

TENNESSEE VALLEY AUTHORITY		EXAMINATION SUMMARY AND RESOLUTION SHEET		REPORT NUMBER: <i>R. P0306</i>	
PROJECT: <i>WBN</i> UNIT: <i>2</i>		CYCLE <i>00</i>		COMPONENT ID: <i>SIF-D197-08</i>	
EXAMINATION METHOD				SYSTEM: <i>SIS</i>	ISI DWG NO: <i>ISI-2063-W-06</i> <i>Rev 0</i>
MT ☐	PT ☐	UT ☒	VT ☐	CONFIGURATION:	CATEGORY
PROCEDURE: <i>N-UT-64</i>		REV <i>11</i>	TC: <i>N/A</i>	<i>P TO VLV</i>	<i>B-J</i>
EXAMINER: <i>Jose Alejandro</i>		EXAMINER: <i>N</i> <i>A</i>		EXAMINER: <i>N</i> <i>A</i>	EXAMINER: <i>N</i> <i>A</i>
LEVEL: <i>II</i>		LEVEL:		LEVEL:	LEVEL:

Total coverage calculated to be approximately *73.66 %*

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 for maximum coverage.

Examination was a one sided exam due to valve geometry and performed from the pipe side.

No recordable indications observed.

73.66 % examination volume coverage achieved.

RESOLUTION BY: <i>Jose Alejandro</i>	REVIEWED BY: <i>Barbara Dwyer</i>	ANII: <i>W</i>
LEVEL <i>II</i> DATE: <i>04-29-09</i>	LEVEL: <i>II</i> DATE: <i>5-11-09</i>	DATE: <i>5/13/09</i>
		Page: <i>1</i> OF <i>6</i>

**TENNESSEE VALLEY
AUTHORITY**

**DIGITAL ULTRASONIC
CALIBRATION
DATA SHEET**

REPORT NUMBER

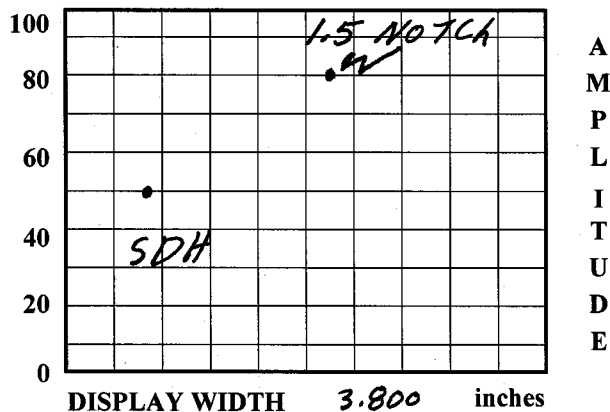
R.P0306

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



A
M
P
L
I
T
U
D
E

DISPLAY WIDTH 3.800 inches

CALIBRATION DATE: 04-29-09
CALIBRATION BLOCK NO. WB 83 TEMP: 74.3 °F
SIMULATOR BLOCK: Rompas

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

ANGLE VERIFICATION
BLOCK TYPE Rompas S/N: 790390
NOMINAL ANGLE: 45 ACTUAL ANGLE 45 °

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

REFLECTOR			REFERENCE SENSITIVITY	MEMORY NUMBER
SCAN DIRECT.	NTC	SDH		
AXIAL	☒	☐	30.4 dB	45-10, n-SS
CIRC.	☒	☐	30.4 dB	45-10, n-SS

RANGE: 3.800 inches * FREQ: 2.25 MHz
PROBE DELA 6.5831 msec * RECTIFY: Fullwave
VELOCITY 0.1198 msec DUAL ☐ ON ☒ OFF
DISP DELAY: 0.00 * REJECT: Q %
* ENERGY: High * DISP. START: IP
* DAMPING: 1K ohms DET: ☐ Peak ☒ Flank
* PRR/PRF: Auto High TCG: ☐ ON ☒ OFF
ANGLE: 45 deg * PULSER: 5.7912
ZERO: N/A msec

REF. REFLECTOR: Rompas SDH GAIN: 35.3 dB
AMPLITUDE: 50 % METAL PATH: .442

VERIFICATION TIMES 1) 0910 2) 0932 3) 0948 4) 1028 5) 1047 6) 1053 7) 1104 8) 1125 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	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-088 SIF-D197-10
SIS089
SIF-D197-08
SIF-D197-09
SIS-090
SIS-091

EXAMINER: Jose Alejandro Juel LVL: II

EXAMINER: John Reed LVL: I

REVIEWER: Donna D. Dreyer LVL: III DATE: 5-11-09

ANII: ED

DATE: 5/13/09

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**TENNESSEE VALLEY
AUTHORITY**

