



Technical Services, Inc.

P. O. Box 721139, Houston, Texas 77272-1139
www.ndttechnicalservices.com

Phone: (281) 341-0469
Cell: (281) 389-4304
E-mail: NDTServices@aol.com

SUMMARY AND ASSESSMENT OF EOC - RE-INSPECTION PERFORMED ON GIRTH WELDS

In accordance with the approved PG&E Inspection Test Plan (ITP), on November 13 & 15, 2013 a re-inspection utilizing radiographic examination was performed on five (5) girth welds on the WV-132-13 project in Milpitas, CA. Once each of the welds were re-radiographed they were “fingerprinted” (weld features compared against original images to verify that the original radiographic film images of the weld matched the images of the re-inspected girth weld.

The following weld numbers were re-inspected:

<u>Original Weld Id Number</u>	<u>Reinspection Weld Id Number</u>
W-31	W-31-RI
W-32	W-32-RI
W-33	W-33-RI
TI-9	TI-9-RI
TI-10	TI-10-RI

The following were the results of these-inspections:

Weld Number: W-31-RI Comments: Weld matched fingerprint and weld was determined to be acceptable to API 1104, 20th edition.

Weld Number: W-32-RI Comments: Weld matched fingerprint and weld was determined to be acceptable to API 1104, 20th edition.

Weld Number: W-33-RI Comments: Weld matched fingerprint and weld was determined to be acceptable to API 1104, 20th edition.

Weld Number: TI-9-RI Comments: Weld ***did not*** match fingerprint. However, after performing further investigation it was ultimately determined that this weld was originally identified as weld number W-34 which was acceptable as originally radiographed. Its fingerprint was matched and the weld was

determined to be acceptable to API 1104, 20th edition. On November 15th the next weld down from weld number W-34 was re-radiographed and this weld matched the fingerprint for the original weld number identified as TI-9 and the weld was determined to be acceptable to API 1104, 20th edition.

Weld Number: TI-10-RI Comments: Weld matched fingerprint and weld was determined to be acceptable to API 1104, 20th edition.

Upon a detailed review of the pipeline alignment sheets, PG&E was able to determine that the original weld number TI-9 was actually one weld joint east of the location for weld number W-34. On November 15, 2013 the field site was further excavated to locate the actual location for weld number TI-9 and the weld was re-radiographed, the fingerprint matched that of the original film images for TI-9, was evaluated and determined to be acceptable to API 1104, 20th edition.

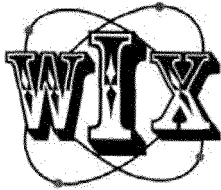
Copies of WIX's Radiographic Testing Inspection reports indicating the results of their evaluation of welds examined are attached.

This summary completes the evaluation and documentation of the re-inspections performed on the five (5) identified girth welds on the WV-132-13 project in Milpitas, CA.

Respectfully submitted,



David L. Culbertson
President
ASNT/ACCP Professional Level III – 2820



Western Industrial X-Ray, Inc.
 P.O. Box 238 Fairfield, CA
 (707) 425-4673
 (888) For X-Ray
 info@wixinc.net
 www.wixinc.net

Date 12/13/2013 Page 1 Of 1
 Radiographic Report or Control # RIG-D
 Customer PGE
 Address _____
 Customer's P.O. Number 2500904964
 Job Location MILPITAS, CA LINE-132 RE-INSPECTION
 Job Number 30677902/41960097
 Item Description 20" GIRTH WELDS
 100% Insp. Spot Insp. _____ Percent _____

