



GE Nuclear Energy

# EXAMINATION SUMMARY SHEET

REPORT NO.:

R-R11-019

PROJECT: WNP2 - RFO11  
1FR9Z

PROCEDURE: UT-WNP2-208V0 REV: 0 FRR: N/A  
N/A  
N/A

SYSTEM: RECIRCULATION

UT-WNP2-207V0 REV: 0 FRR: N/A  
N/A  
N/A

WELD NO.: 20RRC(6)-8

CONFIGURATION: PIPE TO VALVE

N/A REV: N/A FRR: N/A  
N/A  
N/A

EXAMINER: R. PASZKOWSKI LEVEL: II

☐ MT ☐ PT ☒ UT ☐ VT

EXAMINER: C. VAN HECKE LEVEL: II

☒ CIRCUMFERENTIAL

EXAMINER: N/A LEVEL: N/A

WELD TYPE: ☐ LONGITUDINAL ☐ OTHER N/A

DATA SHEET NO.(S): DA-R11-001  
DA-R11-002

CAL SHEET NO.(S): CA-R11-001  
CA-R11-002  
CA-R11-003

During the ultrasonic examination of the above referenced weld, one (1) reportable ID connected planar indication was recorded with the "Smart 2000" system utilizing a 45° shear wave and 60° refracted longitudinal wave search units. This weld was examined for purposes of indication monitoring only. The indication has the following parameters:

Ind. No.	Distance from Zero Reference	Total Length	Thru Wall Dimension	Remaining Ligament	Side of Weld	Type of Reflector	Search Unit
* 1.	-1.00"	3.60"	18.7%	.80"	UPST	CIRC	45°S / 60°RL

\* The reflector face appears to be smooth and non-faceted without the presence of axial components, which is not typical of IGSCC type indications. This indication straddles "Lo" reference and starts at approximately 1.0" counterclockwise from top dead center.

Supplemental relooks and thru-wall depth sizing were performed with the "Smart 2000" system utilizing the 60° RL search unit. The thru-wall depth of this reflector was determined by the high angle absolute arrival time tip diffraction method. The length of this indication was determined by measurements taken from the "Smart 2000" 60° RL data with allowances for beam spread. This indication was sized per NUREG 0313 requirements which are more stringent than ASME Section XI. This indication has not exhibited any noticeable thru-wall propagation or length since it was sized during the R10 ISI outage in 1995, or previous outages.

The 45° shear also recorded non-relevant indications and beam redirect, along with the above referenced indication, from the upstream side of the weld.

The 60° RL also recorded inside surface geometry, along with the above referenced indication, from the upstream side of the weld.

No examination was performed downstream due to the valve configuration.

Previous data was reviewed prior to this summary.

<input checked="" type="checkbox"/> EXAM COMPLETE	<input type="checkbox"/> PARTIALLY EXAMINED (EXPLAIN IN COMMENTS)	<input type="checkbox"/> EXAM COMPLETE IN COMBINATION WITH DATA SHEETS BELOW	CODE COVERAGE OBTAINED:  N/A %
ADDITIONAL DATA SHEETS: N/A			
COMPARED TO: <input type="checkbox"/> PSI <input checked="" type="checkbox"/> ISI REPORT NO.(S): R-R10-001 <input checked="" type="checkbox"/> NO CHANGE		NO. OF RECORDABLE INDICATIONS: 1	
EXAMINATION RESULTS: <input type="checkbox"/> ACCEPTABLE <input checked="" type="checkbox"/> UNACCEPTABLE		NO. OF REPORTABLE INDICATIONS: 1	
SUMMARY BY <i>[Signature]</i>	LEVEL III DATE 4/24/96	UTILITY REVIEW <i>[Signature]</i>	DATE 4-25-96
GE REVIEWED BY <i>[Signature]</i>	LEVEL III DATE 4-25-96	ANII REVIEW <i>[Signature]</i>	DATE 4/26/96

PAGE: 1 OF: 11

FORM UT-08 REV. 9

9605210397 960514  
PDR ADDCK 05000397  
PDR



GE Nuclear Energy

# WALL THICKNESS PROFILE SHEET

SITE: WNP UNIT: 2

REPORT NO.:

PROJECT: 1ER9Z - REQ11

R-R11-019

SYSTEM: RECIRCULATION

COMPONENT ID NO.: 20BRC(6)-8

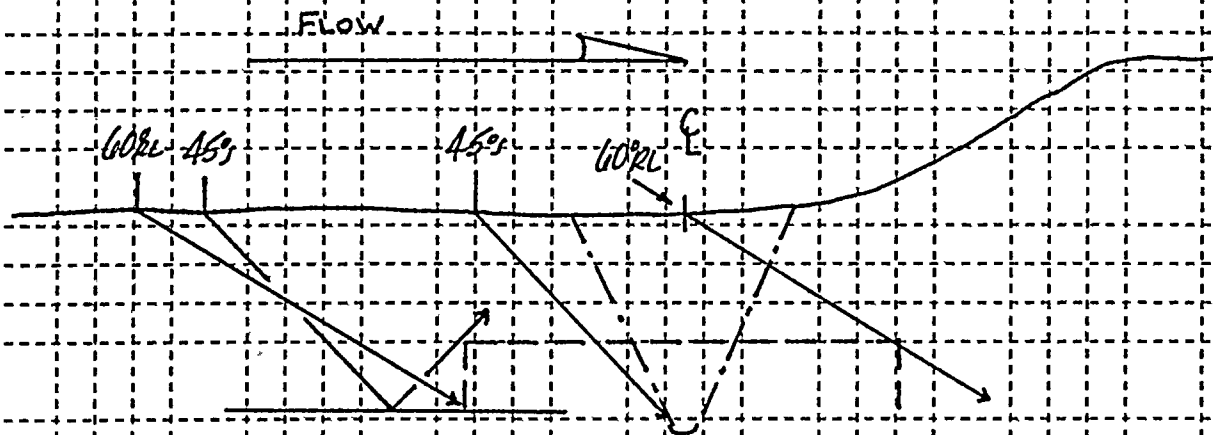
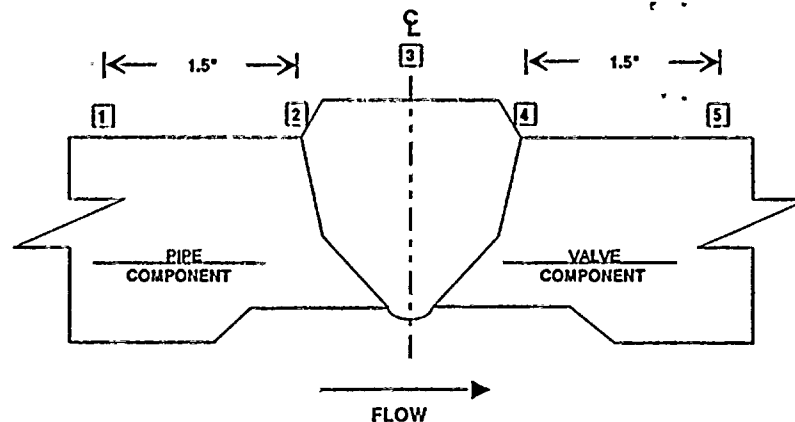
POSITION	0°	90°	180°	270°
1	1.00"	N/A	N/A	N/A
2	.98"	N/A	N/A	N/A
3	1.13"	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A
5	2.06"	N/A	N/A	N/A

CROWN HEIGHT: FLUSH

CROWN WIDTH: 1.20"

NOM DIAMETER: 20.00"

WELD LENGTH: 63.00"



45° SHEAR & 60° PL COVERAGE PLOT.