**DIGITAL ULTRASONIC
CALIBRATION
DATA SHEET**

REPORT NUMBER

R.D0306

PROJECT WBN UNIT/CYCLE 21 00

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

MANUFAC RTD MODEL: TRL-2

ELEMENTS: 2 SHAPE: Rectangle

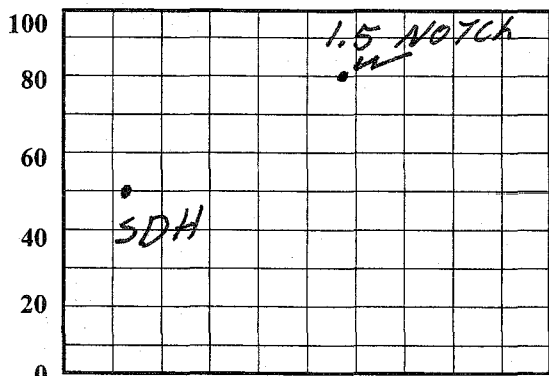
S/N 85-639 SIZE: 2(8x14) FREQ: 2.0 MHZ

CONTOUR: N/A FOCUS: N/A

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

MODE: ☐ SHEAR ☐ LONG ☒ RL

DAC



DISPLAY WIDTH 7.500 inches

CALIBRATION DATE: 04-29-09
CALIBRATION BLOCK NO. WB 83 TEMP: 74.3 °F
SIMULATOR BLOCK: Rompas

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

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

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	☒	☐	67.5 dB	70RL-10.11-55
CIRC.	☐	☐	N/A dB	N/A

RANGE: 7.500 inches *FREQ: 2.25 MHZ

PROBE DELA 25.4634 msec *RECTIFY: Full Wave

VELOCITY 0.2274 msec DUAL ☒ ON ☐ OFF

DISP DELAY: 0.00 *REJECT: 0 %

*ENERGY: High *DISP. START: IP

*DAMPING: 1K ohms DET: ☐ Peak ☒ Flank

*PRR/PRF: Auto High TCG: ☐ ON ☒ OFF

ANGLE: 70 RL deg *PULSER: DUAL

ZERO: N/A msec

REF. REFLECTOR: Rompas SDH GAIN: 64.0 dB

AMPLITUDE: 50 % METAL PATH: .920

VERIFICATION TIMES 1) 1001 2) 1020 3) N/A

CALIBRATION TIMES

INITIAL TIME: 0850 FINAL TIME: 1020 *

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	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

* Final calibration time - 1133 JA

SIF-D197-08

SIF-D197-09

EXAMINER: José Alejandro Quijano LVL: II

EXAMINER: Edith Reed LVL: I

REVIEWER: Donna Duroy LVL: IV DATE: 5-11-09

ANII: Q

DATE: 5/13/09

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**TENNESSEE VALLEY
AUTHORITY**

**MANUAL ULTRASONIC
PIPING EXAMINATION
DATA SHEET**

REPORT NUMBER

R.P.0306

PROJECT: WBN UNIT/CYCLE 2100

SYSTEM: SIS

WELD I.D.: SIF-D197-08

CONFIG.: P TO VLV

FLOW 

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

W_o REFERENCE: 2 of weld

Lo REFERENCE: TDC

EXAMINATION DATE 04-24-09

START TIME: 0953 END TIME: 1017

EXAM SURFACE ☐ ID ☒ OD

MATERIAL TYPE: ☐ CS ☒ SS ☐ CSCL ☐ CCSS

SURFACE TEMP.: 78.3 PYRO NO. 558271

EXAMINATION ANGLE 45 DEG. 70RL DEG.

AXIAL SCAN SENSITIVITY 42.5 dB 64.5 dB

CIRC. SCAN SENSITIVITY 44.9 dB NA 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	70RL	☒	
								3	64.5	☒	
								5	45	☒	
								6	64.5	☒	
										☐	
										☐	

REMARKS/LIMITATIONS No examination scans 4 from valve side. Examination performed maintaining 5-20% ID roll. Scanned on weld.

EXAMINER: José Alejandro Pichay LEVEL: II

EXAMINER: Edie Reed Edie P.R. LEVEL: I

REVIEWED BY: David Duley LEVEL: II DATE: 5-11-09

ANII: W

DATE: 5/13/09

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TVA

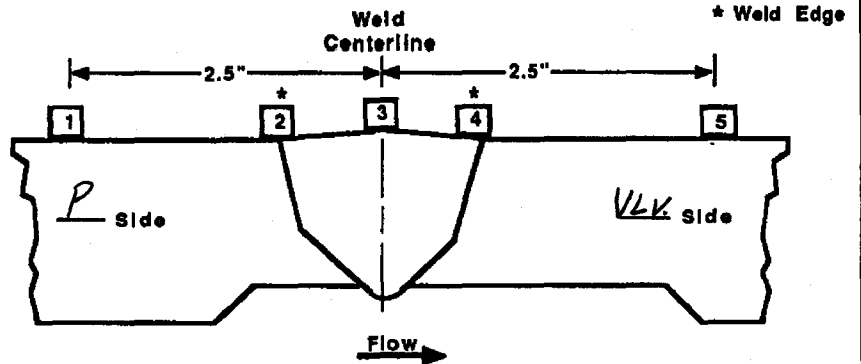
WALL THICKNESS
PROFILE SHEET

REPORT NO:

