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WANL-TME-1059  
December 18, 1964

A-11 SEVEN CLUSTER MODEL: FFL-10 SOLID CORE TESTS  
(Title Unclassified)

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by  
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E. A. DeZubay, Manager  
Fluid Flow Laboratory

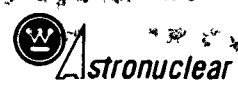
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### ABSTRACT

In earlier tests of the A-11 Seven Cluster Model, B-3 Single Seal High Pressure Isothermal Tests, and G-3 Plugged Core Flow Tests, good comparison of analytical experimental data obtained on lateral support and seal system flow rates was dependent upon the use of leakage flow area contributed by radial stepping of the filler strips and sealing surfaces.

In order to predict the lateral support and seal system flow rates of the NRX-A reactor with a higher degree of confidence, additional testing was required. In addition to reducing the uncertainty in the flow rates, other information was desired on the effect of plunger pin leakage and of a variable area in the filler strip gap. The reasons for obtaining data in these three areas were as follows:

1. Lateral Support and Seal System Flow Balance - The flow rates are important for the analysis of the NRX-A reactor since the flow affects the gas temperatures in the seals. The gas temperature is important in the analysis of corrosion and thermal stress problems in the core periphery and seal system.
2. Effect of Plunger Leakage on the Seal Distribution - One of the basic assumptions of the seal analysis is that there is no pressure loss interaction by the mixing of the two flows, only an enthalpy balance, between the plunger leakage and the main seal channel flow. Preliminary data obtained on the single seal test rig indicated that there was no significant interaction between the flows. However, more extensive testing over a range of seal flows and plunger annulus flows was required to corroborate this data.
3. Effect of a Variable Area in the Filler Strip Gap - Information was desired on the effect of a variable area in the filler strip gap on the seal distribution and system flow balance.

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In order to fulfill these experimental data requirements, a specially designed solid core model was flow-tested with ambient temperature hydrogen to obtain pressure and flow data in the lateral support and seal regions. Core longitudinal pressure distribution data was obtained over a flow range of .01 to .08 lb/sec of hydrogen with core pressure drops varying from 22 to 202 psi. Core inlet pressures ranged from 52 to 268 psia.

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## 1.0 INTRODUCTION

This report summarizes the results of the seventh and last of a series of tests completed in the A-11 test program during the Contract Year 1964. The purpose of this test was to provide additional experimental data for evaluating the lateral support and seal system. These tests, identified as the FFL-10 Solid Core Tests, consisted of flow testing a solid core model which incorporated most of the NRX-A design features, i. e., banded core, segmented lateral support and seal system, eighteen (18) rows of seal rings, and seal segments with various size flow slots. The model included an impregnated inner reflector, orificed reflector plugs to simulate plunger leakage, and a variable filler strip gap ranging in size from a nominal 3.5 mils at the dome end to a nominal 9 mils at the nozzle end.

A total of four flow tests were conducted with ambient temperature hydrogen. Pressure and flow data were obtained at various points along four different operating curves, with flow rates extending from .01 to .08 lb/sec and core pressure drops varying from 22 to 202 psi. Core inlet pressures ranged from 52 to 268 psia. The experimental results obtained were found to be reasonable, within the expected accuracy of the measured test data.

## 2.0 TEST RIG

The basic configuration tested consisted of a standard A-11 model incorporating a solid core. Model components included a simulated NRX-A lateral support and seal system, an impregnated inner reflector, and a serrated solid core fitted with specially designed filler strips which were banded at the dome end and supported at the nozzle end. A drawing (710 J 505) showing the basic assembly details of the configuration is presented in Figure 1.

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## 2.1 Core and Filler Strips

The core used for the test was specially designed and was fabricated from a solid cylinder of grade HLM85 graphite. The periphery of the core was serrated uniformly with "V" slots to accept specially designed filler strips. Nozzle end supported single section filler strips, 53.800-inches long, spanned the core. The filler strips were identical in cross-section and were machined to incorporate a tapered filler strip gap varying from a nominal 3.5 mils at the dome end to a nominal 9 mils at the nozzle end. Drawings of the solid core (576 F 478) and filler strips (576 F 479) are presented in Figures 2 and 3, respectively. A groove, machined into the top face of the core assembly, was sealed with carbon base cement, WANL-PDS-30159-1, to prevent hydrogen gas from entering the gap between the apex of the filler strip and the "V" slot of the solid core. In this way, all of the flow entering the core was directed through the filler strip gaps and the lateral support and seal system.

Figure 4 shows the dome end view of the solid core assembly after the groove was filled with the carbon base cement.

## 2.2 Inner Reflector

Incorporated in the solid core test configuration was the Number 3 inner reflector used previously in the FFL-16, Tie Rod Vibration Test. The inner reflector was fabricated from a single block of grade H4LM graphite, and was impregnated with a colloidal silica dispersion, as per WANL Specification 294545.

## 2.3 Lateral Support and Seal System

The lateral support and seal system of the solid core model had the full complement of 18 segment seal rings used previously in the FFL-16, Tie Rod Vibration Test. The configuration of the segments is similar to the NRX-A design employing the outer "V" grooves and inner vertical flow

slots. Each seal ring in the lateral support system had six seal segments and each segment was spring-loaded by two coil spring-plunger assemblies. The coil springs used in the tests had a spring rate of 135 lb/in and were designed to exert a pre-load core bundling pressure approximately 3.9 psi based on the peripheral core surface area. This value closely simulates the NRX-A1 cold pre-load bundling pressure of 3.8 psi.

The flow slots on the inner surfaces of the seal segments covered 66.5 percent of the core circumference. The 36 flow channels in each seal were so spaced that each was opposite one of the 36 gaps occurring between filler strips. The flow channels had a uniform width and were distributed so that each channel spanned a filler strip gap. To insure that the flow channels spanned the filler strip gaps, a guide pin was press-fitted into each of the filler strip locating pins to limit seal segment rotation. The depth of the flow slots was selected in accordance with the schedule shown in Figure 1.

#### 2.4 Orificed Reflector Plugs

In each of the 18 rows of seal grooves machined into the inner reflector, an orificed reflector plug was installed in place of the standard plugs normally used. The orificed reflector plugs were installed as close as possible to the location diametrically opposite each corresponding pressure tap. All of the reflector plugs incorporated a standard 22.5 mil diameter fuel element orifice. Calibration curves showing loss coefficients for typical 22.5 mil diameter fuel element orifices are presented in the report, WANL-TME-866. A schematic of a typical orificed plug-spring-plunger assembly is shown in Figure 5.

#### 2.5 Assembly Clearances

After the filler strips were installed in the serrated core, the core was tightly banded with hose clamps. The cylindrical surface of the core

was checked for discontinuities and variations using a blank seal ring cut in half and banded tightly onto the core. Feeler gauges and micrometers were used to measure slot clearances and filler strip gaps. Assembly measurements are tabulated in Appendix A. All measurements with the exception of the seal segment measurements were made during final assembly of the solid core configuration. A dimensional inspection of the seal segment grooves was made prior to the FFL-16 Tie Rod Vibration Test, WANL-TME-1000.

### 3.0 INSTRUMENTATION

Instrumentation used in the solid core tests included pressure gauges, differential pressure gauges, pressure transducers and a thermocouple. All of the pressure gauges were mounted in a panel board, and a 70 mm automatic camera was used to record pressure data. Transducer pressures and thermocouple temperatures were recorded on an oscillograph. Closed circuit television was used throughout the test to monitor the core.

An instrumentation schematic showing the location of the measuring stations is shown in Figure 6 with the instrumentation summarized in Table I.

### 4.0 TEST PROCEDURE

High pressure hydrogen gas supplied from tube trailers flowed through a pressure control valve, and entered the test vessel at a specific pressure. The gas then flowed vertically downward through the reflector core assembly, passed through a shut-off valve, flowed through a critical flow nozzle, and discharged through the exhaust system to the flare stack where the hydrogen gas was burned. Various core inlet pressures were set during each test using a ramp method of operation. This method of operation included a transient pressure-flow ramp and a minimum of 30 seconds at a specific steady state pressure level before proceeding to the next ramp.

## 5.0 FLOW TESTS

A total of four hydrogen flow tests were conducted with the solid core model. All of the tests were conducted with the model positioned in the downward firing mode. Pressure and flow data were obtained at various points along four different operating curves including the FFL-16 operating curve, WANL-TME-1000. Flow nozzles with orifice diameters of 0.285, 0.525, 0.298 and 0.450 were employed as fixed restrictions downstream of the test rig to provide back pressure during the four test runs.

Lateral support and seal distribution data was obtained at mass flow rates ranging from .011 to .084 lb/sec with core pressure drops varying from 22 to 202 psi. Core inlet pressures varied from 52 to 268 psia.

## 6.0 DISCUSSION OF RESULTS

A summary of the test conditions including core inlet pressures, core pressure drops, and mass flow rates are shown in Table II.

Longitudinal core pressure distribution data was obtained for various back pressure conditions using different size flow nozzles downstream of the test rig. The experimental results of these tests are presented in Appendix B.

Figure 7 shows typical seal pressure distribution obtained with a 0.285-inch diameter flow nozzle incorporated in the system. Figures 8, 9 and 10 show typical pressure distributions obtained with 0.525, 0.298 and 0.450-inch diameter flow nozzles.

The core pressure drops obtained during the test is presented in Figure 11. Figure 12 shows the flow pressure data obtained with the various size flow nozzles.

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## 7.0 CONCLUSION

The experimental results obtained from the solid core tests were found to be reasonable and within the expected accuracy of the measured test data.

In conclusion, the results, obtained with the seven cluster rig used throughout the A-11 test program, proved to be very useful for providing vibration and lateral support and seal pressure distribution data to be used in the analysis of the NRX-A reactors.

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TABLE I  
FFL-10 SOLID CORE MODEL INSTRUMENTATION SUMMARY

<u>Gage or Transducer Number</u>	<u>Type</u>	<u>Range Full Scale</u>	<u>Measurement</u>
		<u>Temperature</u>	
T1	Copper-Constantan		Core Outlet
		<u>Pressure</u>	
P1	Heise	0-400 psig	Core Inlet
P2	Heise	0-400 psig	Core Outlet
P3	Heise	0-1200 psia	Barrel Pressure
DP-1	Barton	0-15 psid	Core Inlet Heise and Core Outlet
DP2	Barton	0-15 psid	Core Inlet and Seal 1
DP3	Barton	0-15 psid	Across Seal 2
DP4	Barton	0-30 psid	Across Seals 3 - 6
DP5	Barton	0-30 psid	Across Seals 7 - 8
DP6	Barton	0-30 psid	Across Seals 9 - 11
DP7	Barton	0-30 psid	Across Seals 12 - 13
DP8	Barton	0-30 psid	Across Seal 14
DP9	Barton	0-30 psid	Across Seal 15
DP10	Barton	0-30 psid	Across Seals 16 - 17
DP11	Midwest	0-100 psid	Across Seal 18
DP12	Barton	0-30 psid	Exit Seal 18 to Core Exit Heise
DP35	Midwest	0-100 psid	Across Flow Nozzle
TP1	CEC	0-500 psia	Core Inlet



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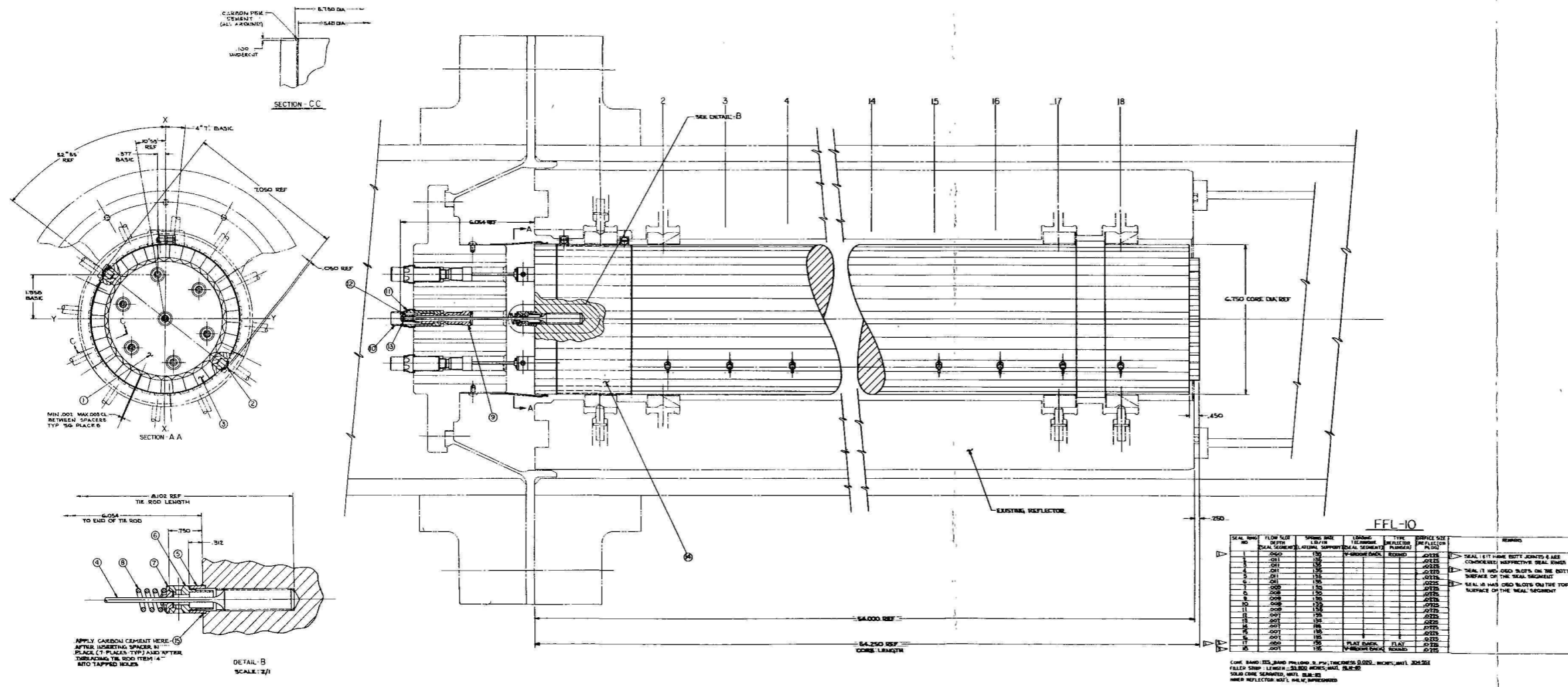
TABLE I (CONTINUED)

<u>Gage or Transducer Number</u>	<u>Type</u>	<u>Range Full Scale</u>	<u>Measurement</u>
TP2	CEC	0-500 psia	Core Outlet Plenum
TP3	CEC	0-900 psia	Barrel Pressure
TP4	CEC	0-900 psia	Downstream of Seal 4
TP5	CEC	0-900 psia	Downstream of Seal 10

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TABLE II  
FFL-10 SOLID CORE MODEL HYDROGEN FLOW TESTS

<u>Test Number</u>	<u>Core Inlet Pressure psia</u>	<u>Core Pressure Drop psi</u>	<u>Mass Flow Rate Lb/Sec</u>
1A	52	22	0.011
1B	133	46	0.033
1C	182	62	0.045
1D	231	79	0.057
3A	91	68	0.029
3B	132	100	0.041
3C	158	118	0.051
3D	193	144	0.062
3E	204	151	0.067
3F	268	202	0.084
4A	150	58	0.038
4B	164	62	0.042
4C	207	77	0.053
4D	237	89	0.060
4E	267	101	0.068
5A	106	73	0.031
5B	135	93	0.040
5C	149	101	0.045
5D	167	113	0.051
5E	192	132	0.057
5F	198	135	0.061
5G	241	165	0.072



FFL-10

ITEM NO.	ITEM DESCRIPTION	QTY	UNIT	REMARKS
1	Carbon Peak Cement	1	lb	For application to seal joints
2	Carbon Peak Cement	1	lb	For application to seal joints
3	Carbon Peak Cement	1	lb	For application to seal joints
4	Carbon Peak Cement	1	lb	For application to seal joints
5	Carbon Peak Cement	1	lb	For application to seal joints
6	Carbon Peak Cement	1	lb	For application to seal joints
7	Carbon Peak Cement	1	lb	For application to seal joints
8	Carbon Peak Cement	1	lb	For application to seal joints
9	Carbon Peak Cement	1	lb	For application to seal joints
10	Carbon Peak Cement	1	lb	For application to seal joints
11	Carbon Peak Cement	1	lb	For application to seal joints
12	Carbon Peak Cement	1	lb	For application to seal joints
13	Carbon Peak Cement	1	lb	For application to seal joints
14	Carbon Peak Cement	1	lb	For application to seal joints
15	Carbon Peak Cement	1	lb	For application to seal joints
16	Carbon Peak Cement	1	lb	For application to seal joints
17	Carbon Peak Cement	1	lb	For application to seal joints
18	Carbon Peak Cement	1	lb	For application to seal joints
19	Carbon Peak Cement	1	lb	For application to seal joints
20	Carbon Peak Cement	1	lb	For application to seal joints

REV.	DESCRIPTION	DATE
A	SEAL RING CHART WAS ADDED	10/1/54
B	SECT. CC WAS ADDED	10/1/54

NO.	DESCRIPTION	QTY	UNIT	REMARKS
1	Carbon Peak Cement	1	lb	For application to seal joints
2	Carbon Peak Cement	1	lb	For application to seal joints
3	Carbon Peak Cement	1	lb	For application to seal joints
4	Carbon Peak Cement	1	lb	For application to seal joints
5	Carbon Peak Cement	1	lb	For application to seal joints
6	Carbon Peak Cement	1	lb	For application to seal joints
7	Carbon Peak Cement	1	lb	For application to seal joints
8	Carbon Peak Cement	1	lb	For application to seal joints
9	Carbon Peak Cement	1	lb	For application to seal joints
10	Carbon Peak Cement	1	lb	For application to seal joints
11	Carbon Peak Cement	1	lb	For application to seal joints
12	Carbon Peak Cement	1	lb	For application to seal joints
13	Carbon Peak Cement	1	lb	For application to seal joints
14	Carbon Peak Cement	1	lb	For application to seal joints
15	Carbon Peak Cement	1	lb	For application to seal joints
16	Carbon Peak Cement	1	lb	For application to seal joints
17	Carbon Peak Cement	1	lb	For application to seal joints
18	Carbon Peak Cement	1	lb	For application to seal joints
19	Carbon Peak Cement	1	lb	For application to seal joints
20	Carbon Peak Cement	1	lb	For application to seal joints

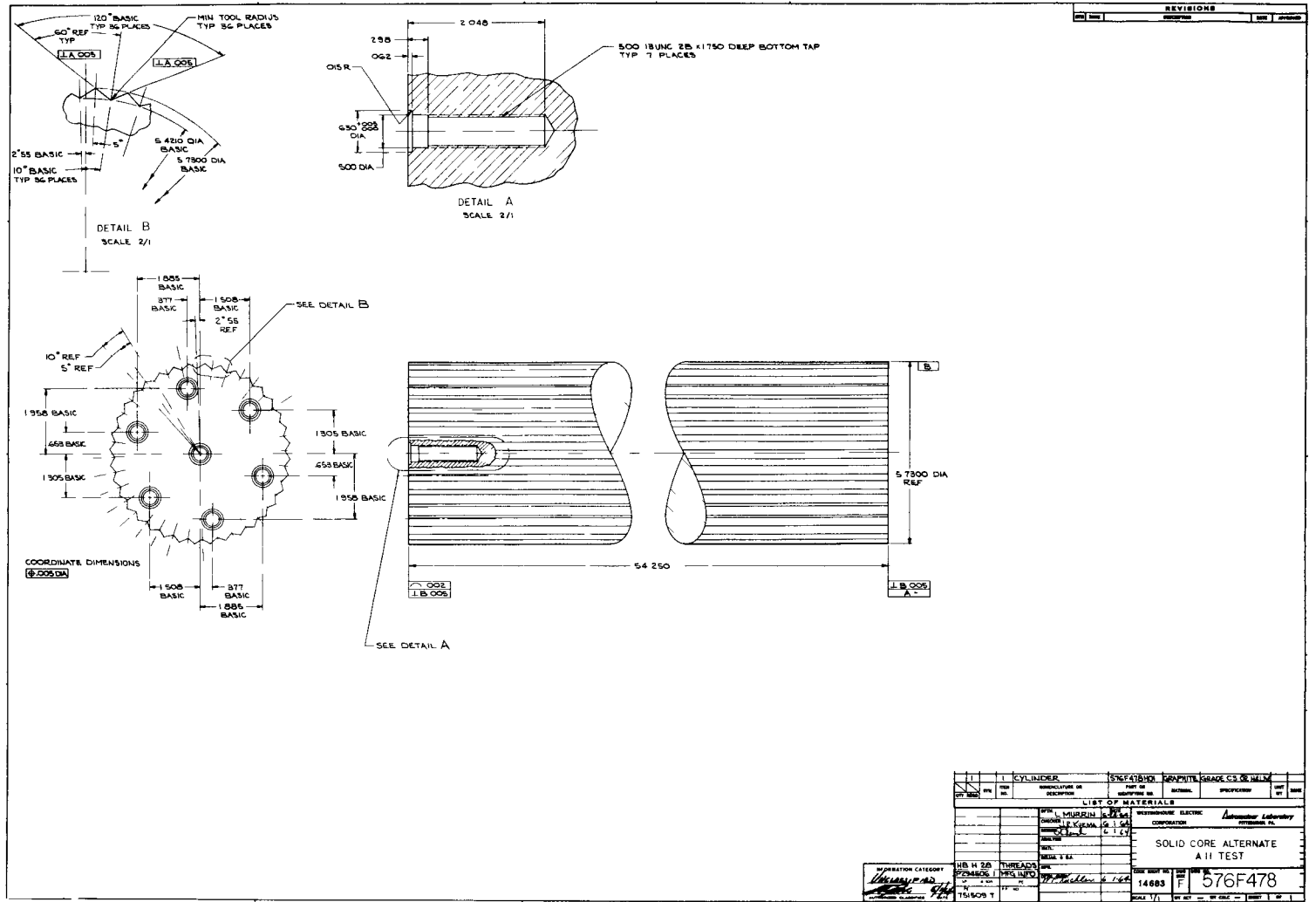
FIGURE 1  
 GENERAL ASSEMBLY SOLID CORE - ALTERNATE A-11 TEST

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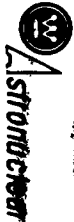
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SOLID CORE - ALTERNATE A-11 TEST

FIGURE 2

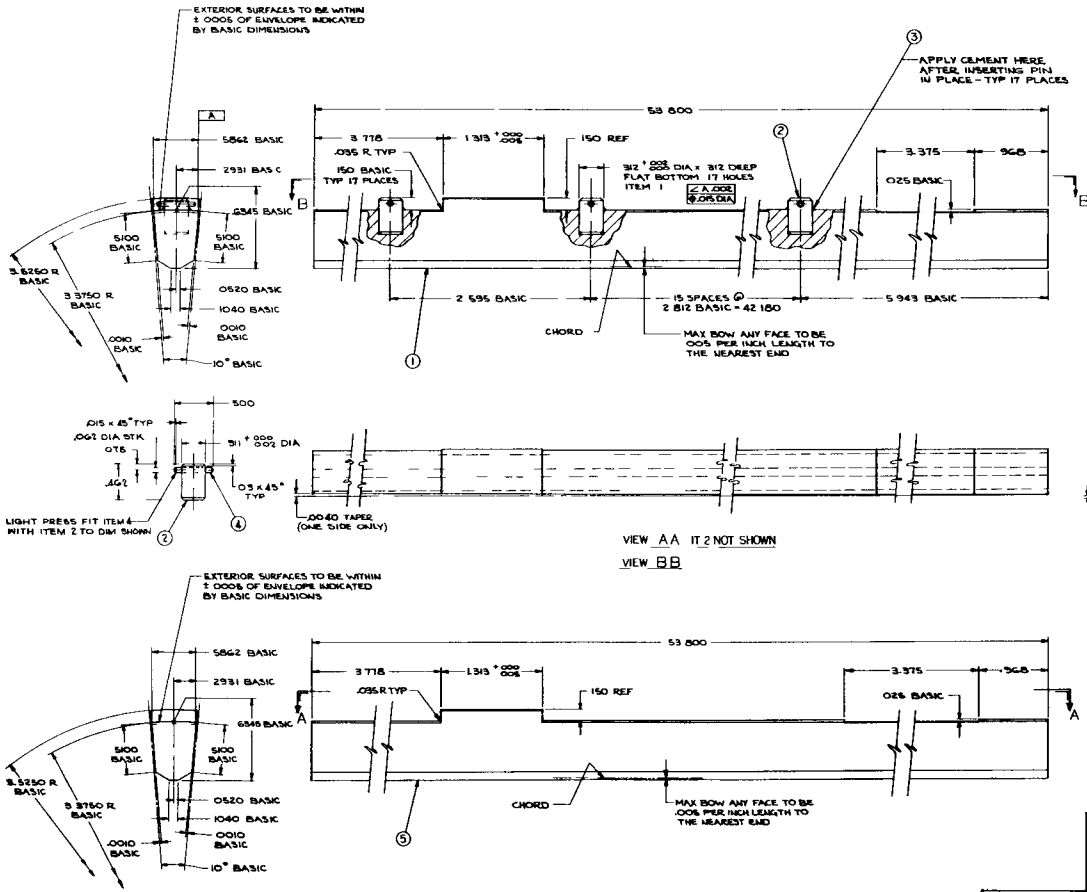


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SPACERS - SOLID CORE A-11 TEST

FIGURE 3



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NO.	DATE	DESCRIPTION	BY
A	8-2	ADDED .005 UNDRUG TO TOPS 115	D. T51509W
B	8-2	VIEW AA & VIEW BB WAS ADDED	D. T51509 Z

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	REMARKS
1	SPACER	1	PC	
2	SAUNDER PIN	1	PC	
3	CARBON CEMENT	1	PC	
4	SPACER	1	PC	