TAKEN FROM 1992 GE DATA

DRAWN BY David W. Hester LEVEL III DATE 4/25/96  
GE REVIEWED BY \_\_\_\_\_ LEVEL \_\_\_\_\_ DATE \_\_\_\_\_

UTILITY REVIEW 4/25/96 DATE \_\_\_\_\_

ANII REVIEW 4/25/96 DATE \_\_\_\_\_

PAGE: 2 OF: 11

FORM UT-01 REV. 4



GE Nuclear Energy

# INDICATION PLOT SHEET

SITE: WNP UNIT: 2

PROJECT: 1ER9Z - REQ11

REPORT NO.:

R-R11-019

SYSTEM: RECIRCULATION

COMPONENT ID NO.: 20RRC(6)-8

CONFIGURATION: PIPE FLOW VALVE

FLOW

①

Q

4.5° SHEAR

① — NON-GEOMETRIC INDICATION (PLANAR INDICATION #1)

DRAWN BY

III  
LEVEL

4/25/96  
DATE

GE REVIEWED BY

III  
LEVEL

4-24-96  
DATE

UTILITY REVIEW

DATE

ANII REVIEW

DATE

PAGE: 3 OF: 11

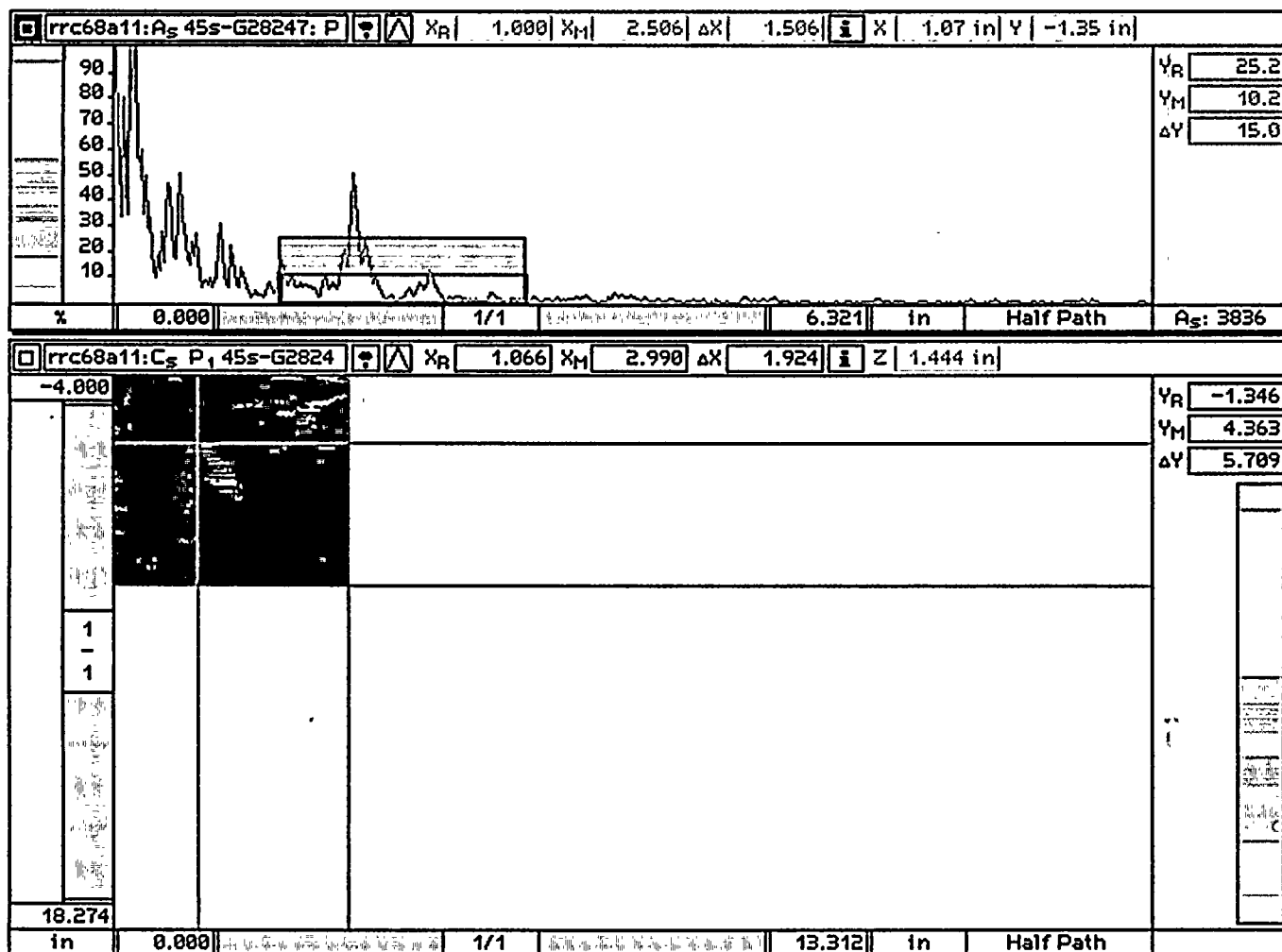
FORM UT-02 REV. 5





GE Nuclear Energy

# ULTRASONIC SCAN DATA PRINT SHEET (AUTOMATED WITH Smart 2000)



Non-Geometric Indication (Planar Indication #1)

SITE: WNP UNIT: 2 PROJECT NO.: 1ER9Z REPORT NO.: R-R11-019  
WELD NO.: 20RRC(6)-8 SEARCH UNIT: 45°/SHR INDICATION NO.: 1 PAGE: 4 OF: 11