R-PO306

PROJECT: WATS BAR NUCLEARWELD NO: SIF-D197-08UNIT: 2SYSTEM: SISRecord Thickness Measurements As
Indicated, Including Weld Width,
Edge-To-Edge At 0°

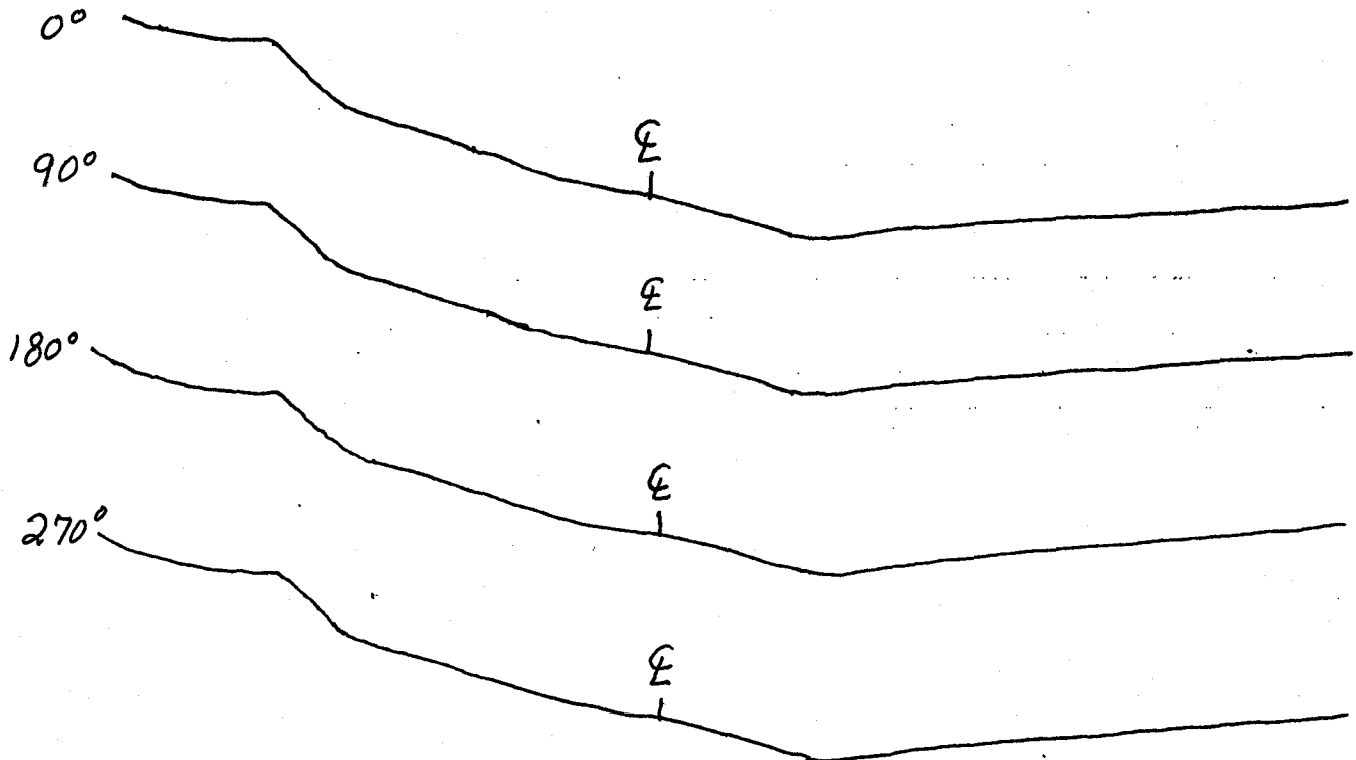
Position	0°	90°	180°	270°
1	.990	1.028	1.025	1.000
2	1.142	1.064	1.000	.943
3	1.215	1.150	1.160	1.150
4	1.474	1.290	1.401	1.204
5	N/A	N/A	N/A	N/A

CROWN HEIGHT: FLUSHDIAMETER: 10.0CROWN WIDTH: 1.0WELD LENGTH: 35.750

VALVE

FLOW

PIPE

EXAMINER: Julio C. [Signature]REVIEWED BY: [Signature]ANN: [Signature]LEVEL: IILEVEL: IIIDATE: 5-11-09DATE: 5/13/09DATE: 04-28-09PAGE 5 OF 6