LIST OF MATERIALS	
SPACER	1
SAUNDER PIN	1
CARBON CEMENT	1
SPACER	1

INFORMATION CATEGORY	DATE	BY	REVISION
DESIGN	8-2-54	D. T51509	1
CONSTRUCTION			
TESTING			
REVISIONS			

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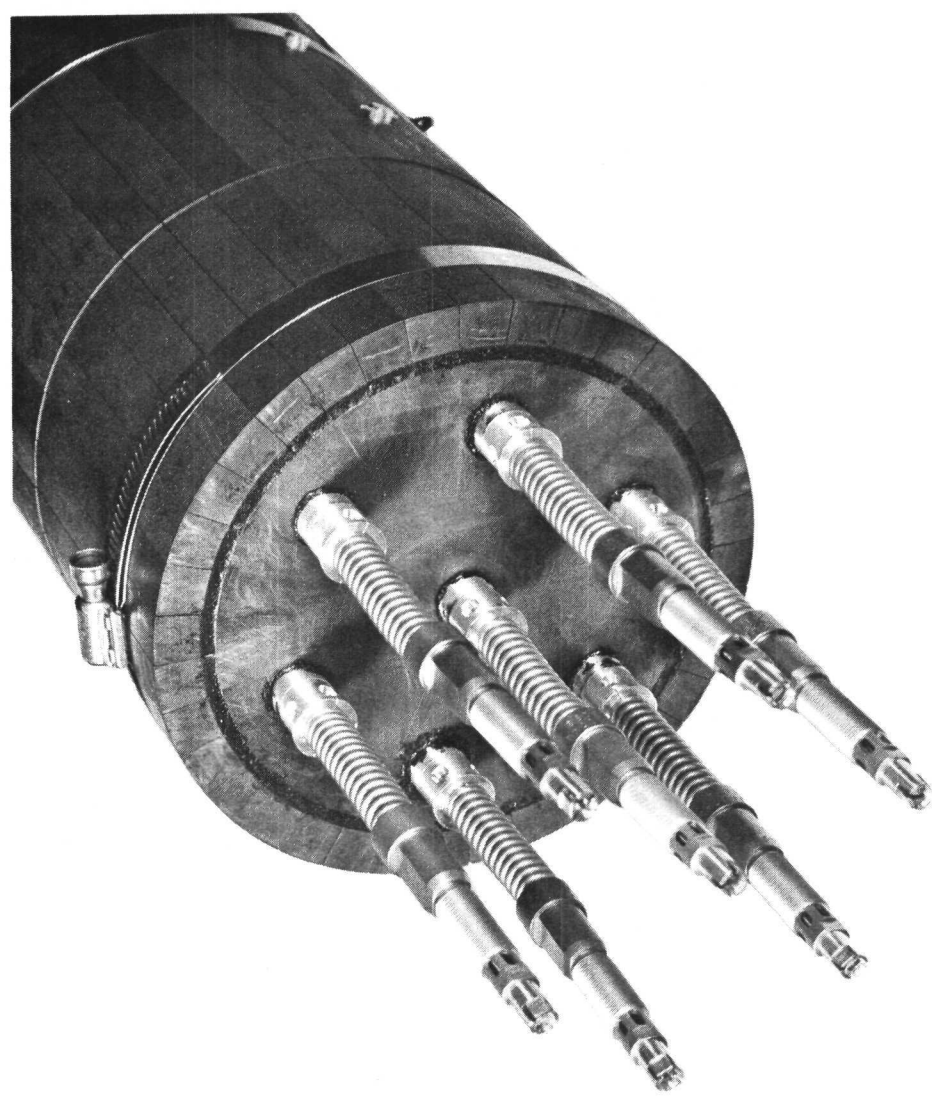


FIGURE 4  
DOME END VIEW OF SOLID CORE ASSEMBLY

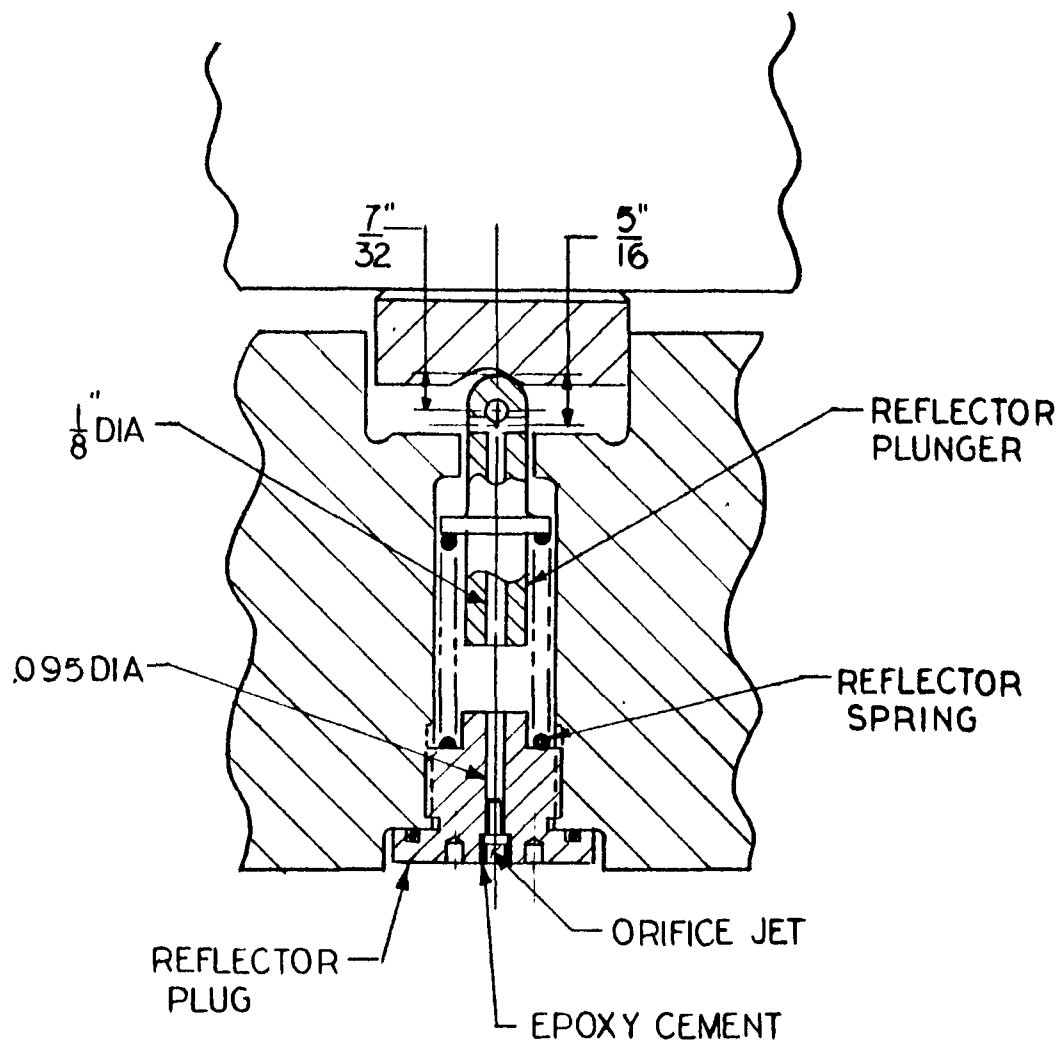


FIGURE 5

TYPICAL ORIFICED PLUG-SPRING-PLUNGER ASSEMBLY

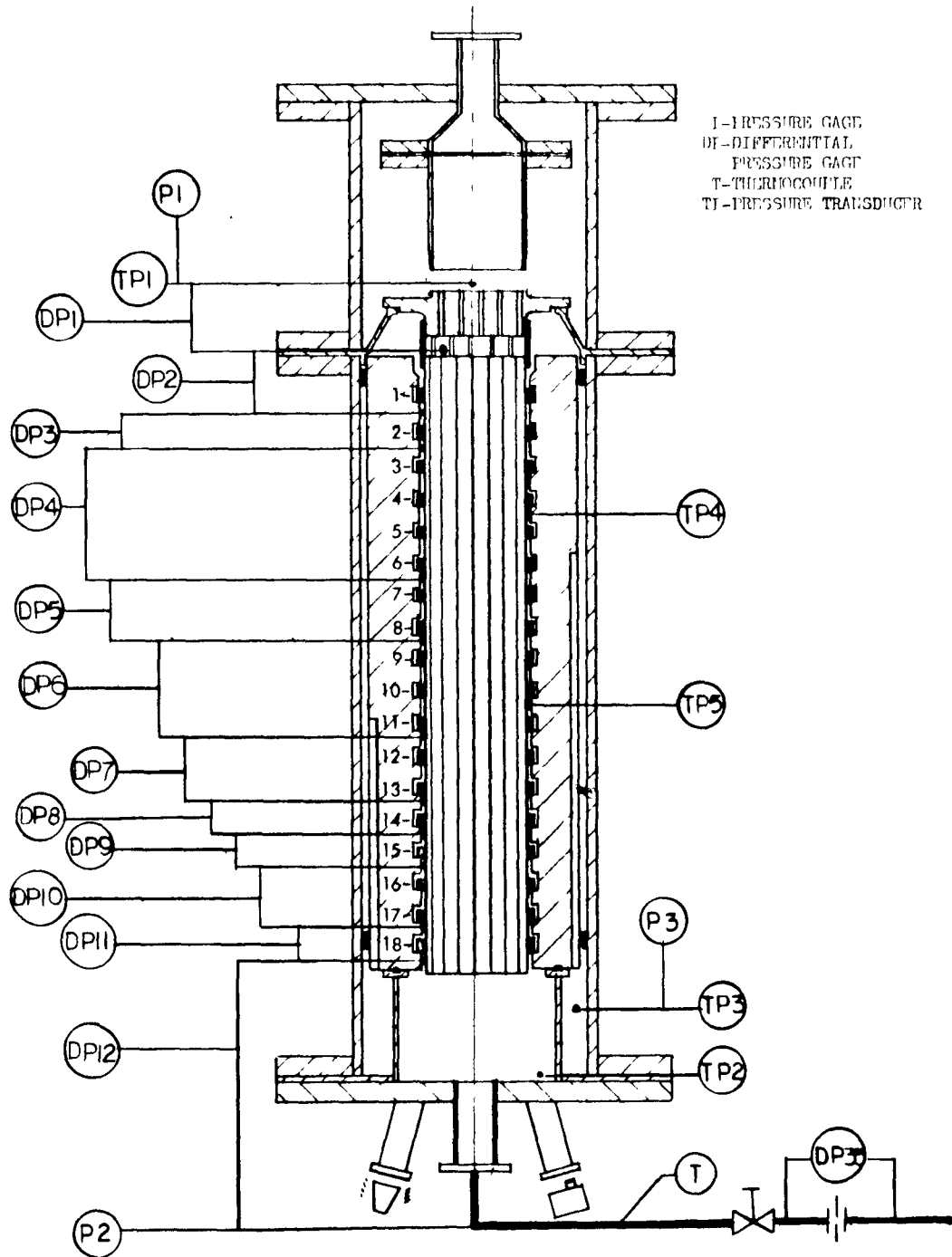


FIGURE 6

FFL-10 TEST RIG SCHEMATIC



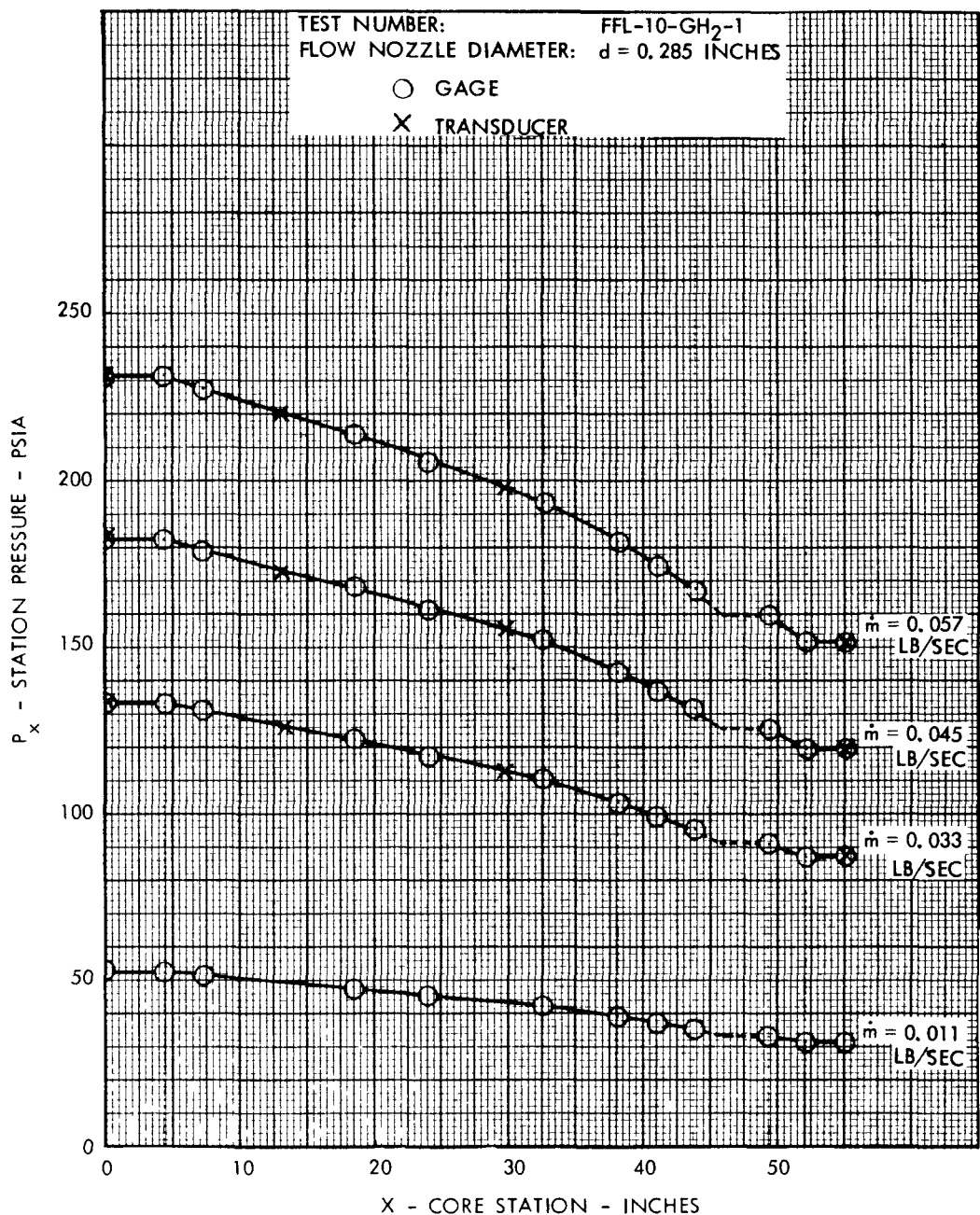


FIGURE 7  
MEASURED SEAL PRESSURE DISTRIBUTION

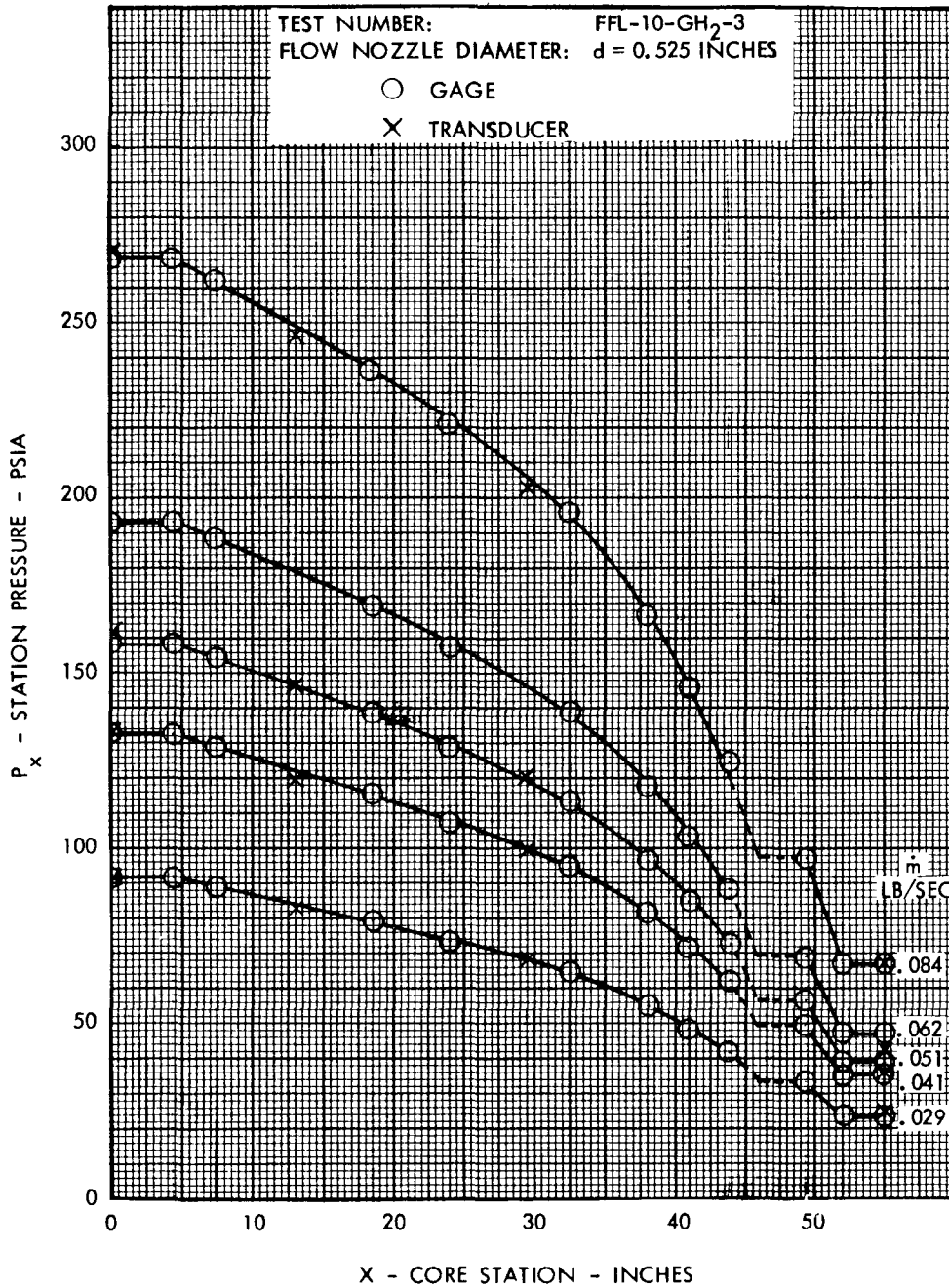


FIGURE 8  
MEASURED SEAL PRESSURE DISTRIBUTION

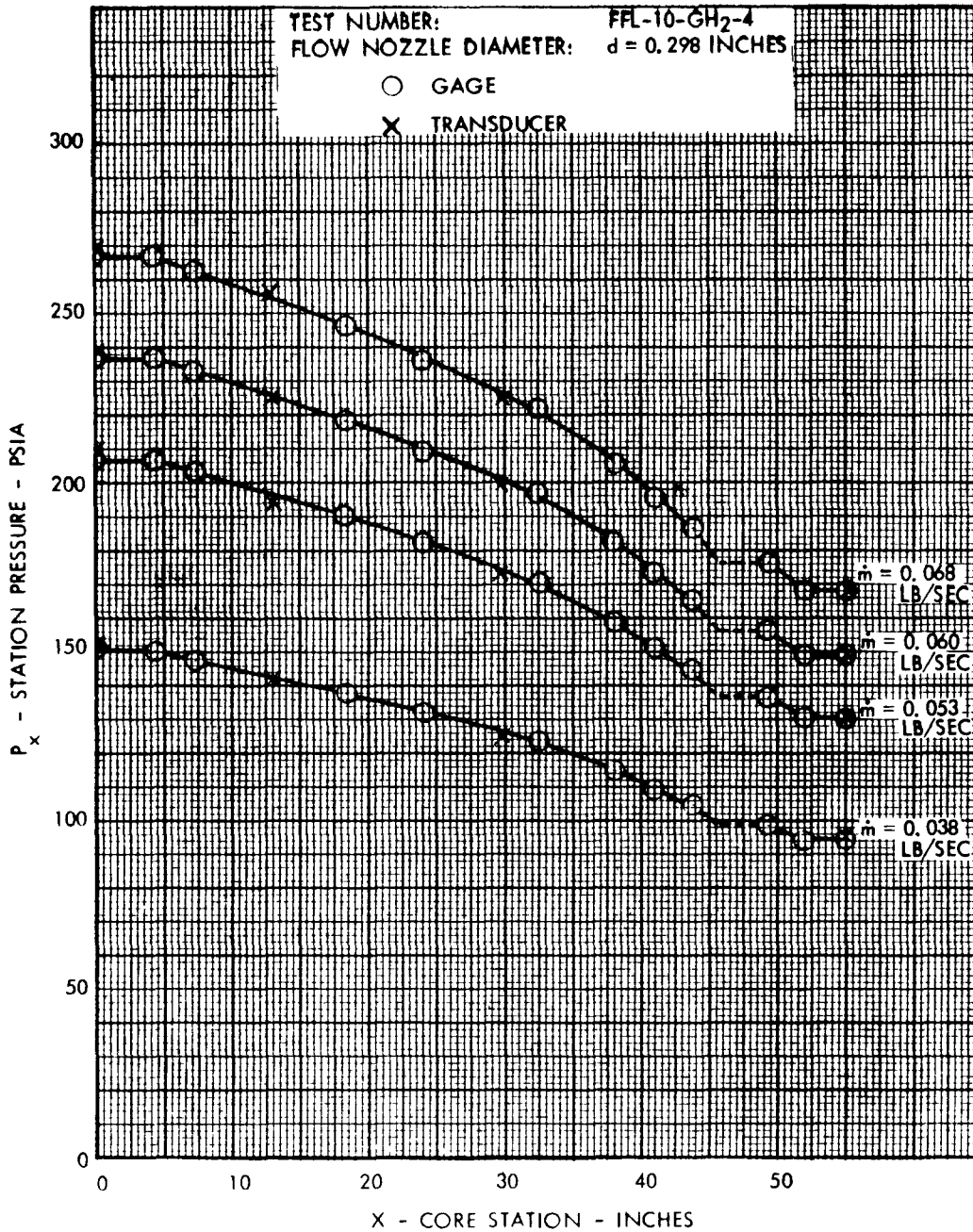


FIGURE 9

MEASURED SEAL PRESSURE DISTRIBUTION

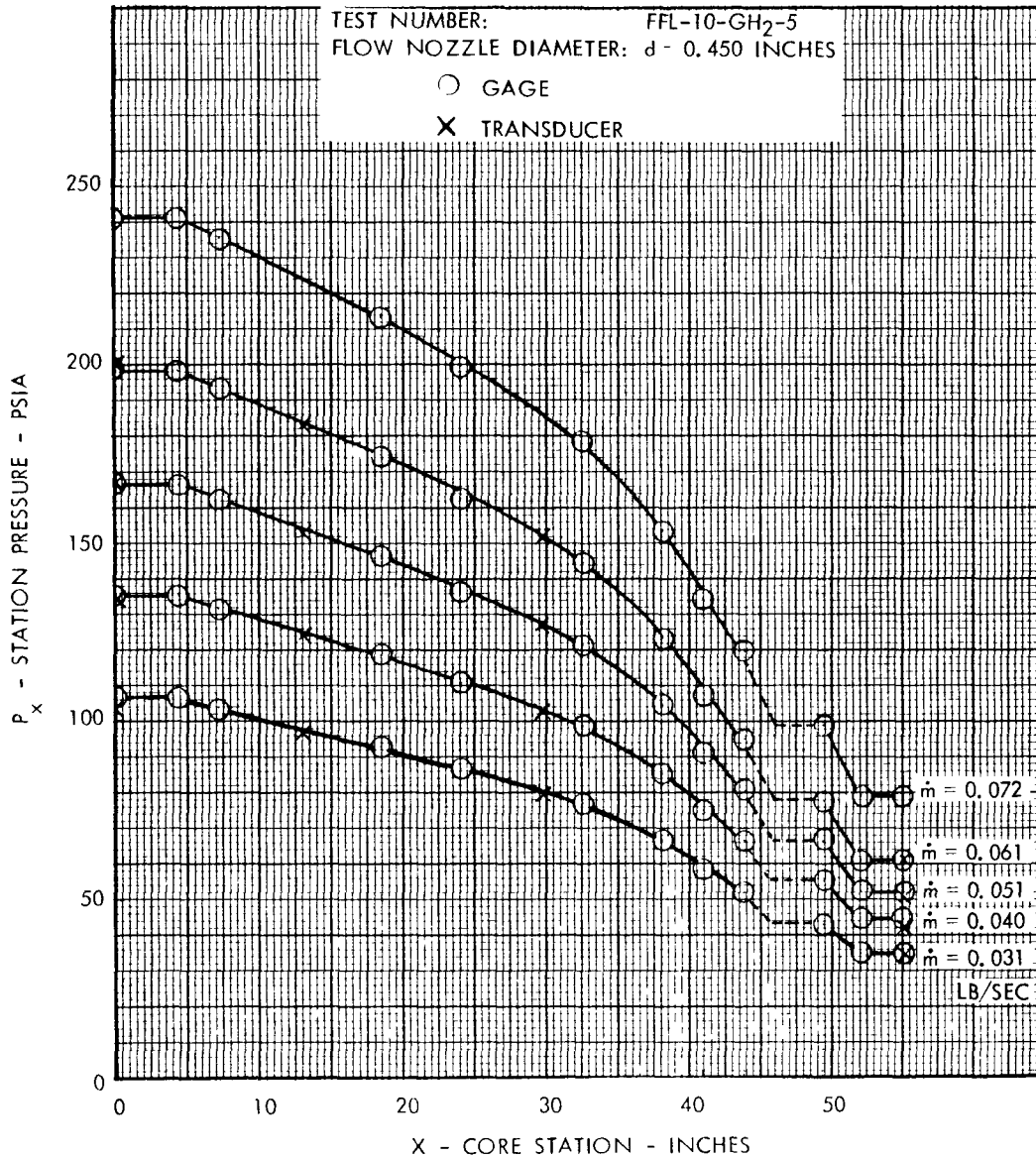
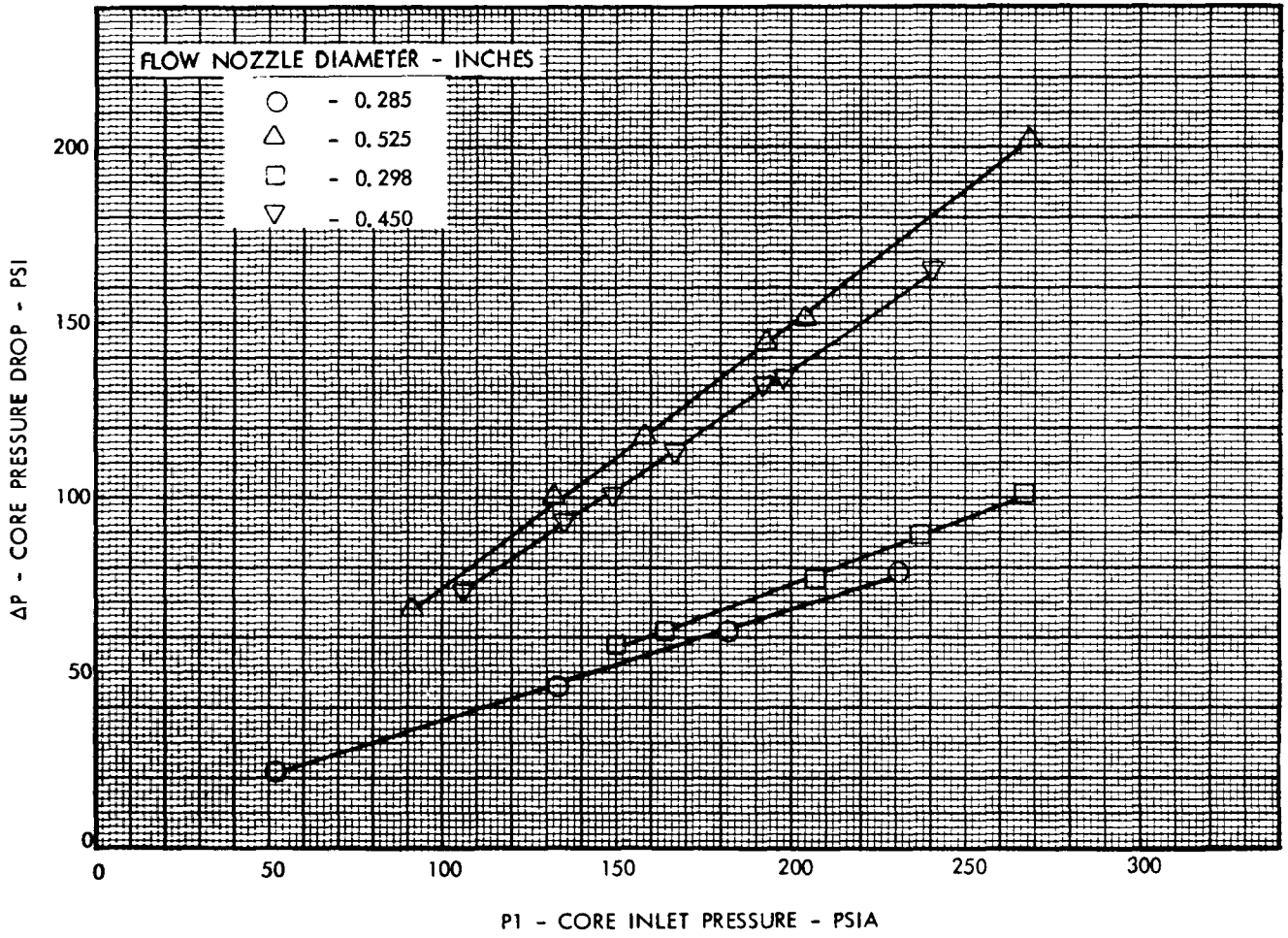


