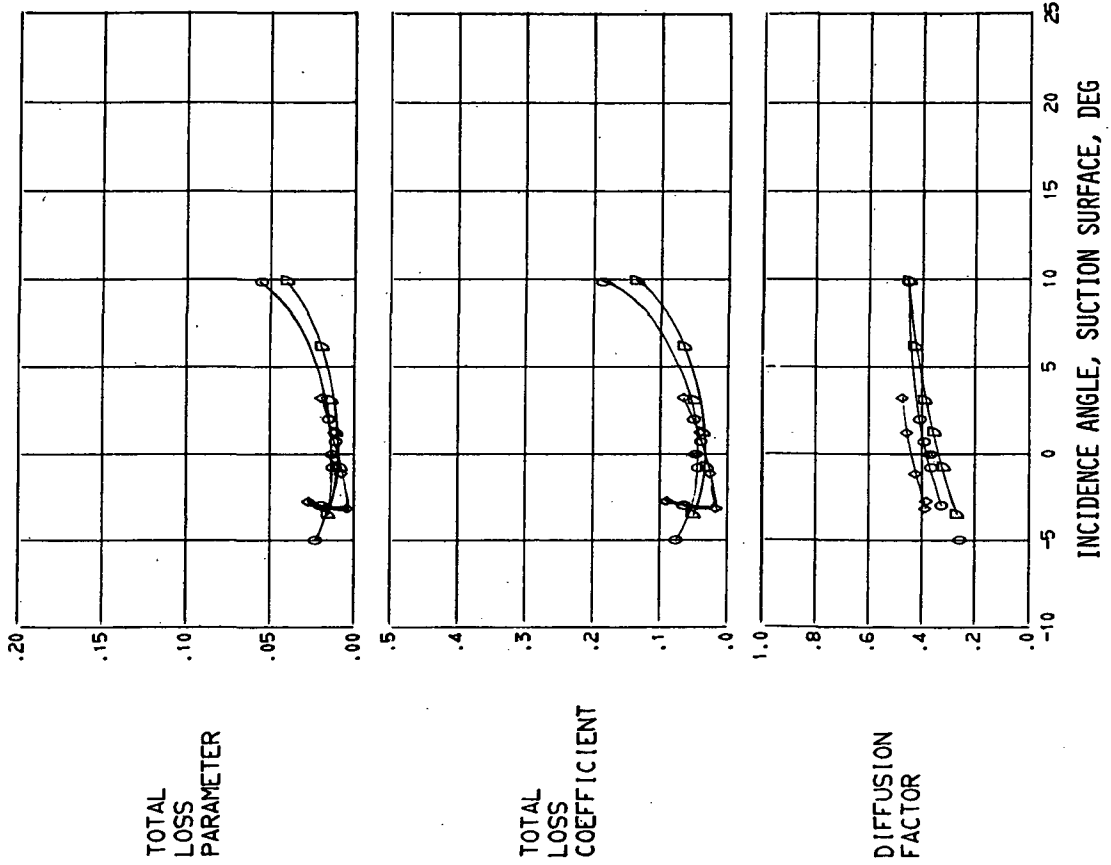




(B) 10.0 PERCENT SPAN.

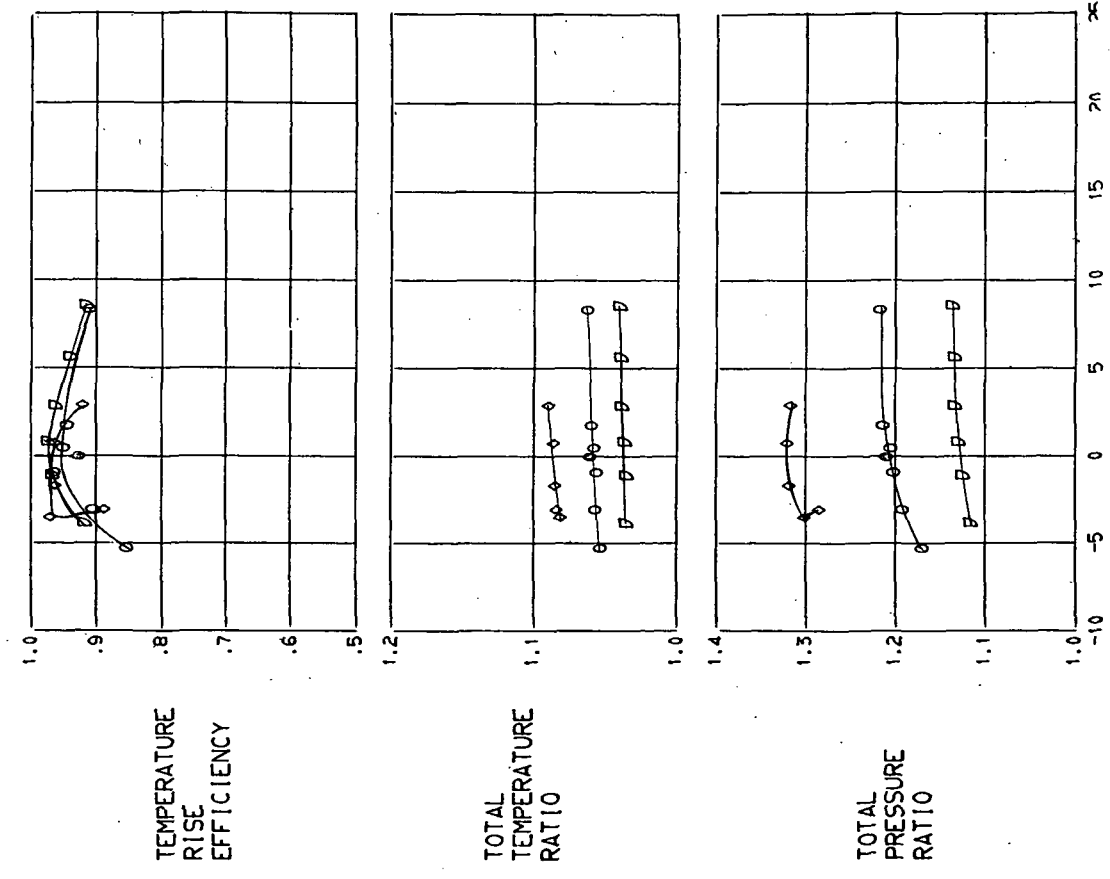
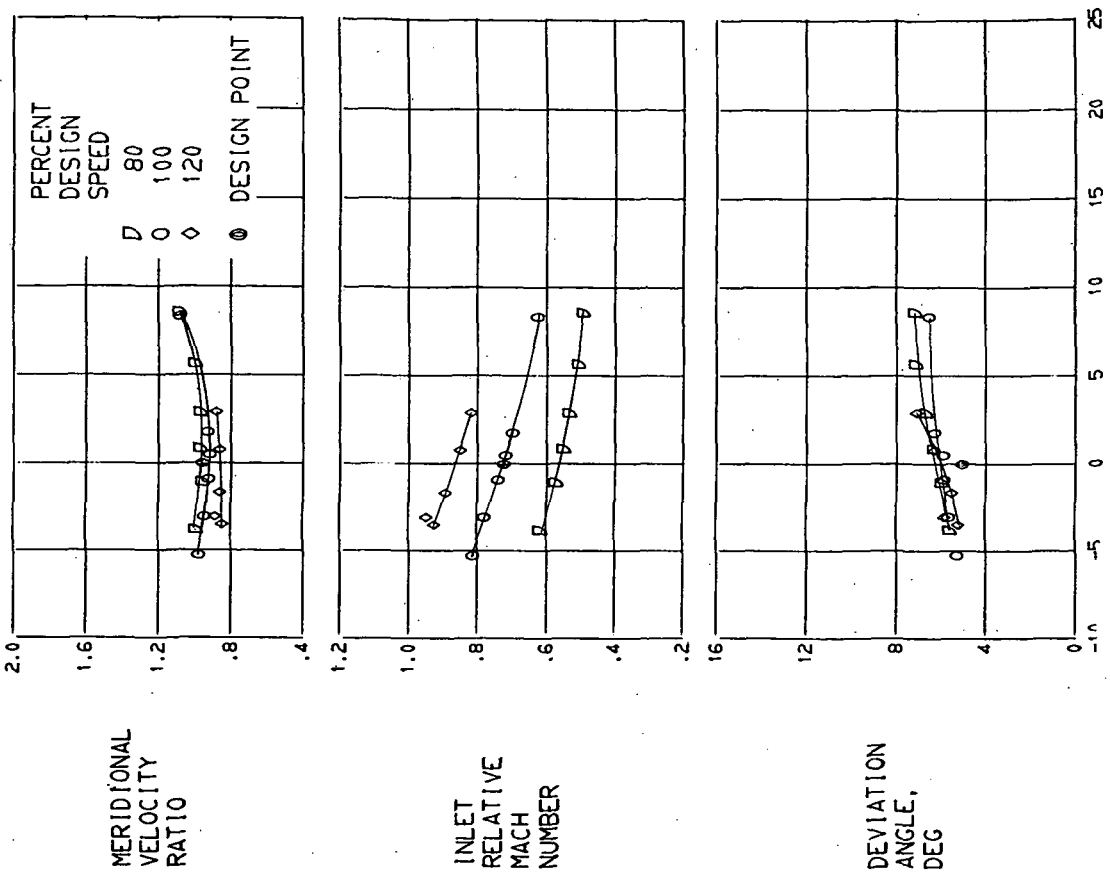
FIGURE 11. - BLADE-ELEMENT PERFORMANCE FOR ROTOR 54.

