

TENNESSEE VALLEY AUTHORITY	EXAMINATION SUMMARY AND RESOLUTION SHEET	REPORT NUMBER: <i>R. P 0341</i>
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PROJECT: <i>WBN</i> UNIT: <i>2</i> CYCLE <i>00</i>	COMPONENT ID: <i>SIF-D198-04</i>
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EXAMINATION METHOD		SYSTEM: <i>SIS</i>	ISI DWG NO: <i>ISI-2063-W-07 Rev. 1</i>
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MT <input type="checkbox"/>	PT <input type="checkbox"/>	UT <input checked="" type="checkbox"/>	VT <input type="checkbox"/>	CONFIGURATION:	CATEGORY
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PROCEDURE: <i>N-UT-64</i>	REV <i>11</i>	TC: <i>N/A</i>	<i>P TO VLV</i>	<i>B-J</i>
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EXAMINER: <i>Jose Alejandro</i> LEVEL: <i>II</i>	EXAMINER: <i>N A</i> LEVEL:	EXAMINER: <i>N A</i> LEVEL:	EXAMINER: <i>N A</i> LEVEL:
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Total coverage calculated to be approximately *75* %

*An ultrasonic examination was performed to meet the requirements of ASME section XI preservice inspection.*

*A 45° shear wave and a 70° refracted longitudinal wave were calibrated and used for this examination.*

*No examination scan 4 performed due to valve geometry.*

*No recordable indications observed.*

*75% examination volume coverage achieved utilizing both 45° shear and 70° refracted longitudinal waves.*

RESOLUTION BY: <i>Jose Alejandro</i> LEVEL <i>II</i> DATE: <i>05-07-09</i>	REVIEWED BY: <i>Darlene Duroy</i> LEVEL: <i>III</i> DATE: <i>5-13-09</i>	ANII: <i>(signature)</i> DATE: <i>6/2/09</i> Page: <i>1</i> OF <i>6</i>
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TENNESSEE VALLEY  
AUTHORITY

DIGITAL ULTRASONIC  
CALIBRATION  
DATA SHEET

REPORT NUMBER

R-P 0341

PROJECT WBN UNIT/CYCLE 21 00

PROCEDURE: N-UT-64 REV: 11 TC: N/A

TRANSDUCER  
MANUFAC KBA MODEL: COMP-G

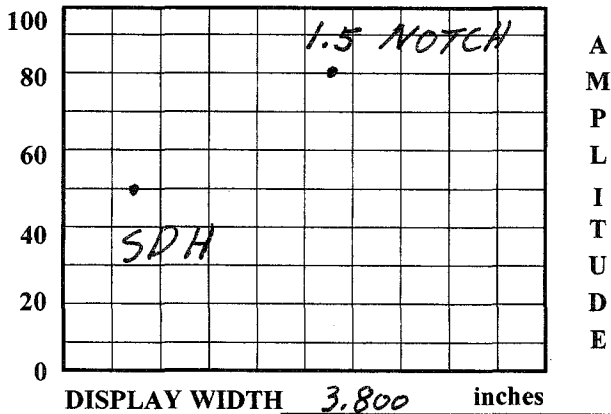
# ELEMENTS: 1 SHAPE: Round  
S/N 01FH9T SIZE: .375 FREQ: 1.5 MHz

CONTOUR: N/A FOCUS: N/A

CABLE TYPE RG174 LENGTH: 72.0 # CNT: N/A

MODE:  SHEAR  LONG  RL

DAC



CALIBRATION DATE: 05-07-09  
CALIBRATION BLOCK NO. WB 83 TEMP: 76.5°F  
SIMULATOR BLOCK: Rompas

THERMOMETER S/N: 558271 DUE DATE: 06-24-09  
COUPLANT: Ultragel II BATCH: 06225-F

ANGLE VERIFICATION  
BLOCK TYPE Rompas S/N: 790 390  
NOMINAL ANGLE: 45 ACTUAL ANGLE 45°

INSTRUMENT  
MANUFACTURER: KrautKramer DUE DATE: 06-23-09  
MODEL NO.: USN 60 S/N: E36304

REFLECTOR			REFERENCE SENSITIVITY	MEMORY NUMBER
SCAN DIRECT.	NTC	SDH		
AXIAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	29.0 dB	45°-10.in-55
CIRC.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	29.0 dB	45°-10.in-55