FIGURE 10  
MEASURED SEAL PRESSURE DISTRIBUTION

FIGURE 11  
SOLID CORE MODEL: CORE PRESSURE DROP



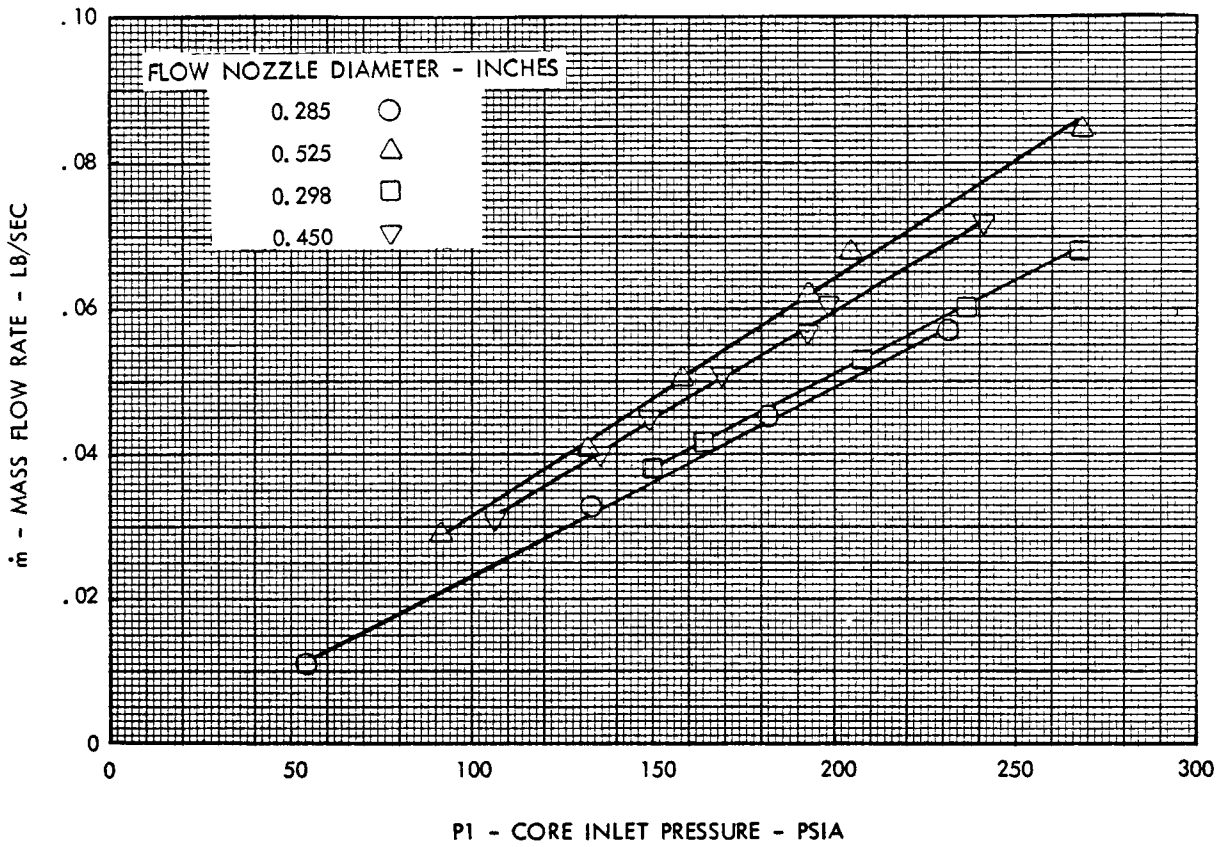


FIGURE 12  
SOLID CORE MODEL: PRESSURE FLOW CURVE

## APPENDIX A

A dimensional inspection of the three areas (i. e., seal segment groove sizes, gaps between adjacent filler strips, and radial stepping between adjacent filler strips) was performed on the solid core model to approximate their respective flow areas.

### Seal Segment Measurements

A dimensional inspection of the A-11 seal segment grooves was performed by Quality Control Inspection prior to the FFL-16 Tie Rod Vibration Test, to obtain an approximate seal segment groove flow area. The dimensions obtained during this inspection are shown schematically in Figures 13 and 14, and are tabulated in Tables III and IV.

The depth (D) of the groove at any point was determined by taking the average thickness of the seal segment measured at the adjacent lands and subtracting the seal segment thickness at the groove.

$$D = \frac{A_{N-1} + A_N}{2} - C_N$$

where N is the number identifying adjacent seal grooves and lands.

### Filler Strip Gaps and Radial Stepping Gaps

The filler strip gap measurements were made at assembly after banding the core assembly at 18 axial stations by means of hose clamps tightened to simulate the spring bundling forces exerted on the core when assembled in the inner reflector cylinder. Prior to taking the filler gap measurements, the hose clamp at a specific axial station was removed and was replaced by a blank seal ring banded tightly to the core by means of a hose clamp. The filler strip gap measurements were made at eight axial stations by means of flat feeler gauges (minimum feeler gauge thickness used was 0.001-inch). Figure 16 shows the banded core assembly just prior to taking the final measurements. As a result of machining deviations, the initially planned 2 to 6 mil tapered gap was not obtained. Figure 17

shows a curve of the average taper obtained. In cases where a radial taper existed in the filler strip gap, minimum and maximum gap measurements were made and recorded at each axial station. The filler strip gap measurements are estimated to be accurate within  $\pm 0.5$  mils.

A schematic showing the locations of the filler strip gap measurements is shown in Figure 13 and Figure 15, and tabulated in Table V.

The radial stepping gaps of the filler strips on the FFL-10 model were measured at six axial stations with feeler gauges and a blank seal ring (i. e. , a seal cut in half with no machined grooves). These measurements were taken at a specific axial station following the completion of the filler strip gap measurements.

The schematic drawing showing the locations of the radial stepping gap measurements is shown in Figure 13 and Figure 15, and measurements tabulated in Table VI.

#### Core Diameter

Core diameter measurements (d) were taken across diametrically opposite filler strips. Core diameter measurements are tabulated in Table VII.

#### Plunger Measurements

The plunger measurements (P) were made to assure that the seal segments were seated properly against the periphery of the core. Figure 15 shows the locations of the measurements and the dimensions are tabulated in Table VIII.



TABLE III  
SEAL SEGMENT MEASUREMENT - INCHES

	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R 1-SS1-T-	.5670	.5045	.5670	.5055	.5665	.5045	.5665	.5050	.5660	.5055		.5045
R 1-SS1-B-	.5660	.5025	.5660	.5045	.5660	.5035	.5660	.5040	.5655	.5050		.5040
R 1-SS2-T-	.5660	.5050	.5665	.5055	.5670	.5045	.5670	.5040	.5665	.5035		.5045
R 1-SS2-B-	.5665	.5035	.5660	.5045	.5660	.5045	.5660	.5035	.5665	.5025		.5045
R 1-SS3-T-	.5665	.5050	.5665	.5130	.5665	.5075	.5665	.5080	.5665	.5090		.5090
R 1-SS3-B-	.5665	.5055	.5665	.5135	.5665	.5070	.5665	.5095	.5665	.5090		.5090
R 1-SS4-T-	.5690	.5055	.5685	.5055	.5685	.5055	.5690	.5055	.5685	.5050		.5050
R 1-SS4-B-	.5670	.5070	.5675	.5050	.5670	.5045	.5670	.5045	.5660	.5050		.5045
R 1-SS5-T-	.5675	.5055	.5675	.4985	.5675	.5065	.5685	.5050	.5675	.5070		.5070
R 1-SS5-B-	.5660	.5060	.5665	.4995	.5665	.5060	.5670	.5060	.5675	.5070		.5065
R 1-SS6-T-	.5670	.5130	.5670	.5115	.5680	.5130	.5670	.5115	.5675	.5100		.5105
R 1-SS6-B-	.5685	.5145	.5680	.5125	.5685	.5135	.5685	.5130	.5685	.5110		.5115

DRAWING DIMENSIONS: A = 0.568/0.563  
C = 0.508/0.498

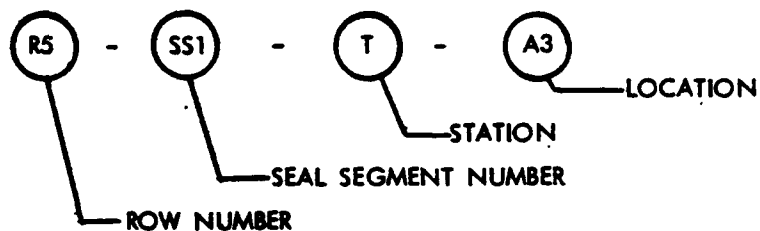
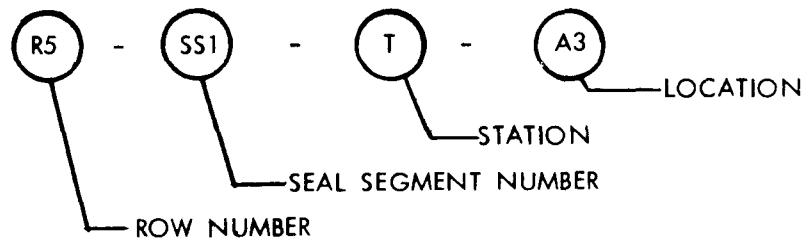


TABLE III (CONTINUED)

	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R 2-SS1-T-	.568	.556	.5675	.5555	.568	.555	.5675	.555	.5680	.5545	.568	.556
R 2-SS1-B-	.5665	.5555	.5665	.555	.567	.555	.5665	.5545	.5670	.5545		
R 2-SS2-T-	.5685	.5575	.5685	.5565	.5685	.5565	.5685	.5565	.5685	.5565	.5685	.5565
R 2-SS2-B-	.5675	.557	.567	.5565	.5675	.557	.5670	.556	.5675	.5565		
R 2-SS3-T-	.566	.5555	.5655	.5555	.5650	.5550	.5650	.5550	.5650	.5550	.5655	.556
R 2-SS3-B-	.5665	.5555	.5660	.556	.5655	.5555	.5655	.5555	.5655	.5560		
R 2-SS4-T-	.5675	.5565	.5675	.5555	.5675	.5550	.5675	.5555	.5670	.5560	.5670	.5560
R 2-SS4-B-	.5665	.5565	.5665	.5555	.5665	.5555	.5665	.5555	.5665	.5550		
R 2-SS5-T-	.5690	.5565	.5685	.5570	.5685	.5570	.5690	.5555	.5685	.5555	.5685	.5555
R 2-SS5-B-	.5670	.5575	.5670	.5570	.5685	.5565	.5670	.5555	.5675	.5555		
R 2-SS6-T-	.5675	.5555	.5670	.5555	.5665	.5555	.5675	.5560	.5675	.5565	.5675	.5565
R 2-SS6-B-	.5665	.5555	.5660	.5560	.5660	.5550	.5660	.5565	.5665	.5565		

DRAWING DIMENSIONS: A = 0.568/0.563  
 C = 0.557/0.551



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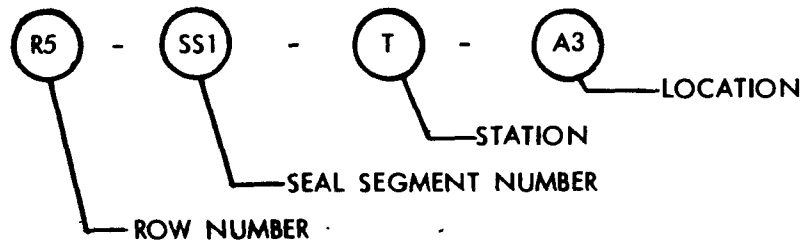
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TABLE III (CONTINUED)

	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R 3-SS1-T-	.5680	.5565	.5680	.5560	.5685	.5565	.5680	.5560	.5675	.5565	.5680	.5565
R 3-SS1-B-	.5665	.5560	.5665	.5550	.5665	.5560	.5670	.5555	.5670	.5560		
R 3-SS2-T-	.5670	.5575	.5670	.5570	.5670	.5565	.5670	.5550	.5675	.5550	.5675	.5560
R 3-SS2-B-	.5660	.5585	.5660	.5575	.5665	.5565	.5665	.5560	.5665	.5565		
R 3-SS3-T-	.5675	.5560	.5680	.5555	.5680	.5555	.5680	.5560	.5680	.5550	.5680	.5555
R 3-SS3-B-	.5665	.5560	.5670	.5560	.5670	.5550	.5670	.5565	.5665	.5555		
R 3-SS4-T-	.5690	.5545	.5685	.5545	.5685	.5555	.5680	.5550	.5680	.5555	.5680	.5550
R 3-SS4-B-	.5670	.5550	.5675	.5550	.5670	.5550	.5670	.5555	.5670	.5560		
R 3-SS5-T-	.5695	.5575	.5695	.5575	.5695	.5580	.5695	.5585	.5700	.5580	.5700	.5585
R 3-SS5-B-	.5675	.5565	.5680	.5575	.5675	.5570	.5675	.5580	.5675	.5580		
R 3-SS6-T-	.5670	.5565	.5680	.5565	.5680	.5565	.5685	.5560	.5685	.5560	.5690	.5565
R 3-SS6-B-	.5665	.5565	.5670	.5565	.5675	.5565	.5670	.5565	.5670	.5565		

DRAWING DIMENSIONS: A = 0.568/0.563  
C = 0.557/0.551



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TABLE III (CONTINUED)

	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R 4-SS1-T-	.5680	.5570	.5680	.5570	.5680	.5570	.5680	.5565	.5680	.5560	.5680	.5565
R 4-SS1-B-	.5665	.5565	.5665	.5560	.5665	.5565	.5665	.5565	.5665	.5550		
R 4-SS2-T-	.5670	.5565	.5675	.5570	.5670	.5560	.5670	.5560	.5675	.5565	.5675	.5565
R 4-SS2-B-	.5660	.5570	.5655	.5570	.5660	.5565	.5660	.5560	.5660	.5565		
R 4-SS3-T-	.5665	.5570	.5665	.5565	.5665	.5565	.5665	.5570	.5665	.5565	.5665	.5560
R 4-SS3-B-	.5655	.5560	.5650	.5560	.5645	.5565	.5650	.5565	.5655	.5565		
R 4-SS4-T-	.5630	.5530	.5630	.5530	.5630	.5530	.5635	.5515	.5630	.5515	.5635	.5530
R 4-SS4-B-	.5620	.5525	.5620	.5525	.5615	.5515	.5620	.5510	.5620	.5505		
R 4-SS5-T-	.5690	.5560	.5690	.5565	.5685	.5565	.5685	.5565	.5680	.5565	.5680	.5550
R 4-SS5-B-	.5675	.5565	.5670	.5565	.5665	.5565	.5665	.5555	.5665	.5560		
R 4-SS6-T-	.5680	.5565	.5680	.5570	.5680	.5570	.5675	.5570	.5675	.5570	.5675	.5565
R 4-SS6-B-	.5670	.5560	.5670	.5565	.5665	.5565	.5670	.5565	.5670	.5570		

DRAWING DIMENSIONS: A = 0.568/0.563  
 C = 0.557/0.551

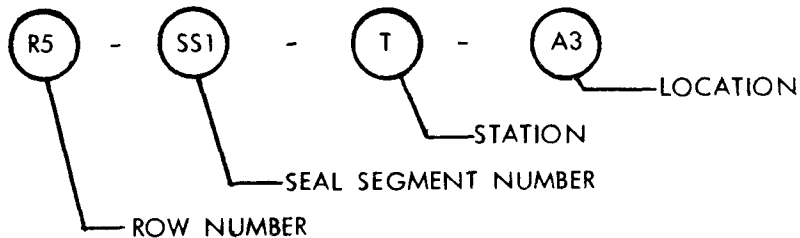
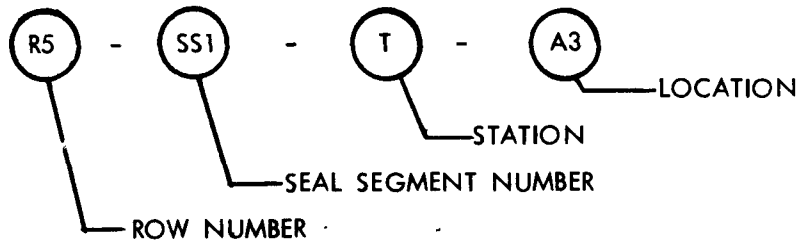


TABLE III (CONTINUED)

	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R 5-SS1-T-	.5680	.5555	.5675	.5560	.5675	.5560	.5675	.5560	.5675	.5560	.5675	.5555
R 5-SS1-B-	.5665	.5555	.5665	.5555	.5665	.5550	.5665	.5555	.5665	.5555		
R 5-SS2-T-	.5670	.5565	.5665	.5565	.5675	.5565	.5670	.5560	.5670	.5560	.5675	.5560
R 5-SS2-B-	.5660	.5570	.5665	.5565	.5660	.5560	.5660	.5565	.5660	.5565		
R 5-SS3-T-	.5685	.5570	.5685	.5570	.5685	.5565	.5685	.5560	.5685	.5565	.5685	.5565
R 5-SS3-B-	.5670	.5565	.5667	.5575	.5670	.5560	.5670	.5565	.5665	.5565		
R 5-SS4-T-	.5675	.5555	.5675	.5550	.5680	.5555	.5680	.5550	.5675	.5550	.5675	.5560
R 5-SS4-B-	.5660	.5555	.5665	.5545	.5665	.5550	.5665	.5550	.5665	.5555		
R 5-SS5-T-	.5685	.5555	.5685	.5555	.5680	.5555	.5685	.5550	.5690	.5550	.5685	.5545
R 5-SS5-B-	.5670	.5555	.5665	.5560	.5665	.5545	.5665	.5550	.5675	.5550		
R 5-SS6-T-	.5665	.5555	.5665	.5545	.5665	.5550	.5660	.5550	.5660	.5555	.5665	.5550
R 5-SS6-B-	.5655	.5560	.5655	.5550	.5650	.5540	.5650	.5555	.5655	.5555		

DRAWING DIMENSIONS: A = 0.568/0.563  
 C = 0.557/0.551



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TABLE III (CONTINUED)

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	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R 6-SS1-T-	.5685	.5565	.5680	.5565	.5680	.5565	.5685	.5560	.5680	.5555	.5680	.5565
R 6-SS1-B-	.5670	.5560	.5670	.5555	.5665	.5555	.5665	.5555	.5665	.5540		
R 6-SS2-T-	.5675	.5575	.5675	.5565	.5675	.5560	.5675	.5555	.5675	.5550	.5675	.5560
R 6-SS2-B-	.5665	.5570	.5665	.5565	.5665	.5550	.5665	.5555	.5665	.5550		
R 6-SS3-T-	.5665	.5575	.5665	.5565	.5660	.5560	.5655	.5550	.5645	.5540	.5640	.5545
R 6-SS3-B-	.5655	.5570	.5655	.5560	.5645	.5545	.5645	.5555	.5635	.5550		
R 6-SS4-T-	.5675	.5560	.5680	.5560	.5680	.5565	.5680	.5560	.5680	.5560	.5685	.5565
R 6-SS4-B-	.5665	.5550	.5665	.5555	.5665	.5550	.5665	.5550	.5665	.5555		
R 6-SS5-T-	.5645	.5550	.5655	.5550	.5660	.5550	.5665	.5545	.5665	.5550	.5665	.5555
R 6-SS5-B-	.5635	.5545	.5645	.5550	.5645	.5540	.5650	.5545	.5655	.5555		
R 6-SS6-T-	.5660	.5570	.5665	.5565	.5660	.5565	.5660	.5560	.5655	.5560	.5660	.5565
R 6-SS6-B-	.5665	.5570	.5665	.5560	.5665	.5555	.5665	.5555	.5665	.5555		

DRAWING DIMENSIONS: A = 0.568/0.563  
 C = 0.557/0.551

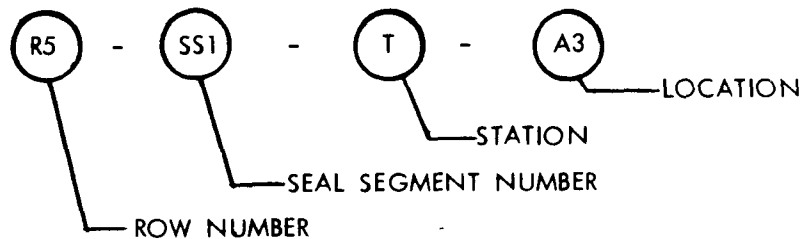
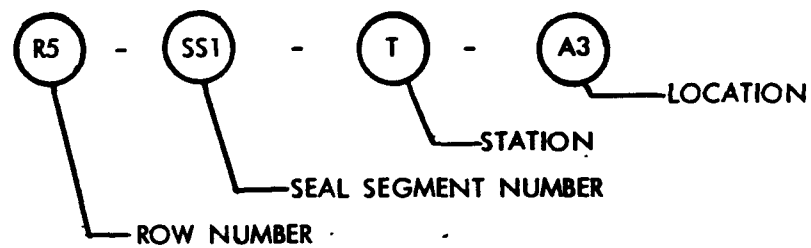


TABLE III (CONTINUED)

	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R 7-SS1-T-	.5680	.5585	.5685	.5585	.5680	.5585	.5680	.5585	.5680	.5585	.5680	.5585
R 7-SS1-B-	.5665	.5580	.5665	.5575	.5665	.5570	.5665	.5575	.5665	.5570		
R 7-SS2-T-	.5685	.5585	.5685	.5595	.5685	.5590	.5680	.5585	.5680	.5585	.5680	.5585
R 7-SS2-B-	.5670	.5585	.5665	.5585	.5665	.5570	.5665	.5585	.5665	.5580		
R 7-SS3-T-	.5655	.5585	.5655	.5575	.5650	.5570	.5645	.5560	.5645	.5565	.5645	.5570
R 7-SS3-B-	.5660	.5585	.5665	.5575	.5660	.5565	.5655	.5565	.5655	.5570		
R 7-SS4-T-	.5660	.5570	.5665	.5565	.5665	.5565	.5675	.5565	.5680	.5565	.5685	.5565
R 7-SS4-B-	.5645	.5555	.5650	.5550	.5655	.5545	.5660	.5550	.5665	.5555		
R 7-SS5-T-	.5680	.5595	.5680	.5585	.5680	.5585	.5680	.5585	.5680	.5585	.5680	.5585
R 7-SS5-B-	.5665	.5585	.5665	.5585	.5670	.5575	.5665	.5585	.5665	.5585		
R 7-SS6-T-	.5665	.5585	.5670	.5580	.5670	.5575	.5670	.5575	.5670	.5575	.5670	.5580
R 7-SS6-B-	.5660	.5575	.5655	.5575	.5655	.5565	.5655	.5575	.5655	.5570		

DRAWING DIMENSIONS: A = 0.568/0.563  
 C = 0.559/0.553



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TABLE III (CONTINUED)

	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R 8-SS1-T-	.5685	.5590	.5685	.5595	.5690	.5595	.5685	.5595	.5685	.5585	.5680	.5585
R 8-SS1-B-	.5670	.5590	.5675	.5595	.5670	.5580	.5670	.5590	.5670	.5580		
R 8-SS2-T-	.5680	.5590	.5680	.5585	.5680	.5590	.5685	.5585	.5680	.5590	.5680	.5575
R 8-SS2-B-	.5665	.5590	.5665	.5585	.5665	.5580	.5665	.5585	.5665	.5585		
R 8-SS3-T-	.5690	.5595	.5695	.5595	.5695	.5595	.5690	.5590	.5690	.5585	.5695	.5595
R 8-SS3-B-	.5675	.5595	.5675	.5590	.5675	.5580	.5675	.5585	.5675	.5590		
R 8-SS4-T-	.5685	.5530	.5685	.5590	.5685	.5580	.5680	.5580	.5675	.5575	.5675	.5585
R 8-SS4-B-	.5675	.5530	.5675	.5590	.5675	.5570	.5670	.5580	.5665	.5575		
R 8-SS5-T-	.5670	.5590	.5675	.5590	.5675	.5590	.5675	.5575	.5675	.5585	.5670	.5590
R 8-SS5-B-	.5665	.5590	.5665	.5585	.5665	.5575	.5665	.5580	.5665	.5585		
R 8-SS6-T-	.5665	.5585	.5665	.5585	.5665	.5585	.5665	.5580	.5660	.5580	.5665	.5580
R 8-SS6-B-	.5670	.5585	.5665	.5585	.5665	.5565	.5665	.5565	.5665	.5575		

DRAWING DIMENSIONS: A = 0.568/0.563  
 C = 0.559/0.553

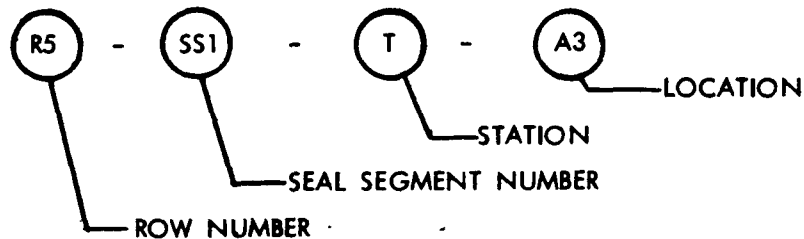




TABLE III (CONTINUED)

	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R 9-SS1-T-	.5680	.5580	.5685	.5585	.5685	.5580	.5685	.5580	.5680	.5580	.5685	.5585
R 9-SS1-B-	.5685	.5570	.5685	.5575	.5680	.5570	.5680	.5570	.5680	.5575		
R 9-SS2-T-	.5680	.5590	.5680	.5590	.5680	.5590	.5680	.5595	.5680	.5590	.5680	.5595
R 9-SS2-B-	.5690	.5595	.5685	.5595	.5685	.5590	.5685	.5595	.5690	.5595		
R 9-SS3-T-	.5695	.5590	.5690	.5595	.5695	.5595	.5695	.5595	.5695	.5600	.5690	.5595
R 9-SS3-B-	.5680	.5590	.5680	.5590	.5680	.5595	.5685	.5590	.5680	.5595		
R 9-SS4-T-	.5680	.5580	.5675	.5590	.5675	.5585	.5670	.5590	.5675	.5590	.5680	.5590
R 9-SS4-B-	.5690	.5585	.5690	.5585	.5685	.5590	.5690	.5590	.5690	.5580		
R 9-SS5-T-	.5670	.5585	.5670	.5585	.5670	.5585	.5670	.5590	.5675	.5590	.5675	.5590
R 9-SS5-B-	.5680	.5590	.5675	.5590	.5675	.5595	.5680	.5590	.5680	.5595	.5680	
R 9-SS6-T-	.5680	.5580	.5685	.5585	.5680	.5590	.5690	.5595	.5690	.5590	.5690	.5585
R 9-SS6-B-	.5680	.5580	.5675	.5585	.5675	.5585	.5680	.5585	.5680	.5590		

