

# Pyramid Co.

123 Any Street KC, MO 64015

## **Procedure Qualification Record (PQR)**

PQR No.: <b>PQR #2</b> Date: <b>7/3/2011</b> WPS	No.: Page 1 of 2					
Welding Process(es) / Type(s): (1) GMAW / Semiautomatic						
Joint Design (QW-402)	Base Metals (QW-403)					
Weld Type: Groove weld	Specification Type and Grade:   A-1008, Grade DS Type B   to   A-1008, Grade DS Type B					
Groove Type: Square groove						
Backing: Open butt, no back weld						
Root Opening:in.						
1	1					
	Preheat (QW-406)					
	Minimum Preheat Temperature: 1 °F					
	Preheat Maintenance: 1  Maximum Interpass Temperature: 1 °F					
	Maximum Interpass Temperature: 1					
	Postweld Heat Treatment (QW-407)					
	Type: No PWHT performed					
	PWHT Temperature: None °F					
	PWHT Holding Time: None hr.					
First Process: GMAW	Type: Semiautomatic					
Filler Metals (QW-404)	Electrical Characteristics (QW-409)					
AWS Classification: E70C-B2L	\ <del>-</del> /					
GD4 G 1G 11	Current Type and Polarity: DCEN (straight)					
SFA Specification: 5.28 F-No.: 6	Current Type and Polarity: DCEN (straight) Transfer Mode: Short-circuiting arc					
	Transfer Mode: Short-circuiting arc					
	Current Type and Polarity: DCEN (straight)  Transfer Mode: Short-circuiting arc  Welding Details  Filler Metal Size (in.): 1   -   -					
A-No. or Chemical Composition: 3	Transfer Mode: Short-circuiting arc Welding Details					
A-No. or Chemical Composition: 3  Filler Metal Trade Name: 1  Filler Metal Product Form: Metal cored	Welding Details         Short-circuiting arc           Filler Metal Size (in.):         1         -         -					
A-No. or Chemical Composition: 3  Filler Metal Trade Name: 1  Filler Metal Product Form: Metal cored	Welding Details         Short-circuiting arc           Filler Metal Size (in.):         1   -   -           Amperage Used:         1   -   -					
A-No. or Chemical Composition: 3  Filler Metal Trade Name: 1  Filler Metal Product Form: Metal cored  Supplemental Filler Metal: 1	Transfer Mode:         Short-circuiting arc           Welding Details           Filler Metal Size (in.):         1         -         -           Amperage Used:         1         -         -           Wire Feed Speed (in/min):         1         -         -					
A-No. or Chemical Composition:  Filler Metal Trade Name:  Filler Metal Product Form:  Supplemental Filler Metal:  Weld Deposit 't' (in.):  1	Transfer Mode:         Short-circuiting arc           Welding Details           Filler Metal Size (in.):         1         -         -           Amperage Used:         1         -         -           Wire Feed Speed (in/min):         1         -         -           Voltage Used:         1         -         -					
A-No. or Chemical Composition:  Filler Metal Trade Name:  Filler Metal Product Form:  Supplemental Filler Metal:  Weld Deposit 't' (in.):  Pass Greater Than ½":  No  Positions (QW-405)  Position of Joint:  1  No  1  1  1  1  1  1  1  1  1  1  1  1  1	Transfer Mode:         Short-circuiting arc           Welding Details           Filler Metal Size (in.):         1         -         -           Amperage Used:         1         -         -           Wire Feed Speed (in/min):         1         -         -           Voltage Used:         1         -         -           Travel Speed (in/min):         1         -         -           Max. Heat Input (J/in):         N/R           Technique (QW-410)         N/R					
A-No. or Chemical Composition:  Filler Metal Trade Name:  Filler Metal Product Form:  Supplemental Filler Metal:  Weld Deposit 't' (in.):  Pass Greater Than ½":  Positions (QW-405)  Position of Joint:  Weld Progression:  1  1  1  1  1  1  1  1  1  1  1  1  1	Transfer Mode:         Short-circuiting arc           Welding Details           Filler Metal Size (in.):         1         -         -           Amperage Used:         1         -         -           Wire Feed Speed (in/min):         1         -         -           Voltage Used:         1         -         -           Travel Speed (in/min):         1         -         -           Max. Heat Input (J/in):         N/R           Technique (QW-410)           Thermal Processes:         No					
A-No. or Chemical Composition:  Filler Metal Trade Name:  Filler Metal Product Form:  Metal cored  Supplemental Filler Metal:  Weld Deposit 't' (in.):  Pass Greater Than ½":  No  Positions (QW-405)  Position of Joint:  Weld Progression:  N/A  Notes:  1	Transfer Mode:         Short-circuiting arc           Welding Details           Filler Metal Size (in.):         1         -         -           Amperage Used:         1         -         -           Wire Feed Speed (in/min):         1         -         -           Voltage Used:         1         -         -           Travel Speed (in/min):         1         -         -           Max. Heat Input (J/in):         N/R           Technique (QW-410)           Thermal Processes:         No           Stringer or Weave Bead:         Stringer bead					
A-No. or Chemical Composition:  Filler Metal Trade Name:  Filler Metal Product Form:  Metal cored  Supplemental Filler Metal:  Weld Deposit 't' (in.):  Pass Greater Than ½":  No  Positions (QW-405)  Position of Joint:  Weld Progression:  N/A  Notes:  1  Gas (QW-408)	Transfer Mode:         Short-circuiting arc           Welding Details           Filler Metal Size (in.):         1         -         -           Amperage Used:         1         -         -           Wire Feed Speed (in/min):         1         -         -           Voltage Used:         1         -         -           Travel Speed (in/min):         1         -         -           Max. Heat Input (J/in):         N/R           Technique (QW-410)           Thermal Processes:         No           Stringer or Weave Bead:         Stringer bead           Nozzle / Gas Cup Size:         1					
A-No. or Chemical Composition:  Filler Metal Trade Name:  Filler Metal Product Form:  Metal cored  Supplemental Filler Metal:  Weld Deposit 't' (in.):  Pass Greater Than ½":  No  Positions (QW-405)  Position of Joint:  Weld Progression:  N/A  Notes:  1  Gas (QW-408)  Shielding:  100% Argon  1	Transfer Mode:         Short-circuiting arc           Welding Details           Filler Metal Size (in.):         1         -         -           Amperage Used:         1         -         -           Wire Feed Speed (in/min):         1         -         -           Voltage Used:         1         -         -           Travel Speed (in/min):         1         -         -           Max. Heat Input (J/in):         N/R           Technique (QW-410)           Thermal Processes:         No           Stringer or Weave Bead:         Stringer bead           Nozzle / Gas Cup Size:         1           CFH         Contact Tube to Work Distance:         1					
A-No. or Chemical Composition: 3  Filler Metal Trade Name: 1  Filler Metal Product Form: Metal cored  Supplemental Filler Metal: 1  Weld Deposit 't' (in.): 1  Pass Greater Than ½": No  Positions (QW-405)  Position of Joint: 1G - Flat  Weld Progression: N/A  Notes: 1  Gas (QW-408)  Shielding: 100% Argon / 1  Backing: None / -	Transfer Mode:         Short-circuiting arc           Welding Details           Filler Metal Size (in.):         1         -         -           Amperage Used:         1         -         -           Wire Feed Speed (in/min):         1         -         -           Voltage Used:         1         -         -           Travel Speed (in/min):         1         -         -           Max. Heat Input (J/in):         N/R         N/R           Technique (QW-410)           Thermal Processes:         No           Stringer or Weave Bead:         Stringer bead           Nozzle / Gas Cup Size:         1           CFH         Contact Tube to Work Distance:         1           CFH         Multiple / Single Pass (per side):         Single pass					
A-No. or Chemical Composition:  Filler Metal Trade Name:  Filler Metal Product Form:  Metal cored  Supplemental Filler Metal:  Weld Deposit 't' (in.):  Pass Greater Than ½":  No  Positions (QW-405)  Position of Joint:  Weld Progression:  N/A  Notes:  1  Gas (QW-408)  Shielding:  100% Argon  1	Transfer Mode:         Short-circuiting arc           Welding Details           Filler Metal Size (in.):         1         -         -           Amperage Used:         1         -         -           Wire Feed Speed (in/min):         1         -         -           Voltage Used:         1         -         -           Travel Speed (in/min):         1         -         -           Max. Heat Input (J/in):         N/R           Technique (QW-410)           Thermal Processes:         No           Stringer or Weave Bead:         Stringer bead           Nozzle / Gas Cup Size:         1           CFH         Contact Tube to Work Distance:         1					