RANGE: 3.800 inches \* FREQ: 2.25 MHz  
PROBE DELA 7.238 msec \* RECTIFY: Fullwave  
VELOCITY 0.1198 msec DUAL  ON  OFF  
DISP DELAY: 0.00 \* REJECT: 2 %  
\* ENERGY: High \* DISP. START: IP  
\* DAMPING: 1K ohms DET:  Peak  Flank  
\* PRR/PFR: Auto High TCG:  ON  OFF  
ANGLE: 45 deg \* PULSER: Single  
ZERO: N/A msec

REF. REFLECTOR: Rompas SDH GAIN: 31.6 dB  
AMPLITUDE: 50 % METAL PATH: A90

CALIBRATION TIMES  
INITIAL TIME: 0900 FINAL TIME: 1245

VERIFICATION TIMES 1) 1006 2) 1017 3) 1039 4) 1049 5) 1110 6) 1123 7) 1149 8) 1218 9) N/A

\*PDI QUALIFIED INSTRUMENT SETTINGS:  
VERIFY INSTRUMENT SETTINGS AND CALIBRATION SEQUENCE ARE IN ACCORDANCE WITH TABLE 2 OF THE APPLICABLE PDI QUALIFICATION IMPLEMENTATION PROCEDURE!

LINEARITY CHECK

VERTICAL	SIGNAL										
	SIGNAL 1	100	90	80	70	60	50	40	30	20	
	SIGNAL 2	50	45	40	35	30	25	20	15	10	
ATTENUATOR	GAIN	SET	-6 dB	-12dB	SET	+12	SET	+6			
	AMP	80%	32 TO 48	16 TO 24	20%	64 TO 96	40%	64 TO 96			
			40	20		80		80			

COMMENTS

WELD / ITEMS EXAMINED

	SIS-108
	SIF-D198-10 SIF-D198-04
	SIS-106
	SIS-105
	SIS-104
	SIF-D198-05

EXAMINER: Jose Alejandro Quijano LVL.: II

EXAMINER: Edie Reed LVL.: II

REVIEWER: Darlene Dancy LVL.: III DATE: 5-13-09

ANII: AD

DATE: 6/2/09

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**TENNESSEE VALLEY  
AUTHORITY**

**DIGITAL ULTRASONIC  
CALIBRATION  
DATA SHEET**

**REPORT NUMBER**

R. P. 0341

PROJECT WBN UNIT/CYCLE 2100  
PROCEDURE: N-UT-64 REV: 11 TC: N/A

CALIBRATION DATE: 05-07-09  
CALIBRATION BLOCK NO. WB83 TEMP: 76.5°F  
SIMULATOR BLOCK: Rompas

TRANSDUCER  
MANUFAC RTD MODEL: TR12  
# ELEMENTS: 2 SHAPE: Rectangle  
S/N 85-639 SIZE: 2(8X14) FREQ: 2 MHz  
CONTOUR: N/A FOCUS: N/A  
CABLE TYPE RG174 LENGTH: 72 in # CNT: N/A

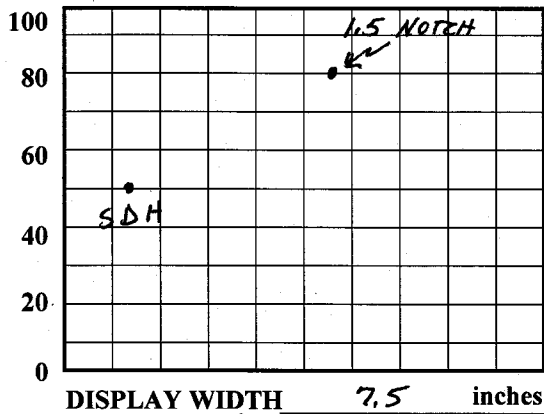
THERMOMETER S/N: 558271 DUE DATE: 06-24-09  
COUPLANT: Ultragel II BATCH: 06225F

ANGLE VERIFICATION  
BLOCK TYPE Rompas S/N: 790390  
NOMINAL ANGLE: 70RL ACTUAL ANGLE 70RL

MODE:  SHEAR  LONG  RL

INSTRUMENT  
MANUFACTURER: Kraut Kramer DUE DATE: 06-23-09  
MODEL NO.: USN 60 S/N: E36304

**DAC**



A  
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REFLECTOR			REFERENCE SENSITIVITY	MEMORY NUMBER
SCAN DIRECT.	NTC	SDH		
AXIAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	68.5 dB	70RL-10 in
CIRC.	<u>N/A</u>	<u>N/A</u>	<u>N/A</u> dB	<u>N/A</u>