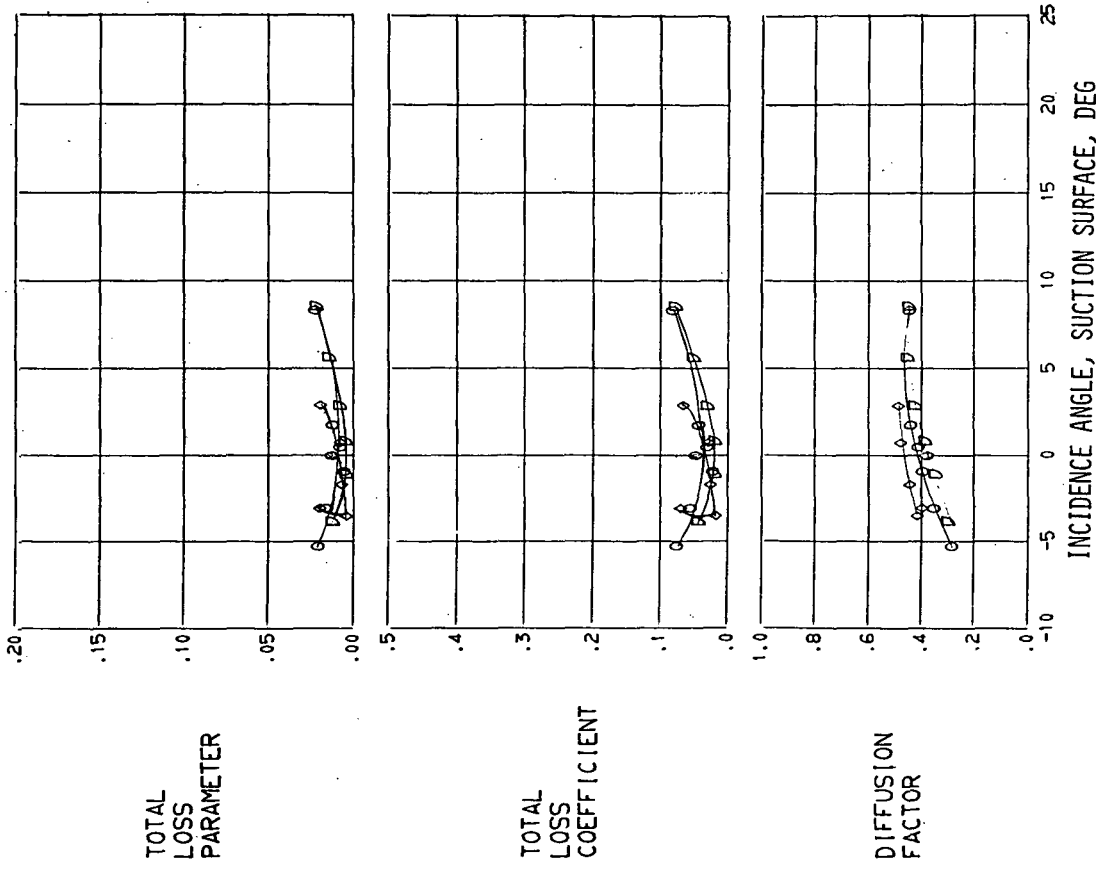




(C) 30.0 PERCENT SPAN.

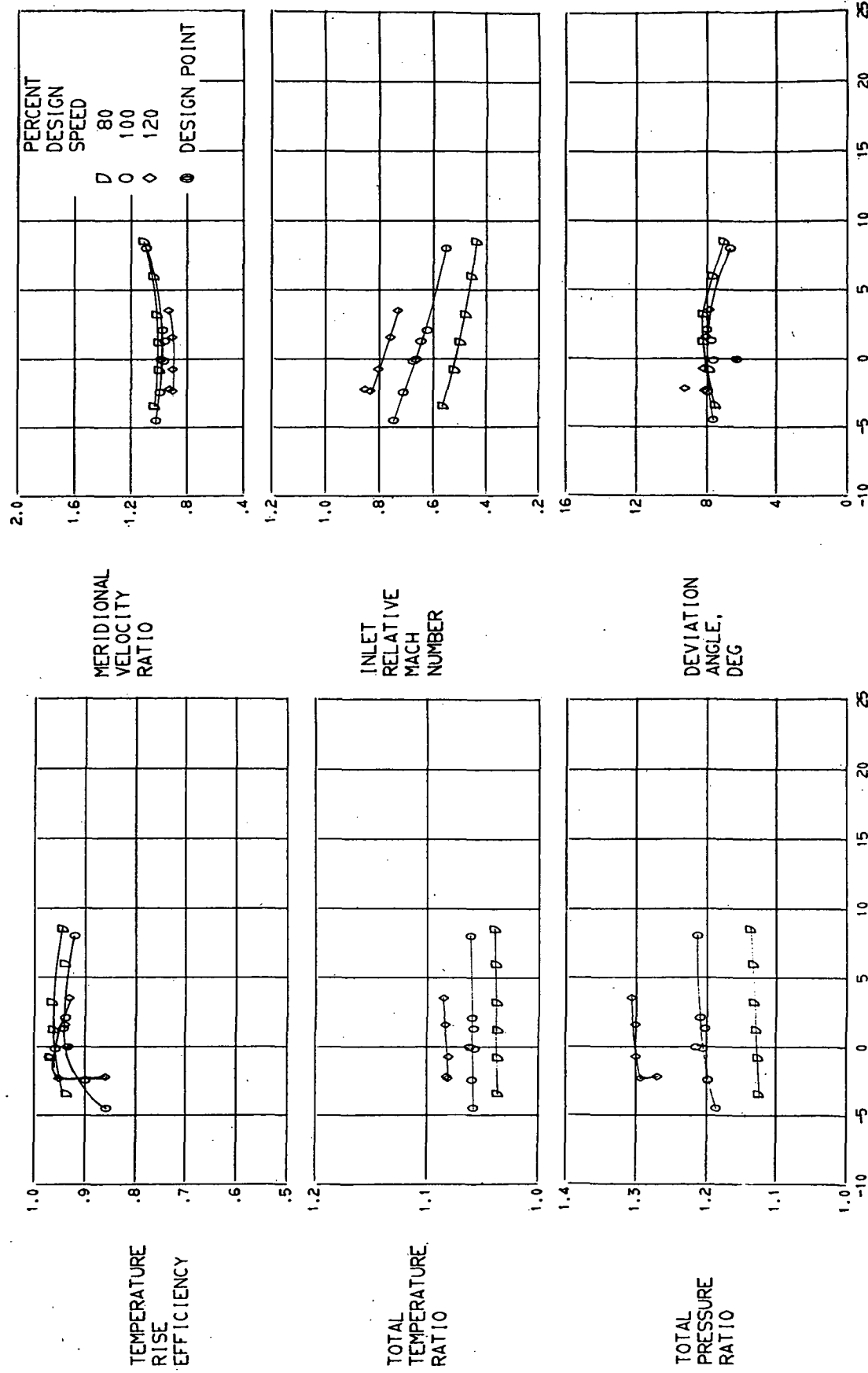
FIGURE 11. - BLADE-ELEMENT PERFORMANCE FOR ROTOR 54.

