TENNESSEE VALLEY AUTHORITY	EXAMINATION SUMMARY AND RESOLUTION SHEET	REPORT NUMBER: R.P0405

PROJECT: *WBN* UNIT: *2* CYCLE *00*				COMPONENT ID: *SIF-D199-07*	
EXAMINATION METHOD				SYSTEM: SIS	ISI DWG NO: *ISI-2063-W-08* Rev. 0
MT ☐	PT ☐	UT ☑	VT ☐	CONFIGURATION:	CATEGORY
PROCEDURE: *N-UT-64*		REV *11*	TC: N/A	*VLV* TO *EL*	*B-J*

EXAMINER:	EXAMINER:	EXAMINER:	EXAMINER:
Jose Alejandro	N / A	N / A	N / A
LEVEL: II	LEVEL:	LEVEL:	LEVEL:

Total coverage calculated to be approximately 70.35 %

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

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

No examination scan 3 performed due to valve geometry.

No recordable indications observed.

70.35% examination volume coverage achieved utilizing both 45° shear and 70° refracted longitudinal waves.

RESOLUTION BY:	REVIEWED BY:	ANII:
		DATE: 6/15/09
LEVEL II DATE: 06-01-09	LEVEL: III DATE: 6-2-09	Page: 1 OF 6

ACCESS: FORMS DATABASE R-10/04/01

TENNESSEE VALLEY AUTHORITY	DIGITAL ULTRASONIC CALIBRATION DATA SHEET	REPORT NUMBER R.P0405

PROJECT WBN UNIT/CYCLE 2/00
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

CALIBRATION DATE: 06-01-09
CALIBRATION BLOCK NO. WB83 TEMP: 71.7 °F
SIMULATOR BLOCK: Rompas
THERMOMETER S/N: 562773 DUE DATE: 06-20-09
COUPLANT: Ultragel II BATCH: 06225F

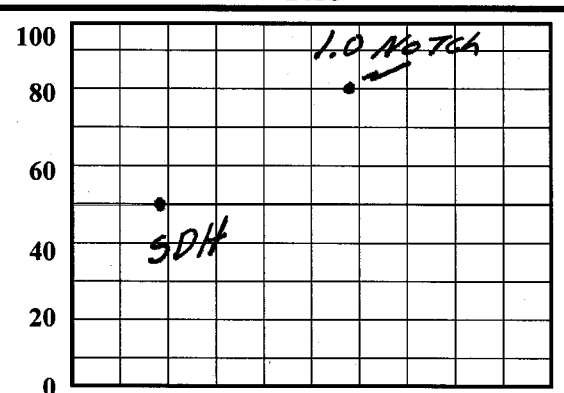
ANGLE VERIFICATION

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

INSTRUMENT

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

DAC



DISPLAY WIDTH 2.5 inches

REFLECTOR SCAN DIRECT.	NTC	SDH	REFERENCE SENSITIVITY	MEMORY NUMBER
AXIAL	☒	☐	29.3 dB	45°-6.in-55
CIRC.	☒	☐	29.3 dB	45°-6.in-55

RANGE: 2.5 inches *FREQ: 2.25 MHz
PROBE DELA 7.6312 msec *RECTIFY: Fullwave
VELOCITY .1198 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: 45° deg
ZERO: N/A msec *PULSER: Single

REF. REFLECTOR: Rompas SDH GAIN: 31.9 dB
AMPLITUDE: 50 % METAL PATH: .458

CALIBRATION TIMES

INITIAL TIME: 0920 FINAL TIME: 1053

VERIFICATION TIMES	1) 0946	2) 1003	3) 1025	4) 1039	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
	SIF-D199-07
	SIS-111
	SIS-112

EXAMINER: Jose Alejandro LVL.: II
EXAMINER: Ellis Reed LVL.: II
REVIEWER: Darlene Dudley LVL.: III DATE: 6-2-09

ANII: [illegible]
DATE: 6/15/09
PAGE 2 OF 6

ACCESS: FORMS DATABASE 07-25-07

TENNESSEE VALLEY AUTHORITY	DIGITAL ULTRASONIC CALIBRATION DATA SHEET	REPORT NUMBER R.P0405

PROJECT WBN UNIT/CYCLE 2/00
PROCEDURE: N-UT-64 REV: 11 TC: N/A

TRANSDUCER

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: 720 # CNT: N/A

MODE: ☐ SHEAR ☐ LONG ☒ RL

CALIBRATION DATE: 06-01-09
CALIBRATION BLOCK NO. WB 83 TEMP: 71.7 °F
SIMULATOR BLOCK: Rompas Block
THERMOMETER S/N: 562773 DUE DATE: 06-20-09
COUPLANT: Ultragel II BATCH: 06225F

