

# WELDER OR WELDING OPERATOR COUPON QUALIFICATION TEST RECORD

REPORTED TO: LoenBro  
 Attn: Cody Fryberger  
 409 14<sup>th</sup> Street SW  
 Great Falls, MT 59404

DATE: October 24, 2012  
 ETI PROJECT NO: 12-576  
 Welding Cont:

Welder Name Robert Nordson Clock No. 8456 Stamp No. \_\_\_\_\_  
 Type of Welder Welding Procedure Qualification  
 Welding Procedure Specification No. API-SMA-2 (7010) Rev. 0 Date October 22, 2012

Process Type: SMAW - Manual without backing  
 Mean Temperature: 45<sup>th</sup> F  
 Weather Conditions: Mostly Clear  
 Time of Day/Welding Time: 0830 to 1100, 2 1/2 Hours - includes cutting & fitting

Voltage/Amperage: 22 to 32 volts / 105 to 140 amps  
 Welding Machine Type/Size: Lincoln Custom 250  
 Weld Type/Position: Butt Weld = 5G - Fixed Horizontally  
 Filler Metal/Group Number: E6010/1 = Root, E7010/1 = Hot Pass, Filler & Cap (2-5)

Reinforcement Size/Welding Direction: up to 1/8" / Downhill  
 Pipe Type and Grade: ASTM A 106 Grade B  
 Wall Thickness/Outside Diameter: 0.280"/6.625"  
 Qualified Thickness/Outside Diameter Range: 0.188" to 0.750" / 2.375" to 12.750"

VISUAL INSPECTION (6.4) Acceptable YES or NO Yes				
TENSILE TESTS (6.6.2)				
	1	2	3	4
Coupon stenciled	CN-1	CN-6		
Original specimen dimensions (in.)	1.006 x 0.272	0.989 x 0.294		
Original specimen area (in.)	0.274	0.291		
Maximum load (lbs)	22,600	24,000		
Tensile Strength (psi)	82,600	82,500		
Fracture location	Base Metal	Base Metal		

Procedure Welder     
  Qualifying test Line test     
  Qualified Disqualified  
 Maximum Tensile 82,500     
 Minimum tensile 82,500     
 Average Tensile 82,500

Remarks on tensile-strength test and Macro Etch test:

1. CN-1 = Satisfactory
2. CN-6 = Satisfactory
3. \_\_\_\_\_
4. \_\_\_\_\_

Remarks on bend test:

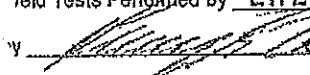
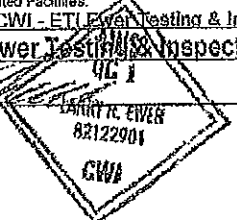
1. Face Bend - 2 = Satisfactory
2. Root Bend - 4 = Satisfactory
3. Face Bend - 7 = Satisfactory
4. Root Bend - 9 = Satisfactory

Remarks on nick-break test:

1. Nick-break - 3 = Satisfactory
2. Nick-break - 5 = Satisfactory
3. Nick-break - 8 = Satisfactory
4. Nick-break - 10 = Satisfactory

We, the undersigned, certify that the statements in this record are correct and that tests were prepared and tested in accordance with the requirements of Appendix B of API Standard 1104 Twentieth Edition, November 2005 Welding of Pipelines and Related Facilities.