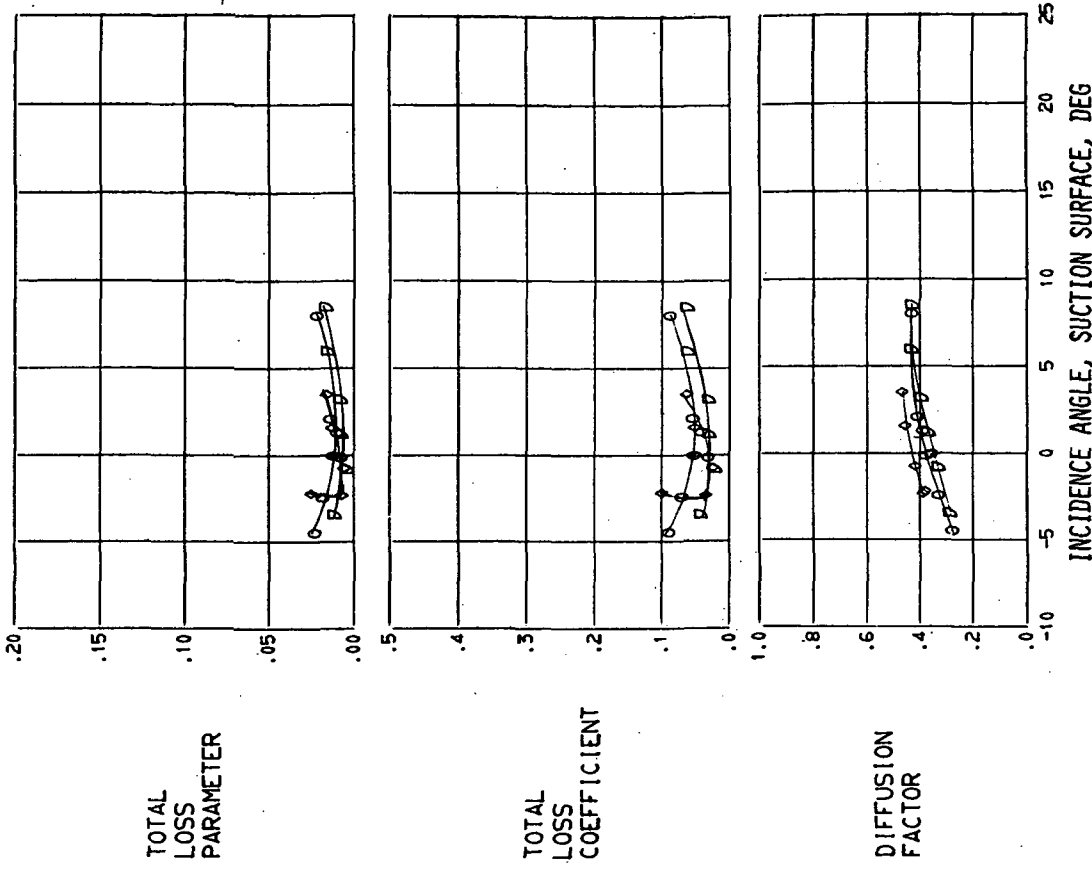




(D) 50.0 PERCENT SPAN.

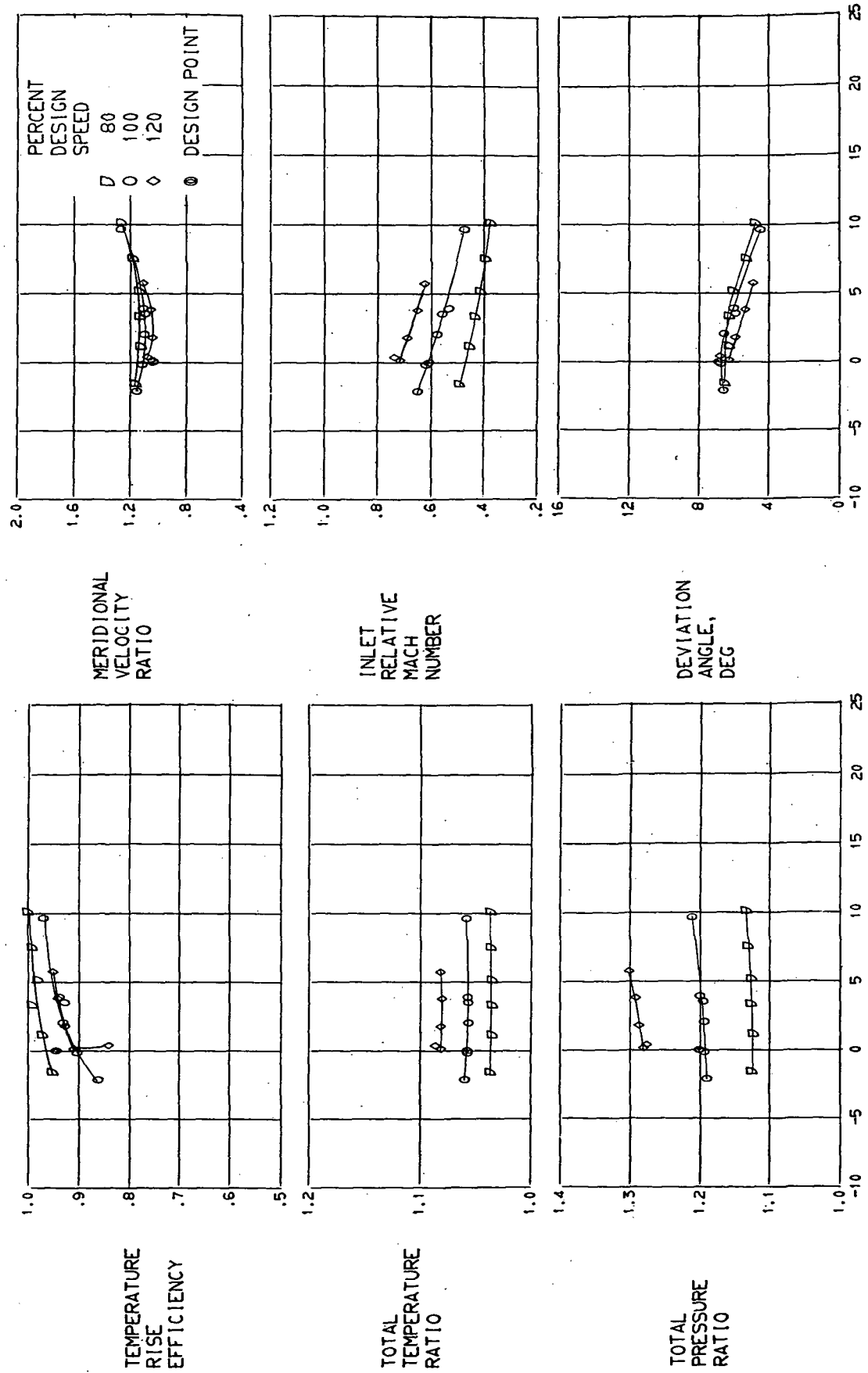
FIGURE 11. - BLADE-ELEMENT PERFORMANCE FOR ROTOR 54.