**GE Nuclear Energy**

# INDICATION PLOT SHEET

SITE: WNP UNIT: 2

**REPORT NO.:**

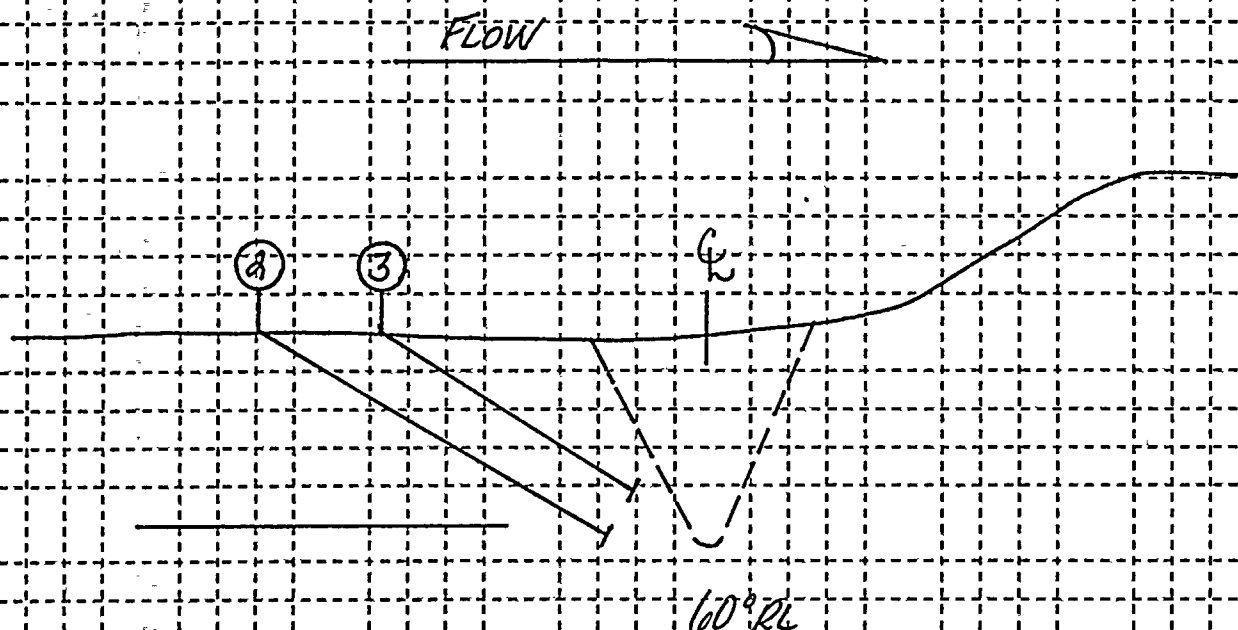
PROJECT: 1E89Z - RFQ11

R-R11-019

**SYSTEM: RECIRCULATION**

COMPONENT ID NO.: 20RRC(6)-8

CONFIGURATION: PIPE \_\_\_\_\_ FLOW \_\_\_\_\_ VALVE \_\_\_\_\_



② — NON-GEOMETRIC INDICATION (PLANAR INDICATION #1 - BASE REFLECTOR).

### ③ — NON-GEOMETRIC INDICATION (PLANAR INDICATION #1 - TIP REFLECTOR)

**DRAWN BY**

III      4/25/96  
LEVEL      DATE

GE REVIEWED BY

~~III~~ 4-25-96  
LEVEL DATE

## UTILITY REVIEW

DATE \_\_\_\_\_

## ANU REVIEW

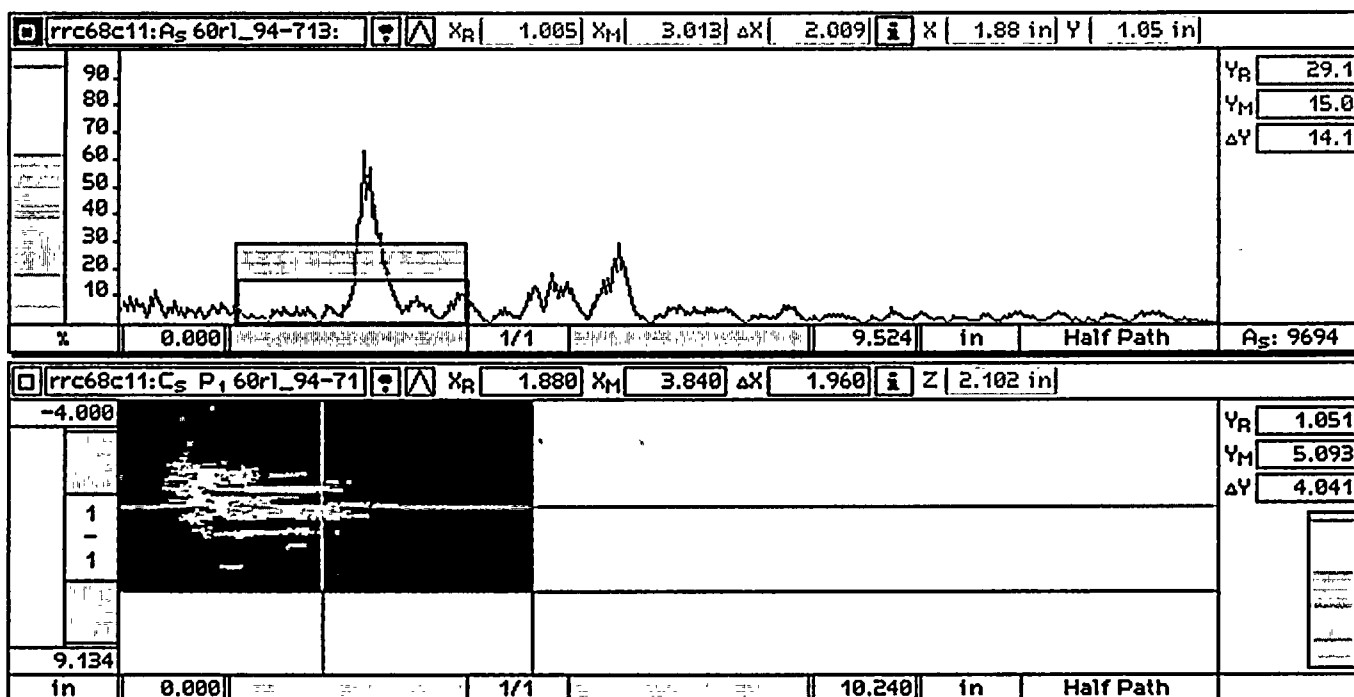
DATE \_\_\_\_\_

PAGE: 5 OF: 11

FORM UT-02 REV. 5



GE Nuclear Energy

ULTRASONIC SCAN DATA PRINT SHEET  
(AUTOMATED WITH Smart 2000)

Non-Geometric Indication (Planar Indication #1 Base Reflector)