Nondestructive Inspection Report

Piece or Joint #s.	Weld Number	Film No.	A C C I	R E J	Defect Code	Comments	Work Summary	
							Amount	Description
20"X.375/.500	TI-9-RI	3	✓		IUC	IUC@62.5"×2"IN 12"	4 Travel Hours	3 # Persons
							0830 In Time	1530 Out Time
							7 Work Hours	
20"X.375/.500	W-33-RI	3	✓			PROCESSING MARKS @24",29"	0 Standby Hours	
							11 Total Hours	
							NO Per Diem	# Persons
20X.375/.800	W-32-RI	3	✓			PROCESSING MARKS @56",24",29"	150 Mileage One Way	Round Trip <input checked="" type="checkbox"/>
							5 Weld 20" in. dia.	Weld in. dia.
							Weld in. dia.	Weld in. dia.
							Weld in. dia.	Weld in. dia.
20X.375/.800	W-31-RI	3	✓				15 Film 3.5" × 24" Type D-7	
							Film × Type	
							Technique Date/Procedure Qualification	
							Inspection Specification	API-1104
							Acceptance Standard	20TH
							RT Procedure No.	RT-7 Shooting Sketch (RSSS) <input checked="" type="checkbox"/>
							View	DWE SWV Source Ir192 Cunes 87
							Physical Source Size	106X126 Effective Focal Spot 165
							Pb Screens: Front	.005 Center N/A Back .005
							Dia. 20" Material Type X60 Thickness 375 Reinf. 125	
							SFD: 20.47 Source To Obj. 20.1 IQI Essential Wire 013	
							Exp. Time: 1 min. 15 sec. Dev. Time: 6 @ 69 deg.	
							Film Manufacturer: Agfa Speed: D-7 No. of Exp. 3 Film 3	
							Geometric Unsharpness (Ug): .004 Avg. Density: _____	
							Dia. 20" Material Type X60 Thickness 375 Reinf. 125	
							SFD: 20.47 Source To Obj. 20.1 IQI Essential Wire 013	
							Exp. Time: 1 min. 20 sec. Dev. Time: 6 @ 69 deg.	
							Film Manufacturer: Agfa Speed: D-7 No. of Exp. 3 Film 3	
							Geometric Unsharpness (Ug): .004 Avg. Density: _____	
							Dia. 20" Material Type X60 Thickness 375 Reinf. 125	
							SFD: 20.47 Source To Obj. 20.1 IQI Essential Wire 013	
							Exp. Time: 1 min. 30 sec. Dev. Time: 6 @ 69 deg.	
							Film Manufacturer: Agfa Speed: D-7 No. of Exp. 3 Film 3	
							Geometric Unsharpness (Ug): .004 Avg. Density: _____	

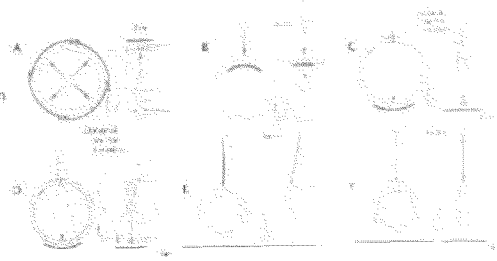
Defect Code

- BT - Burn Through
- C - Crack
- CV - Root Concavity
- CX - Root Convexity
- D1 - Deep Through
- ICP - Inadequate Cross Penetration
- IF - Incomplete Fusion
- IP - Incomplete Penetration
- PD - Inadequate Penetration Due to High Low
- Ox - Oxidation
- P - Porosity
- SL - Slag Lines
- SI - Slag Inclusions
- UC - Undercut
- TI - Tungsten Inclusion

1. Edward P. Stephani Level II
 Radiographer
 2. Gerrit Vansickle Level I
 Radiographer's Assistant

The person signing this document represents that they have the authority to sign on the behalf of the customer. This report does not guarantee or warranty the condition of the materials tested. Western Industrial X-Ray, Inc. is not liable for any interpretation of results or losses attributable to any testing performed. There is no warranty for these services. Any liability is limited to the amount paid for the services in question. Final film interpretation is the responsibility of the customer.