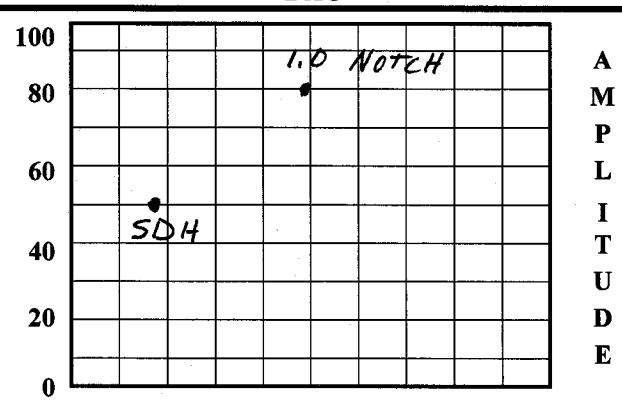
ANGLE VERIFICATION

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

INSTRUMENT

MANUFACTURER: Krautkramer DUE DATE: 06-23-09
MODEL NO.: USN60 S/N: E36304

DAC



DISPLAY WIDTH 6.0 inches

REFLECTOR SCAN DIRECT.	NTC	SDH	REFERENCE SENSITIVITY	MEMORY NUMBER
AXIAL	☒	☐	59.0 dB	70RL-6in
CIRC.	☐	☐	N/A dB	N/A

RANGE: 6.0 inches
PROBE DELA 45.7072 msec
VELOCITY .2062 msec
DISP DELAY: 0.000
*ENERGY: High
*DAMPING: 1K ohms
*PRR/PRF: Autohigh
ANGLE: 70RL deg
ZERO: N/A msec

*FREQ: 2.25 MHz
*RECTIFY: Fullwave
DUAL ☒ ON ☐ OFF
*REJECT: 0 %
*DISP. START: IP
DET: ☒ Peak ☐ Flank
TCG: ☐ ON ☒ OFF
*PULSER: Dual

REF. REFLECTOR: Rompas SDH GAIN: 65 dB
AMPLITUDE: 50 % METAL PATH: .915

CALIBRATION TIMES

INITIAL TIME: 0916 FINAL TIME: 1051

VERIFICATION TIMES	1) 1013	2) 1023	3) N/A	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
	SIF-D199-07

EXAMINER: Jose Alejandro [signature] LVL.: II
EXAMINER: Ellie Reed [signature] LVL.: II
REVIEWER: [signature] LVL.: III DATE: 6-2-09

ANII: [signature]
DATE: 6/15/09
PAGE 3 OF 6

ACCESS: FORMS DATABASE 07-25-07

TENNESSEE VALLEY AUTHORITY	MANUAL ULTRASONIC PIPING EXAMINATION DATA SHEET	REPORT NUMBER R.P0405

PROJECT: WBN UNIT/CYCLE 2/00
SYSTEM: SIS
WELD I.D.: SIF-D199-07
CONFIG.: VLV TO EL
FLOW →

PROCEDURE: N-UT-64 REV: 11 TC: N/A
Wo REFERENCE: ℄ of weld
Lo REFERENCE: TDC

EXAMINATION DATE 06-01-09
START TIME: 1014 END TIME: 1021
EXAM SURFACE ☐ ID ☒ OD
MATERIAL TYPE: ☐ CS ☒ SS ☐ CSCL ☐ CCSS
SURFACE TEMP.: 84.6 PYRO NO. 562773

EXAMINATION ANGLE	45 DEG.	70RL DEG.
AXIAL SCAN SENSITIVITY	32.3 dB	74.5 dB
CIRC. SCAN SENSITIVITY	40.0 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					
								4	45°	☒	
								5	45°	☒	
								6	45°	☒	
								4	70°RL	☒	
										☐	
										☐	

REMARKS/LIMITATIONS No examination scan 3 due to valve geometry. Examination performed maintaining 5-20% ID roll. Scanned on weld.