DRAWING DIMENSIONS: A = 0.568/0.563  
C = 0.559/0.553

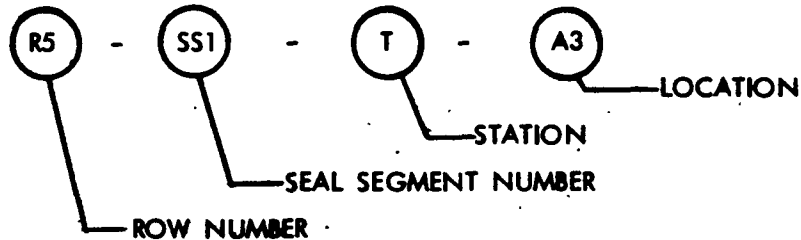


TABLE III (CONTINUED)

	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R10-SS1-T-	.5695	.5600	.5695	.5600	.5690	.5605	.5690	.5600	.5690	.5600	.5690	.5600
R10-SS1-B-	.5670	.5600	.5670	.5595	.5670	.5600	.5670	.5595	.5680	.5590		
R10-SS2-T-	.5685	.5600	.5685	.5605	.5680	.5605	.5685	.5600	.5685	.5600	.5680	.5605
R10-SS2-B-	.5680	.5600	.5675	.5595	.5675	.5595	.5680	.5595	.5680	.5600		
R10-SS3-T-	.5690	.5600	.5690	.5605	.5695	.5600	.5695	.5600	.5695	.5600	.5690	.5605
R10-SS3-B-	.5680	.5600	.5680	.5600	.5685	.5600	.5685	.5590	.5680	.5590		
R10-SS4-T-	.5680	.5590	.5680	.5590	.5680	.5595	.5680	.5590	.5680	.5595	.5680	.5595
R10-SS4-B-	.5675	.5595	.5670	.5595	.5670	.5595	.5675	.5600	.5670	.5595		
R10-SS5-T-	.5670	.5595	.5670	.5595	.5675	.5590	.5675	.5595	.5670	.5595	.5675	.5590
R10-SS5-B-	.5670	.5605	.5670	.5605	.5670	.5605	.5670	.5600	.5670	.5600		
R10-SS6-T-	.5695	.5595	.5695	.5600	.5690	.5600	.5690	.5595	.5690	.5600	.5695	.5595
R10-SS6-B-	.5670	.5600	.5675	.5605	.5675	.5605	.5675	.5605	.5675	.5600		

DRAWING DIMENSIONS: A = 0.568/0.563  
 C = 0.559/0.553

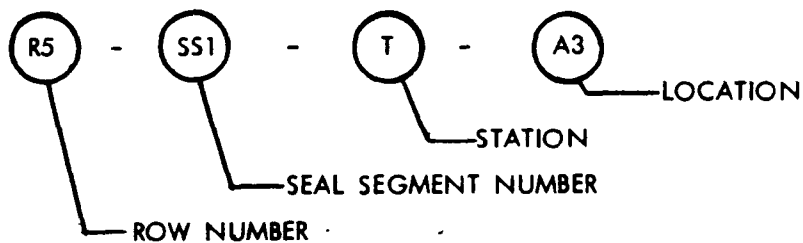


TABLE III (CONTINUED)

	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R11-SS1-T-	.5675	.5575	.5680	.5580	.5680	.5580	.5680	.5580	.5680	.5575	.5680	.5575
R11-SS1-B-	.5665	.5565	.5665	.5565	.5665	.5570	.5665	.5575	.5665	.5575		
R11-SS2-T-	.5685	.5595	.5685	.5595	.5685	.5590	.5685	.5580	.5685	.5590	.5685	.5595
R11-SS2-B-	.5670	.5585	.5670	.5585	.5670	.5575	.5670	.5575	.5670	.5585		
R11-SS3-T-	.5675	.5595	.5675	.5590	.5675	.5590	.5680	.5585	.5685	.5585	.5685	.5590
R11-SS3-B-	.5670	.5590	.5665	.5585	.5665	.5575	.5670	.5580	.5675	.5585		
R11-SS4-T-	.5665	.5575	.5665	.5575	.5665	.5565	.5665	.5565	.5665	.5565	.5665	.5565
R11-SS4-B-	.5665	.5575	.5665	.5575	.5665	.5565	.5670	.5570	.5670	.5565		
R11-SS5-T-	.5680	.5585	.5680	.5585	.5685	.5575	.5685	.5575	.5685	.5585	.5685	.5595
R11-SS5-B-	.5675	.5580	.5670	.5575	.5670	.5565	.5675	.5575	.5675	.5585		
R11-SS6-T-	.5680	.5595	.5680	.5595	.5680	.5590	.5685	.5590	.5685	.5585	.5685	.5595
R11-SS6-B-	.5670	.5590	.5670	.5585	.5670	.5575	.5670	.5585	.5670	.5585		

DRAWING DIMENSIONS: A = 0.568/0.563  
 C = 0.559/0.553

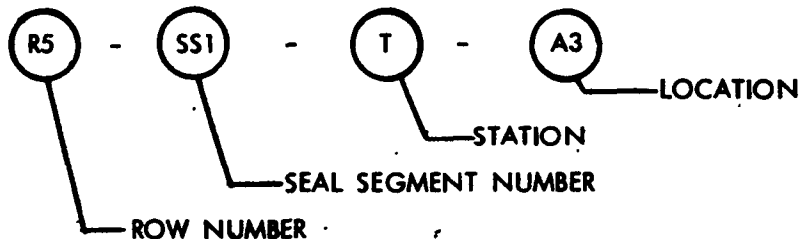
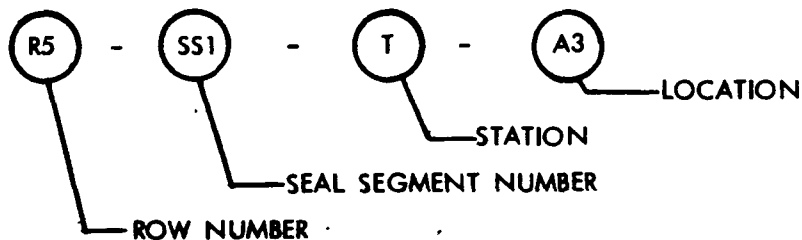


TABLE III (CONTINUED)

	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R12-SS1-T-	.5675	.5615	.5670	.5605	.5675	.5605	.5675	.5605	.5670	.5605	.5675	.5605
R12-SS1-B-	.5665	.5615	.5660	.5600	.5665	.5595	.5660	.5600	.5665	.5600		
R12-SS2-T-	.5675	.5615	.5675	.5605	.5675	.5605	.5675	.5605	.5675	.5605	.5670	.5605
R12-SS2-B-	.5660	.5610	.5660	.5605	.5660	.5605	.5660	.5600	.5660	.5605		
R12-SS3-T-	.5675	.5625	.5675	.5615	.5675	.5610	.5670	.5615	.5675	.5615	.5670	.5620
R12-SS3-B-	.5665	.5615	.5665	.5605	.5665	.5600	.5665	.5605	.5665	.5605		
R12-SS4-T-	.5685	.5625	.5680	.5615	.5680	.5605	.5685	.5615	.5680	.5620	.5680	.5625
R12-SS4-B-	.5665	.5615	.5665	.5605	.5665	.5605	.5665	.5595	.5665	.5610		
R12-SS5-T-	.5680	.5615	.5675	.5605	.5685	.5605	.5680	.5605	.5680	.5600	.5680	.5605
R12-SS5-B-	.5670	.5610	.5665	.5600	.5665	.5595	.5665	.5600	.5670	.5605		
R12-SS6-T-	.5665	.5620	.5665	.5605	.5665	.5615	.5665	.5610	.5665	.5605	.5665	.5610
R12-SS6-B-	.5660	.5605	.5660	.5605	.5665	.5595	.5660	.5600	.5655	.5600		

DRAWING DIMENSIONS: A = 0.568/0.563

C = 0.561/0.555

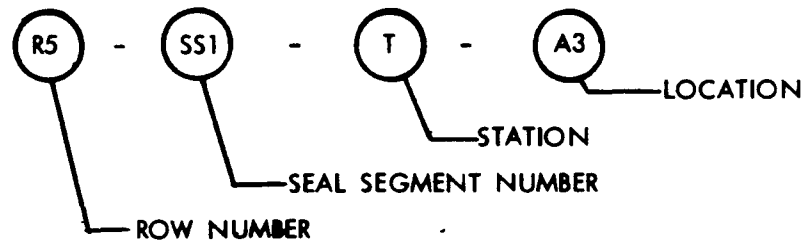


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TABLE III (CONTINUED)

	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R13-SS1-T-	.5680	.5610	.5680	.5610	.5680	.5610	.5680	.5610	.5680	.5610	.5680	.5610
R13-SS1-B-	.5665	.5600	.5665	.5590	.5665	.5585	.5665	.5595	.5665	.5595		
R13-SS2-T-	.5690	.5615	.5690	.5620	.5690	.5610	.5685	.5605	.5690	.5610	.5690	.5610
R13-SS2-B-	.5670	.5610	.5680	.5615	.5680	.5610	.5680	.5605	.5675	.5610		
R13-SS3-T-	.5670	.5610	.5670	.5605	.5670	.5610	.5675	.5605	.5670	.5610	.5670	.5610
R13-SS3-B-	.5660	.5600	.5665	.5600	.5660	.5605	.5660	.5600	.5665	.5600		
R13-SS4-T-	.5695	.5605	.5690	.5610	.5695	.5610	.5690	.5605	.5690	.5610	.5690	.5600
R13-SS4-B-	.5680	.5600	.5680	.5595	.5675	.5600	.5675	.5595	.5675	.5595		
R13-SS5-T-	.5685	.5615	.5685	.5610	.5680	.5610	.5680	.5615	.5680	.5615	.5680	.5620
R13-SS5-B-	.5675	.5615	.5670	.5610	.5670	.5600	.5670	.5605	.5665	.5610		
R13-SS5-T-	.5685	.5620	.5685	.5620	.5690	.5620	.5685	.5620	.5685	.5625	.5690	.5620
R13-SS6-B-	.5670	.5610	.5670	.5615	.5670	.5600	.5670	.5600	.5670	.5610		

DRAWING DIMENSIONS: A = 0.568/0.563  
 C = 0.561/0.555



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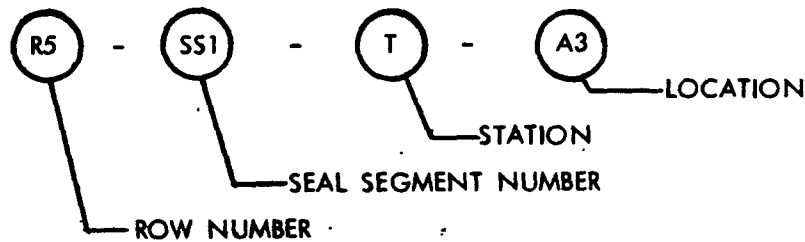
Astronuclear  
 WANL-TME-1059

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 RESTRICTED DATA  
 Atomic Energy Act - 1954

TABLE III (CONTINUED)

	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R14-SS1-T-	.5680	.5605	.5675	.5605	.5675	.5610	.5675	.5610	.5675	.5615	.5680	.5610
R14-SS1-B-	.5660	.5610	.5660	.5610	.5660	.5605	.5660	.5600	.5660	.5600		
R14-SS2-T-	.5690	.5620	.5690	.5620	.5690	.5615	.5695	.5620	.5690	.5620	.5690	.5620
R14-SS2-B-	.5670	.5610	.5670	.5610	.5670	.5610	.5670	.5610	.5665	.5610		
R14-SS3-T-	.5680	.5610	.5680	.5610	.5680	.5615	.5680	.5615	.5680	.5615	.5680	.5615
R14-SS3-B-	.5670	.5605	.5670	.5600	.5670	.5600	.5670	.5605	.5670	.5600		
R14-SS4-T-	.5680	.5605	.5680	.5605	.5685	.5600	.5680	.5600	.5685	.5600	.5685	.5605
R14-SS4-B-	.5670	.5595	.5670	.5600	.5670	.5600	.5670	.5600	.5670	.5590		
R14-SS5-T-	.5670	.5610	.5670	.5615	.5675	.5615	.5680	.5610	.5675	.5610	.5680	.5615
R14-SS5-B-	.5665	.5610	.5665	.5610	.5665	.5605	.5665	.5600	.5665	.5605		
R14-SS6-T-	.5680	.5615	.5680	.5620	.5680	.5615	.5685	.5615	.5680	.5615	.5680	.5620
R14-SS6-B-	.5675	.5615	.5675	.5610	.5675	.5610	.5675	.5605	.5675	.5610		

DRAWING DIMENSIONS: A = 0.568/0.563  
 C = 0.561/0.555



RESTRICTED DATA

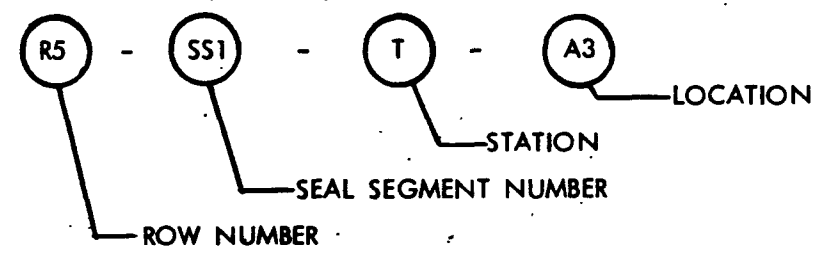
WANL-TME-1059  
 Astronuclear

**CONFIDENTIAL**  
**RESTRICTED DATA**  
 Atomic Energy Act - 1954

TABLE III (CONTINUED)

	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R15-SS1-T-	.5685	.5605	.5685	.5605	.5685	.5610	.5695	.5600	.5695	.5595	.5690	.5595
R15-SS1-B-	.5670	.5595	.5670	.5595	.5670	.5595	.5675	.5590	.5675	.5590		
R15-SS2-T-	.5680	.5610	.5680	.5615	.5680	.5615	.5680	.5610	.5680	.5615	.5680	.5620
R15-SS2-B-	.5675	.5615	.5675	.5620	.5680	.5615	.5675	.5610	.5675	.5610		
R15-SS3-T-	.5675	.5605	.5675	.5610	.5675	.5610	.5670	.5600	.5675	.5605	.5675	.5610
R15-SS3-B-	.5665	.5610	.5665	.5610	.5670	.5600	.5670	.5600	.5665	.5600		
R15-SS4-T-	.5685	.5605	.5685	.5600	.5680	.5600	.5680	.5605	.5685	.5610	.5680	.5600
R15-SS4-B-	.5665	.5600	.5670	.5595	.5665	.5595	.5665	.5595	.5665	.5600		
R15-SS5-T-	.5685	.5610	.5680	.5605	.5670	.5605	.5670	.5600	.5680	.5600	.5675	.5605
R15-SS5-B-	.5665	.5610	.5665	.5610	.5665	.5605	.5665	.5605	.5665	.5605		
R15-SS6-T-	.5685	.5620	.5685	.5615	.5685	.5615	.5685	.5615	.5685	.5615	.5685	.5615
R15-SS6-B-	.5675	.5615	.5675	.5605	.5680	.5615	.5675	.5610	.5680	.5610		

DRAWING DIMENSIONS: A = 0.568/0.563  
 C = 0.561/0.555



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 Atomic Energy

TABLE III (CONTINUED)

	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R16-SS1-T-	.5675	.5615	.5680	.5610	.5680	.5605	.5680	.5600	.5685	.5605	.5685	.5615
R16-SS1-B-	.5665	.5620	.5670	.5610	.5670	.5605	.5670	.5600	.5670	.5605		
R16-SS2-T-	.5675	.5615	.5675	.5615	.5675	.5610	.5675	.5610	.5675	.5610	.5675	.5615
R16-SS2-B-	.5660	.5605	.5660	.5600	.5665	.5590	.5665	.5600	.5665	.5595		
R16-SS3-T-	.5670	.5615	.5675	.5610	.5675	.5615	.5675	.5615	.5670	.5610	.5670	.5610
R16-SS3-B-	.5660	.5600	.5660	.5600	.5660	.5600	.5660	.5600	.5660	.5600		
R16-SS4-T-	.5690	.5620	.5690	.5615	.5690	.5605	.5695	.5615	.5695	.5615	.5695	.5620
R16-SS4-B-	.5675	.5615	.5675	.5615	.5675	.5620	.5675	.5615	.5675	.5615		
R16-SS5-T-	.5670	.5605	.5670	.5610	.5670	.5610	.5670	.5605	.5670	.5610	.5670	.5615
R16-SS5-B-	.5665	.5600	.5665	.5665	.5665	.5605	.5665	.5600	.5665	.5605		
R16-SS6-T-	.5685	.5620	.5685	.5615	.5690	.5615	.5690	.5620	.5690	.5620	.5690	.5615
R16-SS6-B-	.5670	.5610	.5670	.5605	.5675	.5605	.5675	.5600	.5675	.5605		

DRAWING DIMENSIONS: A = 0.568/0.563  
 C = 0.561/0.555

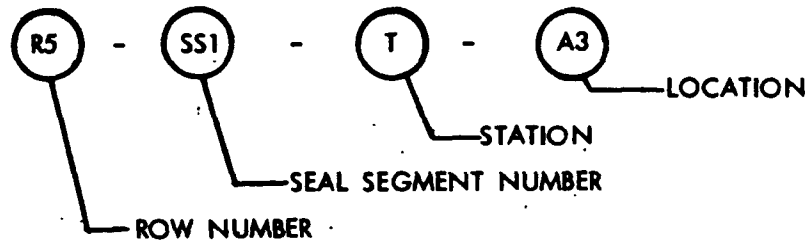


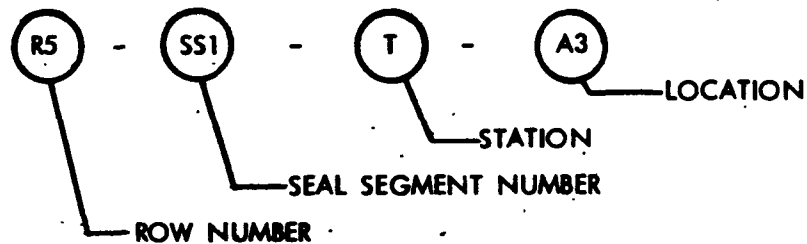


TABLE III (CONTINUED)

	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R17-SS1-T-	.5680	.5160	.5685	.5160	.5685	.5150	.5690	.5155	.5690	.5160	.5685	.5160
R17-SS1-B-	.5670	.5160	.5670	.5160	.5670	.5150	.5670	.5160	.5670	.5150	.5670	.5165
R17-SS2-T-	.5680	.5150	.5675	.5140	.5680	.5150	.5680	.5150	.5680	.5150	.5685	.5145
R17-SS2-B-	.5685	.5160	.5690	.5150	.5690	.5160	.5690	.5165	.5685	.5165	.5685	.5155
R17-SS3-T-	.5675	.5145	.5675	.5145	.5680	.5140	.5680	.5140	.5680	.5140	.5675	.5145
R17-SS3-B-	.5690	.5150	.5690	.5150	.5690	.5150	.5690	.5155	.5690	.5140	.5690	.5150
R17-SS4-T-	.5680	.5140	.5685	.5140	.5685	.5140	.5685	.5140	.5685	.5145	.5685	.5150
R17-SS4-B-	.5680	.5140	.5680	.5140	.5680	.5145	.5680	.5140	.5680	.5145	.5685	.5145
R17-SS5-T-	.5690	.5140	.5690	.5140	.5690	.5135	.5690	.5145	.5690	.5145	.5690	.5140
R17-SS5-B-	.5680	.5140	.5690	.5145	.5690	.5145	.5680	.5145	.5680	.5150	.5680	.5150
R17-SS6-T-	.5690	.5135	.5690	.5130	.5690	.5135	.5690	.5135	.5690	.5145	.5690	.5145
R17-SS6-B-	.5680	.5145	.5680	.5150	.5680	.5150	.5680	.5155	.5680	.5155	.5675	.5155

DRAWING DIMENSIONS: A = 0.568/0.563

C = 0.518/0.508



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TABLE III (CONTINUED)

	A 1	C 1	A 2	C 2	A 3	C 3	A 4	C 4	A 5	C 5	A 6	C 6
R18-SS1-T-	.5685	.5595	.5685	.5590	.5685	.5595	.5690	.5590	.5690	.5585	.5695	.5590
R18-SS1-B-	.5675	.5600	.5675	.5590	.5675	.5590	.5670	.5585	.5670	.5585		
R18-SS2-T-	.5665	.5585	.5660	.5585	.5660	.5580	.5660	.5580	.5660	.5580	.5665	.5580
R18-SS2-B-	.5650	.5585	.5650	.5590	.5650	.5580	.5650	.5570	.5650	.5575		
R18-SS3-T-	.5660	.5590	.5660	.5590	.5660	.5590	.5660	.5585	.5655	.5585	.5660	.5590
R18-SS3-B-	.5650	.5590	.5650	.5590	.5650	.5590	.5645	.5585	.5640	.5590		
R18-SS4-T-	.5680	.5605	.5680	.5580	.5680	.5580	.5675	.5575	.5670	.5580	.5670	.5580
R18-SS4-B-	.5670	.5600	.5670	.5590	.5665	.5600	.5660	.5580	.5655	.5575		
R18-SS5-T-	.5670	.5600	.5670	.5600	.5670	.5600	.5670	.5600	.5670	.5600	.5670	.5600
R18-SS5-B-	.5670	.5600	.5670	.5600	.5670	.5595	.5665	.5600	.5660	.5595		
R18-SS6-T-	.5670	.5590	.5670	.5595	.5675	.5585	.5670	.5580	.5670	.5580	.5670	.5585
R18-SS6-B-	.5655	.5590	.5655	.5590	.5655	.5580	.5660	.5585	.5660	.5580		

DRAWING DIMENSIONS: A = 0.568/0.563  
 C = 0.561/0.555

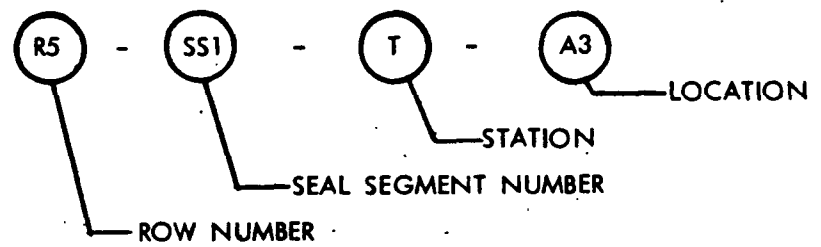
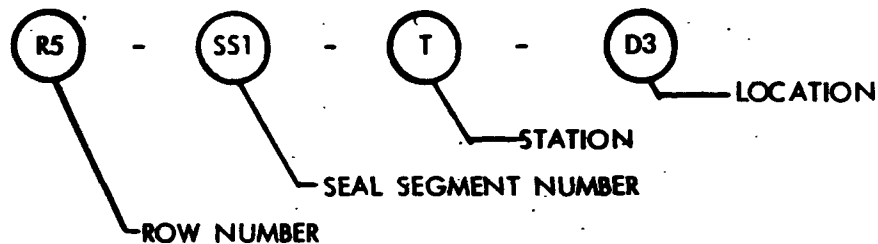


TABLE IV  
SEAL SEGMENT MEASUREMENT - INCHES

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R 1-SS1-T-		.3946	.0615	.3941	.0623	.3945	.0615	.3936	.0608	.3941		.2814
R 1-SS1-B-		.3946	.0615	.3944	.0625	.3946	.0620	.3941	.0607	.3941		.2836
R 1-SS2-T-		.3938	.0608	.3946	.0623	.3940	.0630	.3945	.0633	.3941		.2985
R 1-SS2-B-		.3942	.0618	.3945	.0615	.3944	.0625	.3941	.0638	.3944		.2998
R 1-SS3-T-		.3887	.0535	.3891	.0590	.3890	.0585	.3883	.0575	.3882		.2760
R 1-SS3-B-		.3888	.0530	.3887	.0595	.3890	.0570	.3881	.0575	.3886		.2771
R 1-SS4-T-		.3947	.0633	.3944	.0630	.3940	.0633	.3947	.0638	.3945		.2823
R 1-SS4-B-		.3948	.0623	.3948	.0628	.3946	.0625	.3946	.0615	.3946		.2837
R 1-SS5-T-		.3947	.0690	.3947	.0610	.3940	.0630	.3946	.0610	.3938		.2863
R 1-SS5-B-		.3941	.0668	.3939	.0605	.3935	.0608	.3946	.0603	.3941		.2866
R 1-SS6-T-		.3890	.0555	.3888	.0545	.3884	.0560	.3885	.0573	.3885		.2841
R 1-SS6-B-		.3890	.0558	.3888	.0548	.3886	.0555	.3892	.0575	.3892		.2816

DRAWING DIMENSIONS: D = 0.065/0.060

E = 0.396/0.391



CONFIDENTIAL  
 RESTRICTED DATA  
 AUTHORITY ACT - 1954

CONFIDENTIAL  
 RESTRICTED DATA

WANL-TME-1059  
 Astronuclear

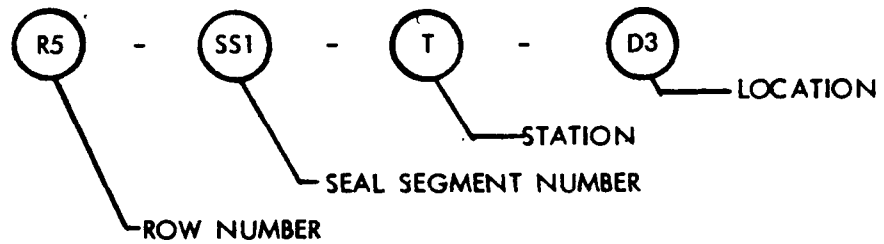
**CONFIDENTIAL**

**CONFIDENTIAL**

TABLE IV (CONTINUED)