RANGE: 7.5 inches \* FREQ: 2.25 MHz  
PROBE DELAY: 2.4397 msec \* RECTIFY: Fullwave  
VELOCITY .2274 msec DUAL  ON  OFF  
DISP DELAY: 0.000 \* REJECT: 0 %  
\* ENERGY: High \* DISP. START: IP  
\* DAMPING: 1K ohms DET:  Peak  Flank  
\* PRR/PRF: Autohigh TCG:  ON  OFF  
ANGLE: 70RL deg \* PULSER: Dual  
ZERO: N/A msec

REF. REFLECTOR: Rompas SDH GAIN: 52.5 dB  
AMPLITUDE: 50 % METAL PATH: .913

CALIBRATION TIMES  
INITIAL TIME: 0900 FINAL TIME: 1243

VERIFICATION TIMES 1) 1126 2) 1133 3) 1138 4) N/A 5) N/A 6) N/A 7) N/A 8) N/A 9) N/A

**\*PDI QUALIFIED INSTRUMENT SETTINGS:  
VERIFY INSTRUMENT SETTINGS AND CALIBRATION SEQUENCE ARE IN ACCORDANCE WITH TABLE 2  
OF THE APPLICABLE PDI QUALIFICATION IMPLEMENTATION PROCEDURE!**

LINEARITY CHECK										
VERTICAL	SIGNAL 1	100	90	80	70	60	50	40	30	20
		SIGNAL 2	50	45	40	35	30	25	20	15
ATTENUATOR	GAIN	SET	-6 dB	-12dB	SET	+12	SET	+6		
	AMP	80%	32 TO 48	16 TO 24	20%	64 TO 96	40%	64 TO 96		
			40	20		80		80		

COMMENTS	WELD / ITEMS EXAMINED
	<u>SIF-D198-04</u>

EXAMINER: Jose Alejandro Jimenez LVL.: II  
EXAMINER: Eric Reed LVL.: II  
REVIEWER: Andrew D. ... LVL.: III DATE: 5-13-09

ANII: Ⓚ  
DATE: 6/2/09  
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TENNESSEE VALLEY  
AUTHORITY

MANUAL ULTRASONIC  
PIPING EXAMINATION  
DATA SHEET

REPORT NUMBER

R.P0341

PROJECT: WBN UNIT/CYCLE 2100

SYSTEM: SIS

WELD ID.: SIF-D198-04

CONFIG.: P TO VLV

FLOW 

PROCEDURE: N-UT-64 REV: 11 TC: N/A

Wo REFERENCE: £ of weld

Lo REFERENCE: TDC

EXAMINATION DATE 05-07-09

START TIME: 1116 END TIME: 1129

EXAM SURFACE  ID  OD

MATERIAL TYPE:  CS  SS  CSCL  CCSS

SURFACE TEMP.: 80.7 PYRO NO. 558271

EXAMINATION ANGLE 45 DEG. 70RL DEG.

AXIAL SCAN SENSITIVITY 37.7 dB 62.5 dB

CIRC. SCAN SENSITIVITY 41.4 dB N/A dB

IND NO.	L (in) FROM REF.			AT MAX AMP			MAX AMP % DAC	EXAM NO. 3-14	NOM. ANG.	NRI	INDICATION INFORMATION: TYPE, DAMPING, ETC.
	L1	L Max	L2	W MAX	MP MAX	D MAX					
								3	45°	<input checked="" type="checkbox"/>	
								5	45°	<input checked="" type="checkbox"/>	
								6	45°	<input checked="" type="checkbox"/>	
								3	70RL	<input checked="" type="checkbox"/>	
										<input type="checkbox"/>	
										<input type="checkbox"/>	

REMARKS/LIMITATIONS No examination scans from down stream side due to valve geometry. Scanned on weld. Examination performed maintaining 5-20% ID roll.

EXAMINER: Tese Alejandro J. Lopez LEVEL: II  
 EXAMINER: Elle-Rod E. ... LEVEL: II  
 REVIEWED BY: Darlene ... LEVEL: III DATE: 5-13-09

ANII: ①  
 DATE: 6/2/09  
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**TVA**

**WALL THICKNESS  
PROFILE SHEET**

REPORT NO:

