CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES 19/55

NONCONFORMANCE REPORT

Pr	oiect	No.	20-01402-57	1
	UICCL	110.	20-01402-37	J

NCR No. 2002-08

PART 1: DESCRIPTION OF NONCONFORMANCE:

One of the Alloy 22 weld qualification specimens CNWRA Drawing 20-01402-571-025 machined by Texas Toolmakers was not machined correctly. A detailed description of the non conformance items is provided below:

- 1. All plates: The 1.00 inch dimension (plate thickness) was not machined. Thickness of machined specimens was left as the nominal plate thickness.
- 2. Plate S/N 003: The 0.250 inch dimension was not recorded on the dimensional inspection for plate S/N 003.
- 3. Plate S/N 006: Thermocouple bore was machined too deep and has nearly penetrated through the weld joint surface.

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Darrell S. Dunn

Date:

7/16/2002

PART 2: PROPOSED DISPOSITION AND CORRECTIVE ACTION

Disposition:

Accept specimens as is.

Basis of Disposition:

The missing dimensional inspection for the 0.250 inch dimension on plate S/N 003 (diameter of thermocouple hole) is an oversight during the dimensional inspection of this part. The nominal plate thickness which is slightly greater than 1.00 inch is acceptable for the weld procedure qualification specimens. Plate S/N 006 was rejected on the basis of the incorrectly machined thermocouple bore. Repair of weld procedure qualification specimen S/N 006 will be performed if needed and all dimensions will be reinspected and documented.

Action to Correct Nonconformance:

The three items listed in Part 1 were discussed with staff at Texas Toolmakers (Mike and Casey Ridgway).

Item #1: Plate thickness is not normally not machined for this type of specimen. Corrections to CNWRA Drawing 20-01402-571-25 are recommended. The 1.00 +/- 0.010 inch dimension for plate thickness should be changed to 1 inch nominal thickness.

Item #2: The 0.250" hole diameter will be verified by SwRI staff and documented on dimensional inspection for Plate S/N. 003.

Item #3: No corrective action will be taken at this time. Plate will be tagged indicating out of tolerance dimensions. If weld procedure qualification specimen S/N 006 is used, it will be repaired and re machined. All repair work will be performed at SwRI or a vendor on the SwRI Approved Supplier List and documented.

Target date for completion: J49/2002

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Proposed by:

Darrell S. Dunn

Date: 7/16/2002

D. Deens

PART 3: APPROVAI

Element Manager:

Date

7/16/2002

Director of QA:

Date:

7/17/2002

Comments/Instructions:

PART 4: CLOSE OUT: Distribution:

Deen Nivised to suffect a 1 nominal thickness.

Comments: I tim "2 - Hole diameters were measure and found acceptable. I tem "3 - SpecimenOb will mot be used to qualify a welding procedure and will not be used for testing surposes.

Ref Memo D. Dunn to B. Martito 3/24/03

Verified by: Nach R. Ehnstonn Date: 3/24/03

Darrell S. Dunn SwRI-CNWRA Phone: (210) 522-6090 Fax: (210) 522-5184 e-mail: ddunn@swri.org	Alloy 22 1 Specimen CNWRA L.awing 20-01402-571 All Dimensions ± 0.010" unless otherwise specified Note: Detail A on Page 2 Page 1 of 2	-25 To br empleted at time of order: Material: ALLOY 22 34/55 Heat: 2277 - 1 - 3164 Specimen Orientation: Other:
	6.00" +/- 0.03"	0.50"
3.00" +/- 0.03"	į	0.128" +/- 0.002"dia
12.00" +/- 0.06"	4.25"	D. 2493 AS MGASURED PIMENSTONS BY SWRI QA INSPECTOR SEE ADDITION TNEORMATION ON BACK OF PAGE 0.250" dia PAGE
3.00" +/- 0.03"	4.25"	0.250" dia PAGE O.2515 Alloy22 Aprimer No. 3 7/2402
Detail A	Tagani in the state of the stat	1.00" Aurelf Orm 5/22/2002 Initiated by. D. Dunn Date
7	34 JUL 18 2002	Reviewed by V. Jain Date S/25/00 Z QA Approval B. Mabrito Date

Bruce Mabrito

From:

Darrell Dunn [ddunn@cnwra.swri.edu] Monday, March 24, 2003 11:05 AM

Sent:

Bruce Mabrito; 'mark ehnstrom'

Subject:

Repaired weld specimen

The repaired weld specimen which was the subject of NCR 2002-08 will not be used to qualify a welding procedure. The plate will be used as a practice piece for a fabrication shop to weld Alloy 22 with the current waste package weld joint design. The welded specimen will not be used for testing. The quality of the weld will be evaluated using radiographic testing (RT).