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R 2-SS1-T-		.3944	.0123	.3947	.0128	.3945	.0128	.3945	.0132	.3951	.0120	.3944
R 2-SS1-B-		.3946	.0115	.3948	.0118	.3945	.0123	.3944	.0122	.3949		
R 2-SS2-T-		.3951	.0120	.3948	.0120	.3947	.0120	.3947	.0120	.3947	.0120	.3943
R 2-SS2-B-		.3952	.0108	.3949	.0103	.3947	.0113	.3950	.0107	.3950		
R 2-SS3-T-		.3953	.0103	.3954	.0103	.3953	.0100	.3954	.010	.3958	.0092	.3949
R 2-SS3-B-		.3954	.0103	.3954	.0103	.3952	.0100	.3952	.0095	.3958		
R 2-SS4-T-		.3946	.0120	.3946	.0125	.3947	.0120	.3946	.0112	.3946	.0110	.3943
R 2-SS4-B-		.3944	.0110	.3946	.0110	.3946	.0110	.3940	.0115	.3947		
R 2-SS5-T-		.3950	.0118	.3943	.0115	.3950	.0133	.3947	.0132	.3947	.0130	.3951
R 2-SS5-B-		.3947	.0100	.3947	.0113	.3947	.0123	.3949	.0117	.3946		
R 2-SS6-T-		.3945	.0118	.3949	.0113	.3947	.0110	.3947	.0110	.3947	.0110	.3948
R 2-SS6-B-		.3948	.0103	.3943	.0110	.3945	.0095	.3949	.0097	.3944		

DRAWING DIMENSIONS: D = 0.012/0.011  
E = 0.396/0.391



CONFIDENTIAL  
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 SECURITY ACT - 1952

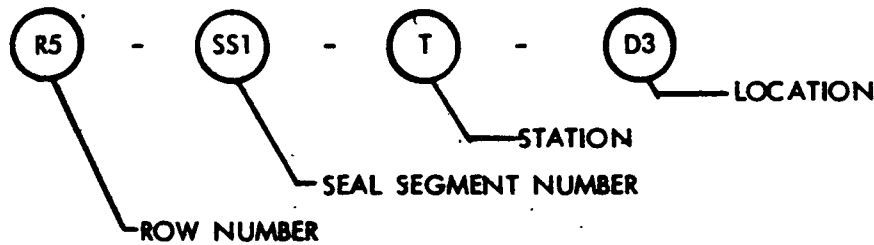
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 SECURITY ACT - 1952

TABLE IV (CONTINUED)

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R 3-SS1-T-		.3941	.0120	.3936	.0117	.3938	.0122	.3938	.0112	.3938	.0112	.3938
R 3-SS1-B-		.3939	.0115	.3932	.0105	.3936	.0112	.3937	.0110	.3935		
R 3-SS2-T-		.3948	.0100	.3954	.0105	.3953	.0120	.3957	.0122	.3955	.0115	.3957
R 3-SS2-B-		.3954	.0085	.3954	.0097	.3955	.0105	.3953	.0100	.3952		
R 3-SS3-T-		.3957	.0122	.3956	.0125	.3957	.0120	.3955	.0130	.3949	.0125	.3949
R 3-SS3-B-		.3959	.0107	.3954	.0120	.3959	.0105	.3953	.0112	.3960		
R 3-SS4-T-		.3931	.0142	.3932	.0130	.3923	.0132	.3924	.0125	.3920	.0130	.3926
R 3-SS4-B-		.3934	.0122	.3927	.0122	.3927	.0115	.3924	.0110	.3926		
R 3-SS5-T-		.3942	.0120	.3943	.0115	.3934	.0110	.3938	.0117	.3938	.0115	.3943
R 3-SS5-B-		.3943	.0102	.3938	.0107	.3937	.0095	.3946	.0095	.3938		
R 3-SS6-T-		.3944	.0110	.3941	.0115	.3946	.0122	.3950	.0125	.3948	.0122	.3943
R 3-SS6-B-		.3948	.0102	.3951	.0107	.3951	.0107	.3952	.0105	.3952		

DRAWING DIMENSIONS: D = 0.012/0.011

E = 0.396/0.391



CONFIDENTIAL  
RESTRICTED DATA

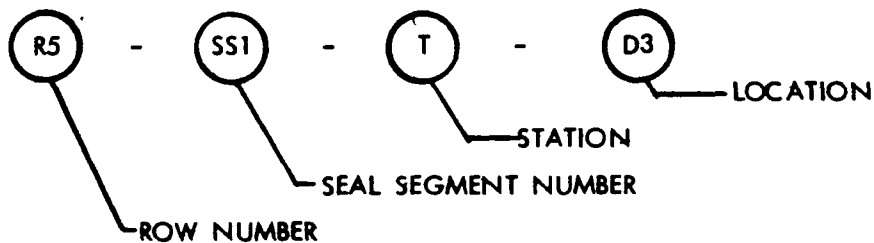
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Atomic Energy Act - 1954

TABLE IV (CONTINUED)

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R 4-SS1-T-		.3946	.0110	.3935	.0110	.3939	.0115	.3938	.0120	.3942	.0115	.3937
R 4-SS1-B-		.3939	.0105	.3937	.0100	.3937	.0100	.3932	.0115	.3945		
R 4-SS2-T-		.3947	.0102	.3947	.0112	.3942	.0110	.3942	.0107	.3946	.0110	.3944
R 4-SS2-B-		.3943	.0087	.3948	.0092	.3947	.0100	.3939	.0095	.3944		
R 4-SS3-T-		.3946	.0100	.3943	.0100	.3943	.0095	.3948	.0100	.3948	.0105	.3944
R 4-SS3-B-		.3945	.0092	.3944	.0082	.3943	.0082	.3951	.0087	.3944		
R 4-SS4-T-		.3936	.0100	.3938	.0100	.3948	.0117	.3940	.0117	.3938	.0102	.3940
R 4-SS4-B-		.3935	.0095	.3948	.0102	.3947	.0107	.3943	.0115	.3943		
R 4-SS5-T-		.3937	.0125	.3938	.0122	.3938	.0120	.3940	.0117	.3940	.0130	.3936
R 4-SS5-B-		.3933	.0107	.3938	.0102	.3935	.0110	.3937	.0105	.3943		
R 4-SS6-T-		.3940	.0110	.3942	.0110	.3943	.0107	.3947	.0105	.3942	.0110	.3946
R 4-SS6-B-		.3938	.0105	.3942	.0102	.3948	.0102	.3947	.0100	.3938		

DRAWING DIMENSIONS: D = 0.012/0.011

E = 0.396/0.391



WANL-TME-1059



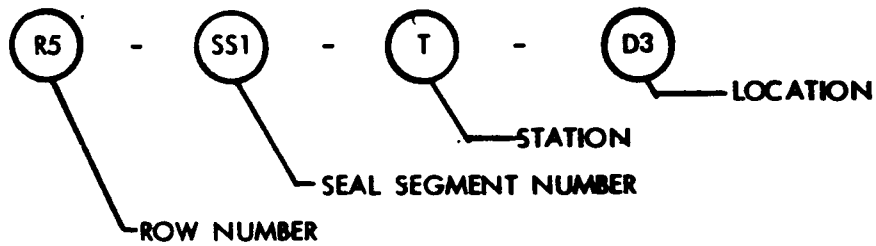
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CONFIDENTIAL  
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 PROHIBITED BY ACT - 1954

TABLE IV (CONTINUED)

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R 5-SS1-T-		.3936	.0118	.3937	.0115	.3935	.0115	.3936	.0115	.3930	.0120	.3938
R 5-SS1-B-		.3937	.0110	.3938	.0115	.3936	.0110	.3937	.0110	.3937		
R 5-SS2-T-		.3936	.0103	.3952	.0105	.3946	.0112	.3948	.0110	.3951	.0112	.3953
R 5-SS2-B-		.3940	.0098	.3953	.0103	.3946	.0095	.3957	.0095	.3955		
R 5-SS3-T-		.3941	.0115	.3947	.0120	.3946	.0125	.3948	.0120	.3938	.0120	.3943
R 5-SS3-B-		.3947	.0094	.3949	.0109	.3937	.0105	.3945	.0102	.3947		
R 5-SS4-T-		.3933	.0125	.3927	.0123	.3923	.0130	.3934	.0127	.3935	.0115	.3938
R 5-SS4-B-		.3928	.0118	.3936	.0115	.3936	.0115	.3941	.0110	.3937		
R 5-SS5-T-		.3947	.0130	.3946	.0128	.3943	.0132	.3948	.0137	.3948	.0142	.3943
R 5-SS5-B-		.3947	.0108	.3938	.0120	.3940	.0115	.3948	.0120	.3941		
R 5-SS6-T-		.3943	.0120	.3947	.0115	.3943	.0112	.3943	.0105	.3947	.0112	.3939
R 5-SS6-B-		.3947	.0105	.3944	.0110	.3946	.0095	.3946	.0097	.3950		

DRAWING DIMENSIONS: D = 0.012/0.011  
 E = 0.396/0.391



WANL-TME-1059  

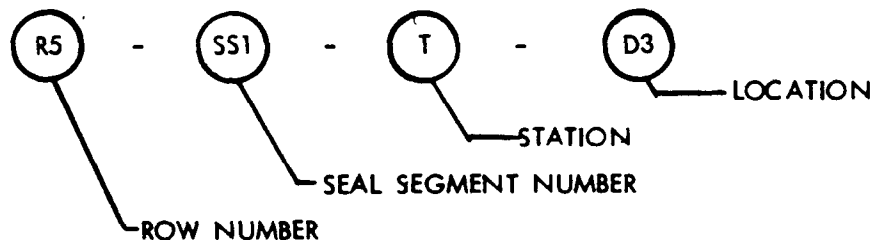
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TABLE IV (CONTINUED)

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R 6-SS1-T-		.3936	.0118	.3943	.0115	.3946	.0122	.3948	.0127	.3942	.0115	.3940
R 6-SS1-B-		.3937	.0115	.3946	.0113	.3946	.0110	.3940	.0125	.3944		
R 6-SS2-T-		.3945	.0110	.3949	.0115	.3948	.0120	.3946	.0125	.3947	.0115	.3943
R 6-SS2-B-		.3948	.0100	.3946	.0115	.3950	.0110	.3952	.0115	.3949		
R 6-SS3-T-		.3945	.0100	.3944	.0103	.3950	.0107	.3957	.011	.3952	.0097	.3948
R 6-SS3-B-		.3941	.0095	.3943	.0105	.3957	.009	.3956	.008	.3958		
R 6-SS4-T-		.3940	.0118	.3947	.0115	.3940	.012	.3942	.012	.3943	.0117	.3945
R 6-SS4-B-		.3938	.0110	.3946	.0115	.3942	.0115	.3944	.011	.3948		
R 6-SS5-T-		.3942	.0100	.3951	.01075	.3951	.0117	.3943	.011	.3954	.011	.3943
R 6-SS5-B-		.3951	.0090	.3952	.0105	.3949	.0102	.3952	.0097	.3950		
R 6-SS6-T-		.3939	.0098	.3943	.0098	.3938	.0100	.3937	.0097	.3936	.0092	.3937
R 6-SS6-B-		.3939	.0105	.3939	.0110	.3941	.0110	.3939	.0110	.3937		

DRAWING DIMENSIONS: D = 0.012/0.011

E = 0.396/0.391



WANL-TME-1059



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RESTRICTED DATA

CONFIDENTIAL  
RESTRICTED DATA



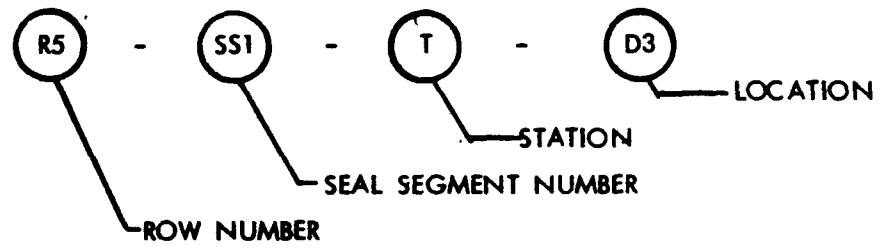
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CONFIDENTIAL  
 RESTRICTED DATA  
 Atomic Energy Act - 1954

TABLE IV (CONTINUED)

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R 7-SS1-T-		.3933	.0097	.3938	.0097	.3938	.0095	.3942	.0095	.3938	.0095	.3934
R 7-SS1-B-		.3934	.009	.3937	.0095	.3941	.009	.3943	.0095	.3933		
R 7-SS2-T-		.3933	.009	.3938	.0095	.3939	.0097	.3942	.0095	.3939	.0095	.3934
R 7-SS2-B-		.3932	.0082	.3934	.0095	.3941	.008	.3942	.0085	.3943		
R 7-SS3-T-		.3935	.008	.3945	.0082	.3937	.0087	.3939	.008	.3938	.0075	.3939
R 7-SS3-B-		.3937	.0087	.3939	.0097	.3936	.0092	.3936	.0085	.3937		
R 7-SS4-T-		.3934	.0097	.3933	.0100	.3936	.0105	.3933	.0112	.3927	.0117	.3936
R 7-SS4-B-		.3933	.0097	.3935	.0107	.3934	.0107	.3931	.0107	.3932		
R 7-SS5-T-		.3935	.0095	.3938	.0095	.3934	.0095	.3934	.0095	.3928	.0095	.3932
R 7-SS5-B-		.3938	.008	.3940	.0092	.3928	.0082	.3929	.0080	.3923		
R 7-SS6-T-		.3936	.0087	.3934	.0095	.3933	.0095	.3939	.0095	.3937	.0090	.3938
R 7-SS6-B-		.3933	.0082	.3941	.0090	.3935	.0080	.3940	.0085	.3933		

DRAWING DIMENSIONS: D = 0.010/0.009  
 E = 0.396/0.391



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 RESTRICTED DATA

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 RESTRICTED DATA  
 JAN 1954

TABLE IV (CONTINUED)

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R 8-SS1-T-		.3937	.009	.3938	.0092	.3940	.0092	.3939	.0100	.3939	.0097	.3938
R 8-SS1-B-		.3942	.0077	.3938	.0092	.3937	.008	.3936	.0090	.3943		
R 8-SS2-T-		.3936	.0095	.3937	.009	.3937	.0097	.3938	.0092	.3938	.0105	.3937
R 8-SS2-B-		.3932	.008	.3936	.0085	.3933	.008	.3941	.008	.3939		
R 8-SS3-T-		.3934	.0097	.3937	.0100	.3936	.0102	.3941	.0105	.3935	.0097	.3941
R 8-SS3-B-		.3937	.0085	.3938	.0095	.3937	.009	.3941	.0085	.3939		
R 8-SS4-T-		.3932	.0095	.3938	.0105	.3929	.0102	.3933	.0102	.3937	.009	.3934
R 8-SS4-B-		.3931	.0085	.3936	.0105	.3929	.0092	.3932	.0092	.3934		
R 8-SS5-T-		.3943	.0082	.3947	.0085	.3937	.0100	.3934	.009	.3941	.0082	.3938
R 8-SS5-B-		.3948	.008	.3949	.009	.3941	.0085	.3940	.008	.3943		
R 8-SS6-T-		.3923	.008	.3938	.008	.3937	.0085	.3945	.0082	.3935		.3938
R 8-SS6-B-		.3932	.0082	.3938	.0100	.3939	.009	.3943	.009	.3934	.0082	

DRAWING DIMENSIONS: D = 0.010/0.009

E = 0.396/0.391

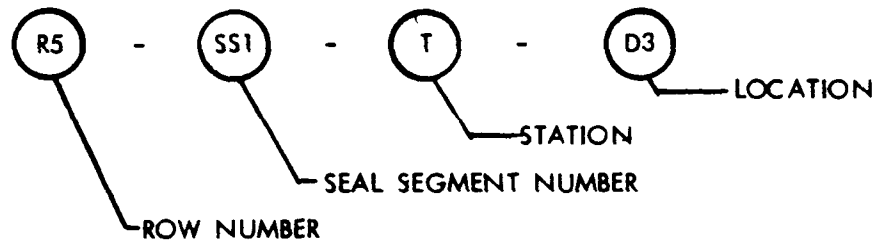
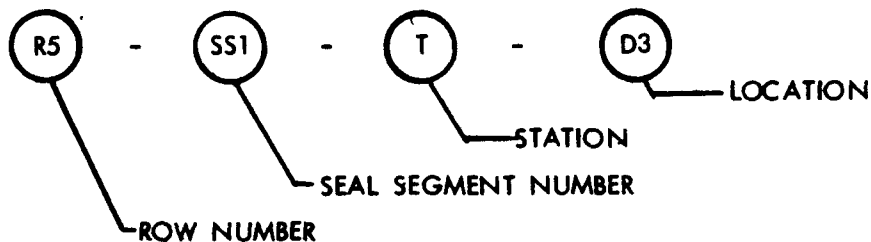


TABLE IV (CONTINUED)

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R 9-SS1-T-		.3938	.0097	.3937	.0105	.3937	.0105	.3935	.0102	.3938	.0097	.3935
R 9-SS1-B-		.3944	.0110	.3940	.0112	.3938	.0110	.3938	.0105	.3940		
R 9-SS2-T-		.3935	.009	.3935	.009	.3937	.0085	.3935	.009	.3938	.0085	.3934
R 9-SS2-B-		.3938	.0092	.3936	.0095	.3935	.009	.3935	.0092	.3936		
R 9-SS3-T-		.3935	.0097	.3935	.0097	.3930	.0100	.3935	.0095	.3935	.0097	.3935
R 9-SS3-B-		.3935	.009	.3935	.0085	.3940	.0092	.3935	.0085	.3935		
R 9-SS4-T-		.3933	.0087	.3935	.009	.3935	.0082	.3934	.0082	.3935	.0087	.3935
R 9-SS4-B-		.3937	.0105	.3937	.0097	.3934	.0097	.3937	.0110	.3937		
R 9-SS5-T-		.3935	.0085	.3938	.0085	.3935	.008	.3938	.0082	.3940	.0085	.3936
R 9-SS5-B-		.3938	.0087	.3937	.008	.3938	.0087	.3935	.0085	.3935		
R 9-SS6-T-		.3945	.0097	.3938	.0092	.3940	.009	.3938	.0100	.3935	.0105	.3935
R 9-SS6-B-		.3940	.0092	.3942	.009	.3944	.0092	.3945	.009	.3940		

DRAWING DIMENSIONS: D = 0.010/0.009  
 E = 0.396/0.391



CONFIDENTIAL  
 RESTRICTED DATA

CONFIDENTIAL  
 RESTRICTED DATA

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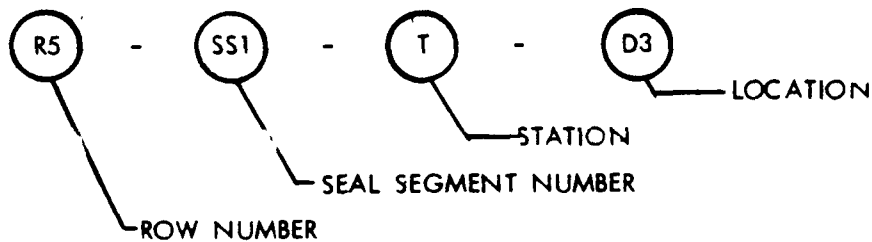
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TABLE IV (CONTINUED)

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R10-SS1-T-		.3935	.0095	.3935	.0087	.3940	.009	.3935	.009	.3940	.009	.3940
R10-SS1-B-		.3940	.0075	.3940	.007	.3935	.0075	.3935	.0085	.3935		
R10-SS2-T-		.3935	.0080	.3935	.0077	.3935	.0082	.3935	.0085	.3940	.0077	.3935
R10-SS2-B-		.3935	.0082	.3935	.008	.3940	.0082	.3940	.008	.3940		
R10-SS3-T-		.3935	.0085	.3940	.0092	.3940	.0095	.3940	.0095	.3935	.0087	.3935
R10-SS3-B-		.3935	.008	.3930	.0082	.3935	.0095	.3935	.0092	.3935		
R10-SS4-T-		.3935	.009	.3935	.0085	.3935	.009	.3940	.0085	.3935	.0085	.3940
R10-SS4-B-		.3940	.0077	.3945	.0075	.3940	.0072	.3940	.0077	.3940		
R10-SS5-T-		.3930	.0075	.3935	.0082	.3935	.008	.3935	.0077	.3930	.0082	.3935
R10-SS5-B-		.3935	.0065	.3935	.0065	.3940	.007	.3935	.007	.3940		
R10-SS6-T-		.3935	.0095	.3935	.0092	.3930	.0095	.3935	.009	.3935	.0097	.3935
R10-SS6-B-		.3940	.0067	.3935	.0070	.3940	.007	.3940	.0075	.3940		

DRAWING DIMENSIONS: D = 0.010/0.009

E = 0.396/0.391



WANL-TME-1059



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**RESTRICTED DATA**  
 Atomic Energy Act - 1954

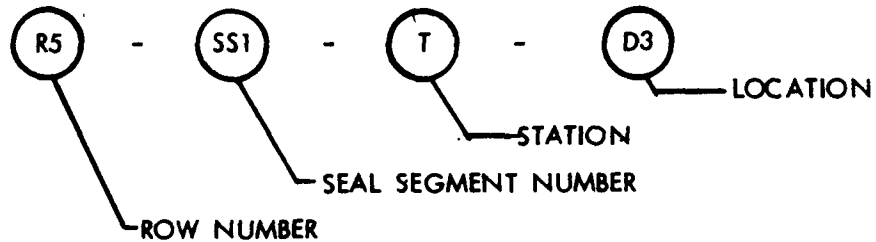
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**RESTRICTED DATA**  
 Atomic Energy Act - 1954

TABLE IV (CONTINUED)

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R11-SS1-T-		.3926	.0097	.3919	.0100	.3939	.0100	.3930	.0105	.3934	.0105	.3937
R11-SS1-B-		.3928	.0100	.3924	.0095	.3935	.009	.3930	.009	.3932		
R11-SS2-T-		.3945	.009	.3941	.0095	.3943	.0105	.3937	.0095	.3937	.009	.3940
R11-SS2-B-		.3943	.0085	.3947	.0095	.3939	.0095	.3935	.0085	.3934		
R11-SS3-T-		.3937	.0085	.3938	.0085	.3935	.0092	.3934	.0097	.3935	.0095	.3933
R11-SS3-B-		.3939	.0082	.3938	.009	.3937	.0087	.3939	.0087	.3934		
R11-SS4-T-		.3935	.009	.3932	.0100	.3941	.0100	.3937	.0100	.3936	.0100	.3938
R11-SS4-B-		.3936	.009	.3936	.0100	.3936	.0097	.3933	.0105	.3937		
R11-SS5-T-		.3938	.0095	.3929	.0107	.3939	.0110	.3934	.0100	.3934	.009	.3937
R11-SS5-B-		.3942	.0097	.3933	.0105	.3933	.0097	.3933	.009	.3937		
R11-SS6-T-		.3936	.0085	.3934	.009	.3936	.0092	.3933	.0100	.3938	.0095	.3931
R11-SS6-B-		.3939	.0085	.3933	.0095	.3939	.0085	.3937	.0085	.3937		

DRAWING DIMENSIONS: D = 0.010/0.009

E = 0.396/0.391



WANL-TME-1059

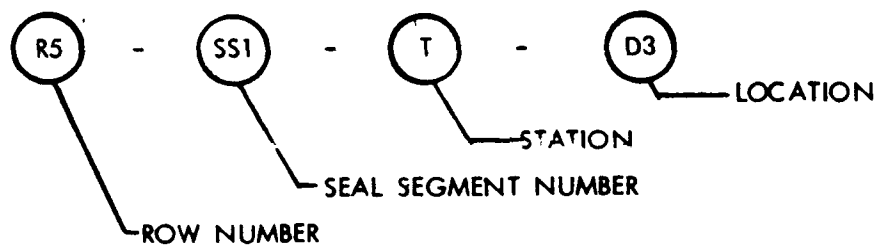


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TABLE IV (CONTINUED)

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R12-SS1-T-		.3943	.0067	.3935	.0067	.3947	.0070	.3933	.0067	.3948	.0067	.3946
R12-SS1-B-		.3949	.0062	.3937	.0057	.3949	.0062	.3938	.0062	.3940		
R12-SS2-T-		.3913	.007	.3924	.007	.3917	.0070	.3913	.007	.3914	.0067	.3915
R12-SS2-B-		.3909	.0055	.3927	.0055	.3913	.006	.3917	.0055	.3918		
R12-SS3-T-		.3934	.006	.3927	.0065	.3915	.0057	.3909	.0057	.3913	.0052	.3914
R12-SS3-B-		.3945	.006	.3924	.0065	.3917	.006	.3908	.006	.3912		
R12-SS4-T-		.3942	.0067	.3918	.0075	.3922	.0067	.3942	.0062	.3908	.0055	.3918
R12-SS4-B-		.3905	.006	.3920	.0060	.3919	.007	.3918	.0055			
R12-SS5-T-		.3913	.0072	.3913	.0075	.3912	.0077	.3912	.008	.3915	.0075	.3914
R12-SS5-B-		.3914	.0067	.3909	.0060	.3909	.0065	.3934	.0062	.3912		
R12-SS6-T-		.3948	.006	.3921	.005	.3927	.0055	.3930	.006	.3924	.0055	.3948
R12-SS6-B-		.3915	.0055	.3929	.0067	.3930	.0062	.3919	.0057	.3927		

DRAWING DIMENSIONS: D = 0.008/0.007  
E = 0.396/0.391



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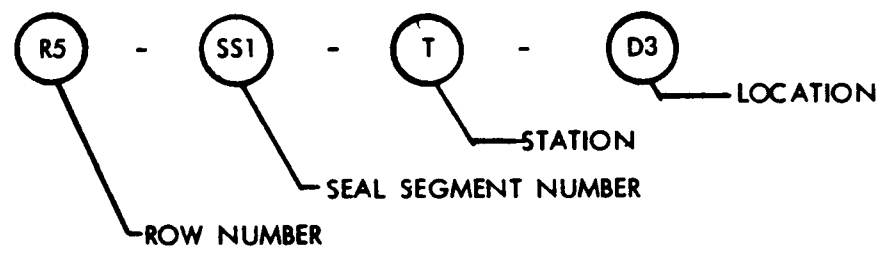
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TABLE IV (CONTINUED)

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R13-SS1-T-		.3940	.0070	.3945	.0070	.3932	.0070	.3938	.0070	.3942	.0070	.3943
R13-SS1-B-		.3943	.0075	.3937	.0080	.3943	.0070	.3942	.0070	.3934		
R13-SS2-T-		.3936	.0070	.3932	.0080	.3930	.0083	.3940	.0078	.3932	.0080	.3938
R13-SS2-B-		.3940	.0060	.3940	.0070	.3934	.0075	.3938	.0068	.3940		
R13-SS3-T-		.3936	.0065	.3938	.0060	.3936	.0068	.3940	.0063	.3935	.0060	.3937
R13-SS3-B-		.3940	.0063	.3940	.0058	.3937	.0060	.3943	.0063	.3937		
R13-SS4-T-		.3935	.0083	.3937	.0083	.3935	.0088	.3940	.0080	.3938	.0090	.3940
R13-SS4-B-		.3938	.0085	.3942	.0078	.3935	.0080	.3935	.0080	.3935		
R13-SS5-T-		.3935	.0075	.3940	.0073	.3940	.0065	.3935	.0065	.3940	.0060	.3940
R13-SS5-B-		.3944	.0065	.3936	.0070	.3938	.0065	.3942	.0058	.3938		
R13-SS6-T-		.3930	.0065	.3932	.0068	.3935	.0068	.3935	.0060	.3930	.0068	.3936
R13-SS6-B-		.3935	.0055	.3928	.0070	.3935	.0070	.3930	.0060	.3930		