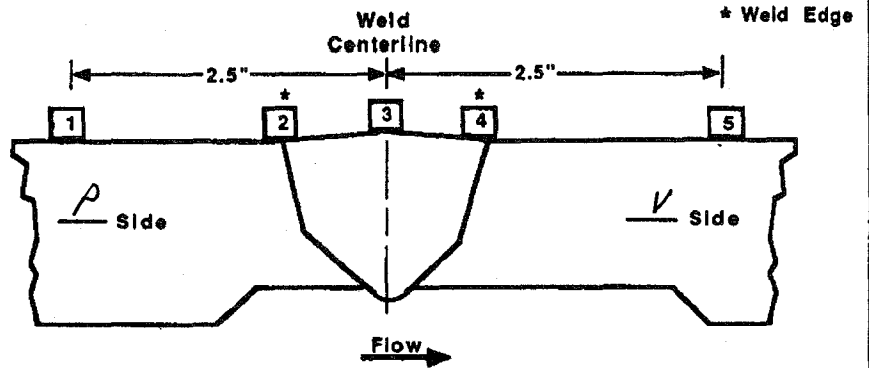
*R. D0341*

PROJECT: WBN  
UNIT: 2

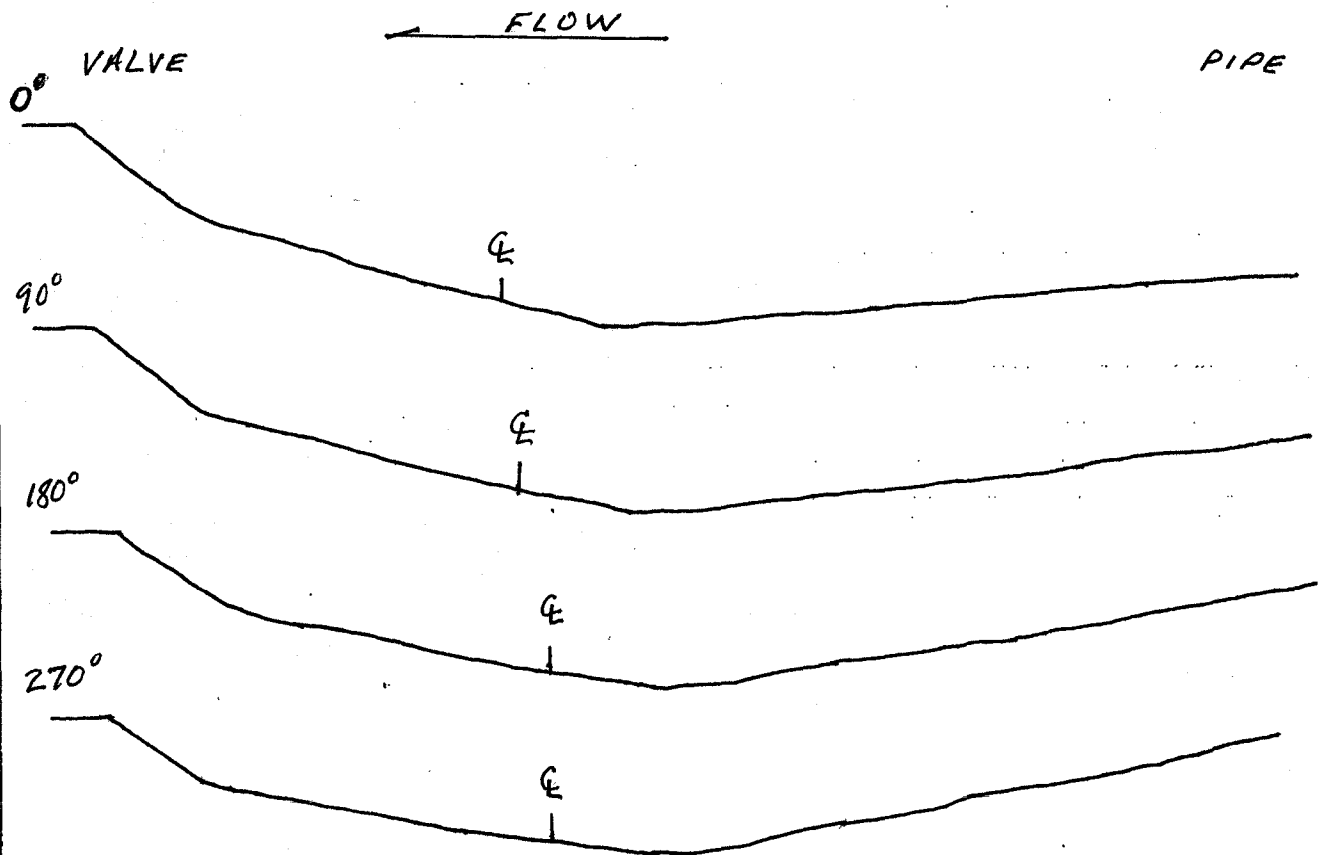
WELD NO: SIF-D198-04  
SYSTEM: SIS

Record Thickness Measurements As Indicated, Including Weld Width, Edge-To-Edge At 0°