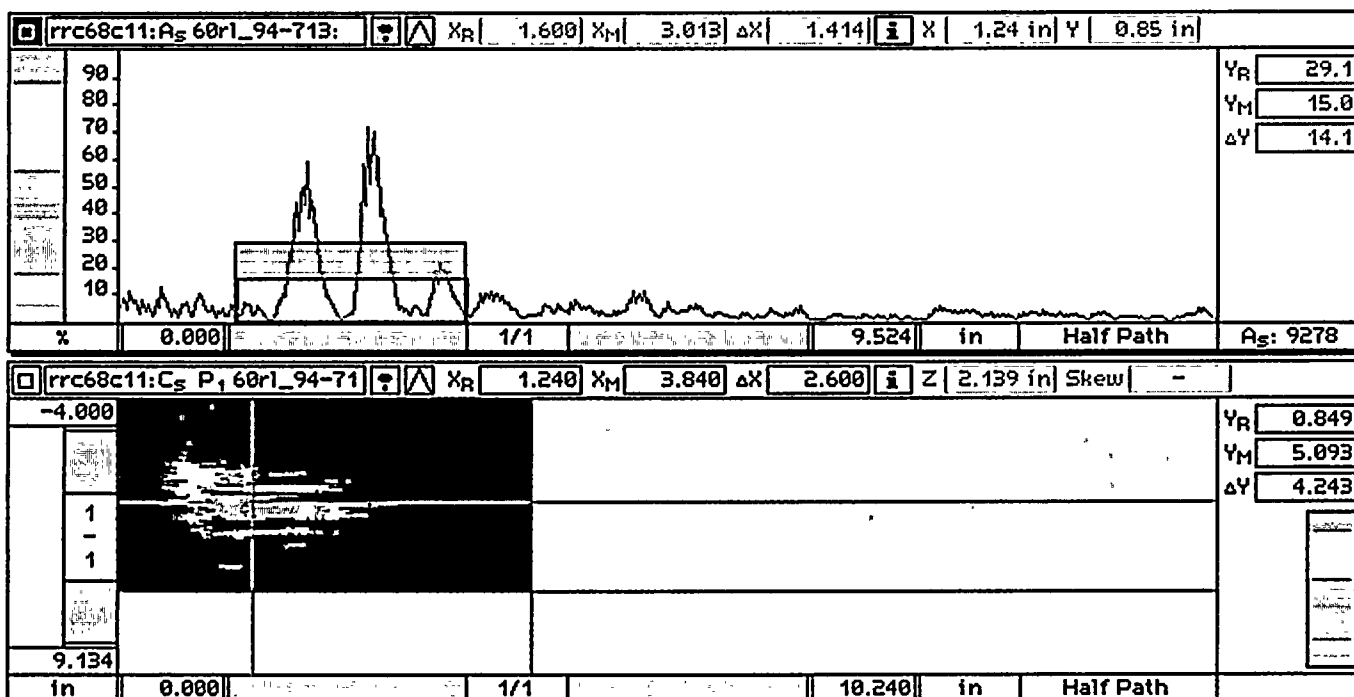
SITE: WNP UNIT: 2 PROJECT NO.: 1ER9Z REPORT NO.: R-R11-019  
WELD NO.: 20RRC(6)-8 SEARCH UNIT: 60°/RL INDICATION NO.: 2 PAGE: 6 OF: 11





GE Nuclear Energy

# ULTRASONIC SCAN DATA PRINT SHEET (AUTOMATED WITH Smart 2000)



Non-Geometric Indication (Planar Indication #1 Tip Reflector)

SITE: WNP UNIT: 2 PROJECT NO.: 1ER9Z REPORT NO.: R-R11-019  
WELD NO.: 20RRC(6)-8 SEARCH UNIT: 60°/RL INDICATION NO.: 3 PAGE: 7 OF: 11





GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET  
(AUTOMATED WITH Smart 2000)

SITE: WNP

PROCEDURE NO.: UT-WNP2-208V0

REPORT NO.: R-R11-019

UNIT: 2

REVISION NO.: 0

DATA SHEET NO.: DA-R11-001

PROJECT NO.: 1FR9Z - RFO11

FRR NO.: N/A

CALIBRATION SHEET NO.: CA-R11-001

SYSTEM: RECIRCULATION EXAM SURFACE TEMP: 90 °F COUPLANT: ULTRAGEL II EXAM START: 14:50

WELD ID: 20RRC(6)-8 THERMOMETER S/N: 145989 BATCH NO.: 094041 EXAM END: 21:50

SEARCH UNIT: 45° / SHR EXAMINATION SURFACE: OD COMPONENT: PIPE FLOW VALVE

SCAN: A11 SCAN DIRECTION: AXUP GAIN(dB): 32.0

DISK/SIDE: D-01/A FILENAME(S): RRC68A11

## EXAMINATION RESULTS:

- ☐ NO RECORDED INDICATIONS ☐ ACOUSTIC INTERFACE  
☐ ROOT GEOMETRY ☐ INSIDE SURFACE GEOMETRY  
☐ COUNTERBORE GEOMETRY ☒ NON-GEOMETRIC INDICATIONS  
☒ NON-RELEVANT INDICATIONS ☒ OTHER: BEAM REDIRECT

## COMMENTS:

Scan performed at gain level below recommended scanning  
sensitivity in order to maintain a 10-30% average ID noise level.

SCAN: A12 SCAN DIRECTION: AXUP GAIN(dB): 30.0

DISK/SIDE: D-01/A FILENAME(S): RRC68A12

## EXAMINATION RESULTS:

- ☐ NO RECORDED INDICATIONS ☐ ACOUSTIC INTERFACE  
☐ ROOT GEOMETRY ☐ INSIDE SURFACE GEOMETRY  
☐ COUNTERBORE GEOMETRY ☒ NON-GEOMETRIC INDICATIONS  
☒ NON-RELEVANT INDICATIONS ☒ OTHER: BEAM REDIRECT

## COMMENTS:

Scan performed at gain level below recommended scanning  
sensitivity in order to maintain a 10-30% average ID noise level.

SCAN: A50 SCAN DIRECTION: CWUP GAIN(dB): 32.0

DISK/SIDE: D-01/A FILENAME(S): RRC68A50

## EXAMINATION RESULTS:

- ☐ NO RECORDED INDICATIONS ☐ ACOUSTIC INTERFACE  
☐ ROOT GEOMETRY ☐ INSIDE SURFACE GEOMETRY  
☐ COUNTERBORE GEOMETRY ☐ NON-GEOMETRIC INDICATIONS  
☒ NON-RELEVANT INDICATIONS ☐ OTHER: N/A

## COMMENTS:

Scan performed at gain level below recommended scanning  
sensitivity in order to maintain a 10-30% average ID noise level.

SCAN: A51 SCAN DIRECTION: CWUP GAIN(dB): 32.0

DISK/SIDE: D-01/A FILENAME(S): RRC68A51

## EXAMINATION RESULTS:

- ☐ NO RECORDED INDICATIONS ☐ ACOUSTIC INTERFACE  
☐ ROOT GEOMETRY ☐ INSIDE SURFACE GEOMETRY  
☐ COUNTERBORE GEOMETRY ☐ NON-GEOMETRIC INDICATIONS  
☒ NON-RELEVANT INDICATIONS ☐ OTHER: N/A

## COMMENTS:

Scan performed at gain level below recommended scanning  
sensitivity in order to maintain a 10-30% average ID noise level.

SCAN: A70 SCAN DIRECTION: CCUP GAIN(dB): 32.0

DISK/SIDE: D-01/A FILENAME(S): RRC68A70

## EXAMINATION RESULTS:

- ☐ NO RECORDED INDICATIONS ☐ ACOUSTIC INTERFACE  
☐ ROOT GEOMETRY ☐ INSIDE SURFACE GEOMETRY  
☐ COUNTERBORE GEOMETRY ☐ NON-GEOMETRIC INDICATIONS  
☒ NON-RELEVANT INDICATIONS ☐ OTHER: N/A

## COMMENTS:

Scan performed at gain level below recommended scanning  
sensitivity in order to maintain a 10-30% average ID noise level.