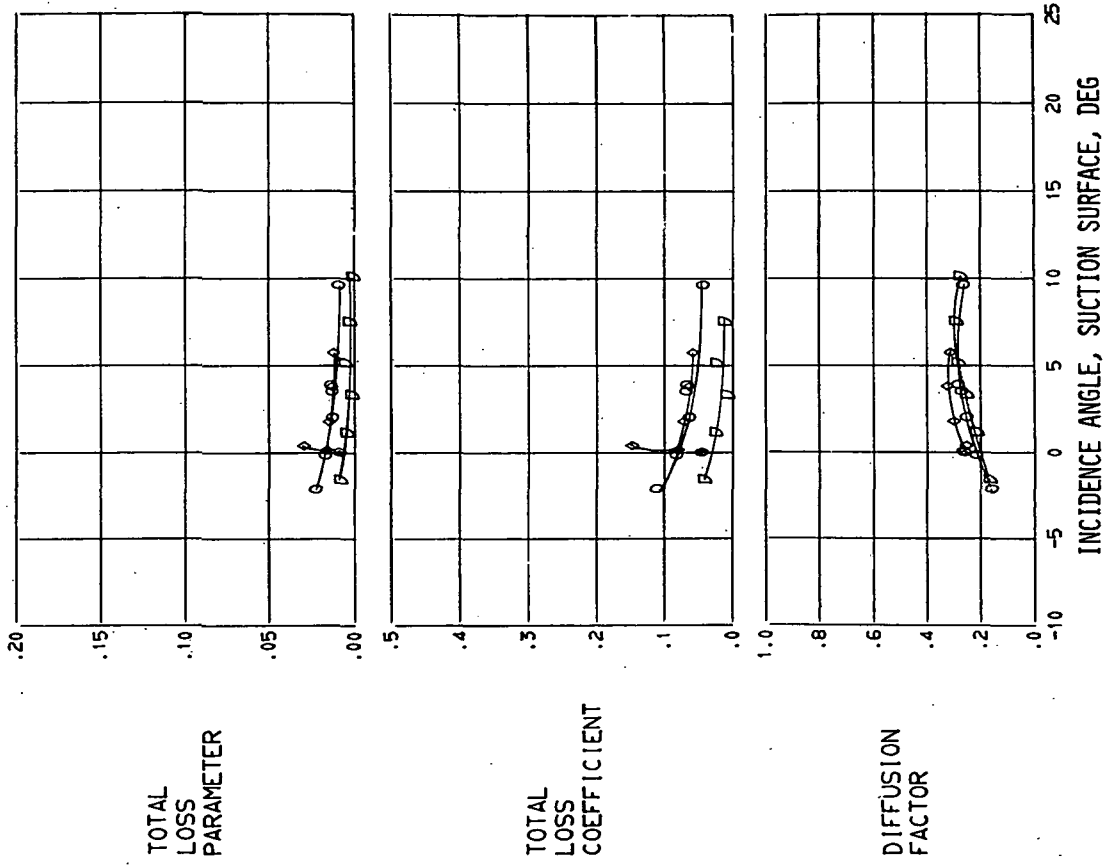




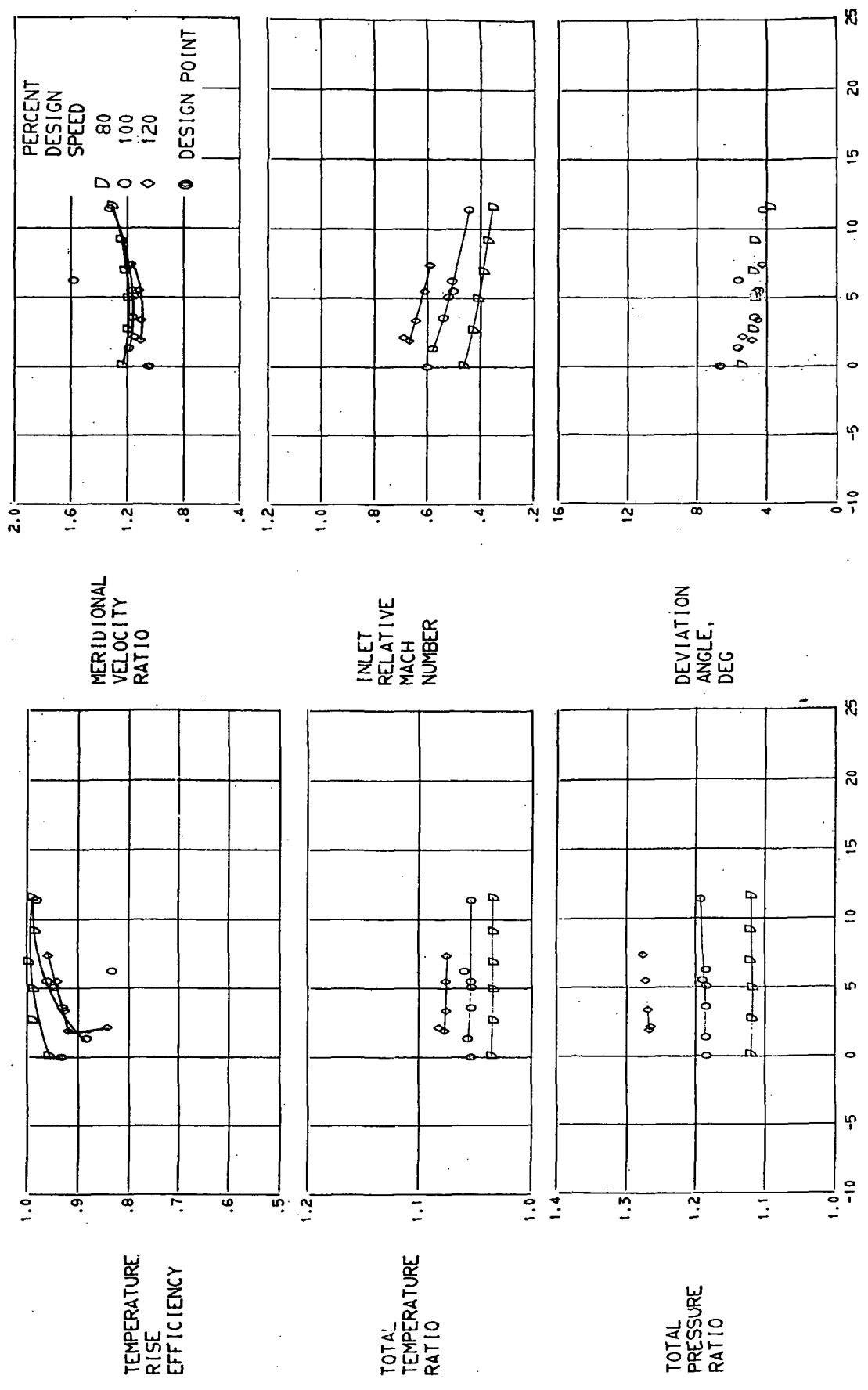
(E) 70.0 PERCENT SPAN.

