Welder's Name Scott Gira Identification no. 5843 GMAW-AL-01 Identification of WPS followed Test Coupon Production Weld P22 to P22 Thickness 0.25" Plate

Specification of base material

Date of Issue: August 09, 2019

Testing conditions and Qualification Limits				
Welding Variables (QW-350)	Actual Values	Range Qualified		
Welding process	GMAW	GMAW		
Type (ie. manual, semi-automatic used)	Semi-Automatic	Semi-Automatic		
Backing ( with/without )	With Backing (Back-gouged)	With Backing		
Plate or Pipe (enter diameter if pipe or tube)	0.25" Plate	1/16" to 0.5"		
		Fillet - All thicknesses		
Base metal P no. or S no. joined to P no. or S no.	P22	P21 through P26		
Filler metal or electrode specification (SFA)	A5.10	A5.10		
Filler metal or electrode classification (info. only)	ER5356	Any		
Filler metal F no.	F22	F21 through F26		
Consumable insert (GTAW or PAW)	N/A	N/A		
Filler Metal Production Form	Solid Wire	Solid Wire		
Deposit thickness for each process	~0.25 in	~0.5 in		
Process 1 (GMAW) 3 layers minimum YES ☐ NO ☑	· —	-		
Position qualified (2G, 6G, 3F etc.)	2G, 3G-U, 4G	Horizontal, Vertical(UP), Overhead		
Vertical progression ( uphill or downhill)	N/A	N/A		
Type of Shielding gas (GMAW)	100% Argon	Any		
Type of Backing gas	N/A	N/A		
Transfer mode (spray / globular or pulse to short circuit)	Spray	Global, Spray or Pulsed		
GTAW current type/polarity (AC, DCEP, DCEN)	N/A	N/A		

Results				
Visual Examination of Welds	QW 302.4	Acceptable		
Transverse Side bends	QW 462.2	N/A		
Transverse Face and Root Bends	QW 462.3a	Acceptable		
Longitudinal Bends	QW 462.3b	N/A		
Pipe Bends Corrosion Resistant Overlay	QW 462.5c	N/A		
Plate Bends Corrosion Resistant Overlay	QW 462.5d	N/A		
Pipe Macro Test for Fusion	QW 462.5b	N/A		
Plate Macro Test for Fusion	QW 462.5e	N/A		

QW 302.4	Alternative Radiographic Examination	N/A
QW 180	Fillet Weld Fracture Test Fracture Test Length and % Defects	N/A
QW 184	Macro Examination fillet size & concavity and convexity	N/A
QW 304	Specimens Evaluated by	National Energy Equiment
	Welding Supervised by	Zanyar Farhadi
	Mechanical Tests Conducted by Lab	Industrial Technology Centre
	Lab Test No.	MT010-17920

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 Section IX of ASME **Boiler and Pressure Vessel Code** 

Certified by: Zanyar Farhadi

Organization: National Energy Equipment

Date Welded July 30, 2019



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## Mechanical Test Laboratory Report

Prepared for: Mr Chris Gerullis Report No: 17920-2

Service Manager
Date: 9 Aug 2019

National Energy Equipment Inc.

1431 Church Ave.

Phone: (204) 632-0043

Winnipeg MB R2X 1G5 Fax: (204) 633-8574

Sample Description: Aluminum Welds – Welder 5843 in positions GMAW 2G, 3G, 4G

Parent Material: 5052 (1/4" Thick), Filler Metal: ER5356

Standard/Specification: ASME IX: ✓ QW-160 Guided Bend Tests

Tests accredited by the Standards Council of Canada to ISO/IEC 17025 indicated with ✓. Note: Samples will be retained by ITC for 90 days from test date unless by other arrangement.

## **Test Results**

## Table 1: Weld Bend Test Results

Sample ID	Pass/Fail	Comments
·	Pass	No Visible Cracks
5843-2G – Face		
5843-2G – Root	Pass	No Visible Cracks
5843-3G – Face	Pass	No Visible Cracks
5843-3G – Root	Pass	No Visible Cracks
5843-4G – Face	Pass	No Visible Cracks
5843-4G – Root	Pass	No Visible Cracks

**End of Report** 

Prepared by: Daniel Godin, C.E.T.

\_\_\_\_\_ Reviewed by:

Tom Manson, P. Eng. Mechanical Engineer

Project Technologist - Mechanical

## Notes

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