DRAWING DIMENSIONS: D = 0.008/0.007  
 E = 0.396/0.391



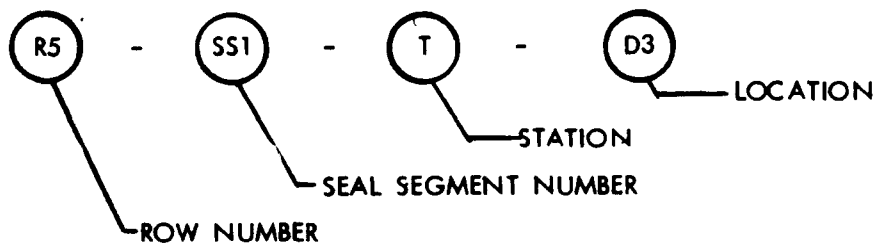
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TABLE IV (CONTINUED)

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R14-SS1-T-		.3936	.0073	.3938	.0065	.3932	.0065	.3935	.0060	.3935	.0068	.3940
R14-SS1-B-		.3940	.0050	.3936	.0055	.3942	.0060	.3945	.0060	.3942		
R14-SS2-T-		.3935	.0070	.3942	.0075	.3933	.0073	.3926	.0073	.3935	.0070	.3930
R14-SS2-B-		.3938	.0060	.3930	.0060	.3937	.0060	.3935	.0058	.3935		
R14-SS3-T-		.3935	.0070	.3938	.0065	.3938	.0065	.3936	.0065	.3940	.0065	.3935
R14-SS3-B-		.3932	.0070	.3940	.0070	.3942	.0065	.3935	.0070	.3938		
R14-SS4-T-		.3947	.0075	.3945	.0083	.3932	.0083	.3944	.0083	.3945	.0080	.3940
R14-SS4-B-		.3942	.0070	.3938	.0070	.3945	.0070	.3945	.0080	.3938		
R14-SS5-T-		.3940	.0055	.3945	.0058	.3945	.0068	.3938	.0068	.3948	.0063	.3945
R14-SS5-B-		.3938	.0055	.3935	.0060	.3936	.0065	.3942	.0060	.3940		
R14-SS6-T-		.3938	.0060	.3937	.0065	.3940	.0068	.3935	.0068	.3938	.0060	.3940
R14-SS6-B-		.3937	.0065	.3942	.0065	.3937	.0070	.3938	.0065	.3944		

DRAWING DIMENSIONS: D = 0.008/0.007  
 E = 0.396/0.391





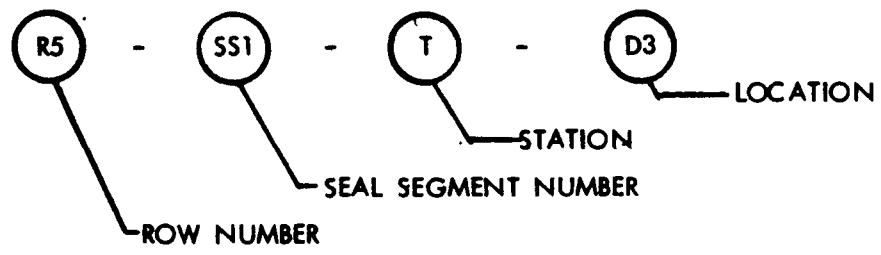
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TABLE IV (CONTINUED)

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R15-SS1-T-		.3935	.0075	.3938	.0075	.3932	.0090	.3935	.0100	.3935	.0098	.3932
R15-SS1-B-		.3930	.0075	.3937	.0075	.3934	.0083	.3936	.0085	.3935		
R15-SS2-T-		.3940	.0065	.3946	.0065	.3945	.0070	.3942	.0065	.3940	.0060	.3940
R15-SS2-B-		.3938	.0055	.3938	.0063	.3944	.0068	.3936	.0065	.3940		
R15-SS3-T-		.3935	.0065	.3932	.0065	.3938	.0073	.3942	.0063	.3940	.0065	.3937
R15-SS3-B-		.3944	.0055	.3946	.0068	.3945	.0070	.3940	.0068	.3940		
R15-SS4-T-		.3937	.0085	.3935	.0083	.3946	.0075	.3944	.0073	.3938	.0083	.3934
R15-SS4-B-		.3945	.0073	.3945	.0073	.3937	.0070	.3935	.0065	.3936		
R15-SS5-T-		.3948	.0078	.3952	.0070	.3947	.0070	.3950	.0075	.3954	.0073	.3946
R15-SS5-B-		.3935	.0055	.3938	.0060	.3937	.0060	.3934	.0060	.3944		
R15-SS6-T-		.3935	.0070	.3935	.0070	.3938	.0070	.3936	.0070	.3930	.0070	.3935
R15-SS6-B-		.3932	.0070	.3944	.0063	.3940	.0068	.3945	.0068	.3942		

DRAWING DIMENSIONS: D = 0.008/0.007  
 E = 0.396/0.391



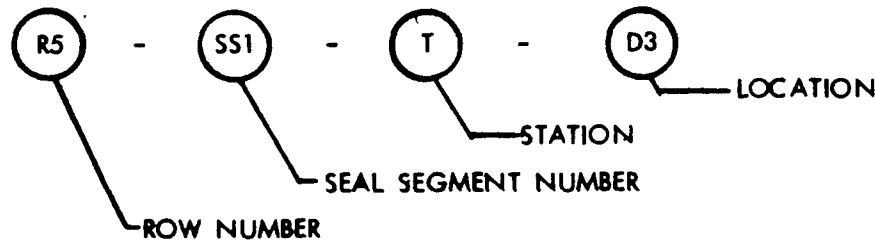
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 Atomic Energy Act - 1954

TABLE IV (CONTINUED)

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R16-SS1-T-		.3913	.0068	.3909	.0075	.3912	.0080	.3912	.0078	.3918	.0070	.3943
R16-SS1-B-		.3916	.0068	.3906	.0065	.3909	.0070	.3917	.0065	.3916		
R16-SS2-T-		.3908	.0060	.3912	.0065	.3914	.0065	.3924	.0065	.3932	.0060	.3943
R16-SS2-B-		.3914	.0060	.3916	.0073	.3926	.0065	.3919	.0070	.3928		
R16-SS3-T-		.3926	.0063	.3928	.0060	.3938	.0060	.3932	.0063	.3938	.0060	.3925
R16-SS3-B-		.3925	.0060	.3930	.0060	.3935	.0060	.3935	.0060	.3932		
R16-SS4-T-		.3925	.0075	.3925	.0085	.3922	.0078	.3927	.0080	.3925	.0075	.3925
R16-SS4-B-		.3924	.0060	.3918	.0055	.3924	.0060	.3922	.0060	.3920		
R16-SS5-T-		.3915	.0060	.3911	.0060	.3914	.0065	.3914	.0060	.3920	.0055	.3932
R16-SS5-B-		.3918	.0060	.3908	.0060	.3911	.0065	.3918	.0060	.3917		
R16-SS6-T-		.3926	.0070	.3926	.0073	.3935	.0070	.3928	.0070	.3930	.0075	.3925
R16-SS6-B-		.3920	.0065	.3918	.0068	.3926	.0075	.3915	.0070	.3922		

DRAWING DIMENSIONS: D = 0.008/0.007  
 E = 0.396/0.391



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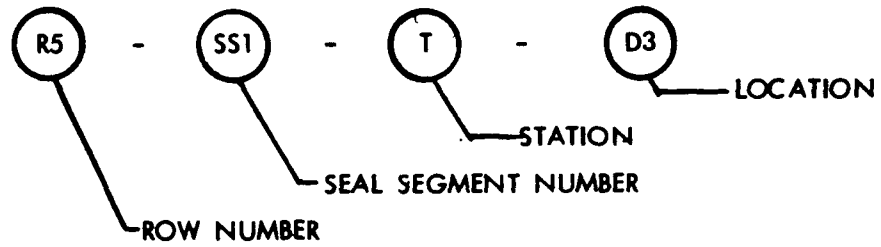


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TABLE IV (CONTINUED)

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R17-SS1-T-		.3930	.0523	.3925	.0535	.3925	.0533	.3925	.0530	.3920	.0528	
R17-SS1-B-		.3928	.0510	.3924	.0520	.3923	.0510	.3925	.0520	.3915	.0505	
R17-SS2-T-		.3925	.0538	.3922	.0528	.3918	.0530	.3918	.0530	.3925	.0538	
R17-SS2-B-		.3918	.0538	.3930	.0530	.3915	.0525	.3922	.0523	.3916	.0530	
R17-SS3-T-		.3925	.0530	.3920	.0538	.3925	.0540	.3923	.0540	.3925	.0533	
R17-SS3-B-		.3928	.0540	.3920	.0540	.3920	.0535	.3915	.0550	.3925	.0540	
R17-SS4-T-		.3915	.0543	.3915	.0545	.3915	.0545	.3912	.0540	.3920	.0535	
R17-SS4-B-		.3918	.0540	.3920	.0535	.3918	.0540	.3910	.0535	.3925	.0538	
R17-SS5-T-		.3915	.0550	.3913	.0555	.3915	.0545	.3918	.0545	.3916	.0550	
R17-SS5-B-		.3918	.0540	.3915	.0545	.3920	.0540	.3913	.0530	.3918	.0530	
R17-SS6-T-		.3915	.0560	.3915	.0555	.3912	.0555	.3920	.0545	.3915	.0545	
R17-SS6-B-		.3915	.0530	.3918	.0530	.3918	.0525	.3916	.0525	.3910	.0523	

DRAWING DIMENSIONS: D = 0.055/0.050  
 E = 0.396/0.391



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 Astronuclear

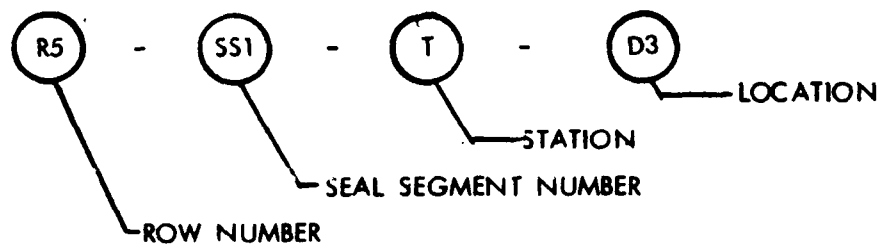
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TABLE IV (CONTINUED)

	D 1	E 1	D 2	E 2	D 3	E 3	D 4	E 4	D 5	E 5	D 6	E 6
R18-SS1-T-		.3925	.0095	.3930	.009	.3927	.0097	.3925	.0105	.3930	.0102	.3927
R18-SS1-B-		.3918	.0085	.3924	.0085	.3920	.0087	.3920	.0085	.3930		
R18-SS2-T-		.3932	.0077	.3937	.008	.3935	.008	.3927	.008	.3925	.0082	.3932
R18-SS2-B-		.3926	.006	.3932	.007	.3932	.008	.3924	.0075	.3925		
R18-SS3-T-		.3928	.007	.3936	.007	.3934	.0075	.3922	.0072	.3928	.0067	.3930
R18-SS3-B-		.3934	.006	.3939	.006	.3935	.0062	.3927	.0052	.3930		
R18-SS4-T-		.3928	.0100	.3932	.0100	.3935	.0102	.3940	.0092	.3932	.009	.3935
R18-SS4-B-		.3934	.008	.3935	.0067	.3938	.0082	.3929	.0082	.3935		
R18-SS5-T-		.3932	.007	.3938	.007	.3937	.007	.3938	.007	.3942	.007	.3934
R18-SS5-B-		.3934	.007	.3935	.0075	.3935	.0067	.3930	.0067	.3937		
R18-SS6-T-		.3930	.0075	.3936	.0087	.3932	.0092	.3927	.009	.3930	.0085	.3935
R18-SS6-B-		.3926	.0065	.3930	.0075	.3930	.0072	.3936	.008	.3925		

DRAWING DIMENSIONS: D = 0.008/0.007  
 E = 0.396/0.391



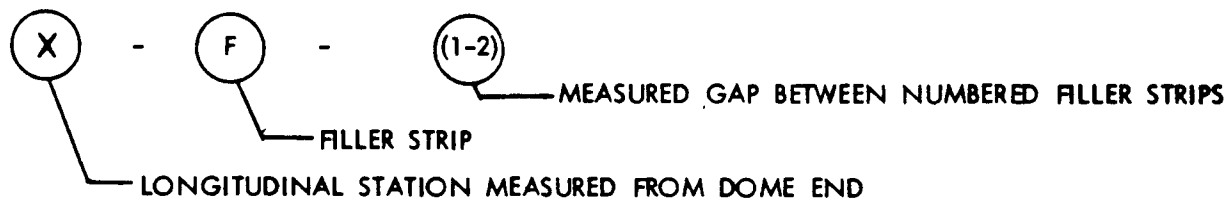
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 April 1954

TABLE V  
FILLER STRIP MEASUREMENT - INCHES

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 April 1954

1-F-(1-2)	.009
1-F-(2-3)	.008 004
1-F-(3-4)	.003 000
1-F-(4-5)	.004 000
1-F-(5-6)	.004 003
1-F-(6-7)	.007 002
1-F-(7-8)	.002
1-F-(8-9)	.003
1-F-(9-10)	.004 000
1-F-(10-11)	.003
1-F-(11-12)	.004 002
1-F-(12-13)	.007
1-F-(13-14)	.006 002
1-F-(14-15)	.004 001
1-F-(15-16)	.006 003
1-F-(16-17)	.005 000
1-F-(17-18)	.008 003
1-F-(18-19)	.005 002

1-F-(19-20)	.004 002
1-F-(20-21)	.004 002
1-F-(21-22)	.003 000
1-F-(22-23)	.006 004
1-F-(23-24)	.002
1-F-(24-25)	.005 002
1-F-(25-26)	.008 004
1-F-(26-27)	.003 002
1-F-(27-28)	.001
1-F-(28-29)	.002
1-F-(29-30)	.005 000
1-F-(30-31)	.006 003
1-F-(31-32)	.003
1-F-(32-33)	.007 004
1-F-(33-34)	.001
1-F-(34-35)	.005 003
1-F-(35-36)	.006 002
1-F-(36-37)	.002



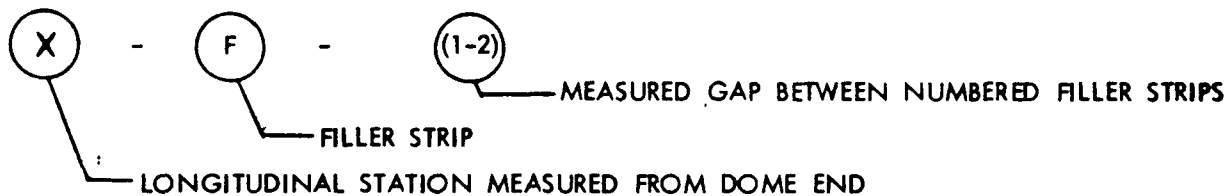
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TABLE V (CONTINUED)

5-F-(1-2)	.007
5-F-(2-3)	<del>.009</del> .006
5-F-(3-4)	<del>.004</del> .0015
5-F-(4-5)	.003
5-F-(5-6)	.005
5-F-(6-7)	<del>.006</del> .004
5-F-(7-8)	.002
5-F-(8-9)	.003
5-F-(9-10)	.003
5-F-(10-11)	.0015
5-F-(11-12)	.004
5-F-(12-13)	.009
5-F-(13-14)	.004
5-F-(14-15)	<del>.003</del> .00
5-F-(15-16)	<del>.010</del> .006
5-F-(16-17)	<del>.003</del> .000
5-F-(17-18)	<del>.010</del> .004
5-F-(18-19)	<del>.007</del> .004

5-F-(19-20)	.006
5-F-(20-21)	<del>.004</del> .000
5-F-(21-22)	.003
5-F-(22-23)	<del>.007</del> .004
5-F-(23-24)	.003
5-F-(24-25)	.003
5-F-(25-26)	<del>.008</del> .004
5-F-(26-27)	.004
5-F-(27-28)	<del>.0015</del> .000
5-F-(28-29)	.004
5-F-(29-30)	.003
5-F-(30-31)	<del>.003</del> .002
5-F-(31-32)	<del>.006</del> .005
5-F-(32-33)	<del>.010</del> .004
5-F-(33-34)	<del>.003</del> .000
5-F-(34-35)	<del>.007</del> .005
5-F-(35-36)	<del>.007</del> .003
5-F-(36-37)	.004

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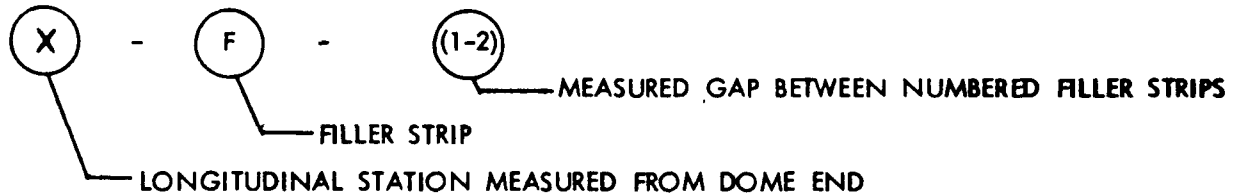


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 JAN. 1954

TABLE V (CONTINUED)

14 -F-(1-2)	.010
14 -F-(2-3)	<del>.019</del> .006
14 -F-(3-4)	<del>.004</del> .000
14 -F-(4-5)	.004
14 -F-(5-6)	.003
14 -F-(6-7)	<del>.010</del> .008
14 -F-(7-8)	.006
14 -F-(8-9)	.004
14 -F-(9-10)	.003
14 -F-(10-11)	<del>.005</del> .002
14 -F-(11-12)	.006
14 -F-(12-13)	.009
14 -F-(13-14)	.004
14 -F-(14-15)	.003
14 -F-(15-16)	<del>.009</del> .006
14 -F-(16-17)	<del>.003</del> .000
14 -F-(17-18)	<del>.008</del> .005
14 -F-(18-19)	<del>.010</del> .003

14 -F-(19-20)	.007
14 -F-(20-21)	.000
14 -F-(21-22)	<del>.007</del> .004
14 -F-(22-23)	<del>.010</del> .008
14 -F-(23-24)	.004
14 -F-(24-25)	<del>.006</del> .003
14 -F-(25-26)	<del>.011</del> .004
14 -F-(26-27)	<del>.009</del> .006
14 -F-(27-28)	.005
14 -F-(28-29)	.006
14 -F-(29-30)	<del>.005</del> .003
14 -F-(30-31)	<del>.006</del> .003
14 -F-(31-32)	.007
14 -F-(32-33)	<del>.006</del> .003
14 -F-(33-34)	<del>.005</del> .002
14 -F-(34-35)	<del>.011</del> .001
14 -F-(35-36)	<del>.008</del> .003
14 -F-(36-37)	.006



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TABLE V (CONTINUED)

22 -F-(1-2)	.010
22 -F-(2-3)	<del>.010</del> .006
22 -F-(3-4)	<del>.004</del> .0015
22 -F-(4-5)	.006
22 -F-(5-6)	<del>.008</del> .005
22 -F-(6-7)	.006
22 -F-(7-8)	.008
22 -F-(8-9)	<del>.007</del> .004
22 -F-(9-10)	.003
22 -F-(10-11)	<del>.007</del> .003
22 -F-(11-12)	.006
22 -F-(12-13)	.009
22 -F-(13-14)	<del>.008</del> .004
22 -F-(14-15)	<del>.007</del> .005
22 -F-(15-16)	.007
22 -F-(16-17)	<del>.003</del> .000
22 -F-(17-18)	<del>.010</del> .007
22 -F-(18-19)	<del>.008</del> .004

22 -F-(19-20)	.007
22 -F-(20-21)	<del>.0015</del> .000
22 -F-(21-22)	<del>.008</del> .005
22 -F-(22-23)	<del>.010</del> .007
22 -F-(23-24)	.007
22 -F-(24-25)	<del>.008</del> .004
22 -F-(25-26)	<del>.018</del> .007
22 -F-(26-27)	<del>.010</del> .008
22 -F-(27-28)	.007
22 -F-(28-29)	<del>.004</del> .007
22 -F-(29-30)	<del>.006</del> .003
22 -F-(30-31)	<del>.007</del> .005
22 -F-(31-32)	.007
22 -F-(32-33)	<del>.008</del> .004
22 -F-(33-34)	.002
22 -F-(34-35)	<del>.008</del> .007
22 -F-(35-36)	<del>.008</del> .006
22 -F-(36-37)	.007

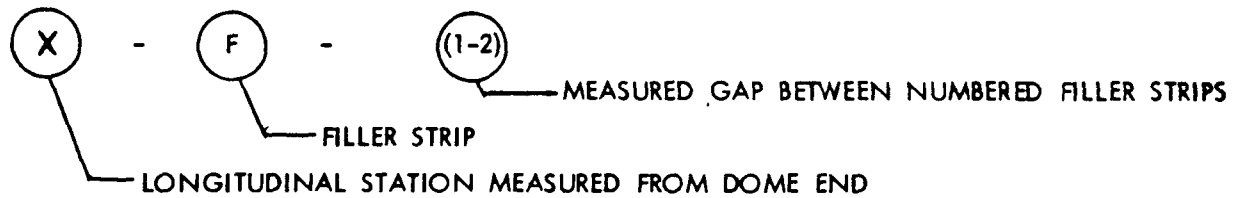
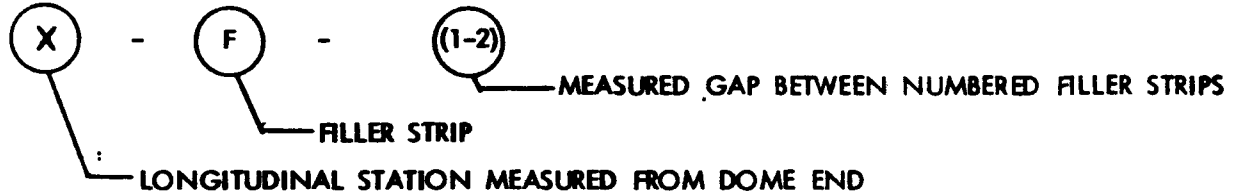




TABLE V (CONTINUED)

31-F-(1-2)	.012
31-F-(2-3)	<del>.010</del> .008
31-F-(3-4)	<del>.008</del> .006
31-F-(4-5)	.005
31-F-(5-6)	.007
31-F-(6-7)	.008
31-F-(7-8)	.007
31-F-(8-9)	.005
31-F-(9-10)	.005
31-F-(10-11)	.005
31-F-(11-12)	.007
31-F-(12-13)	.010
31-F-(13-14)	<del>.008</del> .006
31-F-(14-15)	<del>.010</del> .007
31-F-(15-16)	.009
31-F-(16-17)	<del>.003</del> .000
31-F-(17-18)	.008
31-F-(18-19)	<del>.010</del> .006

31-F-(19-20)	.007
31-F-(20-21)	<del>.0015</del> .000
31-F-(21-22)	<del>.010</del> .008
31-F-(22-23)	<del>.008</del> .006
31-F-(23-24)	<del>.008</del> .006
31-F-(24-25)	<del>.010</del> .008
31-F-(25-26)	.009
31-F-(26-27)	<del>.010</del> .008
31-F-(27-28)	<del>.010</del> .008
31-F-(28-29)	<del>.010</del> .007
31-F-(29-30)	<del>.007</del> .003
31-F-(30-31)	<del>.008</del> .006
31-F-(31-32)	.007
31-F-(32-33)	.009
31-F-(33-34)	.003
31-F-(34-35)	<del>.010</del> .006
31-F-(35-36)	<del>.010</del> .006
31-F-(36-37)	<del>.008</del> .006



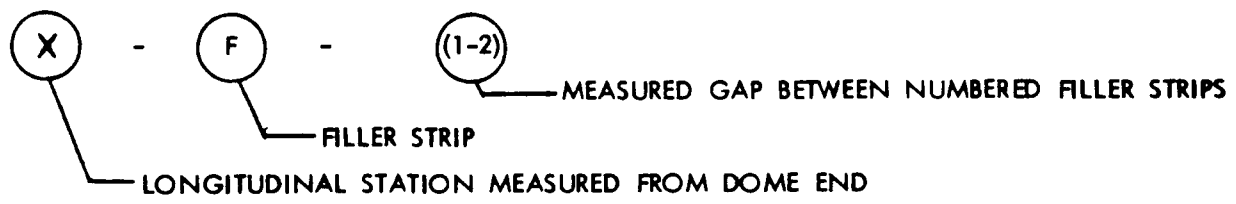
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~~RESTRICTED DATA~~

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~~RESTRICTED DATA~~

TABLE V (CONTINUED)

39 -F-(1-2)	.010
39 -F-(2-3)	<del>.010</del> .006
39 -F-(3-4)	<del>.008</del> .004
39 -F-(4-5)	.007
39 -F-(5-6)	.006
39 -F-(6-7)	<del>.008</del> .006
39 -F-(7-8)	.012
39 -F-(8-9)	<del>.008</del> .005
39 -F-(9-10)	.007
39 -F-(10-11)	<del>.007</del> .004
39 -F-(11-12)	.007
39 -F-(12-13)	.008
39 -F-(13-14)	<del>.010</del> .006
39 -F-(14-15)	.007
39 -F-(15-16)	.010
39 -F-(16-17)	<del>.007</del> .000
39 -F-(17-18)	<del>.010</del> .008
39 -F-(18-19)	<del>.012</del> .008

39 -F-(19-20)	.007
39 -F-(20-21)	<del>.002</del> .000
39 -F-(21-22)	<del>.010</del> .007
39 -F-(22-23)	<del>.010</del> .008
39 -F-(23-24)	.004
39 -F-(24-25)	<del>.010</del> .008
39 -F-(25-26)	<del>.010</del> .006
39 -F-(26-27)	.010
39 -F-(27-28)	<del>.010</del> .008
39 -F-(28-29)	.007
39 -F-(29-30)	<del>.008</del> .006
39 -F-(30-31)	<del>.008</del> .004
39 -F-(31-32)	.007
39 -F-(32-33)	.008
39 -F-(33-34)	.005
39 -F-(34-35)	<del>.008</del> .006
39 -F-(35-36)	<del>.010</del> .006
39 -F-(36-37)	.008

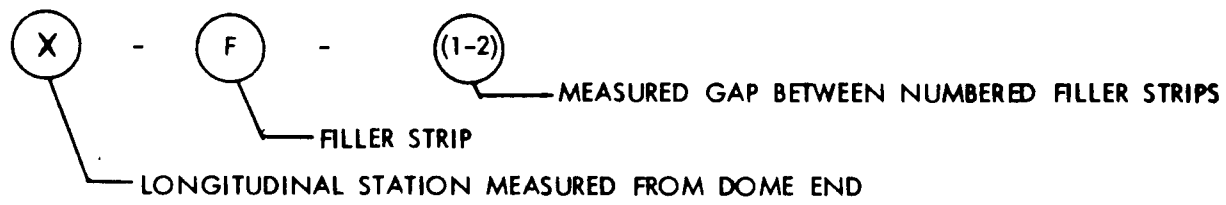


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TABLE V (CONTINUED)

51 -F-(1-2)	.011
51 -F-(2-3)	<del>.010</del> .006
51 -F-(3-4)	<del>.010</del> .004
51 -F-(4-5)	.006
51 -F-(5-6)	.011
51 -F-(6-7)	<del>.010</del> .006
51 -F-(7-8)	.008
51 -F-(8-9)	<del>.011</del> .006
51 -F-(9-10)	.007
51 -F-(10-11)	<del>.010</del> .005
51 -F-(11-12)	.008
51 -F-(12-13)	<del>.012</del>
51 -F-(13-14)	<del>.008</del> .004
51 -F-(14-15)	.008
51 -F-(15-16)	<del>.014</del>
51 -F-(16-17)	<del>.003</del> .000
51 -F-(17-18)	<del>.012</del> .004
51 -F-(18-19)	<del>.012</del> .009