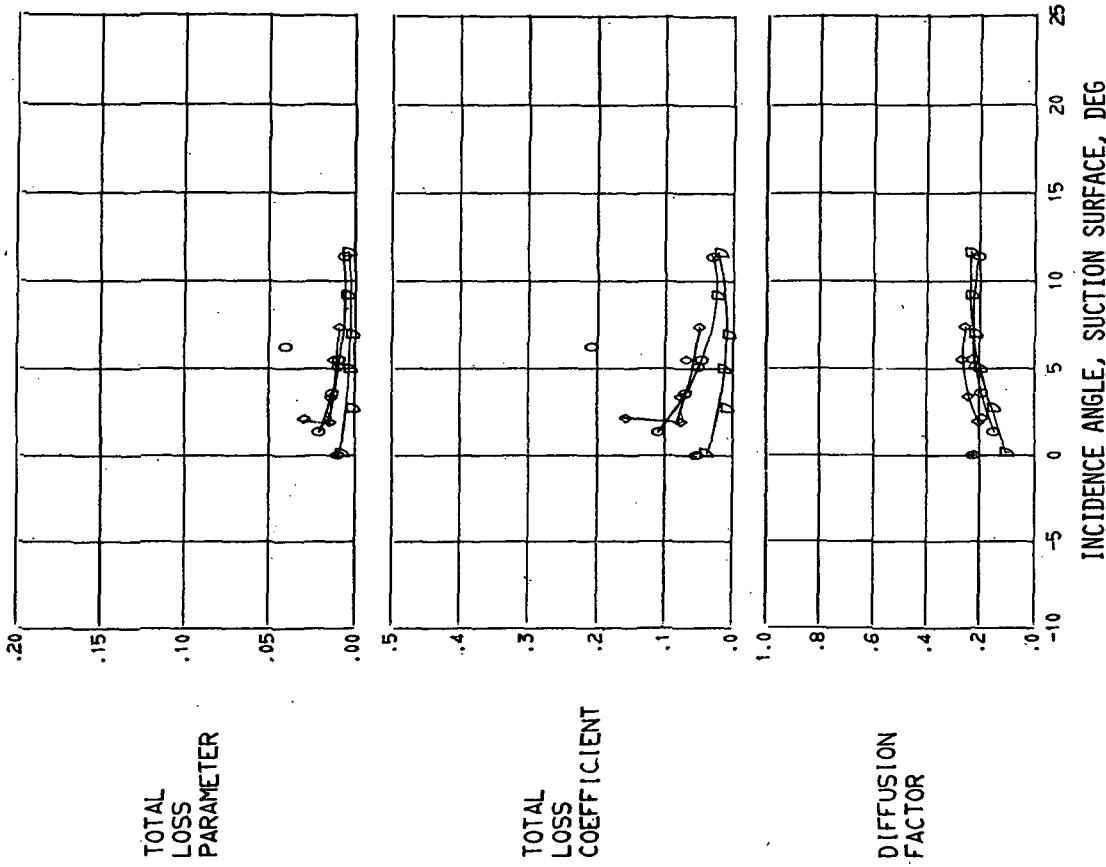
FIGURE 11. - BLADE-ELEMENT PERFORMANCE FOR ROTOR 54.





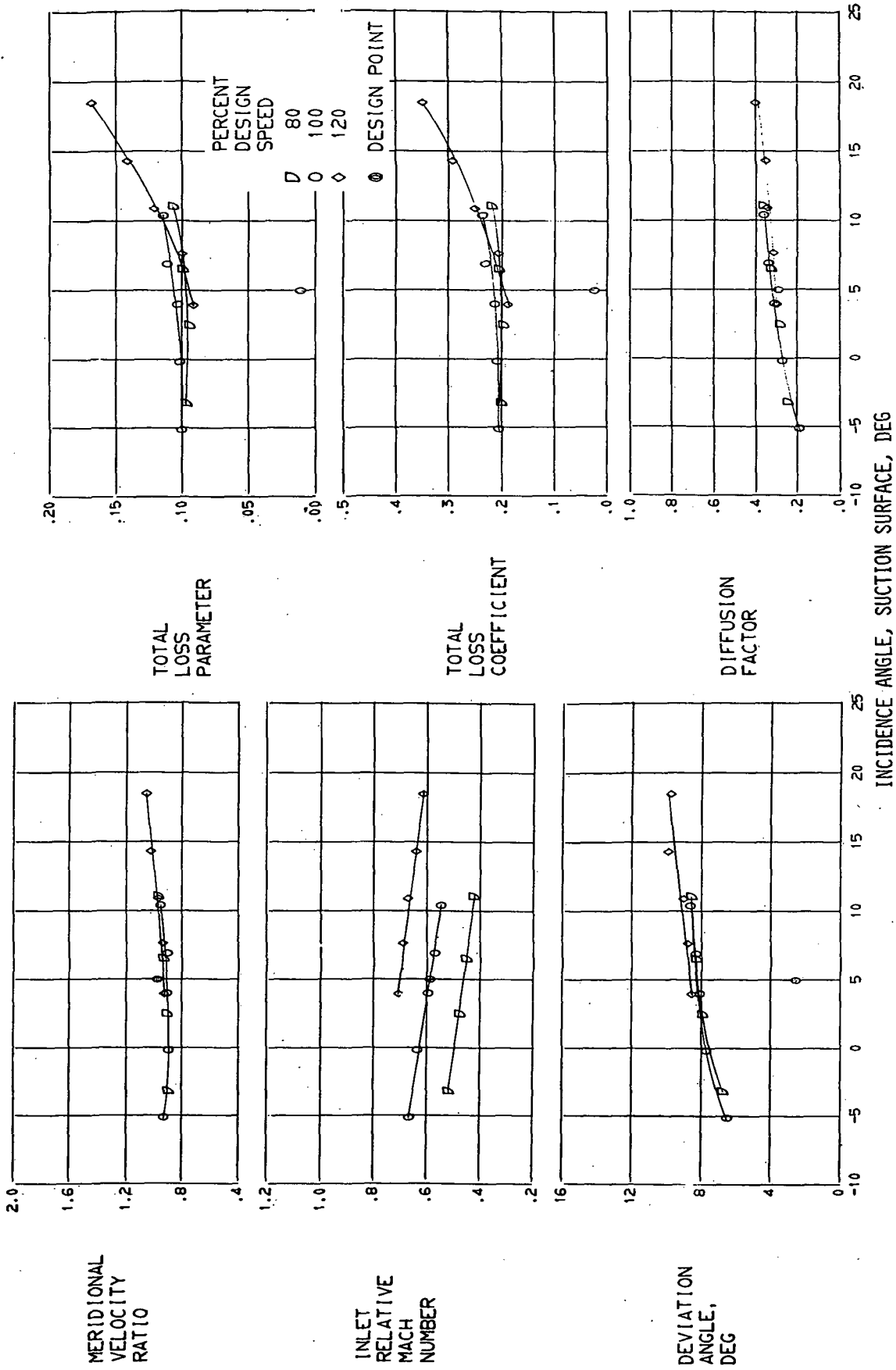
(F) 90.0 PERCENT SPAN.
 FIGURE 11. - BLADE-ELEMENT PERFORMANCE FOR ROTOR 54.





