TENNESSEE VALLEY AUTHORITY	EXAMINATION SUMMARY AND RESOLUTION SHEET	REPORT NUMBER: R-P 0343

PROJECT: *WBN* UNIT: *2* CYCLE *00*				COMPONENT ID: *SIF-D198-10*	
EXAMINATION METHOD				SYSTEM: SIS	ISI DWG NO: *ISI-2063-W-07 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 75 %

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

A 45° shear wave and a ~~60°~~ 60° refracted longitudinal wave were calibrated and used for this examination.

No examination scans upstream due to valve geometry.

No recordable indications observed.

75% examination volume coverage achieved utizing both 45° shear and 60° refracted longitudinal waves.

RESOLUTION BY:	REVIEWED BY:	ANII:
		DATE: 6/2/09
LEVEL II DATE: 05-07-09	LEVEL: III DATE: 5-13-09	Page: 1 OF 6

ACCESS: FORMS DATABASE R-10/04/01

TENNESSEE VALLEY AUTHORITY	DIGITAL ULTRASONIC CALIBRATION DATA SHEET	REPORT NUMBER R.P0343

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

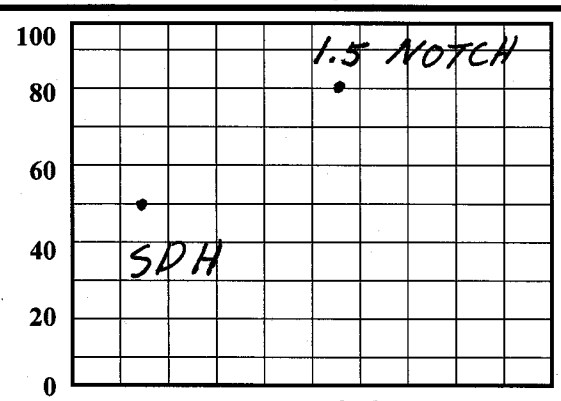
MODE: ☒ SHEAR ☐ LONG ☐ RL

CALIBRATION DATE: 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

DAC



DISPLAY WIDTH 3.800 inches

REFLECTOR SCAN DIRECT.	NTC	SDH	REFERENCE SENSITIVITY	MEMORY NUMBER
AXIAL	☒	☐	29.0 dB	45°-10.in-SS
CIRC.	☒	☐	29.0 dB	45°-10.in-SS

RANGE: 3.800 inches
PROBE DELA 7.2138 msec
VELOCITY 0.1198 msec
DISP DELAY: 0.00
*ENERGY: High
*DAMPING: 1K ohms
*PRR/PRF: Auto High
ANGLE: 45 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: Single

REF. REFLECTOR: Rompas SDH GAIN: 31.6 dB
AMPLITUDE: 50 % METAL PATH: 490

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 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 [signature] LVL.: II
EXAMINER: Eddie Reed [signature] LVL.: II
REVIEWER: [signature] LVL.: III DATE: 5-13-09

ANII: [signature]
DATE: 6/2/09
PAGE 2 OF 6

ACCESS: FORMS DATABASE 07-25-07

TENNESSEE VALLEY AUTHORITY	DIGITAL ULTRASONIC CALIBRATION DATA SHEET	REPORT NUMBER R.P0343

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 95-853 SIZE: 2(8X14) FREQ: 2 MHz
CONTOUR: N/A FOCUS: N/A
CABLE TYPE RG174 LENGTH: 72in # CNT: N/A

MODE: ☐ SHEAR ☐ LONG ☒ RL

CALIBRATION DATE: 05-07-09
CALIBRATION BLOCK NO. WB83 TEMP: 76.5 °F
SIMULATOR BLOCK: Rompas
THERMOMETER S/N: 558271 DUE DATE: 06-24-09
COUPLANT: Ultragel II BATCH: 06225F

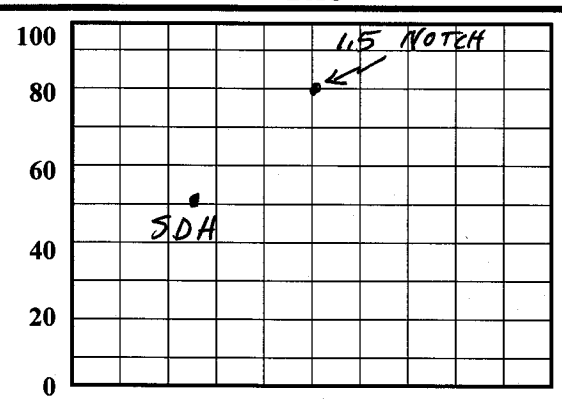
ANGLE VERIFICATION
BLOCK TYPE Rompas S/N: 790390
NOMINAL ANGLE: 60RL ACTUAL ANGLE 60RL