SCAN: A71 SCAN DIRECTION: CCUP GAIN(dB): 30.0

DISK/SIDE: D-01/A FILENAME(S): RRC68A71

## EXAMINATION RESULTS:

- ☐ NO RECORDED INDICATIONS ☐ ACOUSTIC INTERFACE  
☐ ROOT GEOMETRY ☐ INSIDE SURFACE GEOMETRY  
☐ COUNTERBORE GEOMETRY ☐ NON-GEOMETRIC INDICATIONS  
☒ NON-RELEVANT INDICATIONS ☐ OTHER: N/A

## COMMENTS:

Scan performed at gain level below recommended scanning  
sensitivity in order to maintain a 10-30% average ID noise level.

REMARKS: No examination was performed downstream due to the valve configuration.  
Examination performed for purposes of indication monitoring only.

EXAMINER: *R. D. Paszkowski* II 4-22-96  
DATE: 4/25/96  
GE REVIEWED BY: *Donald White* III 4/25/96  
DATE: 4/25/96

UTILITY REVIEW: *Don White*  
DATE: 4-25-96  
ANII REVIEW: *Steve*  
DATE: 4/25/96

PAGE: 8 OF: 11

FORM UT-07 REV. 6



GE Nuclear Energy

ULTRASONIC EXAMINATION DATA SHEET  
(AUTOMATED WITH Smart 2000)SITE: WNPPROCEDURE NO.: UT-WNP2-207V0/208V0REPORT NO.: R-R11-019UNIT: 2REVISION NO.: 0DATA SHEET NO.: DA-R11-002PROJECT NO.: 1FR9Z - RFO11FRR NO.: N/ACALIBRATION SHEET NO.: CA-R11-002\_003SYSTEM: RECIRCULATION EXAM SURFACE TEMP: 90 °F COUPLANT: ULTRAGEL II EXAM START: 23:45WELD ID: 20RRC(6)-8 THERMOMETER S/N: 145989 BATCH NO.: 094041 EXAM END: 02:27SEARCH UNIT: 60° / RL EXAMINATION SURFACE: OD COMPONENT: PIPE FLOW VALVESCAN: C10 SCAN DIRECTION: LKDN GAIN(dB): 42.0DISK/SIDE: D-01/A FILENAME(S): RRC68C10

## EXAMINATION RESULTS:

- |  |   |
|--|---|
| <input type="checkbox"/> NO RECORDED INDICATIONS             | <input type="checkbox"/> ACOUSTIC INTERFACE                       |
| <input type="checkbox"/> ROOT GEOMETRY                       | <input type="checkbox"/> INSIDE SURFACE GEOMETRY                  |
| <input type="checkbox"/> COUNTERBORE GEOMETRY                | <input checked="" type="checkbox"/> NON-GEOMETRIC INDICATIONS     |
| <input checked="" type="checkbox"/> NON-RELEVANT INDICATIONS | <input checked="" type="checkbox"/> OTHER: <u>SHEAR COMPONENT</u> |

COMMENTS:

N/ASCAN: C11 SCAN DIRECTION: LKDN GAIN(dB): 36.0DISK/SIDE: D-01/A FILENAME(S): RRC68C11

## EXAMINATION RESULTS:

- |  |   |
|--|---|
| <input type="checkbox"/> NO RECORDED INDICATIONS             | <input type="checkbox"/> ACOUSTIC INTERFACE                       |
| <input type="checkbox"/> ROOT GEOMETRY                       | <input type="checkbox"/> INSIDE SURFACE GEOMETRY                  |
| <input type="checkbox"/> COUNTERBORE GEOMETRY                | <input checked="" type="checkbox"/> NON-GEOMETRIC INDICATIONS     |
| <input checked="" type="checkbox"/> NON-RELEVANT INDICATIONS | <input checked="" type="checkbox"/> OTHER: <u>SHEAR COMPONENT</u> |

COMMENTS:

Scan performed at gain level below recommended scanning sensitivity in order to maintain a 10-30% average ID noise level.SCAN: N/A SCAN DIRECTION: N/A GAIN(dB): N/ADISK/SIDE: N/A FILENAME(S): N/A

## EXAMINATION RESULTS:

- |   |  |
|---|--|
| <input type="checkbox"/> NO RECORDED INDICATIONS  | <input type="checkbox"/> ACOUSTIC INTERFACE        |
| <input type="checkbox"/> ROOT GEOMETRY            | <input type="checkbox"/> INSIDE SURFACE GEOMETRY   |
| <input type="checkbox"/> COUNTERBORE GEOMETRY     | <input type="checkbox"/> NON-GEOMETRIC INDICATIONS |
| <input type="checkbox"/> NON-RELEVANT INDICATIONS | <input type="checkbox"/> OTHER: <u>N/A</u>         |

COMMENTS:

N/ASCAN: N/A SCAN DIRECTION: N/A GAIN(dB): N/ADISK/SIDE: N/A FILENAME(S): N/A

## EXAMINATION RESULTS:

- |   |  |
|---|--|
| <input type="checkbox"/> NO RECORDED INDICATIONS  | <input type="checkbox"/> ACOUSTIC INTERFACE        |
| <input type="checkbox"/> ROOT GEOMETRY            | <input type="checkbox"/> INSIDE SURFACE GEOMETRY   |
| <input type="checkbox"/> COUNTERBORE GEOMETRY     | <input type="checkbox"/> NON-GEOMETRIC INDICATIONS |
| <input type="checkbox"/> NON-RELEVANT INDICATIONS | <input type="checkbox"/> OTHER: <u>N/A</u>         |

COMMENTS:

N/ASCAN: N/A SCAN DIRECTION: N/A GAIN(dB): N/ADISK/SIDE: N/A FILENAME(S): N/A

## EXAMINATION RESULTS:

- |   |  |
|---|--|
| <input type="checkbox"/> NO RECORDED INDICATIONS  | <input type="checkbox"/> ACOUSTIC INTERFACE        |
| <input type="checkbox"/> ROOT GEOMETRY            | <input type="checkbox"/> INSIDE SURFACE GEOMETRY   |
| <input type="checkbox"/> COUNTERBORE GEOMETRY     | <input type="checkbox"/> NON-GEOMETRIC INDICATIONS |
| <input type="checkbox"/> NON-RELEVANT INDICATIONS | <input type="checkbox"/> OTHER: <u>N/A</u>         |

COMMENTS:

N/ASCAN: N/A SCAN DIRECTION: N/A GAIN(dB): N/ADISK/SIDE: N/A FILENAME(S): N/A

## EXAMINATION RESULTS:

- |   |  |
|---|--|
| <input type="checkbox"/> NO RECORDED INDICATIONS  | <input type="checkbox"/> ACOUSTIC INTERFACE        |
| <input type="checkbox"/> ROOT GEOMETRY            | <input type="checkbox"/> INSIDE SURFACE GEOMETRY   |
| <input type="checkbox"/> COUNTERBORE GEOMETRY     | <input type="checkbox"/> NON-GEOMETRIC INDICATIONS |
| <input type="checkbox"/> NON-RELEVANT INDICATIONS | <input type="checkbox"/> OTHER: <u>N/A</u>         |

COMMENTS:

N/AREMARKS: Scans C10 and C11 inadvertently zeroed .50" upstream of weld centerline.No examination was performed downstream due to the valve configuration.Examination performed for purposes of indication monitoring only.