Test Witnessed by Larry R Ewar, CWI - ETI Ewer Testing & Inspection Inc. Date October 22, 2012  
 Weld Tests Performed by ETI Ewer Testing & Inspection Inc. Laboratory No. 12-576

# WELDING PROCEDURE SPECIFICATION RECORD NO. API-SMA-2 [7010]

REPORTED TO: LoenBro  
 Attn: Cody Fryberger  
 409 14<sup>th</sup> Street SW  
 Great Falls, MT 59404

DATE: October 24, 2012

ETI PROJECT NO: 12-576

Welding Contr:

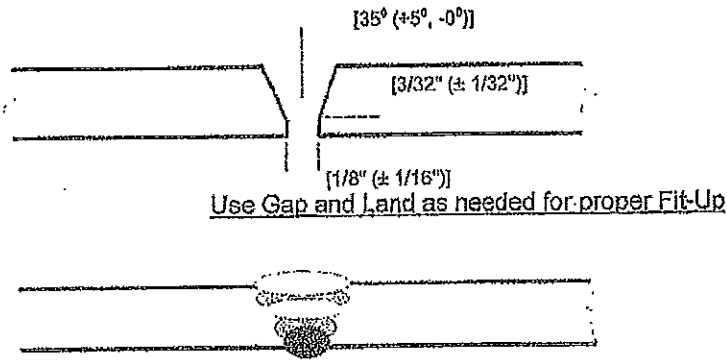
Welding of: Carbon Steel Pipe & Fittings  
 Process Type: SMAW - Manual without backing  
 Material: API 5L X42 - X52  
 Diameter and Wall Thickness: 6.625" x 0.280  
 Joint Design: Butt Weld and Branch Connection

Filler Metal and Number of Beads: E7010 = All Passes Bead, Hot Pass, Filler & Cap  
 Electrical or Flame Characteristics: DC Reverse  
 Position: Butt Weld = 5G-Fixed Horz & Branch=Nipple down (Multiple Qualification)  
 Direction of Welding: Downhill  
 Number of Welders: Single

Time lapse between passes: 0.5 to 2.0 minutes  
 Type and Removal of Line-up Clamp: Pipe Stands or as required  
 Cleaning and/or Grinding: Power Brushing & Grinding  
 Preheat: Ambient is below 50° F preheat from bottom of pipe to remove moisture  
 Shielding gas and flow rate: n/a

Post/Stress Relief: not required  
 Speed of Travel: 4 to 14 ipm  
 Plasma gas composition/flow rate: n/a  
 Plasma gas orifice size: n/a  
 Sketches and tabulations attached: none

Tested by: Larry R Ewer - ETI Ewer Testing & Inspection, Inc  
 Approved: [Signature]  
 Adopted: \_\_\_\_\_  
 Welder: [Signature]  
 Welding Supervisor: Cody Fryberger - LoenBro  
 Chief Engineer: \_\_\_\_\_



Sequence of weld passes

ELECTRODE SIZE AND NUMBER OF BEADS				
Bead Number	Electrode Size and Type	Voltage	Amperage and Polarity	Speed ipm
1	1/8" or 5/32" E7010	18 to 22	80 to 130	6 to 12
2 through 4	1/8" or 5/32" E7010	20 to 24	115 to 160	6 to 10
5 +	5/32" or 3/16" E7010	20 to 28	135 to 190	4 to 8

# WELDER OR WELDING OPERATOR COUPON QUALIFICATION TEST RECORD

REPORTED TO: LoenBro  
 Attn: Cody Fryberger  
 409 14<sup>th</sup> Street SW  
 Great Falls, MT 59404

DATE: October 24, 2012

ETI PROJECT NO: 12-576  
 Welding Cont:

Welder Name Cody Nicholson Clock No. 8458 Stamp No. \_\_\_\_\_  
 Type of Welder Welding Performance Qualification  
 Welding Procedure Specification No. API-SMA-2 (7010) Rev. 0 Date October 22, 2012

Process Type: SMAW - Manual without backing  
 Mean Temperature: 45° F  
 Weather Conditions: Mostly Clear  
 Time of Day/Welding Time: 0830 to 1100, 2 1/4 Hours - includes cutting & fitting

Voltage/Amperage: 22 to 32 volts / 105 to 140 amps  
 Welding Machine Type/Size: Lincoln Custom 250  
 Weld Type/Position: Butt Weld = 5G - Fixed Horizontally  
 Filler Metal/Group Number: E6010/1 = Root, E7010/1 = Hot Pass, Filler & Cap (2-5)

