TENNESSEE VALLEY AUTHORITY	EXAMINATION SUMMARY AND RESOLUTION SHEET	REPORT NUMBER: R-P0508

PROJECT: *WBN* UNIT: *2* CYCLE *00*				COMPONENT ID: *SIF-D193-03*	
EXAMINATION METHOD				SYSTEM: SIS	ISI DWG NO: *ISI-2063-W-11* Rev. 0
MT ☐	PT ☐	UT ☑	VT ☐	CONFIGURATION:	CATEGORY
PROCEDURE: *N-UT-64*	REV *11*	TC: *N/A*		*VAL* TO *P*	*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 %

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

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

No examination scan 3 due to valve geometry.

No recordable indications observed

70 % examination volume coverage achieved.

RESOLUTION BY:	REVIEWED BY:	ANII:
LEVEL II DATE: 06·22·09	LEVEL: III DATE: 6·24·09	DATE: 7/7/09
		Page: 1 OF 6

ACCESS: FORMS DATABASE R-10/04/01

TENNESSEE VALLEY AUTHORITY	DIGITAL ULTRASONIC CALIBRATION DATA SHEET	REPORT NUMBER R-P0508

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

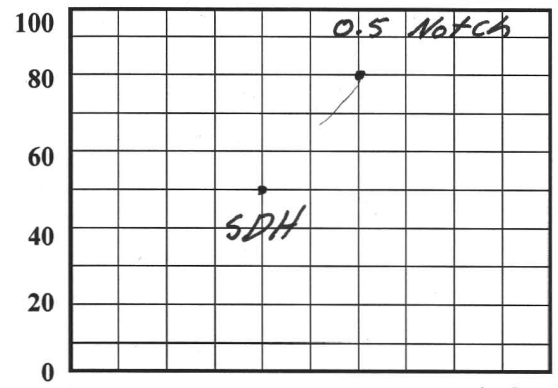
TRANSDUCER
MANUFAC KBA MODEL: Comp G
ELEMENTS: 1 SHAPE: Round
S/N 01LV4C SIZE: .250 FREQ: 2.25 MHz
CONTOUR: N/A FOCUS: N/A
CABLE TYPE RG174 LENGTH: 72.0 # CNT: N/A
MODE: ☒ SHEAR ☐ LONG ☐ RL

CALIBRATION DATE: 06-22-09
CALIBRATION BLOCK NO. WB83 TEMP: 77.1 °F
SIMULATOR BLOCK: Rompas
THERMOMETER S/N: E39054 DUE DATE: 08-12-09
COUPLANT: Ultragel II BATCH: 06225F

ANGLE VERIFICATION
BLOCK TYPE Rompas S/N: 93-5724
NOMINAL ANGLE: 45 ACTUAL ANGLE 45°

INSTRUMENT
MANUFACTURER: Krautkramer DUE DATE: 08-18-09
MODEL NO.: USN 60 S/N: E37688

DAC



DISPLAY WIDTH 1.200 inches

REFLECTOR SCAN DIRECT.	NTC	SDH	REFERENCE SENSITIVITY	MEMORY NUMBER
AXIAL	☐	☐	N/A dB	N/A
CIRC.	☒	☐	28.2 dB	45°-3in-SS

RANGE: 1.200 inches
PROBE DELA 4.3066 msec
VELOCITY 0.1271 msec
DISP DELAY: 0.000
*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: 46.8 dB
AMPLITUDE: 50 % METAL PATH: .443

CALIBRATION TIMES
INITIAL TIME: 0758 FINAL TIME: 1230

VERIFICATION TIMES	1) 0853	2) 0901	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-D193-03

EXAMINER: Jose Alejandro LVL.: II
EXAMINER: Eddie Reed LVL.: II
REVIEWER: Darlene Dudley LVL.: III DATE: 6-24-09

ANII:
DATE: 7/7/09
PAGE 2 OF 6

ACCESS: FORMS DATABASE 07-25-07

TENNESSEE VALLEY AUTHORITY	DIGITAL ULTRASONIC CALIBRATION DATA SHEET	REPORT NUMBER R-P0508

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 01LV4C SIZE: .250 FREQ: 2.25 MHz
CONTOUR: N/A FOCUS: N/A
CABLE TYPE RG174 LENGTH: 72.0 # CNT: N/A

MODE: ☒ SHEAR ☐ LONG ☐ RL

CALIBRATION DATE: 06-22-09
CALIBRATION BLOCK NO. WB83 TEMP: 77.1 °F
SIMULATOR BLOCK: Rompas
THERMOMETER S/N: E39054 DUE DATE: 08-12-09
COUPLANT: Ultragel II BATCH: 06225F