Robert Pearson II 4-22-96  
EXAMINER LEVEL DATE  
Arnold White III 4/25/96  
GE REVIEWED BY LEVEL DATE

[Signature] 4-25-96  
UTILITY REVIEW DATE  
[Signature] 4/25/96  
ANII REVIEW DATE

PAGE: 9 OF: 11

FORM UT-07 REV. 6





GE Nuclear Energy

ULTRASONIC SCAN PARAMETER SHEET  
(AUTOMATED WITH Smart 2000)

SITE: <u>WNP</u>	PROCEDURE NO.: <u>UT-WNP2-208V0</u>	REPORT NO.: <u>R-R11-019</u>
UNIT: <u>2</u>	REVISION NO.: <u>0</u>	DATA SHEET NO.: <u>DA-R11-001</u>
PROJECT NO.: <u>1ER9Z - RFO11</u>	FRR NO.: <u>N/A</u>	CALIBRATION SHEET NO.: <u>CA-R11-001</u>

SYSTEM: RECIRCULATION WELD ID: 20BRC(6)-8 MOTOR STEPS: CIR: 485.01 / in TRA: 500.00 / in  
WELD REFERENCE, (GE-ADM-1005): Lo: TOP DEAD CENTER Wo: WELD CENTERLINE SEARCH UNIT: 45° / SHR

## EXAMINATION SETUP

COMPONENT DIA: 20.0" WELD LENGTH: 63.0" TRACK DIA: 24.0" ARM LENGTH: 12.0" TRACK LOCATION: 9.0" UPST OF WELD CENTERLINE

## SCAN PARAMETERS

SCAN: <u>A11</u>	SCAN DIRECTION: <u>AXUP</u>	SKEW: <u>0°</u>	SCAN: <u>A12</u>	SCAN DIRECTION: <u>AXUP</u>	SKEW: <u>0±10°</u>
<u>SCANNING "X" INDEXING "Y"</u> START: <u>0°</u> <u>-4.0°</u> SIZE: <u>3.00"</u> <u>8.0"</u> OFFSET: <u>0°</u> <u>-4.0°</u> CIR: <u>4.0° CCW FROM TOP DEAD CENTER</u> RESOLUTION: <u>.0260"</u> <u>.0804"</u> TRA: <u>WELD CENTERLINE</u> MOTOR DIR: <u>INVERSE</u> <u>NORMAL</u> ROT: <u>LOOKING DOWNSTREAM</u>			<u>SCANNING "X" INDEXING "Y"</u> START: <u>0°</u> <u>0°</u> SIZE: <u>3.00"</u> <u>63.50"</u> OFFSET: <u>0°</u> <u>0°</u> CIR: <u>TOP DEAD CENTER</u> RESOLUTION: <u>.0247"</u> <u>.1814"</u> TRA: <u>WELD CENTERLINE</u> MOTOR DIR: <u>INVERSE</u> <u>NORMAL</u> ROT: <u>LOOKING DOWNSTREAM</u>		
<u>SCANNING "X" INDEXING "Y"</u> START: <u>0°</u> <u>0°</u> SIZE: <u>63.50"</u> <u>2.35"</u> OFFSET: <u>0°</u> <u>0°</u> CIR: <u>TOP DEAD CENTER</u> RESOLUTION: <u>.0350"</u> <u>.1880"</u> TRA: <u>WELD CENTERLINE</u> MOTOR DIR: <u>NORMAL</u> <u>INVERSE</u> ROT: <u>LOOKING DOWNSTREAM</u>			<u>SCANNING "X" INDEXING "Y"</u> START: <u>0°</u> <u>0°</u> SIZE: <u>63.50"</u> <u>2.35"</u> OFFSET: <u>0°</u> <u>0°</u> CIR: <u>TOP DEAD CENTER</u> RESOLUTION: <u>.0350"</u> <u>.1880"</u> TRA: <u>WELD CENTERLINE</u> MOTOR DIR: <u>NORMAL</u> <u>INVERSE</u> ROT: <u>LOOKING DOWNSTREAM</u>		
<u>SCANNING "X" INDEXING "Y"</u> START: <u>0°</u> <u>0°</u> SIZE: <u>63.50"</u> <u>2.35"</u> OFFSET: <u>0°</u> <u>0°</u> CIR: <u>TOP DEAD CENTER</u> RESOLUTION: <u>.0350"</u> <u>.1880"</u> TRA: <u>WELD CENTERLINE</u> MOTOR DIR: <u>NORMAL</u> <u>INVERSE</u> ROT: <u>LOOKING DOWNSTREAM</u>			<u>SCANNING "X" INDEXING "Y"</u> START: <u>0°</u> <u>0°</u> SIZE: <u>64.20"</u> <u>2.50"</u> OFFSET: <u>0°</u> <u>0°</u> CIR: <u>TOP DEAD CENTER</u> RESOLUTION: <u>.0350"</u> <u>.1880"</u> TRA: <u>WELD CENTERLINE</u> MOTOR DIR: <u>NORMAL</u> <u>INVERSE</u> ROT: <u>LOOKING DOWNSTREAM</u>		

REMARKS: No examination was performed downstream due to the valve configuration.  
Examination performed for purposes of indication monitoring only.

Robert Paszkowski  
EXAMINER

II 4-22-96  
LEVEL DATE

Bob Ullrich  
UTILITY REVIEW

4-25-96  
DATE

Ornald Wilkins  
GE REVIEWED BY

III 4/25/96  
LEVEL DATE

W. J. H. H.  
ANII REVIEW

4/24/96  
DATE

PAGE: 10 OF: 11



GE Nuclear Energy

ULTRASONIC SCAN PARAMETER SHEET  
(AUTOMATED WITH Smart 2000)

SITE: <u>WNP</u>	PROCEDURE NO.: <u>UT-WNP2-207V0/208V0</u>	REPORT NO.: <u>R-R11-019</u>
UNIT: <u>2</u>	REVISION NO.: <u>0</u>	DATA SHEET NO.: <u>DA-R11-002</u>
PROJECT NO.: <u>1ER9Z - RFO11</u>	FRR NO.: <u>N/A</u>	CALIBRATION SHEET NO.: <u>CA-R11-002_003</u>

SYSTEM: RECIRCULATION WELD ID: 20BRC(6)-8 MOTOR STEPS: CIR: 485.01/in TRA: 500.00/in  
WELD REFERENCE, (GE-ADM-1005): Lo: TOP DEAD CENTER Wo: TOP DEAD CENTER SEARCH UNIT: 60°/RL