Reinforcement Size/Welding Direction: up to 1/8" / Downhill  
 Pipe Type and Grade: ASTM A 106 Grade B  
 Wall Thickness/Outside Diameter: 0.280" / 6.625"  
 Qualified Thickness/Outside Diameter Range: 0.188" to 0.750" / 2.375" to 12.750"

VISUAL INSPECTION (6.4) Acceptable YES or NO Yes				
TENSILE TESTS (5.6.2)				
	1	2	3	4
Coupon stenciled	CN-1	CN-6		
Original specimen dimensions (in.)	1.006 x 0.272	0.989 x 0.294		
Original specimen area (in.)	0.274	0.291		
Maximum load (lbs)	22,800	24,000		
Tensile Strength (psi)	82,600	82,600		
Fracture location	Base Metal	Base Metal		

Procedure  
 Welder  
 Maximum Tensile 82,500

Qualifying test  
 Line test  
 Minimum tensile 82,500

Qualified  
 Disqualified  
 Average Tensile 82,500

Remarks on tensile-strength test and Macro Etch test:

1. CN-1 = Satisfactory
2. CN-6 = Satisfactory
3. \_\_\_\_\_
4. \_\_\_\_\_

Remarks on bend test:

1. Face Bend - 2 = Satisfactory
2. Root Bend - 4 = Satisfactory
3. Face Bend - 7 = Satisfactory
4. Root Bend - 9 = Satisfactory

Remarks on nick-break test:

1. Nick-break - 3 = Satisfactory
2. Nick-break - 5 = Satisfactory
3. Nick-break - 8 = Satisfactory
4. Nick-break - 10 = Satisfactory

We, the undersigned, certify that the statements in this record are correct and that welds were prepared and tested in accordance with the requirements of Appendix B of API Standard 1104 Twentieth Edition, November 2005 Welding of Pipelines and Related Facilities.

Test Witnessed by Larry R Ewer, CWI - ETI Ewer Testing & Inspection Inc Date October 22, 2012

Weld Tests Performed by ETI Ewer Testing & Inspection Inc Laboratory No. 12-676

by [Signature]  


# WELDER OR WELDING OPERATOR COUPON QUALIFICATION TEST RECORD

REPORTED TO: LoenBro  
 Attn: Cody Fryberger  
 409 14<sup>th</sup> Street SW  
 Great Falls, MT 59404

DATE: April 8, 2013  
 ETI PROJECT NO: 13-213  
 Welding Contr:

Welder Name ~~Cody Fryberger~~ Clock No. 8456 Stamp No. \_\_\_\_\_  
 Type of Welder Welder Performance  
 Welding Procedure Specification No. Bridger PL = EQ52V Rev. 0 Date 02/05 Rev 1.0

Process Type: SMAW - Manual without backing  
 Mean Temperature: 35° F  
 Weather Conditions: Cloudy  
 Time of Day/Welding Time: 0900 to 1100, 2 Hours - includes fitting & cutting  
 Voltage/Amperage: 22 to 30 volts / 85 to 145 amps  
 Welding Machine Type/Size: Lincoln Custom 250  
 Weld Type/Position: Butt Weld / 6G - 45° fixed  
 Filler Metal/Group Number: Root Bead = E6010/1, Filler & Cap = E7010/1  
 Reinforcement Size/Welding Direction: up to 1/8" / Downhill  
 Pipe Type and Grade: API 5L/ASTM A63 Grade B  
 Wall Thickness/Outside Diameter: 0.250"/12.750"  
 Qualified Thickness/Outside Diameter Range: 0.188" to 0.750" / 2.375" to 12.750"