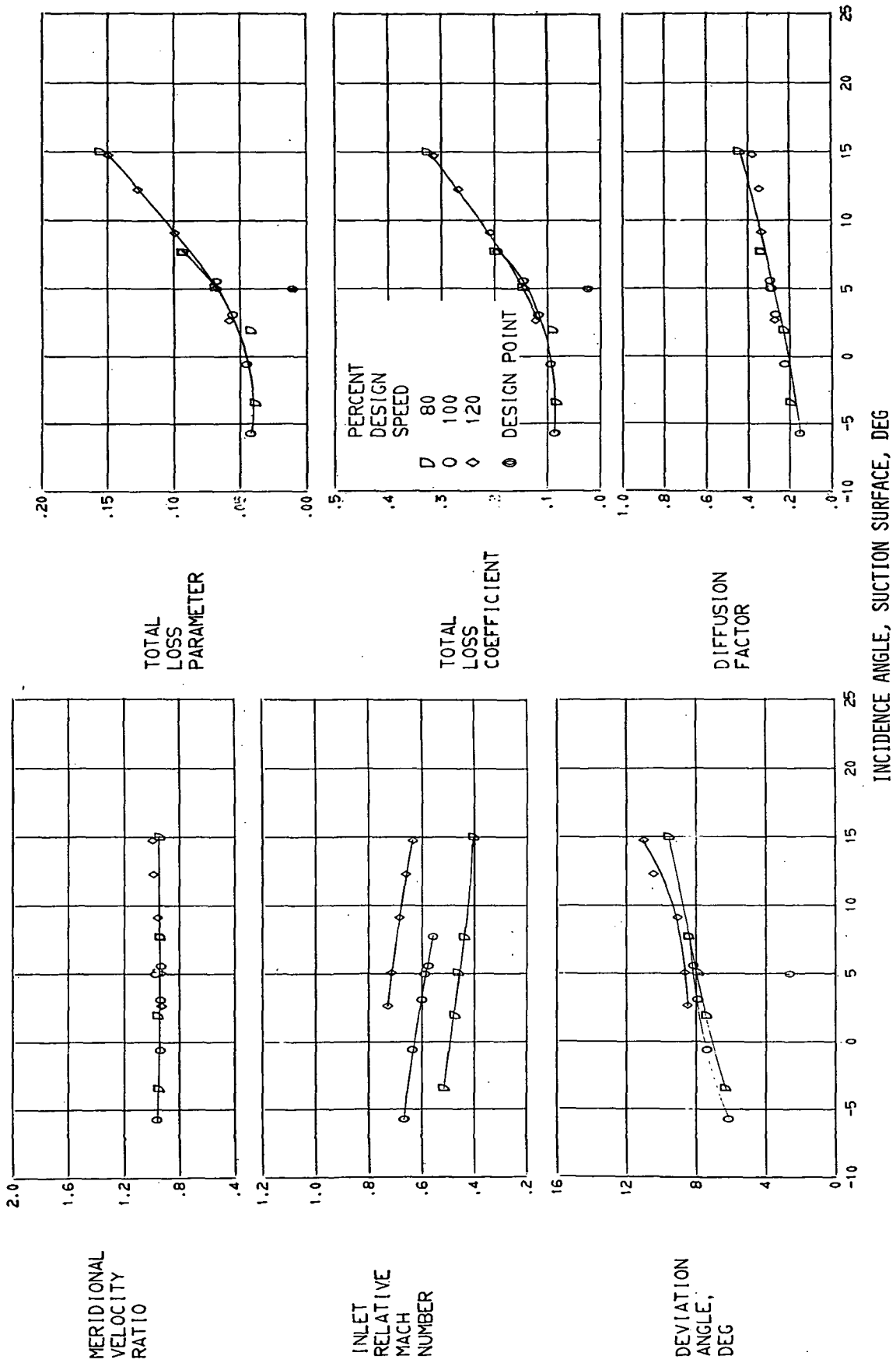
(G) 95.0 PERCENT SPAN.

FIGURE 11. - CONCLUDED. BLADE-ELEMENT PERFORMANCE FOR ROTOR 54.



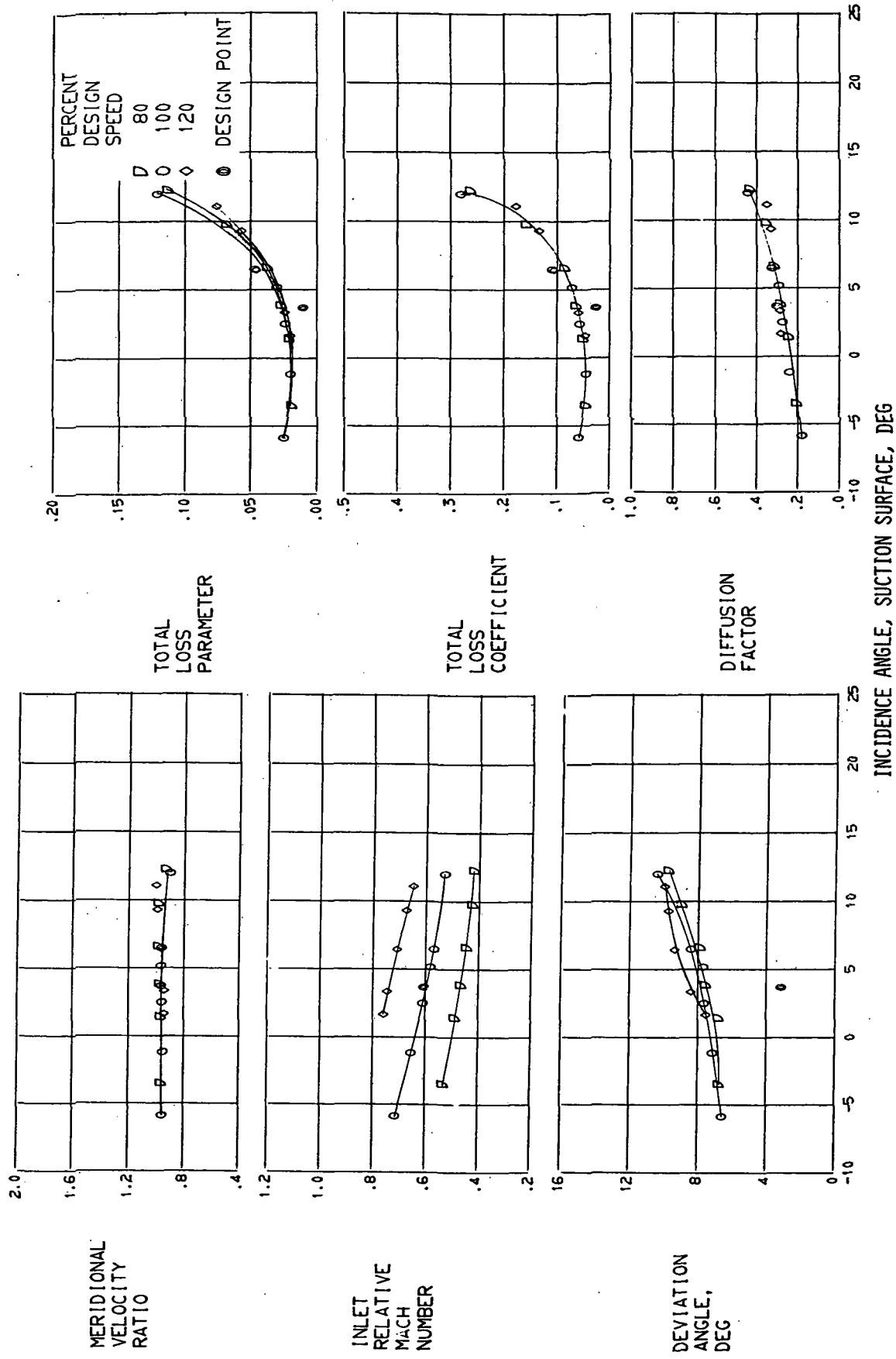
(A) 5.0 PERCENT SPAN.

FIGURE 12. - BLADE-ELEMENT PERFORMANCE FOR STATOR 54.