## EXAMINATION SETUP

COMPONENT DIA: 20.0" WELD LENGTH: 63.0" TRACK DIA: 24.0" ARM LENGTH: 12.0" TRACK LOCATION: 9.0" UPST OF WELD CENTERLINE

## SCAN PARAMETERS

SCAN: <u>C10</u>	SCAN DIRECTION: <u>LKON</u>	SKEW: <u>0x10°</u>	SCAN: <u>C11</u>	SCAN DIRECTION: <u>LKON</u>	SKEW: <u>0°</u>
<u>SCANNING "X" INDEXING "Y"</u> START: <u>0°</u> <u>0°</u> SIZE: <u>3.80"</u> <u>63.50"</u> OFFSET: <u>0°</u> <u>0°</u> CIR: <u>TOP DEAD CENTER</u> RESOLUTION: <u>0360°</u> <u>1402"</u> TRA: <u>WELD CENTERLINE</u> MOTOR DIR: <u>INVERSE</u> <u>NORMAL</u> ROT: <u>LOOKING DOWNSTREAM</u>			<u>SCANNING "X" INDEXING "Y"</u> START: <u>0°</u> <u>-4.00°</u> SIZE: <u>3.80"</u> <u>9.00"</u> OFFSET: <u>0°</u> <u>-4.00°</u> CIR: <u>4.00" CCW OF TOP DEAD CENTER</u> RESOLUTION: <u>0200°</u> <u>1010"</u> TRA: <u>WELD CENTERLINE</u> MOTOR DIR: <u>INVERSE</u> <u>NORMAL</u> ROT: <u>LOOKING DOWNSTREAM</u>		
<u>SCANNING "X" INDEXING "Y"</u> START: <u>N/A</u> <u>N/A</u> SIZE: <u>N/A</u> <u>N/A</u> OFFSET: <u>N/A</u> <u>N/A</u> CIR: <u>N/A</u> RESOLUTION: <u>N/A</u> <u>N/A</u> TRA: <u>N/A</u> MOTOR DIR: <u>N/A</u> <u>N/A</u> ROT: <u>N/A</u>			<u>SCANNING "X" INDEXING "Y"</u> START: <u>N/A</u> <u>N/A</u> SIZE: <u>N/A</u> <u>N/A</u> OFFSET: <u>N/A</u> <u>N/A</u> CIR: <u>N/A</u> RESOLUTION: <u>N/A</u> <u>N/A</u> TRA: <u>N/A</u> MOTOR DIR: <u>N/A</u> <u>N/A</u> ROT: <u>N/A</u>		
<u>SCANNING "X" INDEXING "Y"</u> START: <u>N/A</u> <u>N/A</u> SIZE: <u>N/A</u> <u>N/A</u> OFFSET: <u>N/A</u> <u>N/A</u> CIR: <u>N/A</u> RESOLUTION: <u>N/A</u> <u>N/A</u> TRA: <u>N/A</u> MOTOR DIR: <u>N/A</u> <u>N/A</u> ROT: <u>N/A</u>			<u>SCANNING "X" INDEXING "Y"</u> START: <u>N/A</u> <u>N/A</u> SIZE: <u>N/A</u> <u>N/A</u> OFFSET: <u>N/A</u> <u>N/A</u> CIR: <u>N/A</u> RESOLUTION: <u>N/A</u> <u>N/A</u> TRA: <u>N/A</u> MOTOR DIR: <u>N/A</u> <u>N/A</u> ROT: <u>N/A</u>		

REMARKS: No examination was performed downstream due to the valve configuration.  
Examination performed for purposes of indication monitoring only.

<u>Robert Perkowski</u> EXAMINER <u>Omara Wilkins</u> GE REVIEWED BY	<u>II</u> LEVEL <u>III</u> LEVEL	<u>4-22-96</u> DATE <u>4/25/96</u> DATE	<u>[Signature]</u> UTILITY REVIEW <u>[Signature]</u> ANII REVIEW	<u>4-25-96</u> DATE <u>4/26/96</u> DATE
---	---	--	---	--

PAGE: 11 OF: 11

FORM UT-08 REV. 6







GE Nuclear Energy

# ULTRASONIC CALIBRATION DATA SHEET

(AUTOMATED WITH Smart 2000)

SITE: WNP UNIT: 2

CALIBRATION SHEET NO.: CA-R11-001

PROJECT NO.: 1ER9Z - RFO11

LINEARITY SHEET NO.: L-005

PROCEDURE NO.: UT-WNP2-208V0 REVISION: 0 FRR: N/A

Instrument TECRAD / TOMOSCAN TTS10092113  
Manufacturer / Model System Serial No.

Search Unit KBA G28247 500" 2.25 MHz 45° / SHR 45"  
Manufacturer Serial No. Size Freq. Angle/Mode Incident to wedge front

Cable RG-58, RG-58, RG-174 250', 25', 3' 4 BNC, Micro Dot  
Type Length No. of Connectors

Calibration Standard UT-09 SS 1.031" 1.158" 76 °F  
Serial No. Material Nominal Thickness Measured Thickness Temp.

Thermometer 145989  
Serial No.

Couplant ULTRAGEL II 094041  
Type Batch No.

## CALIBRATION

ORIENTATION: 1/2 SDH CIRC / AXIAL

TYPE: 2/8V / 6/8V / 10/8V ID NOTCHES

DEPTH: .579" / 1.737" / 2.895" 1.158" / 1.158"

AMPLITUDE: 80% / 7% / \* 44.9% / 42%

SWEEP: .815" / 2.457" / 4.099" 1.654" / 1.778"

GAIN: (dB) 24.0 20.0 / 24.0

☐ TIME ☐ DEPTH ☒ METAL PATH

\* 10/8 Nodal position = 20% FSH at 38.0 dB

## BASIC SETTINGS

1. DELAY: .5803 in
2. TIMEBASE: 6.3214 in
3. FREQUENCY: (MHz) 5.00
4. RATE: /S 20.0
5. UNITS: ☐ DISTANCE ☒ HALF PATH ☐ TIME
6. VELOCITY: 123464 in/s
7. SAMPLES: 512

FIELD SIMULATOR: RHOMPAS S/N: CAL-RHOM-038

REFLECTOR:	NEAR SDH	FAR SDH
MAX AMPLITUDE:	80%	80%
SWEEP:	.383"	1.062"
GAIN: (dB)	14.0	15.0

## CALIBRATION VERIFICATION

	TIME	DATE	OPER.	COMP.	REPORT NO
INITIAL	12:30	04/22/96	CVH	20RRC(6)-8	R-R11-019
VERIFIED	19:15	04/22/96	PAZ	20RRC(6)-8	R-R11-019
VERIFIED					
VERIFIED					
VERIFIED					
FINAL	22:05	04/22/96	PAZ	20RRC(6)-8	R-R11-019

## PULSER / RECEIVER

1. MODE: ☒ PULSE ECHO ☐ THRU-TRANSMISSION
2. PULSER: P1 TO P1
3. VOLTAGE: (v) 400
4. WIDTH: (Ns) 276
5. FILTER: ☐ NONE ☐ 0.5 - 2 MHz ☒ 1 - 5 MHz  
☐ 2 - 10 MHz ☐ 5 - 15 MHz
6. RECTIFICATION: ☐ NONE ☐ UNIPOLAR + ☐ UNIPOLAR -  
☒ BIPOLAR
7. SMOOTHING: ☐ NONE ☐ FAST ☐ MEDIUM ☒ SLOW

Circ Notch at 80% = 28.0 dB  
 Axial Notch at 80% = 30.0 dB

Charles J. VanHecke II 4-22-96  
EXAMINER LEVEL DATE

Donald White III 4/25/96  
GE REVIEWED BY LEVEL DATE

Don White 4-25-96  
UTILITY REVIEW DATE

Steve 4/25/96  
ANII REVIEW DATE

PAGE: 1 OF: 1



10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10

10-10-10



GE Nuclear Energy

ULTRASONIC CALIBRATION DATA SHEET  
(AUTOMATED WITH Smart 2000)SITE: WNP UNIT: 2CALIBRATION SHEET NO.: CA-R11-002PROJECT NO.: 1ER9Z - RFO11LINEARITY SHEET NO.: L-005PROCEDURE NO.: UT-WNP2-207V0 REVISION: 0 FRR: N/A

Instrument TECRAD / TOMOSCAN TIS10092113  
Manufacturer / Model System Serial No.