David L. Cullerton Date 11/13/2013
 Customer's Signature





Western Industrial X-Ray, Inc.
 P.O. Box 238 Fairfield, CA
 (707) 425-4673
 (888) For X-Ray
 info@wixinc.net
 www.wixinc.net

Date: 11/15/2013 Page 1 Of 1
 Radiographic Report or Control # RIG-D
 Customer: PGE
 Address:
 Customer's P.O. Number: 2500904964
 Job Location: MILPITAS, CA LINE-132 RE-INSPECTION
 Job Number: 30677902/41960097
 Item Description: 20" GIRTH WELDS
 100% Insp. Spot Insp. _____ Percent _____

Nondestructive Inspection Report

Piece or Joint #s	Weld Number	Film No.	A C C	R E T	Defect Code	Comments	Work Summary	
							Amount	Description
20"X.375/.375	TI-9-RI	3	✓		ESI IUC	ESI@8"TO9"~2"IN12" IUC@1"~2"IN12"	4 Travel Hours 1700 In Time 4 Work Hours 0 Standby Hours 8 Total Hours NO Per Diem 150 Mileage One Way 2 Weld 20" in. dia. Weld in. dia. Weld in. dia. Film x Type Film x Type	3 # Persons 2100 Out Time # Persons Round Trip ✓ Weld in. dia. Weld in. dia. Weld in. dia. Type Type
20"X.375/.500	W-28-RI	1	✓			Reshot for Info Only		

Technique Date/Procedure Qualification
 Inspection Specification: API-1104
 Acceptance Standard: 20TH
 RT Procedure No. RT-7 Shooting Sketch (RSSS) D
 View: JWF SWV Source: Ir192 Curies: 109
 Physical Source Size: 106X114 Effective Focal Spot: 156
 Pb Screens: Front .005 Center N/A Back .005
 Dia: 20" Material Type: X60 Thickness: .375 Reinf: .125
 SFD: 20.47 Source To Obj: 20.1 IQI Essential Wire: .013
 Exp. Time: 1 min .05 sec. Dev. Time: 6 @ 69 deg.
 Film Manufacturer: Agfa Speed: D-7 No. of Exp: 3 Film 3
 Geometric Unsharpness (Ug): .004 Avg. Density: 2.69
 Dia: 20" Material Type: X60 Thickness: .375 Reinf: .125
 SFD: 20.47 Source To Obj: 20.1 IQI Essential Wire: .013
 Exp. Time: 1 min .10 sec. Dev. Time: 6 @ 69 deg.
 Film Manufacturer: Agfa Speed: D-7 No. of Exp: 3 Film 3
 Geometric Unsharpness (Ug): .004 Avg. Density: 2.42
 Dia: _____ Material Type: _____ Thickness: _____ Reinf: _____
 SFD: _____ Source To Obj: _____ IQI Essential Wire: _____
 Exp. Time: _____ min _____ sec. Dev. Time: @ _____ deg.
 Film Manufacturer: _____ Speed: _____ No. of Exp: _____ Film _____
 Geometric Unsharpness (Ug): _____ Avg. Density: _____

Defect Code

- RT - Burn Through
- C - Crack
- CV - Root Concavity
- CX - Root Convexity
- DT - Drop Through
- ICP - Inadequate Cross Penetration
- IF - Incomplete Fusion
- IP - Incomplete Penetration
- PD - Inadequate Penetration Due to High-Low
- Ox - Oxidation
- P - Porosity
- SL - Slag Lines
- SI - Slag Inclusions
- UC - Undercut
- TI - Tungsten Inclusion

1. Level II
 Radiographer: EDWARD J. STEPHEN C.
 2. Level I
 Radiographer's Assistant: GERRIT VANSICKLE

The person signing this document represents that they have the authority to sign on the behalf of the customer. This report does not guarantee or warranty the condition of the materials tested. Western Industrial X-Ray, Inc. is not liable for any interpretation of results or errors attributable to any testing performed. There is no warranty for these services. Any liability is limited to the amount paid for the service in question. Final file interpretation is the responsibility of the customer.

Date: 11/15/2013
 Customer's Signature