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

REFLECTOR SCAN DIRECT.	NTC	SDH	REFERENCE SENSITIVITY	MEMORY NUMBER
AXIAL	☒	☐	54.5 dB	60RL-10in
CIRC.	N/A	N/A	N/A dB	N/A

RANGE: 6.0 inches *FREQ: 2.25 MHz
PROBE DELA 1.1488 msec *RECTIFY: Fullwave
VELOCITY .2188 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: 60RL deg *PULSER: Dual
ZERO: N/A msec

DAC



DISPLAY WIDTH 6.0 inches

REF. REFLECTOR: Rompas SDH GAIN: 49.0 dB
AMPLITUDE: 50 % METAL PATH: 1.562

CALIBRATION TIMES
INITIAL TIME: 0900 FINAL TIME: 1241

VERIFICATION TIMES	1) 1021	2) 1026	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-D198-10

EXAMINER: Jose Alejandro [signature] LVL.: II
EXAMINER: Eddie Reed [signature] LVL.: II
REVIEWER: [signature] LVL.: III DATE: 5-13-09

ANII: [signature]
DATE: 6/2/09
PAGE 3 OF 6

ACCESS: FORMS DATABASE 07-25-07

TENNESSEE VALLEY AUTHORITY	MANUAL ULTRASONIC PIPING EXAMINATION DATA SHEET	REPORT NUMBER R.P0343

PROJECT: WBN UNIT/CYCLE 2/00
SYSTEM: SIS
WELD I.D.: SIF-D198-10
CONFIG.: VLV TO EL
FLOW

EXAMINATION DATE 05-07-09
START TIME: 1007 END TIME: 1024
EXAM SURFACE ☐ ID ☒ OD
MATERIAL TYPE: ☐ CS ☒ SS ☐ CSCL ☐ CCSS
SURFACE TEMP.: 79.2 PYRO NO. 558271

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

EXAMINATION ANGLE	45 DEG.	60RL DEG.
AXIAL SCAN SENSITIVITY	39.0 dB	60.0 dB
CIRC. SCAN SENSITIVITY	43.6 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	60RL	☒	
										☐	
										☐	

REMARKS/LIMITATIONS No examination scans on UP ~~STR~~ stream side due valve geometry. Scan on weld. Examination performed maintaining 5-20% ID roll.

EXAMINER: Jose Alejandro LEVEL: II
EXAMINER: Eddie Reed LEVEL: II
REVIEWED BY: LEVEL: III DATE: 5-13-09

ANII:
DATE: 6/2/09
PAGE 4 OF 6

ACCESS: FORMS DATABASE 10/18/01

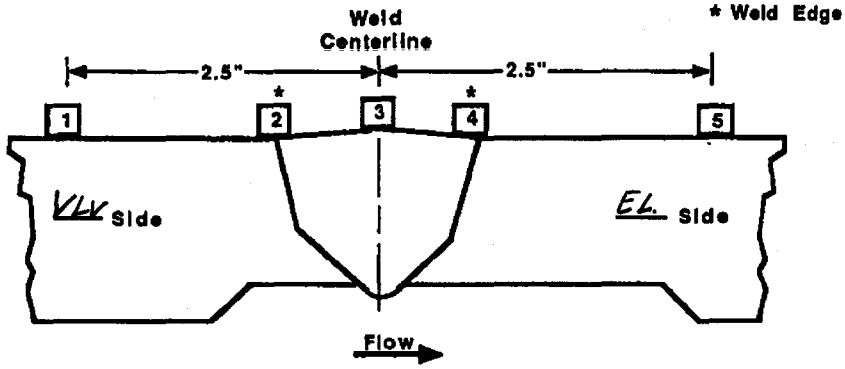
TVA	WALL THICKNESS PROFILE SHEET	REPORT NO: R-P0343