Search Unit RTD 94-713 2(8x14)mm 2.00 60° / RL 40"  
Manufacturer Serial No. Size Freq. Angle/Mode Incident to wedge front

Cable 2(RG-58, RG-58, RG-174) 2(250', 25', 3') 8 BNC, Lemo  
Type Length No. of Connectors

Calibration Standard UT-09 SS 1.031" 1.158" 76 °F  
Serial No. Material Nominal Thickness Measured Thickness Temp.

Thermometer 145989  
Serial No.

Couplant ULTRAGEL II 094041  
Type Batch No.

## CALIBRATION

ORIENTATION: CIRC N/A

TYPE: ID NOTCH TIP N/A

DEPTH: 1.042" N/A

AMPLITUDE: 80% N/A

SWEEP: 2.045" N/A

GAIN: (dB) 42.0 N/A

☐ TIME ☐ DEPTH ☒ METAL PATH

## BASIC SETTINGS

1. DELAY: 1.0696 in
2. TIMEBASE: 9.5240 in
3. FREQUENCY: (MHz) 6.25
4. RATE: /S 20.0
5. UNITS: ☐ DISTANCE ☒ HALF PATH ☐ TIME
6. VELOCITY: 232519 in/s
7. SAMPLES: 512

FIELD SIMULATOR: RHOMPAS S/N: CAL-RHOM-038

## PULSER / RECEIVER

1. MODE: ☐ PULSE ECHO ☒ THRU-TRANSMISSION
2. PULSER: P1 TO R1
3. VOLTAGE: (v) 400
4. WIDTH: (Ns) 276
5. FILTER: ☐ NONE ☐ 0.5 - 2 MHz ☒ 1 - 5 MHz  
☐ 2 - 10 MHz ☐ 5 - 15 MHz
6. RECTIFICATION: ☐ NONE ☐ UNIPOLAR + ☐ UNIPOLAR -  
☒ BIPOLAR
7. SMOOTHING: ☐ NONE ☐ FAST ☐ MEDIUM ☒ SLOW

## CALIBRATION VERIFICATION

	TIME	DATE	OPER.	COMP.	REPORT NO
INITIAL	22:15	04/22/96	PAZ	20RRC(6)-8	R-R11-019
VERIFIED					
VERIFIED					
VERIFIED					
VERIFIED					
FINAL	02:40	04/23/96	PAZ	20RRC(6)-8	R-R11-019

Robert Pankowski II 4-23-96  
EXAMINER LEVEL DATE  
Arundhati III 4/25/96  
GE REVIEWED BY LEVEL DATE

Robert Pankowski 4-25-96  
UTILITY REVIEW DATE  
Arundhati 4/25/96  
ANII REVIEW DATE

PAGE: 1 OF: 1

FORM UT-01 REV. 11



GE Nuclear Energy

# ULTRASONIC CALIBRATION DATA SHEET (AUTOMATED WITH Smart 2000)

SITE: WNP UNIT: 2

CALIBRATION SHEET NO.: CA-R11-003

PROJECT NO.: 1FR9Z - RFO11

LINEARITY SHEET NO.: L-005

PROCEDURE NO.: UT-WNP2-208V0 REVISION: 0 FRR: N/A

Instrument TECRAD / TOMOSCAN TTS10092113  
Manufacturer / Model System Serial No.

Search Unit RTD 94-713 2(8x14)mm 2.00 60° / RL 40°  
Manufacturer Serial No. Size Freq. Angle/Mode Incident to wedge front

Cable 2(RG-58, RG-58, RG-174) 2(250', 25', 3') 8 BNC, Lemo  
Type Length No. of Connectors

Calibration Standard UT-09 SS 1.031" 1.158" 76 °F  
Serial No. Material Nominal Thickness Measured Thickness Temp.

Thermometer 145989  
Serial No.

Couplant ULTRAGEL II 094041  
Type Batch No.

## CALIBRATION

ORIENTATION: CIRC N/A

TYPE: ID NOTCH TIP N/A

DEPTH: 1.042" N/A

AMPLITUDE: 80% N/A

SWEEP: 2.046" N/A

GAIN: (dB) 42.0 N/A

☐ TIME ☐ DEPTH ☒ METAL PATH

## BASIC SETTINGS

1. DELAY: 1.0696 in

2. TIMEBASE: 9.5240 in

3. FREQUENCY: (MHz) 6.25

4. RATE: /S 20.0

5. UNITS: ☐ DISTANCE ☒ HALF PATH ☐ TIME

6. VELOCITY: 232519 in/s

7. SAMPLES: 512

FIELD SIMULATOR: RHOMPAS S/N: CAL-RHOM-038

REFLECTOR:	NEAR SDH	FAR SDH
MAX AMPLITUDE:	80%	80%
SWEEP:	.707"	1.302"
GAIN: (dB)	33.0	29.0

## PULSER / RECEIVER

1. MODE: ☐ PULSE ECHO ☒ THRU-TRANSMISSION

2. PULSER: P1 TO R1

3. VOLTAGE: (v) 400

4. WIDTH: (Ns) 276

5. FILTER: ☐ NONE ☐ 0.5 - 2 MHz ☒ 1 - 5 MHz  
☐ 2 - 10 MHz ☐ 5 - 15 MHz

6. RECTIFICATION: ☐ NONE ☐ UNIPOLAR + ☐ UNIPOLAR -  
☒ BIPOLAR

7. SMOOTHING: ☐ NONE ☐ FAST ☐ MEDIUM ☒ SLOW

## CALIBRATION VERIFICATION

	TIME	DATE	OPER.	COMP.	REPORT NO
INITIAL	22:15	04/22/96	PAZ	20RRC(8)-8	R-R11-019
VERIFIED					
VERIFIED					
VERIFIED					
VERIFIED					
FINAL	02:40	04/23/96	PAZ	20RRC(8)-8	R-R11-019

Robert P. Pappas II 4-23-96  
EXAMINER LEVEL DATE

Orlando M. M. M. III 4/25/96  
GE REVIEWED BY LEVEL DATE

[Signature] 4-25-96  
UTILITY REVIEW DATE

[Signature] 4/24/96  
ANII REVIEW DATE

PAGE: 1 OF: 1



11  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65  
66  
67  
68  
69  
70  
71  
72  
73  
74  
75  
76  
77  
78  
79  
80  
81  
82  
83  
84  
85  
86  
87  
88  
89  
90  
91  
92  
93  
94  
95  
96  
97  
98  
99  
100

A. 1

A. 1  
A. 2  
A. 3