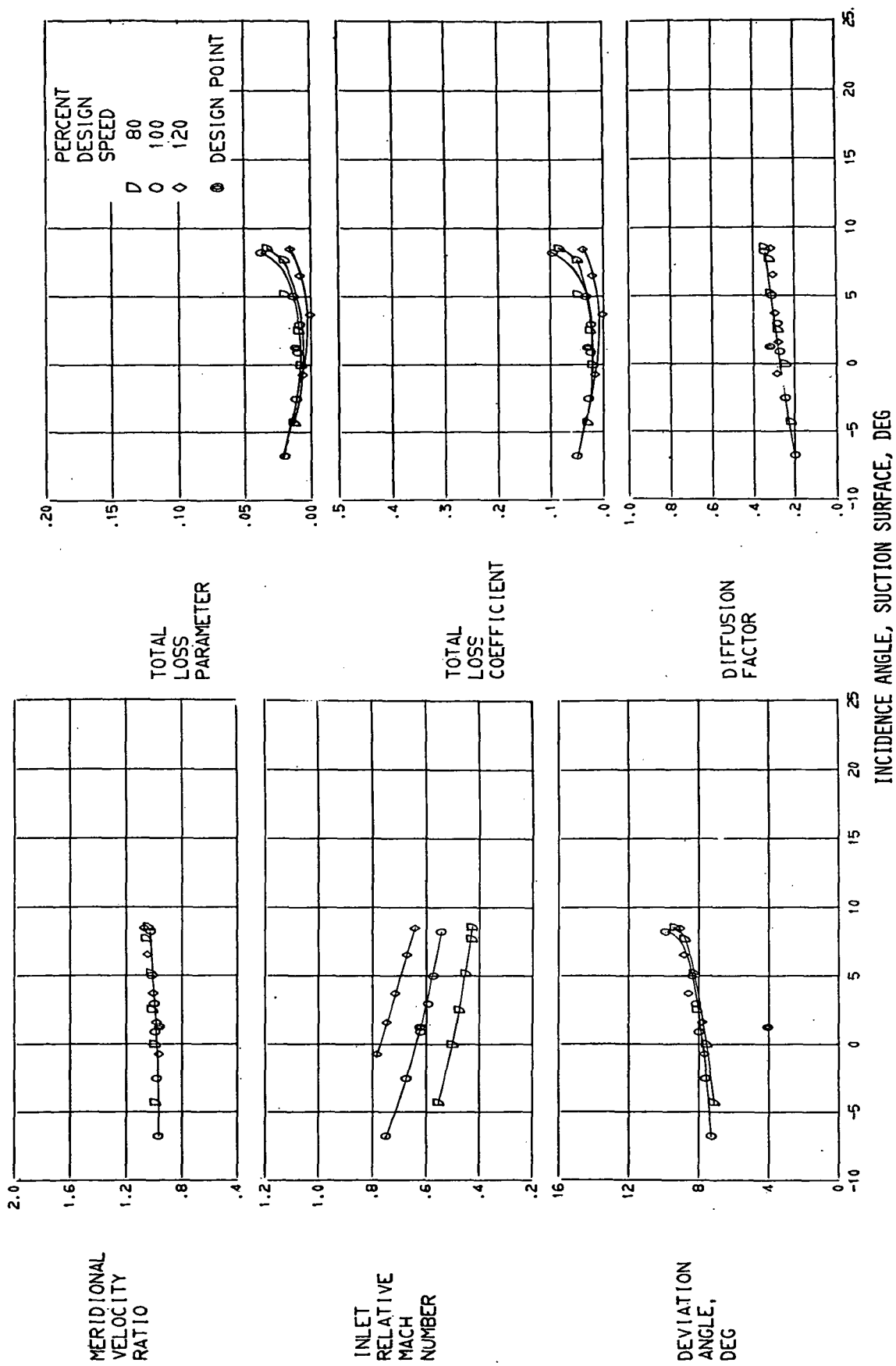
(B) 10.0 PERCENT SPAN.

FIGURE 12. - BLADE-ELEMENT PERFORMANCE FOR STATOR 54.



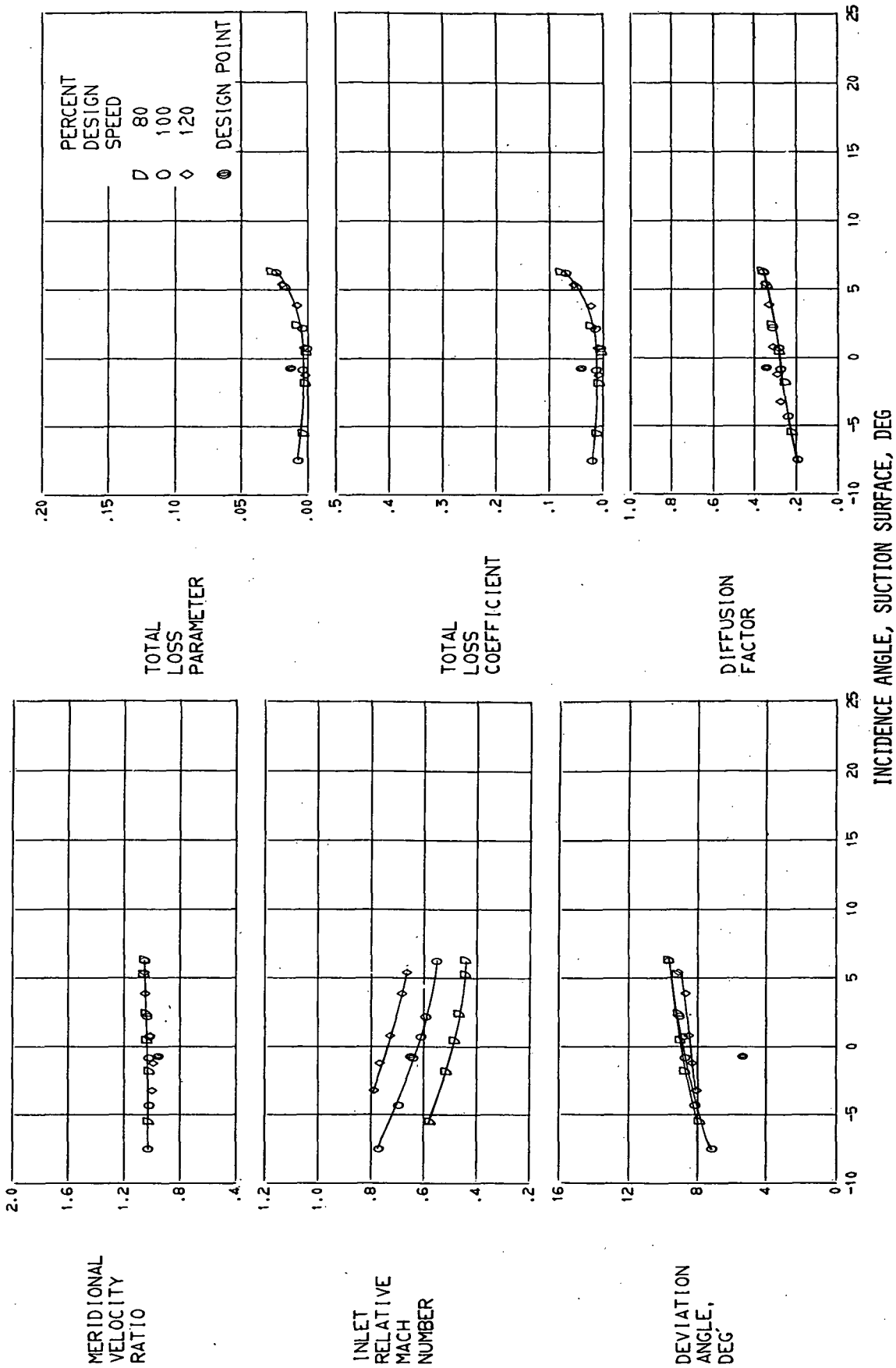
(C) 30.0 PERCENT SPAN.

FIGURE 12. - BLADE-ELEMENT PERFORMANCE FOR STATOR 54.