PROJECT: WATTS BAR NUCLEAR
UNIT: 2

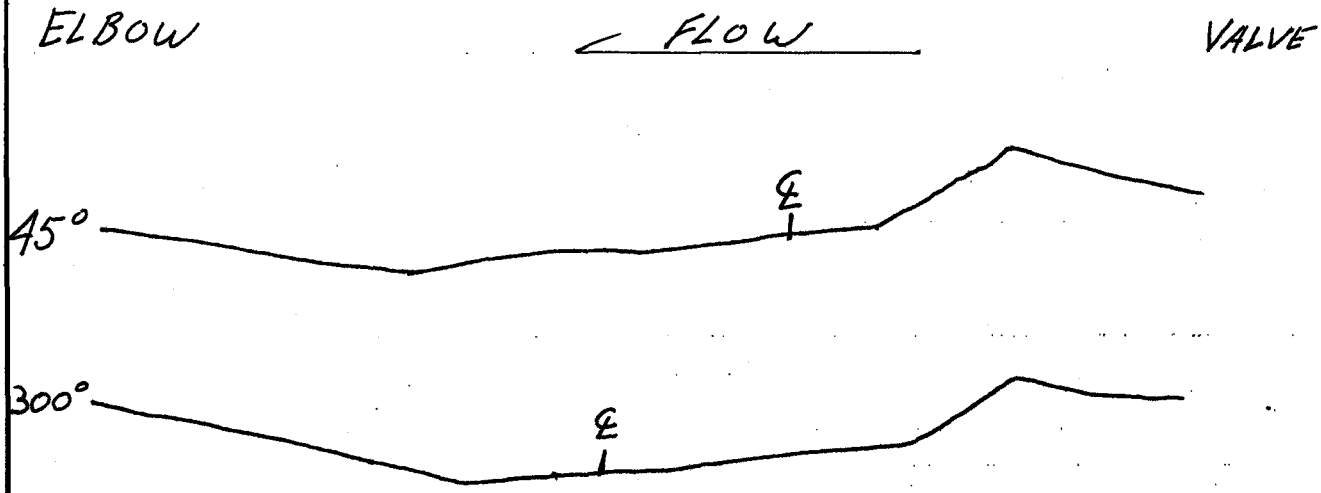
WELD NO: SIF-D198-10
SYSTEM: SIS

Record Thickness Measurements As Indicated, Including Weld Width, Edge-To-Edge At 0° ER 5-5-09

Position	0°	~~90°~~ 45°	180°	270°
1	N/A	N/A	N/A	N/A
2	1.140	1.51	N/A	N/A
3	1.19	1.28	N/A	N/A
4	1.06	1.05	N/A	N/A
5	1.50	1.15	N/A	N/A



CROWN HEIGHT: FLUSH
DIAMETER: 10.0
CROWN WIDTH: 1.10
WELD LENGTH: 37.0



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

REVIEWED BY: [signature]
LEVEL: III
DATE: 5-13-09

ANII: [signature]
DATE: 6/2/09
PAGE 5 OF 6

TVA 19668 (NP-5-89)

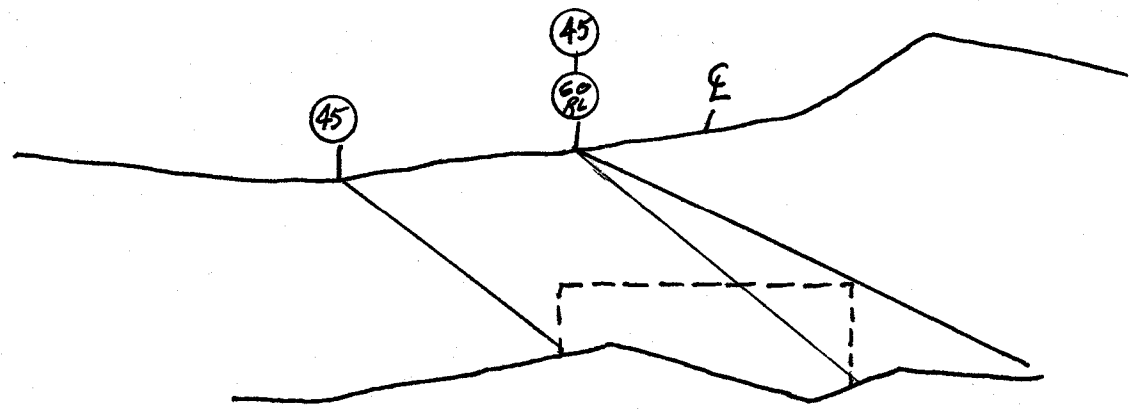
1-108-999-44

TVA Office of Nuclear Power	PROJECT: WATTS BAR NUCLEAR SYSTEM: SIS UNIT: 2 WELD NO: SIF-D198-10	REPORT NO.: R.P0343

FLOW

ELBOW

VALVE



Exam limited to oneside
Due to taper on valve

BY: Eddie D. Reed LEVEL: II DATE: 05-05-09 PAGE 6 OF 6

R. P 0343

TVA Procedure
N-GP-31

Weld # SIF-D198-10

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				37
Item 5	Total required **exam volume** in cubic inches				111
Item 6	**Exam volume achieved** (sq. in.) in direction 1 X **length of weld achieved**	0	37		0
Item 7	**Exam volume achieved** (sq. in.) in direction 2 X **length of weld achieved**	0.75	37		27.75
Item 8	**Exam volume achieved** (sq. in.) in direction 3 X **length of weld achieved**	0.75	37		27.75
Item 9	**Exam volume achieved** (sq. in.) in direction 4 X **length of weld achieved**	0.75	37		27.75
Item 10	Determined the **achivied exam volume** add 6, 7, 8 & 9				83.25
Item 11	Exam **volume percentage** item 10/item 5 x 100				75

JA
05-07-09

limitations due to valve
One sided examination

INFORMATION ONLY