51 -F-(19-20)	.008
51 -F-(20-21)	<del>.001</del> .000
51 -F-(21-22)	.010
51 -F-(22-23)	<del>.010</del> .008
51 -F-(23-24)	.008
51 -F-(24-25)	.008
51 -F-(25-26)	.015
51 -F-(26-27)	<del>.015</del> .008
51 -F-(27-28)	.008
51 -F-(28-29)	.008
51 -F-(29-30)	<del>.008</del> .006
51 -F-(30-31)	<del>.010</del> .009
51 -F-(31-32)	.007
51 -F-(32-33)	<del>.012</del> .008
51 -F-(33-34)	.003
51 -F-(34-35)	.008
51 -F-(35-36)	<del>.02</del> .006
51 -F-(36-37)	.009



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**RESTRICTED DATA**

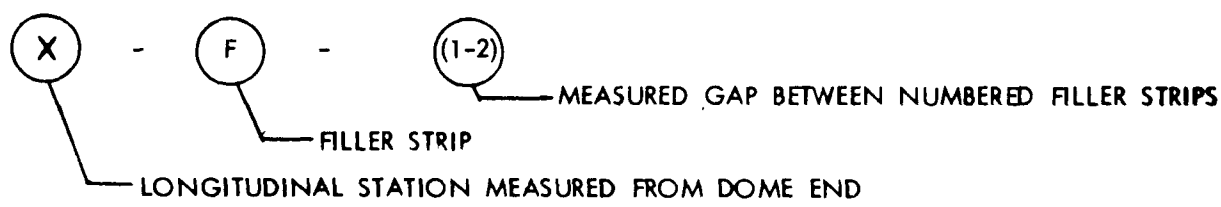
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**RESTRICTED DATA**  
 Atomic Energy Act, 1954

TABLE V (CONTINUED)

53-F-(1-2)	.010
53-F-(2-3)	<del>.012</del> .008
53-F-(3-4)	<del>.010</del> .006
53-F-(4-5)	.005
53-F-(5-6)	.012
53-F-(6-7)	.009
53-F-(7-8)	.007
53-F-(8-9)	.006
53-F-(9-10)	.005
53-F-(10-11)	.010
53-F-(11-12)	.008
53-F-(12-13)	.011
53-F-(13-14)	<del>.008</del> .004
53-F-(14-15)	.008
53-F-(15-16)	.015
53-F-(16-17)	<del>.012</del> .008
53-F-(17-18)	<del>.010</del> .006
53-F-(18-19)	<del>.012</del> .006

53-F-(19-20)	.006
53-F-(20-21)	.005
53-F-(21-22)	<del>.010</del> .008
53-F-(22-23)	.008
53-F-(23-24)	.006
53-F-(24-25)	<del>.010</del> .006
53-F-(25-26)	.018
53-F-(26-27)	.015
53-F-(27-28)	.008
53-F-(28-29)	.009
53-F-(29-30)	.008
53-F-(30-31)	.012
53-F-(31-32)	.006
53-F-(32-33)	<del>.012</del> .008
53-F-(33-34)	.003
53-F-(34-35)	.006
53-F-(35-36)	.010
53-F-(36-37)	.005



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TABLE VI

STEPPING GAP MEASUREMENT BETWEEN FILLER STRIP AND BLANK SEAL SEGMENT - INCHES

5 -G-F 1	.000	
5 -G-F 2	.000	
5 -G-F 3	.000	
5 -G-F 4	.000	
5 -G-F 5	.000	
5 -G-F 6	.000	
5 -G-F 7	.000	
5 -G-F 8	.000	
5 -G-F 9	.000	
5 -G-F10	.000	
5 -G-F11	.000	
5 -G-F12	.000	
5 -G-F13	.000	
5 -G-F14	.0025	
5 -G-F15	.0015	
5 -G-F16	.000	
5 -G-F17	.0015	
5 -G-F18	.0015	

5 -G-F19	.000	
5 -G-F20	.000	
5 -G-F21	.000	
5 -G-F22	.003	
5 -G-F23	.002	
5 -G-F24	.000	
5 -G-F25	.006	
5 -G-F26	.006	
5 -G-F27	.000	
5 -G-F28	.000	
5 -G-F29	.000	
5 -G-F30	.000	
5 -G-F31	.000	
5 -G-F32	.000	
5 -G-F33	.0015	
5 -G-F34	.000	
5 -G-F35	.002	
5 -G-F36	.000	

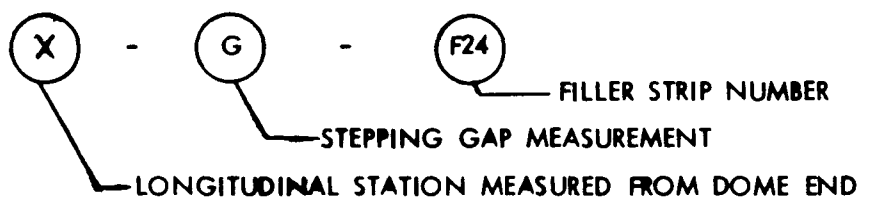
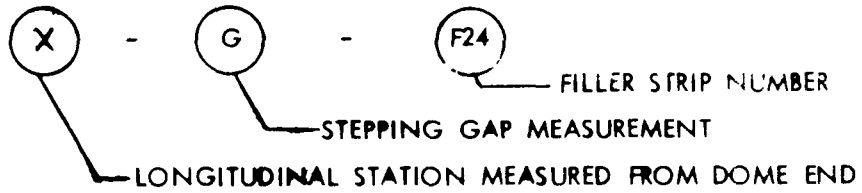


TABLE VI (CONTINUED)

14-G-F 1	.000	
14-G-F 2	.000	
14-G-F 3	.000	
14-G-F 4	.0015	
14-G-F 5	.000	
14-G-F 6	.000	
14-G-F 7	.0015	
14-G-F 8	.000	
14-G-F 9	.000	
14-G-F10	.000	
14-G-F11	.000	
14-G-F12	.000	
14-G-F13	.000	
14-G-F14	.002	
14-G-F15	.000	
14-G-F16	.000	
14-G-F17	.0015	
14-G-F18	.0015	

14-G-F19	.000	
14-G-F20	.000	
14-G-F21	.000	
14-G-F22	.0025	
14-G-F23	.002	
14-G-F24	.000	
14-G-F25	.004	
14-G-F26	.003	
14-G-F27	.000	
14-G-F28	.000	
14-G-F29	.000	
14-G-F30	.000	
14-G-F31	.000	
14-G-F32	.000	
14-G-F33	.001	
14-G-F34	.000	
14-G-F35	.000	
14-G-F36	.000	

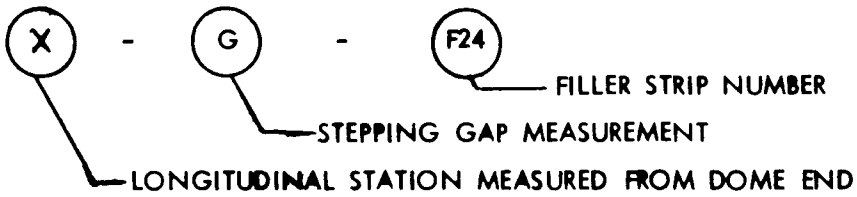


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TABLE VI (CONTINUED)

22-G-F 1	.000	
22-G-F 2	.000	
22-G-F 3	.000	
22-G-F 4	.000	
22-G-F 5	.000	
22-G-F 6	.000	
22-G-F 7	.000	
22-G-F 8	.000	
22-G-F 9	.000	
22-G-F10	.000	
22-G-F11	.000	
22-G-F12	.000	
22-G-F13	.000	
22-G-F14	.001	
22-G-F15	.000	
22-G-F16	.000	
22-G-F17	.000	
22-G-F18	.0015	

22 -G-F19	.000	
22 -G-F20	.000	
22 -G-F21	.000	
22 -G-F22	.002	
22 -G-F23	.002	
22 -G-F24	.000	
22 -G-F25	.005	
22 -G-F26	.005	
22 -G-F27	.000	
22 -G-F28	.000	
22 -G-F29	.000	
22 -G-F30	.000	
22 -G-F31	.000	
22 -G-F32	.000	
22 -G-F33	.000	
22 -G-F34	.000	
22 -G-F35	.000	
22 -G-F36	.000	



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TABLE VI (CONTINUED)

31 -G-F 1	.000	
31 -G-F 2	.000	
31 -G-F 3	.000	
31 -G-F 4	.000	
31 -G-F 5	.000	
31 -G-F 6	.000	
31 -G-F 7	.000	
31 -G-F 8	.000	
31 -G-F 9	.000	
31 -G-F10	.000	
31 -G-F11	.000	
31 -G-F12	.000	
31 -G-F13	.000	
31 -G-F14	.002	
31 -G-F15	.0015	
31 -G-F16	.000	
31 -G-F17	.000	
31 -G-F18	.0015	

31 -G-F19	.000	
31 -G-F20	.000	
31 -G-F21	.000	
31 -G-F22	.002	
31 -G-F23	.0015	
31 -G-F24	.000	
31 -G-F25	.004	
31 -G-F26	.004	
31 -G-F27	.000	
31 -G-F28	.000	
31 -G-F29	.000	
31 -G-F30	.000	
31 -G-F31	.000	
31 -G-F32	.000	
31 -G-F33	.000	
31 -G-F34	.000	
31 -G-F35	.000	
31 -G-F36	.000	

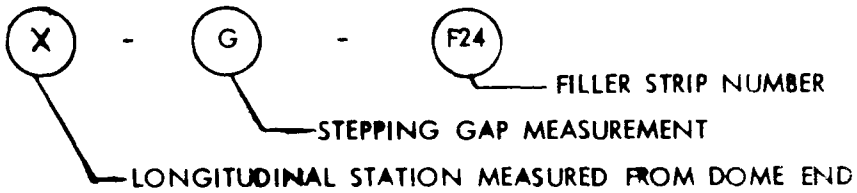
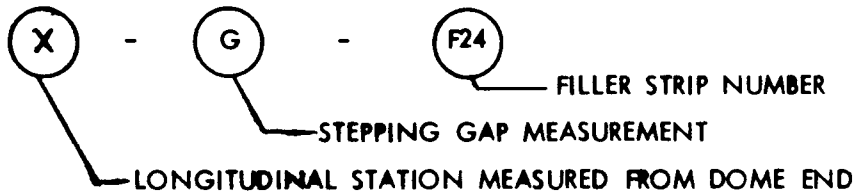




TABLE VI (CONTINUED)

39-G-F 1	.000	
39-G-F 2	.002	
39-G-F 3	.000	
39-G-F 4	.000	
39-G-F 5	.0015	
39-G-F 6	.000	
39-G-F 7	.0015	
39-G-F 8	.000	
39-G-F 9	.000	
39-G-F10	.002	
39-G-F11	.0015	
39-G-F12	.000	
39-G-F13	.0015	
39-G-F14	.003	
39-G-F15	.003	
39-G-F16	.000	
39-G-F17	.000	
39-G-F18	.0015	

39 -G-F19	.000	
39 -G-F20	.000	
39 -G-F21	.000	
39 -G-F22	.003	
39 -G-F23	.002	
39 -G-F24	.000	
39 -G-F25	.006	
39 -G-F26	.005	
39 -G-F27	.000	
39 -G-F28	.000	
39 -G-F29	.000	
39 -G-F30	.000	
39 -G-F31	.000	
39 -G-F32	.000	
39 -G-F33	.000	
39 -G-F34	.000	
39 -G-F35	.000	
39 -G-F36	.000	

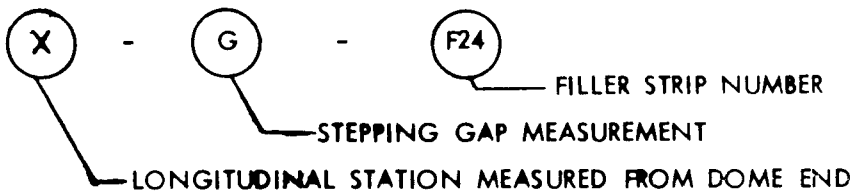


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ATOMIC ENERGY ACT OF 1954

TABLE VI (CONTINUED)

51 -G-F 1	.000	
51 -G-F 2	.0015	
51 -G-F 3	.000	
51 -G-F 4	.000	
51 -G-F 5	.0015	
51 -G-F 6	.000	
51 -G-F 7	.0015	
51 -G-F 8	.000	
51 -G-F 9	.000	
51 -G-F10	.000	
51 -G-F11	.000	
51 -G-F12	.000	
51 -G-F13	.000	
51 -G-F14	.003	
51 -G-F15	.002	
51 -G-F16	.000	
51 -G-F17	.000	
51 -G-F18	.000	

51 -G-F19	.000	
51 -G-F20	.000	
51 -G-F21	.000	
51 -G-F22	.002	
51 -G-F23	.000	
51 -G-F24	.000	
51 -G-F25	.003	
51 -G-F26	.004	
51 -G-F27	.000	
51 -G-F28	.000	
51 -G-F29	.000	
51 -G-F30	.000	
51 -G-F31	.000	
51 -G-F32	.000	
51 -G-F33	.000	
51 -G-F34	.000	
51 -G-F35	.004	
51 -G-F36	.000	

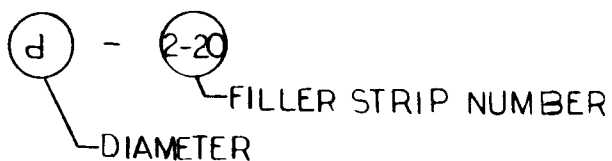


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TABLE VII  
CORE DIAMETER MEASUREMENT SHEET

	STATION - INCHES					
	5.8	14.2	22.6	31.1	39.5	50.7
d - (1-19)	6.755	6.751	6.752	6.752	6.749	6.748
d - (2-20)	6.753	6.747	6.750	6.750	6.747	6.747
d - (3-21)	6.753	6.748	6.750	6.750	6.748	6.748
d - (4-22)	6.750	6.745	6.748	6.747	6.746	6.746
d - (5-23)	6.750	6.746	6.748	6.748	6.745	6.745
d - (6-24)	6.753	6.749	6.751	6.750	6.748	6.747
d - (7-25)	6.746	6.742	6.742	6.744	6.742	6.742
d - (8-26)	6.748	6.743	6.744	6.744	6.743	6.742
d - (9-27)	6.752	6.747	6.750	6.749	6.747	6.746
d - (10-28)	6.752	6.748	6.749	6.749	6.746	6.745
d - (11-29)	6.752	6.747	6.748	6.749	6.746	6.744
d - (12-30)	6.755	6.751	6.752	6.751	6.749	6.746
d - (13-31)	6.753	6.749	6.750	6.750	6.747	6.745
d - (14-32)	6.749	6.746	6.746	6.746	6.741	6.741
d - (15-33)	6.751	6.746	6.746	6.746	6.743	6.741
d - (16-34)	6.753	6.751	6.749	6.750	6.746	6.745
d - (17-35)	6.749	6.746	6.749	6.749	6.746	6.742
d - (18-36)	6.753	6.751	6.750	6.750	6.747	6.750

DRAWING DIMENSION: d = 6.750 NOMINAL



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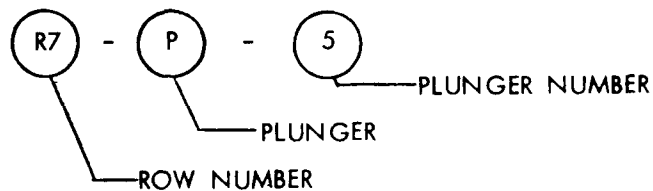
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TABLE VIII  
REFLECTOR TO PLUNGER MEASUREMENT - INCHES

	1	2	3	4	5	6	7	8	9	10	11	12
R 1-P-	1.310	1.319	1.2975	1.3175	1.322	1.312	1.315	1.315	1.308	1.3075	1.2985	1.309
R 2-P-	1.312	1.3155	1.310	1.3200	1.3115	1.3055	1.300	1.3005	1.300	1.300	1.2975	1.300
R 3-P-	1.310	1.313	1.315	1.324	1.322	1.312	1.303	1.297	1.296	1.296	1.300	1.305
R 4-P-	1.3105	1.317	1.319	1.325	1.323	1.313	1.3035	1.3025	1.2995	1.3015	1.305	1.298
R 5-P-	1.3125	1.315	1.3195	1.3285	1.324	1.317	1.307	1.304	1.299	1.2985	1.301	1.302
R 6-P-	1.3055	1.320	1.320	1.329	1.3275	1.321	1.314	1.312	1.301	1.3025	1.306	1.305
R 7-P-	1.3120	1.3225	1.322	1.327	1.3275	1.323	1.316	1.311	1.3055	1.306	1.303	1.305
R 8-P-	1.312	1.3225	1.317	1.316	1.339	1.320	1.318	1.3125	1.3045	1.305	1.309	1.305
R 9-P-	1.313	1.315	1.324	1.333	1.329	1.333	1.316	1.310	1.304	1.310	1.314	1.301
R10-P-	1.297	1.315	1.311	1.322	1.315	1.304	1.307	1.308	1.294	1.297	1.295	1.295
R11-P-	1.292	1.315	1.320	1.323	1.322	1.301	1.309	1.296	1.290	1.287	1.297	1.296
R12-P-	1.288	1.309	1.302	1.323	1.313	1.297	1.300	1.299	1.290	1.290	1.289	1.301
R13-P-	1.288	1.308	1.315	1.323	1.318	1.316	1.310	1.295	1.288	1.293	1.291	1.296
R14-P-	1.293	1.309	1.316	1.323	1.316	1.311	1.313	1.305	1.297	1.292	1.293	1.301
R15-P-	1.292	1.311	1.319	1.324	1.317	1.312	1.306	1.305	1.304	1.295	1.290	1.297
R16-P-	1.291	1.310	1.315	1.323	1.321	1.320	1.313	1.310	1.300	1.301	1.295	1.296
R17-P-	1.293	1.299	1.305	1.312	1.316	1.314	1.301	1.299	1.292	1.287	1.285	1.290
R18-P-	1.294	1.3055	1.317	1.321	1.323	1.317	1.313	1.306	1.292	1.295	1.287	1.295

DRAWING DIMENSION: P = 1.300 NOMINAL



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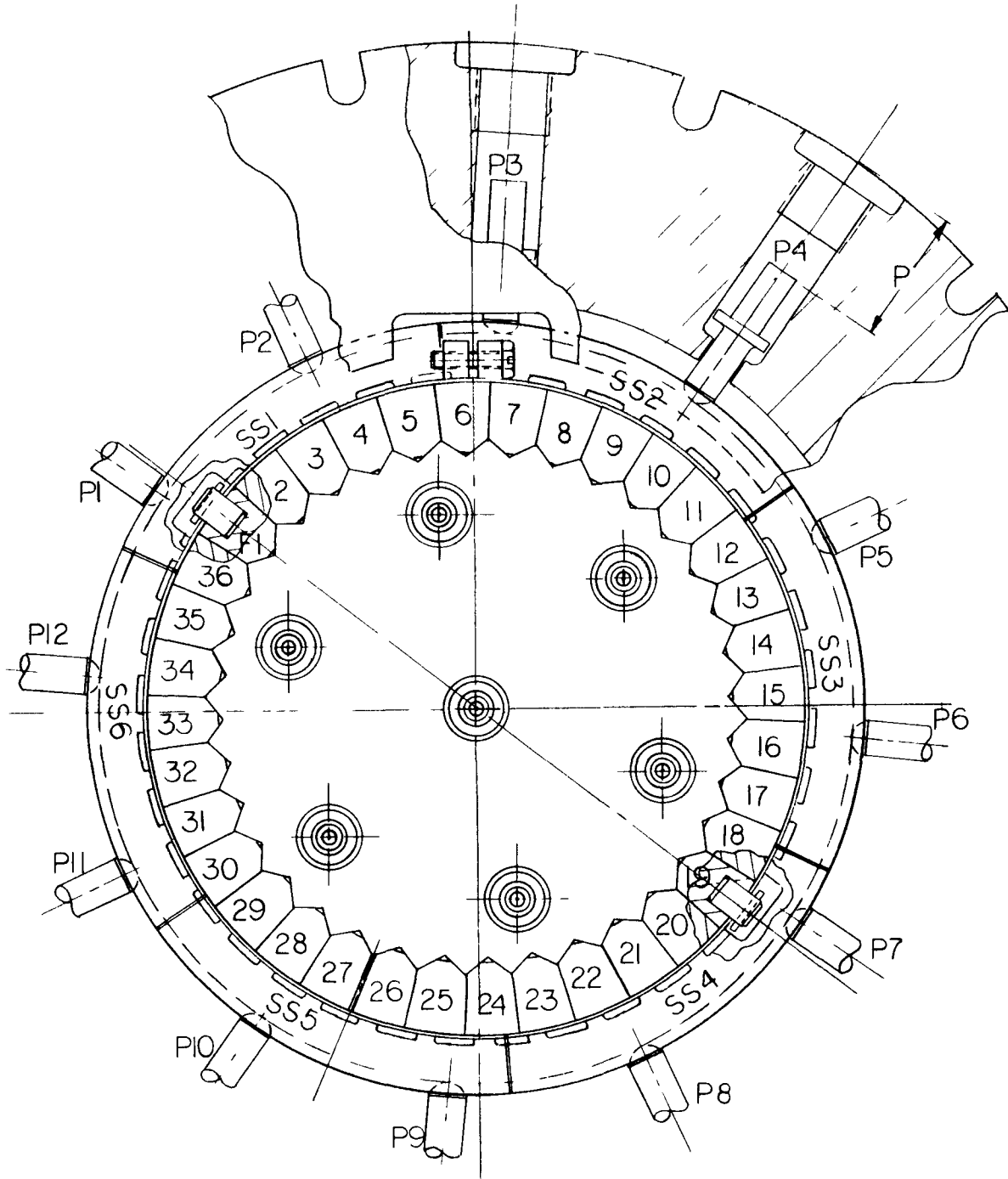


FIGURE 13  
ASSEMBLY MEASUREMENT SCHEMATIC

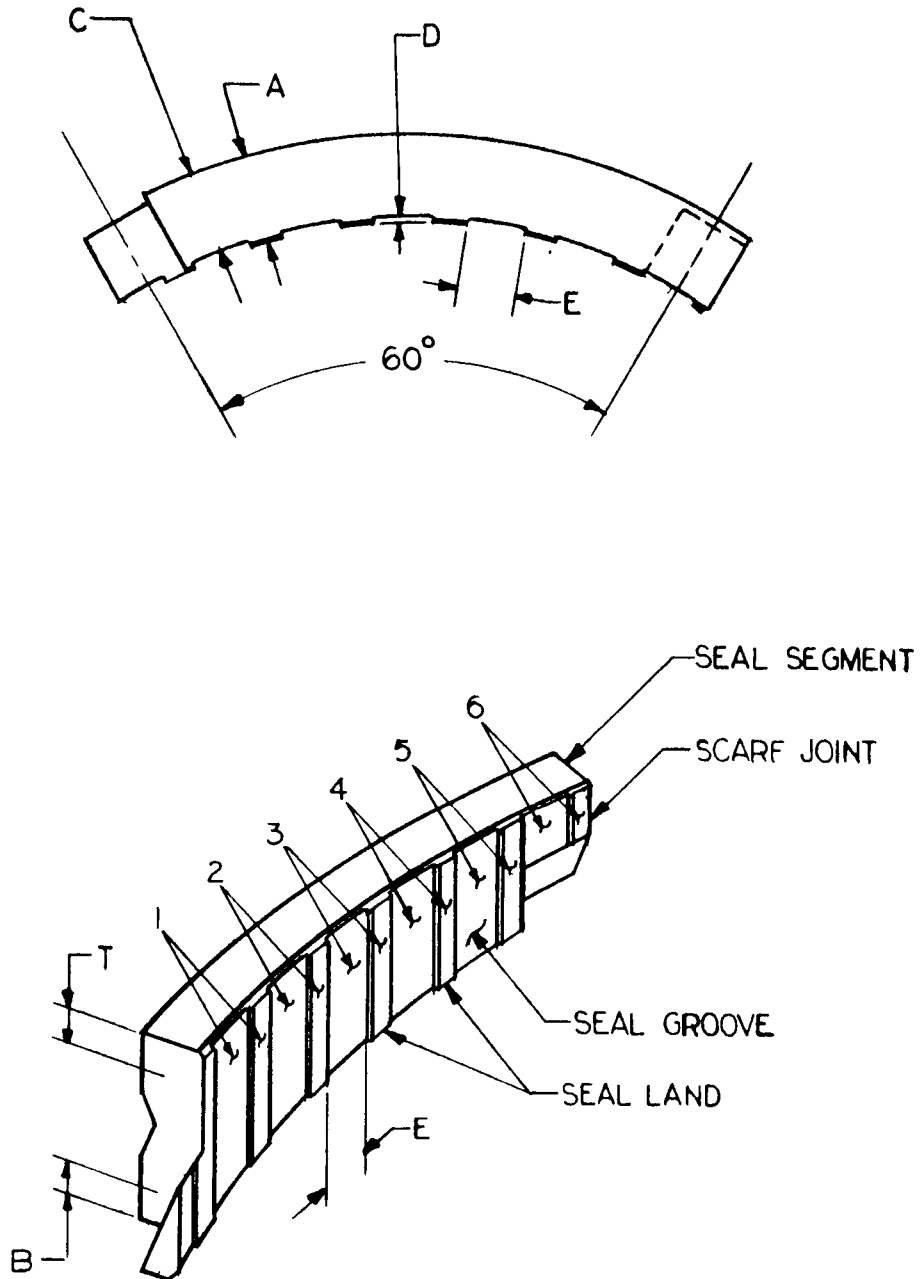


FIGURE 14  
SEAL SEGMENT MEASUREMENTS

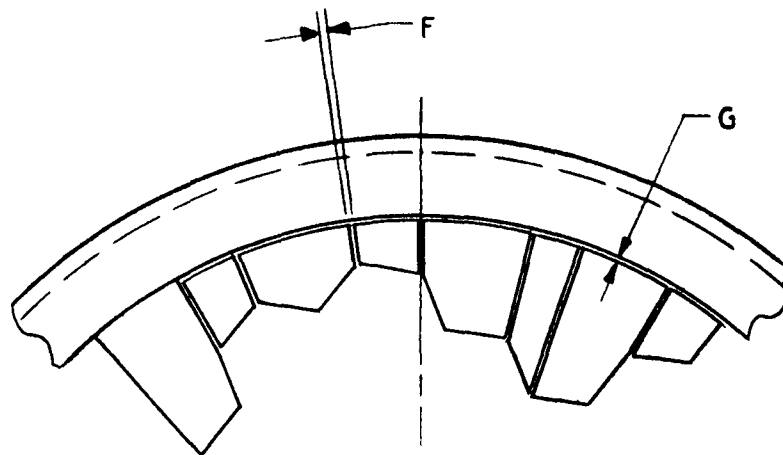
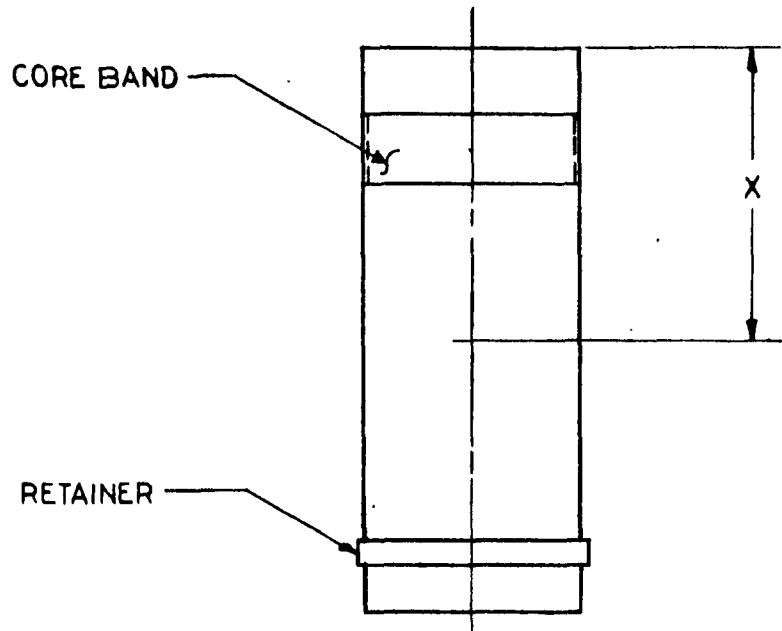