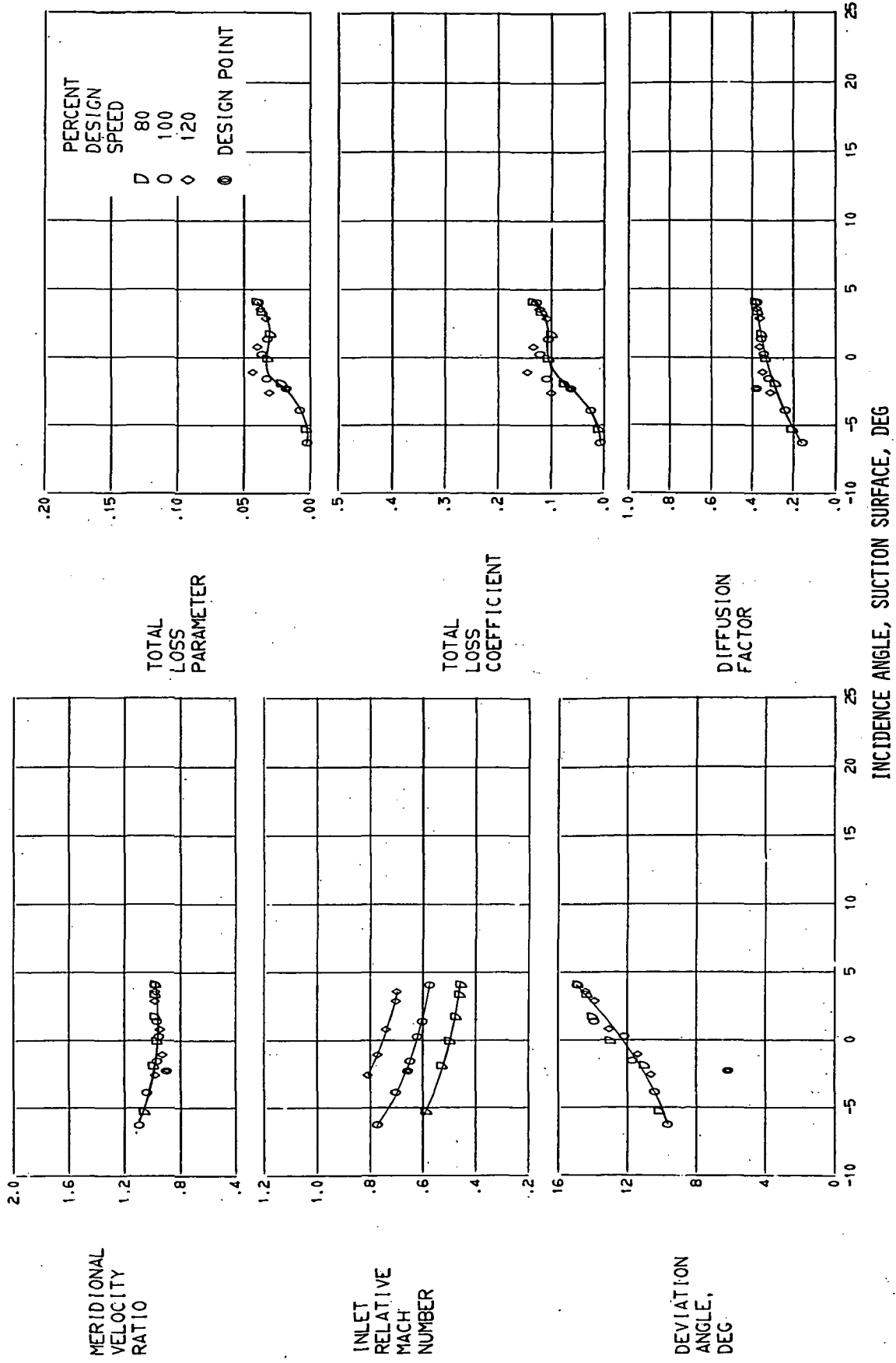
(D) 50.0 PERCENT SPAN.

FIGURE 12. - BLADE-ELEMENT PERFORMANCE FOR STATOR 54.



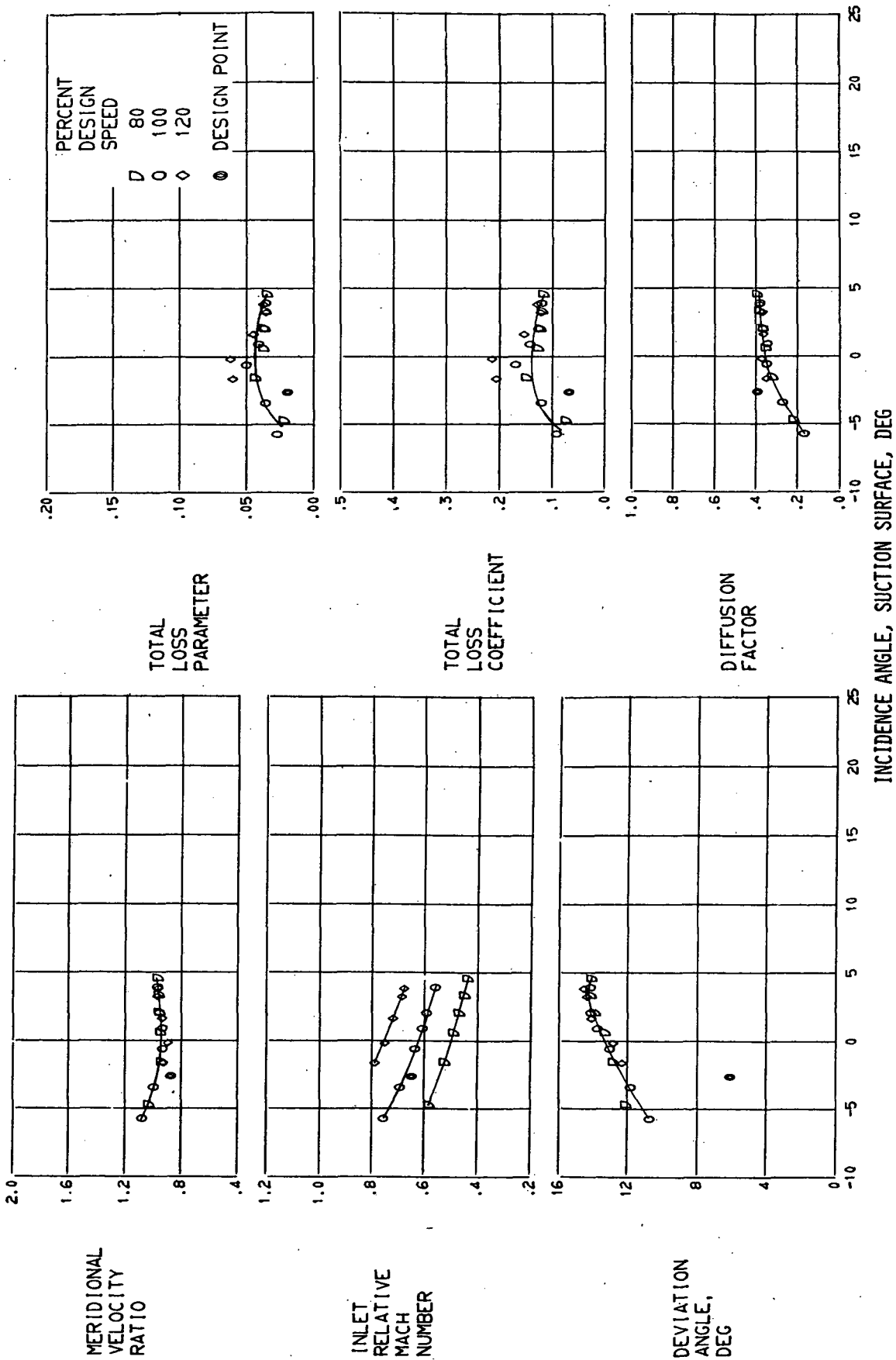
(E) 70.0 PERCENT SPAN.

FIGURE 12. - BLADE-ELEMENT PERFORMANCE FOR STATOR 54.



(F) 90.0 PERCENT SPAN.

FIGURE 12. - BLADE-ELEMENT PERFORMANCE FOR STATOR 54.



(G) 95.0 PERCENT SPAN.

FIGURE 12. - CONCLUDED. BLADE-ELEMENT PERFORMANCE FOR STATOR 54.



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