TVA

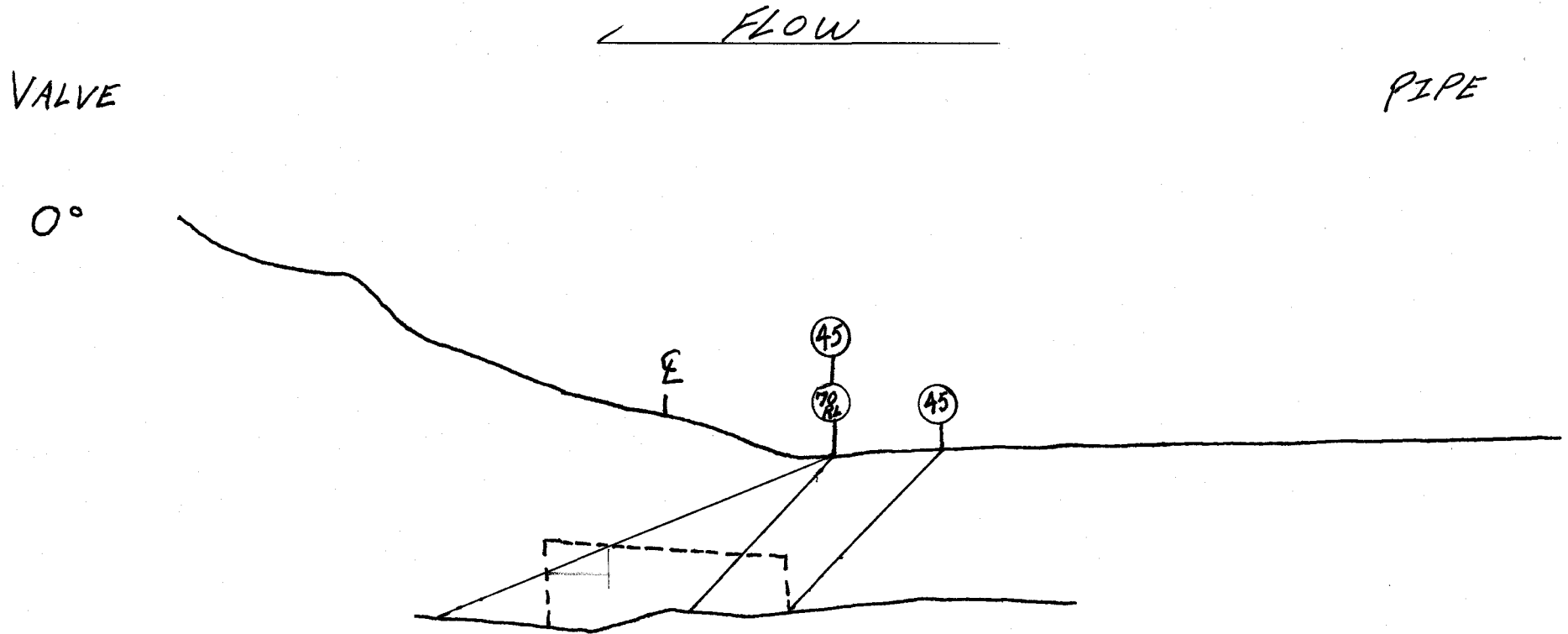
Office of Nuclear Power

PROJECT: WATTS BAR NUCLEAR **SYSTEM:** SIS

UNIT: 2 **WELD NO:** SIF-D197-08

REPORT NO.:

R. P0306



BY: José Alejandro McQuay **LEVEL:** II **DATE:** 04-28-09 **PAGE** 6 **OF** 6

Attachment 3

Item 1	Required examination Volume in sq. in. (width x height)	1.5	0.5		0.75
Item 2	Number of scan directions				4
Item 3	Total Scan volume in sq. in.				3
Item 4	Total length of weld				35.75
Item 5	Total required exam volume in cubic inches				107.25
Item 6	Exam volume achieved (sq. in.) in direction 1 X length of weld achieved	0.71	35.75		25.38
Item 7	Exam volume achieved (sq. in.) in direction 2 X length of weld achieved	0.75	0		0
Item 8	Exam volume achieved (sq. in.) in direction 3 X length of weld achieved	0.75	35.75		26.8125
Item 9	Exam volume achieved (sq. in.) in direction 4 X length of weld achieved	0.75	35.75		26.8125
Item 10	Determined the achived exam volume add 6, 7, 8 & 9				79.005
Item 11	Exam volume percentage item 10/item 5 x 100				73.66434

Limitation
One side examination due to value

JA
04-29-09

INFORMATION ONLY