VISUAL INSPECTION (6.4) Acceptable YES or NO Yes				
TENSILE TESTS (6.6.2)				
	1	2	3	4
Coupon stenciled	n/a			
Original specimen dimensions (in.)				
Original specimen area (in.)				
Maximum load (lbs)				
Tensile Strength (psi)				
Fracture location				

Procedure  
 Welder  
 Maximum Tensile n/a

Qualifying test  
 Line test  
 Minimum tensile n/a

Qualified  
 Disqualified  
 Average Tensile n/a

Remarks on tensile-strength test:

1. n/a
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

Remarks on bend test:

1. Face Bend - 1 Satisfactory
2. Root Bend - 3 Satisfactory
3. Face Bend - 5 Satisfactory
4. Root Bend - 7 Satisfactory

Remarks on nick-break test:

1. Nick-break - 2 Satisfactory
2. Nick-break - 4 Satisfactory
3. Nick-break - 6 Satisfactory
4. Nick-break - 8 Satisfactory

We, the undersigned, certify that the statements in this record are correct and that welds were prepared and tested in accordance with the requirements of paragraph 5.6 and/or 5.8 of API Standard 1104 Twentieth Edition, November 2005 Welding of Pipelines and Related Facilities.

Test Witnessed by Alan Mehrer - ETI ETI Welding & Inspection Inc Date April 4, 2013

Weld Tests Performed by ETI ETI Welding & Inspection Inc ETI Project No. 13-213

by \_\_\_\_\_

**ALAN MEHRER**  
 ETI  
 6101



**RECORD OF WELDER QUALIFICATION TEST (WPQ)**  
 (see QW-301, Section IX, ASME Boiler and Pressure Vessel Code)

Welder's Name: **CODY NICHOLSON**

Stamp No. CN

Welding Process(es) Used: SMAW  
 WPS No: 001  
 Base Material(s) Welded: A-53 GR-B

Type: MANUAL  
 Thickness: .343

Manual of Semiautomatic Variables for Each Process (QW-350)	Actual Values	Range Qualified
Backing (metal, weld metal, both sides welded, etc.)(QW-402)	P1/P1	P1-P11, P34, P4X
ASME P-No. To ASME P-No. (QW-403)	2"	1" - unlimited
QPlate (X) Pipe (enter diameter of pipe)	E6010/E7010/E7018	
Filler Metal SFA#: 5.1/5.5 Classification (QW-404)	3&4	4 AND LOWER
Filler Metal F-No.	N/A	
Consumable Insert for GTAW or PAW	.125/.218	.686/.436
Welding deposit thickness	6G	ALL
Welding Position (1G, 5G, etc.) (QW-405)	ROOT & HOT DOWNHILL	FILL AND CAP UPHILL
Progression (uphill or downhill)	N/A	N/A
Backing Gas (QW-408)	N/A	N/A
GMAW/FCAW Transfer Mode (QW-405)	N/A	N/A
GTAW Welding Current Type/Polarity	N/A	N/A

**GUIDED BEND TEST RESULTS**

<input type="checkbox"/> QW-462.2 (SIDE)	<input checked="" type="checkbox"/> QW-462.3 (A) (TRANS. R&F)	<input type="checkbox"/> QW-462.3 (B) (LONG. R&F)
#1 Face Bend	ACCEPTABLE	#3 Root Bend
#2 Face Bend	ACCEPTABLE	#4 Root Bend

Visual Inspection Results-Fusion: ACCEPTABLE	Penetration: ACCEPTABLE
Fillet Weld Fracture Test: N/A	Length and Percent of Defects: N/A
Macro Test Function: N/A	Fillet Leg Size: N/A
	Concavity/Convexity: N/A
Radiographic Test Results (QW-304,305): N/A	
Radiographic Test Conducted By: N/A	
Mechanical Test Conducted By: Jon Leach	
Welding Test Monitored By: Jon Leach	

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of Section IX code

Organization: LO-N-BRO ENTERPRISES

By:

Date: 9/18/12