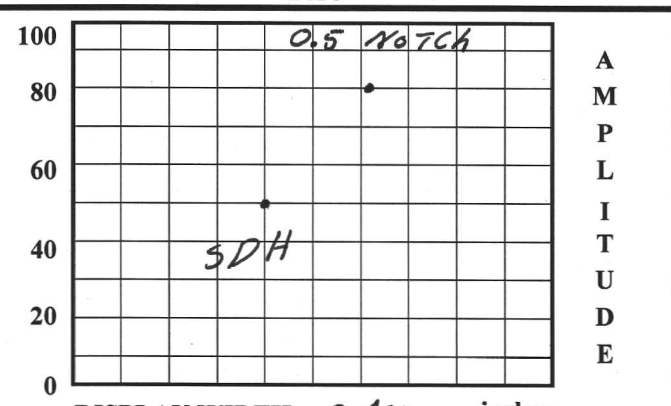
ANGLE VERIFICATION

BLOCK TYPE Rompas S/N: 93-5724
NOMINAL ANGLE: 70 ACTUAL ANGLE 70 °

INSTRUMENT

MANUFACTURER: Krautkramer DUE DATE: 08-18-09
MODEL NO.: USN 60 S/N: E37688

DAC



DISPLAY WIDTH 2.400 inches

REFLECTOR SCAN DIRECT.	NTC	SDH	REFERENCE SENSITIVITY	MEMORY NUMBER
AXIAL	☒	☐	59.2 dB	70°-3in-SS
CIRC.	☐	☐	N/A dB	N/A

RANGE: 2.400 inches
PROBE DELA 5.4925 msec
VELOCITY .1173 msec
DISP DELAY: 0.000
*ENERGY: High
*DAMPING: 1k ohms
*PRR/PRF: Auto High
ANGLE: 70 deg
ZERO: N/A msec

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

REF. REFLECTOR: Rompas SDH GAIN: 50.7 dB
AMPLITUDE: 50 % METAL PATH: 0.961

CALIBRATION TIMES

INITIAL TIME: 0745 FINAL TIME: 1228

VERIFICATION TIMES	1) 0844	2) 0904	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-D193-03

EXAMINER: Jose Alejandro [signature] LVL.: II
EXAMINER: Eddie Reed [signature] LVL.: II
REVIEWER: [signature] LVL.: III DATE: 6-24-09

ANII: [signature]
DATE: 7/7/09
PAGE 3 OF 6

ACCESS: FORMS DATABASE 07-25-07

TENNESSEE VALLEY AUTHORITY	MANUAL ULTRASONIC PIPING EXAMINATION DATA SHEET	REPORT NUMBER R-P0508

PROJECT: WBN UNIT/CYCLE 2/00
SYSTEM: SIS
WELD I.D.: SIF-D193-03
CONFIG.: VAL TO P
FLOW →

EXAMINATION DATE 06-22-09
START TIME: 0847 END TIME: 0857
EXAM SURFACE ☐ ID ☒ OD
MATERIAL TYPE: ☐ CS ☒ SS ☐ CSCL ☐ CCSS
SURFACE TEMP.: 77.9 PYRO NO. E39054

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

EXAMINATION ANGLE	45 DEG.	70 DEG.
AXIAL SCAN SENSITIVITY	39.6 dB	52.2 dB
CIRC. SCAN SENSITIVITY	40.8 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°	☒	
										☐	
										☐	

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: Ellis Reed [signature] LEVEL: II
REVIEWED BY: Darlene [signature] LEVEL: III DATE: 6-24-09

ANII: [signature]
DATE: 7/7/09
PAGE 4 OF 6

ACCESS: FORMS DATABASE 10/18/01

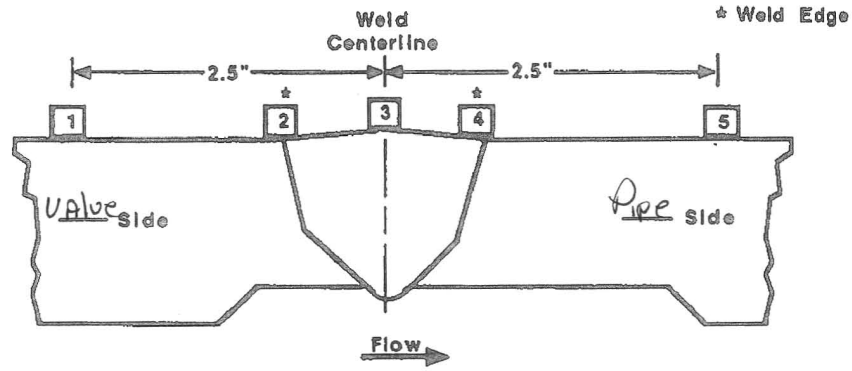
TVA	WALL THICKNESS PROFILE SHEET	REPORT NO: R-P0508