EXAMINER: Jose Alejandro [signature] LEVEL: II
EXAMINER: Eddie Rod [signature] LEVEL: II
REVIEWED BY: [signature] LEVEL: III DATE: 6-2-09

ANII: @
DATE: 6/15/09
PAGE 4 OF 6

ACCESS: FORMS DATABASE 10/18/01

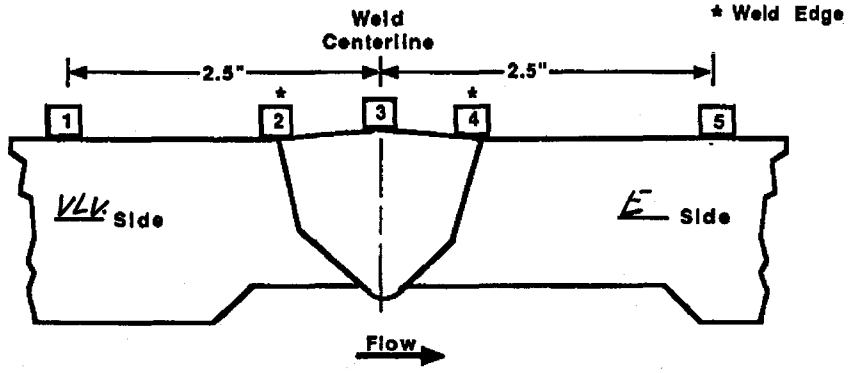
TVA	WALL THICKNESS PROFILE SHEET	REPORT NO: R.P0405