Darrell S. Dunn Center for Nuclear Waste Regulatory Analyses Southwest Research Institute 6220 Culebra Road San Antonio, TX 78238-5166

Phone: 210-522-6090 Fax: 210-522-5184

e-mail: ddunn@swri.org

DARKELL **PURCHASING PURCHASE REQUISITION** REQUISITION DATE ORDER DATE PURCHASE ORDER NUMBER REQ. NO. 5/22/02 610121 SOUTHWEST RESEARCH INSTITUTE. SUGGESTED OR PREVIOUS SUPPLIER PURCHASING SELECTED SUPPLIER DELIVER TO Texas Toolmakers Darrell Dunn/bldg. 57 CITY, STATE SHIP VIA San Antonio, TX F.O.B. SUPPLIER CODE ATTN Mike Ridgway HONE FAX TERMS PHONE FAX 494-3651 494-6139 LN. QTY. UNIT DESCRIPTION ORG **PROJECT ACCT** DATE REQUIRED **EST. UNIT PRICE** 6 A EA C22 weld procedure qualification specimens CNWRA drawing 20-01402-571-025 20 01402 571 100 6/12/02 749.00 Quality & Technical Requirements: Specimens as per CNWRA drawing 20-01402-571-025. Dimensional inspection per dimensions and tolerances identified in CNWRA drawing 20-01402-571-025 is required. SPECIAL INSTRUCTIONS TO SUPPLIER INTERNAL NOTES TO BUYER TOTAL 2. QUALITY ASSURANCE? YES 3. SOURCING NOTES 4. REPAIRS 1. Government Project? YZS NO IF YOU HAVE SELECTED A BRAND NAME OR PARTICULAR MANUFAC-IF YES, CHECK THE APPROPRIATE PROPERTY TYPE (SEE BACK FOR EXPLANATION OF PROP. TURER, WOULD AN EQUIVALENT BRAND OR PRODUCT ALSO SATISFY a ASL REQUIRED? YES NO a IS THIS REQ. FOR A REPAIR? YOUR NEED? SES NO ERTY TYPES) YES NO IF YOU HAVE SUGGESTED A SUPPLIER, AND NO OTHER SUPPLIER a X G-1 CONSUMABLE WILL MEET YOUR NEEDS, PLEASE ATTACH A MEMO OF EXPLANATION. b IS THE REPAIR ON OR OFF CAMPUS? b Q A CODES: b G-2 DELIVERABLE ON OFF REQUESTOR'S SIGNATURE EXT. NO. 6090 Darrell Dunn G-3 ACCOUNTABLE / REPORTABLE C IF OFF CAMPUS PROVIDE SHIPPING TICKET P.I. to imple tupon script. DEPT. / DIVISION APPROVAL DATE O d IS GOVT. PROPERTY BEING SENT TO 6 27/01 SUPPLIER? ADMIN, APPROVAL DATE X YES

BUYER SIGNATURE

CONTRACT REVIEW APPROVAL

DATE

SEE INSTRUCTIONS ON REVERSE SIDE

Darrell S. Dunn SwRI-CNWRA Phone: (210) 522-6090 Fax: (210) 522-5184 e-mail: ddunn@swri.org	Alloy 22 Id Specimen CNWRA Drawing 20-01402-571-2 All Dimensions ± 0.010" unless otherwise specified Note: Detail A on Page 2 Page 1 of 2	To L ompleted at time of order: 22/5 Material: ALLOY 2Z Heat: 2277 - 1 - 3164 Specimen Orientation: Other:
3.00" +/- 0.03"	6.00" +/- 0.03"	0.128" +/- 0.002"dia
12.00" +/- 0.06" 3.00" +/- 0.03"	4.25"	0.128" +/- 0.002"dia 0.250" dia
Detail A		1.00" Aurelf Arm 5/22/2002 Initiated by. D. Dunn Date Reviewed by V. Jain Date OA Approval B. Mabrito Date