PROJECT: Watts Bar Nuclear
UNIT: 2

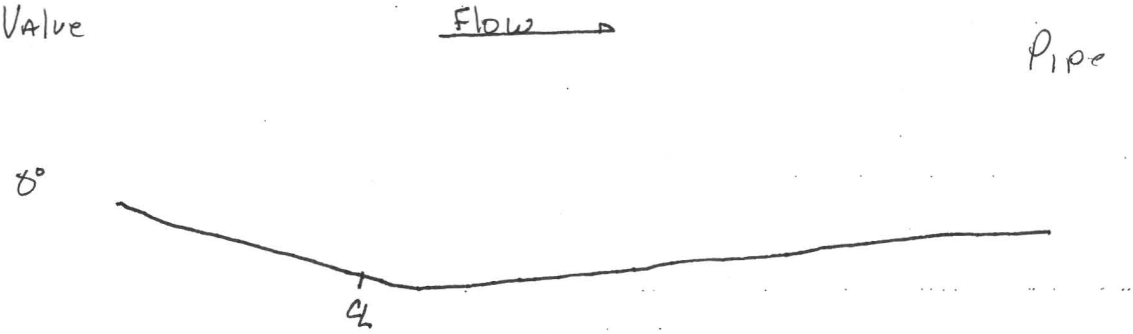
WELD NO: SIF-D193-03
SYSTEM: SIS

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

Position	0°	90°	180°	270°
1	N/A			
2	.691		N	
3	.570		A	
4	.413			
5	.445			



CROWN HEIGHT: Flush
CROWN WIDTH: 3/4"
DIAMETER: 3.0
WELD LENGTH: 11 1/2"



EXAMINER: Marcie Kalkbrenner
LEVEL: II
DATE: 6/17/09

REVIEWED BY: Darlene Dudley
LEVEL: III
DATE: 6-24-09

ANII: [signature]
DATE: 7/7/09
PAGE 5 OF 6

TVA 19668 (NP-5-89)

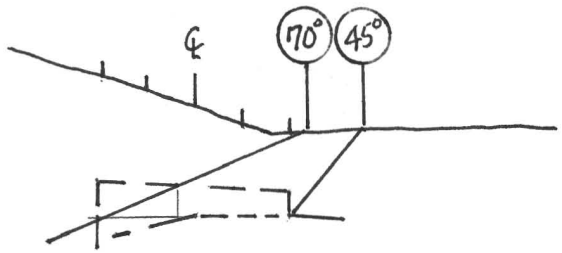
1-108-999-44

TVA Office of Nuclear Power	PROJECT: WBN SYSTEM: SIS UNIT: 2 WELD NO: SIF-D193-03	REPORT NO.: R-P0508

FLOW →

VALVE

PIPE



BY: Jose Alejandro LEVEL: II DATE: 06 ~~28~~ 27-09 JA 06-22-09 PAGE 6 OF 6

R. PO 508

TVA Procedure
N-GP-31

Weld # SIF-Δ193-03

Attachment 3

Item 1	Required examination Volume in sq. in. **(width x height)**	1	0.2		0.2
Item 2	Number of **scan directions**				4
Item 3	Total Scan **volume** in sq. in.				0.8
Item 4	Total **length** of weld				11.5
Item 5	Total required **exam volume** in cubic inches				9.2
Item 6	**Exam volume achieved** (sq. in.) in direction 1 X **length of weld achieved**	0	0		0
Item 7	**Exam volume achieved** (sq. in.) in direction 2 X **length of weld achieved**	0.16	11.5		1.84
Item 8	**Exam volume achieved** (sq. in.) in direction 3 X **length of weld achieved**	0.2	11.5		2.3
Item 9	**Exam volume achieved** (sq. in.) in direction 4 X **length of weld achieved**	0.2	11.5		2.3
Item 10	Determined the **achivied exam volume** add 6, 7, 8 & 9				6.44
Item 11	Exam **volume percentage** item 10/item 5 x 100				70

TA
06-22-09

Limited One sided exam due to valve

INFORMATION ONLY