PROJECT: WATTS BAR NUCLEAR
UNIT: 2

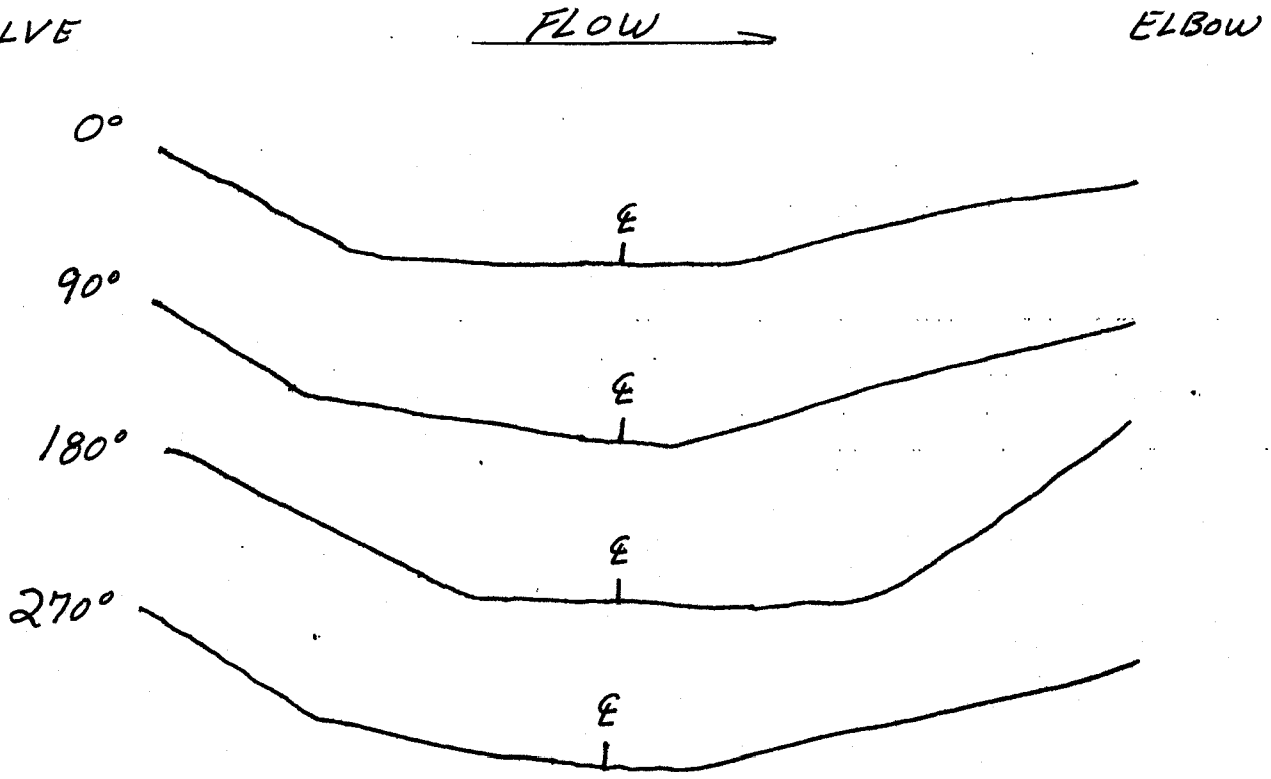
WELD NO: SIF-D199-07
SYSTEM: SIS

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

Position	0°	90°	180°	270°
1	N/A	N/A	N/A	N/A
2	1.059	1.173	1.174	1.172
3	.875	.955	1.017	1.087
4	.869	.999	.860	.844
5	.751	.841	.876	.767



CROWN HEIGHT: FLUSH
CROWN WIDTH: 1.250
DIAMETER: 6.0
WELD LENGTH: 21.50



EXAMINER: [signature]
LEVEL: II
DATE: 05-27-09

REVIEWED BY: [signature]
LEVEL: III
DATE: 6-2-09

ANII: [signature]
DATE: 6/15/09
PAGE 5 OF 6

TVA 19668 (NP-5-89)

1-108-999-44

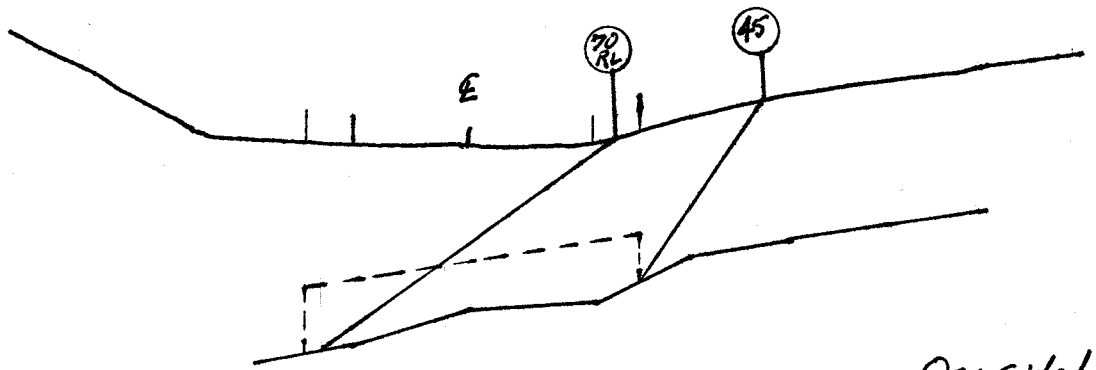
TVA Office of Nuclear Power	PROJECT: WATTS BAR NUCLEAR SYSTEM: SIS UNIT: 2 WELD NO: SIF-D199-07	REPORT NO.: R.P0405

FLOW

VALVE

ELBOW

0°



One sided Examination
Due to Taper of Valve.

BY: Jose Alejandro LEVEL: II DATE: 05-27-09 PAGE 6 OF 6

R.P 0405

TVA Procedure
N-GP-31

Weld # 51F-D199-07

Attachment 3

Item 1	Required examination Volume in sq. in. **(width x height)**	1.75	0.35		0.6125
Item 2	Number of **scan directions**				4
Item 3	Total Scan **volume** in sq. in.				2.45
Item 4	Total **length** of weld				21.5
Item 5	Total required **exam volume** in cubic inches				52.675
Item 6	**Exam volume achieved** (sq. in.) in direction 1 X **length of weld achieved**	0.6125	0		0
Item 7	**Exam volume achieved** (sq. in.) in direction 2 X **length of weld achieved**	0.49875	21.5		10.723125
Item 8	**Exam volume achieved** (sq. in.) in direction 3 X **length of weld achieved**	0.6125	21.5		13.16875
Item 9	**Exam volume achieved** (sq. in.) in direction 4 X **length of weld achieved**	0.6125	21.5		13.16875
Item 10	Determined the **achivied exam volume** add 6, 7, 8 & 9				37.060625
Item 11	Exam **volume percentage** item 10/item 5 x 100				70.357143

Limitation:
One sided examination due to valve geometry

JA
06-01-09

INFORMATION ONLY