Position	0°	90°	180°	270°
1	.99	1.02	.99	1.01
2	1.04	.95	1.11	1.10
3	1.31	1.24	1.12	1.12
4	1.41	1.41	1.40	1.42
5	N/A	N/A	N/A	N/A



CROWN HEIGHT: FLUSH      DIAMETER: 10.0  
CROWN WIDTH: 1.125      WELD LENGTH: 36.0



EXAMINER: *Paul Reynolds*  
LEVEL: II  
DATE: 05-04-05-09  
*12-05-08-09*

REVIEWED BY: *David...*  
LEVEL: III      DATE: 5-13-09

ANH: *Q*  
DATE: 6/2/09  
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TVA

Office of Nuclear Power

PROJECT: WBN SYSTEM: SIS

UNIT: 2 WELD NO: SIF-D198-04

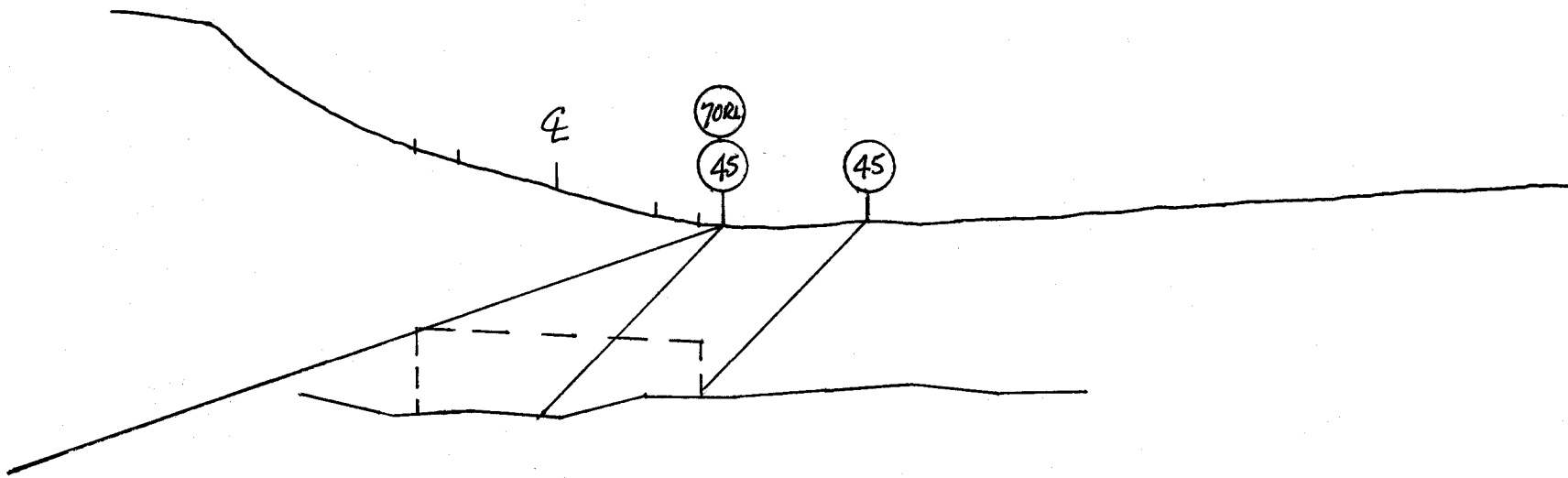
REPORT NO.:

R.P 0341

← FLOW

VALVE

PIPE



BY: Jose Alejandro Jose Alejandro LEVEL: IC DATE: 05-05-09 PAGE 6 OF 6

TVA Procedure  
N-GP-31

Weld# SIF-D198-04

Attachment 3

Item 1	Required examination Volume in sq. in. (width x height)	1.6	0.48	0.768
Item 2	Number of scan directions	4		
Item 3	Total Scan volume in sq. in.	3.072		
Item 4	Total length of weld	36		
Item 5	Total required exam volume in cubic inches	110.592		
Item 6	Exam volume achieved (sq. in.) in direction 1 X length of weld achieved	0.768	36	27.648
Item 7	Exam volume achieved (sq. in.) in direction 2 X length of weld achieved	0.768	36	27.648
Item 8	Exam volume achieved (sq. in.) in direction 3 X length of weld achieved	0.768	36	27.648
Item 9	Exam volume achieved (sq. in.) in direction 4 X length of weld achieved	0	36	0
Item 10	Determined the achieved exam volume add 6, 7, 8 & 9	82.944		
Item 11	Exam volume percentage item 10/item 5 x 100	75		

JA  
05-07-09

Limitation due to value  
one sided examination

**INFORMATION ONLY**