FIGURE 15  
FILLER STRIP MEASUREMENTS

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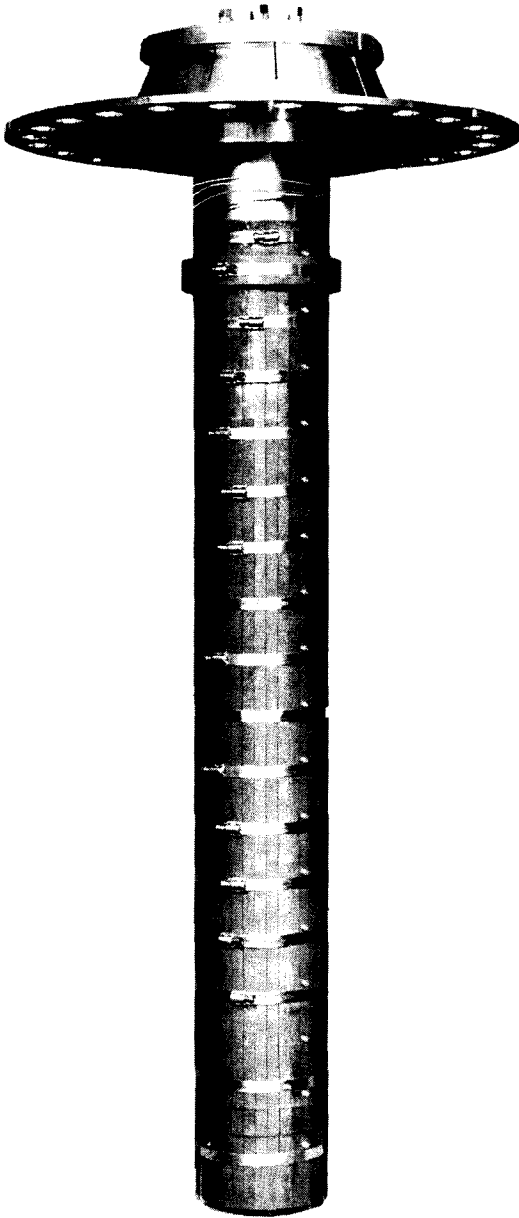


FIGURE 16  
PRE-MEASUREMENT BANDED SOLID CORE ASSEMBLY

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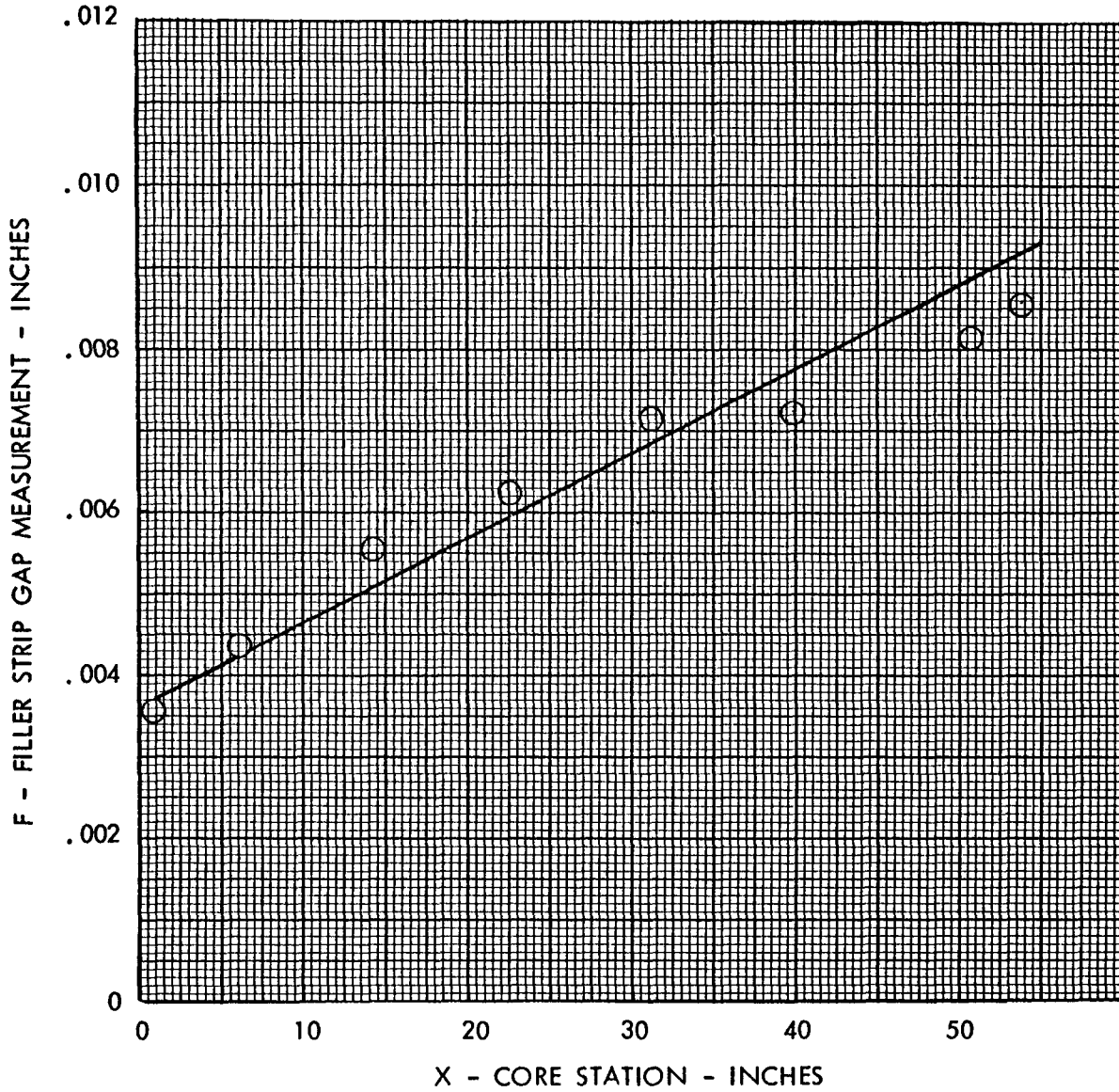


FIGURE 17  
AVERAGE MEASURED FILLER STRIP GAP TAPER

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APPENDIX B

A simple FORTRAN program was written to compute the core pressure distribution and the mass flow rate for the A-11 model. The results of the solid core tests are presented in Table IX of Appendix with the transducer pressure data tabulated in Table X.

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TABLE IX  
TEST A-11 PHASE I CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-GH2-1A      BAROMETRIC PRESSURE 29.17 IN HG      CORE INLET PRESSURE (P1) 52.3 PSIA  
 OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 52.3 PSIA      GAS TEMPERATURE (T2) 533.0 DEGREES RANKINE  
 FLOW NOZZLE DIA. 0.285 IN.      UPSTREAM FLOW NOZZLE PRESSURE (P2) 30.3 PSIA      CALCULATED MASS FLOW 0.011 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.	52.33
4.3	0.	52.33
7.2	1.00	51.33
18.4	4.00	47.33
24.0	2.20	45.13
32.5	3.00	42.13
38.1	3.00	39.13
40.9	1.95	37.18
43.7	1.95	35.23
49.3	2.00	33.23
52.1	1.50	31.73

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TABLE IX (CONTINUED)

TEST ALL PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-1 - 5P2-18      BAROMETRIC PRESSURE 29.17 IN HG      CORE INLET PRESSURE (P1) 133.3 PSIA  
 OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 129.4 PSIA      GAS TEMPERATURE (T2) 533.0 DEGREES RANKINE  
 FLOW NOZZLE DIA. .285 IN.      UPSTREAM FLOW NOZZLE PRESSURE (P2) 87.3 PSIA      CALCULATED MASS FLOW 0.033 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.	133.33
4.3	0.	133.33
7.2	2.25	131.08
19.4	8.50	122.58
24.0	5.00	117.58
32.5	7.00	110.58
38.1	7.00	103.58
40.9	4.12	99.46
43.7	4.12	95.34
49.3	4.25	91.09
52.1	4.00	87.09

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 AMERICAN ENERGY RESEARCH CORPORATION

TABLE IX (CONTINUED)

TEST ALL PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-3R2-10      BAROMETRIC PRESSURE 29.17 IN HG      CORE INLET PRESSURE (P1) 182.3 PSIA  
 OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 180.7 PSIA      GAS TEMPERATURE (T2) 523.0 DEGREES RANKINE  
 FLOW NOZZLE DIA. 0.285 IN. UPSTREAM FLOW NOZZLE PRESSURE (P2) 120.3 PSIA      CALCULATED MASS FLOW 0.045 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.	132.53
4.3	0.	142.33
7.2	3.20	179.13
18.4	11.00	168.13
24.0	6.50	161.63
32.5	9.50	152.13
38.1	9.50	142.63
40.9	5.65	136.98
43.7	5.50	131.48
49.3	5.75	125.73
52.1	6.00	119.73

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TABLE IX (CONTINUED)

TEST A11 PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-SH2-10 BAROMETRIC PRESSURE 29.17 IN HG CORE INLET PRESSURE (P1) 231.3 PSIA  
OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 228.6 PSIA GAS TEMPERATURE (T2) 533.0 DEGREES RANKINE  
FLOW NOZZLE DIA. 0.249 IN. UPSTREAM FLOW NOZZLE PRESSURE (P2) 152.3 PSIA CALCULATED MASS FLOW 0.057 LB/SEC

STATIC INCHES	DELTA P PSID	Px PSIA
0.	0.	231.33
4.3	0.	231.33
7.2	3.80	227.53
18.4	13.50	214.03
24.0	8.20	205.83
32.5	12.00	193.83
38.1	12.00	171.83
40.9	7.25	174.58
43.7	7.12	167.46
47.3	7.50	159.76
52.1	8.00	151.96

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TABLE IX (CONTINUED)

TEST A11 PHASE I CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-GH2-3A      BAROMETRIC PRESSURE 29.13 IN HG      CORE INLET PRESSURE (P1) 91.3 PSIA  
 OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 91.1 PSIA      GAS TEMPERATURE (T2) 536.0 DEGREES RANKINE  
 FLOW NOZZLE DIA. 0.525 IN.      UPSTREAM FLOW NOZZLE PRESSURE (P2) 23.3 PSIA      CALCULATED MASS FLOW 0.029 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.	91.31
4.3	0.	91.31
7.2	2.25	89.06
18.4	9.50	79.56
24.0	6.00	73.56
32.5	9.00	64.56
38.1	9.50	55.06
40.9	6.25	48.81
43.7	6.87	41.94
49.3	8.50	33.44
52.1	10.00	23.44

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TABLE IX (CONTINUED)

TEST ALL PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-GH2-38 BAROMETRIC PRESSURE 29.13 IN HG CORE INLET PRESSURE (P1) 132.3 PSIA  
OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 128.1 PSIA GAS TEMPERATURE (T2) 536.0 DEGREES RANKINE  
FLOW NOZZLE DIA. 0.525 IN. UPSTREAM FLOW NOZZLE PRESSURE (P2) 32.3 PSIA CALCULATED MASS FLOW 0.041 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.	132.31
4.3	0.	132.31
7.2	3.50	128.81
18.4	13.25	115.56
24.0	8.20	107.36
32.5	12.50	94.86
38.1	13.75	81.11
40.9	9.20	71.91
43.7	9.85	62.06
49.3	12.35	49.71
52.1	14.00	35.71



TABLE IX (CONTINUED)

TEST ALL PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-GH2-3C      BAROMETRIC PRESSURE 29.13 IN HG      CORE INLET PRESSURE (P1) 158.3 PSIA  
OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 156.5 PSIA      GAS TEMPERATURE (T2) 536.0 DEGREES RANKINE  
FLOW NOZZLE DIA. 0.525 IN.      UPSTREAM FLOW NOZZLE PRESSURE (P2) 40.3 PSIA      CALCULATED MASS FLOW 0.051 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.	158.31
4.3	0.	158.31
7.2	4.10	154.21
18.4	15.70	138.51
24.0	10.00	128.51
32.5	15.20	113.31
38.1	17.00	96.31
40.9	11.50	84.81
43.7	12.25	72.56
49.3	15.75	56.81
52.1	18.00	38.81

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TABLE IX (CONTINUED)

TEST ALL PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-GH2-3D      BAROMETRIC PRESSURE 29.13 IN HG      CORE INLET PRESSURE (P1) 193.3 PSIA  
OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 193.3 PSIA      GAS TEMPERATURE (T2) 536.0 DEGREES RANKINE  
FLOW NOZZLE DIA. 0.525 IN.      UPSTREAM FLOW NOZZLE PRESSURE (P2) 49.3 PSIA      CALCULATED MASS FLOW 0.062 LB/SEC

STATION INCHES	DELTA P PSID	OX PSIA
0.	0.	193.31
4.3	0.	193.31
7.2	4.35	138.46
18.4	19.00	169.46
24.0	12.00	157.46
32.5	18.50	133.96
38.1	21.00	117.96
40.9	14.50	103.46
43.7	15.35	88.11
49.3	19.10	69.01
52.1	22.00	47.01

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Atomic Energy Act - 1954

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TABLE IX (CONTINUED)

TEST 411 PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NO. PEX FFL-10-3H2-3C      BAROMETRIC PRESSURE 29.13 IN. HG      CORE INLET PRESSURE (P1) 204.3 PSIA  
OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 204.3 PSIA      GAS TEMPERATURE (T2) 536.0 DEGREES RANKINE  
FLOW NOZZLE DIA. 0.525 IN.      UPSTREAM FLOW NOZZLE PRESSURE (P2) 53.3 PSIA      CALCULATED MASS FLOW 0.067 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.	204.31
4.3	0.	204.31
7.2	5.25	199.06
18.4	20.50	178.56
24.0	13.00	165.56
32.5	20.00	145.56
38.1	23.00	122.56
40.9	15.40	107.16
43.7	16.20	90.96
49.3	20.20	70.76
52.1	24.00	46.76

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TABLE IX (CONTINUED)

TEST ALL PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-GH2-3F      BAROMETRIC PRESSURE 29.13 IN HG      CORE INLET PRESSURE (P1) 268.3 PSIA

OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 267.5 PSIA      GAS TEMPERATURE (T2) 536.0 DEGREES RANKINE

FLOW NOZZLE DIA. 0.525 IN.      UPSTREAM FLOW NOZZLE PRESSURE (P2) 66.3 PSIA      CALCULATED MASS FLOW 0.084 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.	268.31
4.3	0.	268.31
7.2	6.25	262.06
18.4	25.20	236.86
24.0	16.00	220.86
32.5	25.00	195.86
38.1	29.50	166.36
40.9	20.50	145.86
43.7	21.60	124.26
49.3	27.00	97.26
52.1	30.00	67.26

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TABLE IX (CONTINUED)

TEST A11 PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-GH2-4A BAROMETRIC PRESSURE 29.13 IN HG CORE INLET PRESSURE (P1) 150.3 PSIA  
OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 150.3 PSIA GAS TEMPERATURE (T2) 533.0 DEGREES RANKINE  
FLOW NOZZLE DIA. 0.298 IN. UPSTREAM FLOW NOZZLE PRESSURE (P2) 92.8 PSIA CALCULATED MASS FLOW 0.038 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.	150.31
4.3	0.	150.31
7.2	2.50	147.81
18.4	9.90	137.91
24.0	5.90	132.01
32.5	8.50	123.51
38.1	8.70	114.81
40.9	5.35	109.46
43.7	5.10	104.36
49.3	5.65	98.71
52.1	4.50	94.21

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TABLE IX (CONTINUED)

TEST 411 PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-GH2-4B      BARMETRIC PRESSURE 29.13 IN HG      CORE INLET PRESSURE (P1) 164.3 PSIA  
OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 164.3 PSIA      GAS TEMPERATURE (T2) 533.0 DEGREES RANKINE  
FLOW NOZZLE DIA. 0.295 IN.      UPSTREAM FLOW NOZZLE PRESSURE (P2) 102.3 PSIA      CALCULATED MASS FLOW 0.042 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.	164.31
4.3	0.15	164.16
7.2	2.75	161.41
18.4	10.60	150.81
24.0	6.40	144.41
32.5	9.20	135.21
38.1	9.50	125.71
40.9	5.85	119.86
43.7	5.60	114.26
49.3	6.10	108.16
52.1	5.00	103.16

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TABLE IX (CONTINUED)

TEST 411 PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-GH2-4C      BAROMETRIC PRESSURE 29.13 IN HG      CORE INLET PRESSURE (P1) 206.8 PSIA  
OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 206.3 PSIA      GAS TEMPERATURE (T2) 533.0 DEGREES RANKINE  
FLOW NOZZLE DIA. 0.294 IN.      UPSTREAM FLOW NOZZLE PRESSURE (P2) 130.3 PSIA      CALCULATED MASS FLOW 0.053 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.	206.81
4.3	0.15	206.66
7.2	3.50	203.16
18.4	13.00	190.16
24.0	7.80	182.36
32.5	11.50	170.86
38.1	12.00	158.86
40.9	7.45	151.41
43.7	7.05	144.36
49.3	7.85	136.51
52.1	6.20	130.31

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TABLE IX (CONTINUED)

TEST ALL PHASE I CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-GH2-40      BAROMETRIC PRESSURE 29.13 IN HG      CORE INLET PRESSURE (P1) 237.3 PSIA  
OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 237.3 PSIA      GAS TEMPERATURE (T2) 533.0 DEGREES RANKINE  
FLOW NOZZLE DIA. 0.298 IN.      UPSTREAM FLOW NOZZLE PRESSURE (P2) 148.3 PSIA      CALCULATED MASS FLOW 0.660 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.05	237.26
4.3	0.15	237.11
7.2	3.95	233.16
18.4	14.70	218.46
24.0	9.00	209.46
32.5	13.20	196.26
38.1	13.90	182.36
40.9	8.65	173.71
43.7	8.20	165.51
49.3	9.10	156.41
52.1	7.20	149.21



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TABLE IX (CONTINUED)

TEST ALL PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-GH2-4E      BAROMETRIC PRESSURE 29.13 IN HG      CORE INLET PRESSURE (P1) 266.8 PSIA  
OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 266.3 PSIA      GAS TEMPERATURE (T2) 533.0 DEGREES RANKINE  
FLOW NOZZLE DIA. 0.298 IN.      UPSTREAM FLOW NOZZLE PRESSURE (P2) 166.3 PSIA      CALCULATED MASS FLOW 0.063 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.05	266.76
4.3	0.15	266.61
7.2	4.30	262.31
18.4	16.30	246.01
24.0	10.00	236.01
32.5	14.70	221.31
38.1	15.60	205.71
40.9	9.75	195.96
43.7	9.25	186.71
49.3	10.25	176.46
52.1	8.20	168.26

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TABLE IX (CONTINUED)

TEST ALL PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FTL-10-GH2-5A      BAROMETRIC PRESSURE 29.13 IN. HG      CORE INLET PRESSURE (P1) 106.3 PSIA  
OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 106.3 PSIA      GAS TEMPERATURE (T2) 517.0 DEGREES FAHREN  
FLOW NOZZLE DIA. 0.450 IN. UPSTREAM FLOW NOZZLE PRESSURE (P2) 33.3 PSIA      CALCULATED MASS FLOW 0.031 LB/SEC

STATION INCHES	DELTA P PSID	Px PSIA
0.	0.	106.31
4.3	0.	106.31
7.2	2.75	103.56
13.4	10.50	93.06
24.0	6.50	86.56
32.5	9.60	76.96
39.1	10.00	66.36
40.9	7.95	58.41
43.7	6.40	52.01
47.3	3.50	48.41
52.1	3.50	34.91

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TABLE IX (CONTINUED)

TEST ALL PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-GH2-5B BAROMETRIC PRESSURE 29.13 IN HG CORE INLET PRESSURE (P1) 135.3 PSIA  
OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 134.3 PSIA GAS TEMPERATURE (T2) 517.0 DEGREES RANKINE  
FLOW NOZZLE DIA. 0.450 IN. UPSTREAM FLOW NOZZLE PRESSURE (P2) 42.3 PSIA CALCULATED MASS FLOW 0.640 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.	135.31
4.3	0.	135.31
7.2	3.45	131.86
18.4	13.00	113.86
24.0	8.10	110.76
32.5	12.20	98.56
38.1	13.50	85.06
40.9	10.20	74.86
43.7	8.20	66.66
49.3	11.20	55.46
52.1	11.00	44.46

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1954

TABLE IX (CONTINUED)

TEST ALL PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-642-50      BAROMETRIC PRESSURE 27.13 IN HG      CORE INLET PRESSURE (P1) 148.3 PSIA  
OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 149.3 PSIA      GAS TEMPERATURE (T2) 517.0 DEGREES RANKINE  
FLOW NOZZLE DIA. 0.450 IN.      UPSTREAM FLOW NOZZLE PRESSURE (P2) 47.3 PSIA      CALCULATED MASS FLOW 0.045 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.	148.81
4.3	0.	148.81
7.2	3.75	145.06
18.4	14.40	130.66
24.0	9.00	121.66
32.5	13.50	108.16
38.1	15.00	93.16
40.9	11.40	81.76
43.7	9.20	72.56
47.3	12.50	60.06
52.1	12.00	48.06

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### TABLE IX (CONTINUED)

#### TEST ALL PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER: FFL-10-3H2-50      BAROMETRIC PRESSURE: 29.13 IN HG      CORE INLET PRESSURE (P1): 166.8 PSIA  
OUTSIDE REFLECTOR SUPPORT PRESSURE (P3): 167.3 PSIA      GAS TEMPERATURE (T2): 518.0 DEGREES RANKINE  
FLOW NOZZLE DIA.: 0.450 IN.      UPSTREAM FLOW NOZZLE PRESSURE (P2): 54.3 PSIA      CALCULATED MASS FLOW: 0.051 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.	166.81
4.3	0.	166.81
7.2	4.20	162.61
18.4	16.10	146.51
24.0	10.00	136.51
32.5	15.20	121.31
38.1	17.20	104.11
40.9	13.10	91.01
43.7	10.50	80.51
49.3	14.40	66.11
52.1	14.00	52.11

TABLE IX (CONTINUED)

TEST A11 PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-GH2-5E      BAROMETRIC PRESSURE 29.13 IN HG      CORE INLET PRESSURE (P1) 192.3 PSIA  
 OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 194.3 PSIA      GAS TEMPERATURE (T2) 518.0 DEGREES RANKINE  
 FLOW NOZZLE DIA. 0.450 IN.      UPSTREAM FLOW NOZZLE PRESSURE (P2) 60.3 PSIA      CALCULATED MASS FLOW 0.057 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.	192.31
4.3	0.	192.31
7.2	4.65	187.66
18.4	17.80	169.86
24.0	11.20	158.66
32.5	17.00	141.66
38.1	19.40	122.26
40.9	14.80	107.46
43.7	11.80	95.66
49.3	16.30	79.36
52.1	16.00	63.36

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TABLE IX (CONTINUED)

LET ALL PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-GH2-5F BAROMETRIC PRESSURE 29.13 IN HG CORE INLET PRESSURE (P1) 198.3 PSIA  
 OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 198.5 PSIA GAS TEMPERATURE (T2) 518.0 DEGREES RANKINE  
 FLOW NOZZLE DIA. 0.450 IN. UPSTREAM FLOW NOZZLE PRESSURE (P2) 64.8 PSIA CALCULATED MASS FLOW 0.061 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.	198.31
4.3	0.	198.31
7.2	4.85	193.46
18.4	18.90	174.56
24.0	12.00	162.56
32.5	18.20	144.36
38.1	20.70	123.66
40.9	15.75	107.91
43.7	12.60	95.31
49.3	17.40	77.91
52.1	17.00	60.91

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TABLE IX (CONTINUED)

TEST ALL PHASE 1 CORE PRESSURE DISTRIBUTION DATA

TEST NUMBER FFL-10-GH2-5G      BAROMETRIC PRESSURE 29.13 IN HG      CORE INLET PRESSURE (P1) 241.3 PSIA  
OUTSIDE REFLECTOR SUPPORT PRESSURE (P3) 244.3 PSIA      GAS TEMPERATURE (T2) 518.0 DEGREES RANKINE  
FLOW NOZZLE DIA. 0.450 IN.      UPSTREAM FLOW NOZZLE PRESSURE (P2) 76.3 PSIA      CALCULATED MASS FLOW 0.072 LB/SEC

STATION INCHES	DELTA P PSID	PX PSIA
0.	0.	241.31
4.3	0.	241.31
7.2	5.65	235.66
19.4	22.00	213.66
24.0	14.00	199.66
32.5	21.40	178.26
38.1	24.60	153.66
40.9	19.00	134.66
43.7	15.00	119.66
49.3	20.60	99.06
52.1	20.00	79.06



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TABLE X  
FFL-10 SOLID CORE TEST TRANSDUCER PRESSURE DATA

Test Number	Core Inlet Pressure	Core Outlet Pressure	Barrel Pressure	Station Pressure	Station Pressure
	psia	psia	psia	X = 12.8 In.	X = 29.7 In.
	TP1	TP2	TP3	TP4	TP5
1A	-----	-----	-----	-----	-----
1B	134.0	87.7	139.5	125.6	112.9
1C	184.3	120.2	180.7	173.8	156.4
1D	231.6	152.7	228.6	219.6	197.5
3A	93.8	24.8	91.3	82.3	66.8
3B	133.3	35.3	131.3	118.3	97.8
3C	163.8	43.3	159.8	146.3	120.8
3D	-----	-----	-----	-----	-----
3E	202.3	52.8	197.3	180.8	149.3
3F	270.3	68.3	268.8	244.3	201.8
4A	154.3	96.3	151.3	140.8	124.8
4B	165.3	102.3	162.8	151.8	135.3
4C	209.3	131.3	207.8	192.3	173.8
4D	239.8	149.6	237.8	222.8	198.3
4E	268.8	166.8	268.3	256.3	223.8
5A	102.4	31.9	105.4	95.4	78.4
5B	133.9	40.0	134.4	123.4	100.9
5C	148.4	46.4	150.4	137.9	112.4
5D	166.7	51.6	167.3	152.8	126.6
5E	-----	-----	-----	-----	-----
5F	201.0	64.1	198.9	183.3	151.9
5G	-----	-----	-----	-----	-----

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