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### Procedure Qualification Record (PQR)

PQR No.: **PQR #2** 

## Tensile Test (QW-150)

	Width	Thickness	Area Ultimate Total		Ultimate Unit	Failure Type		
Specimen No.	(in.)	(in.)	(in²)	Load (lb)	Stress (PSI)	and Location		
1	1	1	1	1	11111111	Base metal		
2	2	2	2	2	2222222	Weld metal		

### **Guided Bend Tests (QW-160)**

Type and Figure No.	Result	Type and Figure No.	Result		
QW-462.2 Side bend	Acceptable	QW-462.2 Side bend	Acceptable		
QW-462.2 Side bend	Acceptable	QW-462.2 Side bend	Acceptable		

#### **Hardness Test - Brinell hardness**

Location	Readings								
A-1008, Grade DS Type B BM	1								
A-1008, Grade DS Type B HA	2								
Weld metal	3								
Visual Examination: 1									
Liquid Penetrant Test: 1									
Macro-Examination Test: 1									
1									
Welder's Name:				I.D.:		St	amp No.:		
PQR was done and welding of co				pany Name					
Test conducted by: 1						Lab T	Test No.: 1		
We certify that the statement requirements of Section IX of		cord are corre	ect and that	the test weld	ds were pre	epared, weld	ed, and tested	d in accordance	ee with the
Verified By		Sh	mar	*		4/8/2016	QA MAna	iger	
		John Sn	111111			Date			