Darrell S. Dunn SwRI-CNWRA -

Phone: (210) 522-6090 Fax: (210) 522-5184

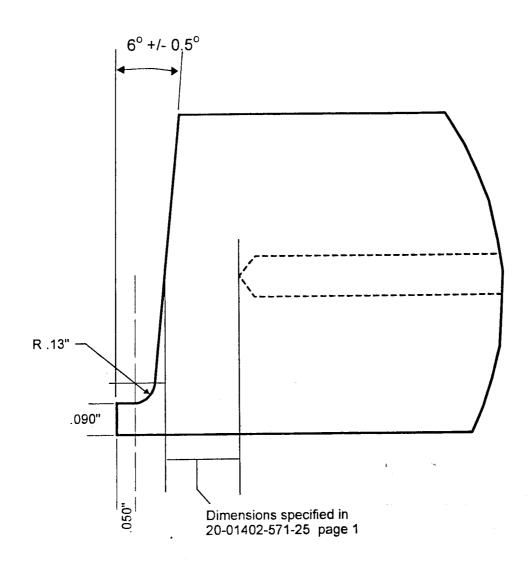
e-mail: ddunn@swri.org

Alloy 22 eld Specimen CNWRA Drawing 20-01402-571-25 All Dimensions ± 0.005" unless otherwise specified Detail A identified on Page 1

Page 2 of 2

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Material:	ALLOY	22	
Heat:	2277-1	-3164	
Specimen	Orientation:		
Other:			

Detail A



QA Approval B. Mabrito

Date

Darrell S. Dunn SwRI-CNWRA

Phone: (210) 522-6090 Fax: (210) 522-5184 e-mail: ddunn@swri.org Refere. Je drawing for weld precedure qualification specimens CNWRA Drawing 20-01402-571-026 No dimensional tolerances

To completed at time of order: 24/5-3

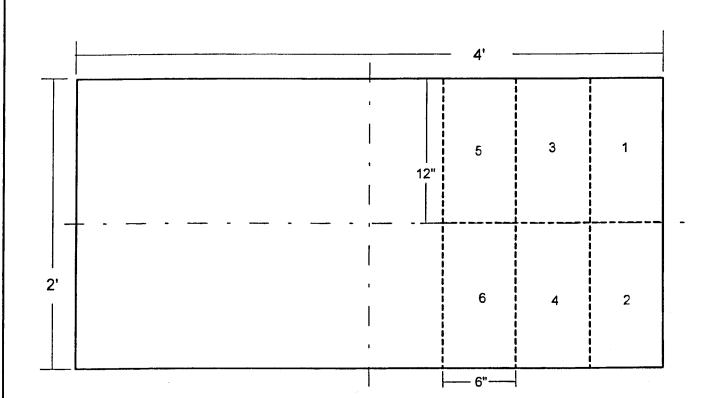
Material: Alloy 22

Heat: 2277-1-3164

Specimen Orientation: As Shown

Other:

The service of



Initiated by. D. Dunn Date

Reviewed by V.Jain

Date

QA Approval B. Mabrito

Date

Reviewed by:

TTI Form QF-030101

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ISO 9002



CERTIFICATE OF CONFORMANCE

11411 East Coker Loop San Antonio, Texas 78216 (210) 494-3651 * Fax (210) 494-6139 www.texastoolmakers.com

TO:	Southwest R	ese :	arch Institute
	6220 Culebra	a Ro	ad
	San Antonio,	Tx.	78238-5166

TEXAS TOOLMAKERS,

CUSTOMER P.O. 286716S

TTI JOB #:

33484

A8306

DESCRIPTION 5 EA. P/N 20-01402-571-25 ALLOY 22 WELD SPECIMEN

WE CERTIFY THAT THE ITEM(S) ON THE ABOVE REFERENCED PURCHASE ORDER HAVE BEEN PROCESSED AND/OR MANUFACTURED IN ACCORDANCE WITH:

Drawings

RECORDS ARE ON FILE AT THIS FACILITY, WHICH VERIFY OUR PROCESS CONTROLS, AND AVAILABLE FOR REVIEW UPON REQUEST. TEST RESULTS ARE AS FOLLOWS:

ACCEPTED

	210		
BY :	to hour	(Steven Espinoza)	
TITLE:	Q.C. Inspector	 	
DATE:	7/16/02	 	

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CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

33/55

MEMORANDUM

August 30, 2002

TO:

Nonconformance Report (NCR) 2002-08 File

FROM:

Bruce Mabrito, Director of CNWRA OA

SUBJECT:

Status/Extension on NCR 2002-08

This memorandum to the NCR 2002-08 file is an explanation of the progress to date on closing out this NCR and provides for an extension in the target dates for completion.

Deme Waluk

NCR 2002-08 describes Alloy 22 specimen preparation shortcomings to be used in the CNWRA weld qualification process.

The subject target date for completion of NCR 2002-08 was first extended to August 31, 2002. Item No. 3 on this NCR will have to be further extended until a decision is reached on whether specimen SN 006 is going to be utilized in the CNWRA process. If used, further repair and machining is required.

Item No. 2 on the NCR, examination of a 0.250-inch hole, has been performed and is acceptable. Item No. 1, drawing revision has not been performed but is not a quality-affecting hold point for close out of NCR 2002-08.

Based on this information and the currently anticipated activity in the CNWRA, I am extending the formal target date for completion of NCR 2002-08 to September 13, 2002.

cc:

B. Mabrito

D. Dunn

M. Ehnstrom/30

T. Mayces/30

M. Padilla/CNWRA QA

	WELD JOINT FABRICAT. N RECORD
Weld Joint No//4	Dwg. No. 20-01402 -571-25 Rev 1
Fab. Oper. Record Seq. No.	1/A Project No. <u>I 20 - 06 0 0</u> 2
Wps No. <u>C22-67AW</u>	
Base Plate A: Material SE Thickness I MRI No. West	Base Plate B: Material
Filler Metal: Type Root <u>ERN</u> , C	Size Root 3/32" RMo-10 Fill 3/32"
SwRI Lot No. Root	
Fit-Up: Accepted By	Date:
Welder	Shift Stamp Number Date
Inspections: (Circ	
	PT: VT: Accepted By Date
Final: MT: UT:	PT: VT: Accepted By Date RT: Accepted By Date
Repair Location Type	Depth Welder Date Inspected Acc Rej Remarks

Comments Repair of Alloy 22 weld Test Spearmen Nob, NR No MCR 2002-08.

Vendon had drilled the emocouple hole that plate into weld groove Ground have weld prepin used grove. Checked weld cavity depth, prehented and welded repair area using 1495 C22-67AM

To be mpleted at time of order: Alloy 22 V Specimen Darrell S. Dunn CNWRA Drawing 20-01402-571-25 Rev. 01 SwRI-CNWRA Material: Phone: (210) 522-6090 Fax: (210) 522-5184 e-mail: ddunn@swri.org All Dimensions ± 0.010" unless otherwise specified Heat: Note: Detail A on Page 2 Specimen Orientation: Page 1 of 2 Other: 6.00" +/-0.50" 0.03" 3.00" +/-0.128" +/-0.03" 0.002"dia 0.250" dia 0.128" +/-0.002"dia 12.00" +/-0.06" 0.250" dia 1.5 " 1.5" 3.00" +/-0.03" nominal thickness Detail A 9/10/2002 QA Approval B. Mabrito Date

Alloy 22 Weld Specimen Darrell S. Dunn CNWF Drawing 20-01402-571-25 Rev. 01 All Dimensions <u>+</u> 0.005" SwRI-CNWRA Ma. ial: Phone: (210) 522-6090 unless otherwise specified Fax: (210) 522-5184 Detail A identified on Page 1 Heat: e-mail: ddunn@swri.org Page 2 of 2 Other: Detail A 6° +/- 0.5° MATERIAL REMOVED BY GRINDING AND REPAIRED BY GTAW 0,390" R .13"

Dimensions specified in

20-01402-571-25 Rev. 01 page 1

.090"

To he completed at time of order: Specimen Orientation:

Initiated by. D. Dunn