

## Welding Qualification

### Introduction:

This Bulletin contains requirements for the qualification of welders regarding B620 program and the material joining processes they use during welding. All B620 welders who did not pass the welding performance qualification after April 24, 2016 or did not weld and record weld reports for more than 6 months, should prepare test plates and send it to qualifying.

### Procedure Qualification Record (PQR):

PQR is what occurred in the section fifteen (15) of Quality Control Manual and the related forms.

The PQR shall be accessible to the authorized Inspector at any time. A procedure specification may be supported by one or more PQR(s).

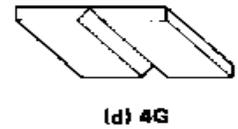
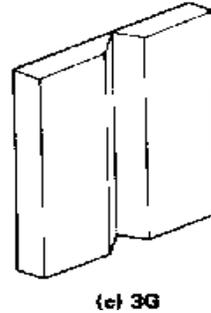
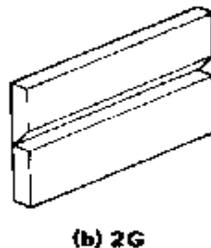
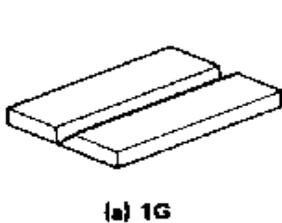
### Welder Performance Qualification (WPQ):

The purpose of qualifying the person who will use a welding process, proposed for repair, modification or assembly of B620 tanks, is to demonstrate that person's ability to produce an acceptable joint when using a procedure specification.

As a minimum, the WPQ document the essential variables for each process used to produce the test plates, the ranges of variables qualified, and the results of the required testing.

In order to get the qualification, each welder need to send four (4) different plates for each material, which are welded, in four (4) different positions:

1. Flat (1G)
2. Horizontal (2G)
3. Vertical (3G)
4. Overhead (4G)



The requirements are four (4) plates with the following specification for material 1 and material 2 = eight (8) plates:

- Material 1:5454 (5052 could be used also)
- Material 2:6061
- Size: 6" long, 6" wide, 1/8"-5/16" thickness

Setup for weld:

- Clean all pieces,
- Bevel weld sides, and tack them together,



- Mark/ engrave required information including position, ID number, which side, and material.
- Then, weld in all different 4 positions



**Notes:**

Do Not Grind, Clean, Cut, or Bend the plates.



There is a two (2) weeks time to check the plates and send back the result.

After the qualification, the test coupons along with the related documents including NEE-FRM-013 (Welding inspection report) and NEE-FRM-016 (Welding continuity log) should be kept and available in the shop by welder.

NATIONAL ENERGY EQUIPMENT INC.		Welding Performance Qualification (WPQ)
Form Number: NEE-FRM-019	Page 1 of 1	Revision: 0
Welder's Name: _____	Identification Number: _____	
WPS Used: _____	Test Coupon: _____	
Base Metal: _____	Thickness: _____	
	Actual Values	Range Values
Welding process	_____	_____
Type of Welder	_____	_____
Plate or Pipe	_____	_____
Base Metal	_____	_____
Filler Metal Spec	_____	_____
Filler Metal Class	_____	_____
Filler Metal	_____	_____
Consumable Insert	_____	_____
Filler Type	_____	_____
Position Qualified	_____	_____
Inert Gas Used	_____	_____
Voltage	_____	_____
Amperage	_____	_____
Transfer Mode	_____	_____
Welder Polarity	_____	_____
Cleaning Type	_____	_____
Welder and Welding Supervisor are responsible for the test coupons being prepared and welded in accordance with requirements of Section IX of the ASME Code.		
Welding Supervisor: _____	Signature: _____	
Location: _____		
<b>Results of Bend Test</b>		
Visual Examination of Complete Weld: _____		
Type of Test: _____	Root or Face: _____	
Code: _____	Result: _____	
Visual Examination of Complete Weld: _____		
Type of Test: _____	Root or Face: _____	
Code: _____	Result: _____	
Mechanical Test Performed by: _____	Signature: _____	
Location: _____		
We certify that the statement in the record is correct and that the test coupons were tested in accordance with the requirements of Section IX of ASME Code.		
Date: _____	Organization: _____	
Name: _____	Signature: _____	

EXTRUDEX		ALUMINUM CDRP		TEL: (416) 748-4444	FAX: (416) 748-0928	1-800-668-7210																	
				411 CHRISLEA ROAD, WOODBRIDGE, ONTARIO, CANADA L4L 2M4																			
				http://www.extrudex.com																			
<b>MILL TEST</b>																							
ROLL NO	3745 (CONT CODE)	DR NUMBER	DATE OF REPORT	EXTRUDEX ORDER NO.	MANIFEST NO.																		
SAMUEL ET PILS ET DIE LEE	19	2158	Aug/10/2017	207848 - 8	375720																		
SHIP TO	CUSTOMER NO	ALLOY	TENSURE	SALESMAN	HOUSE ACCOUNTS																		
LES METAUX SPECIALISES SAMUEL	074605	6061	T1611		MADE IN CANADA																		
DO DESCRIPTION	QUALIFIER PART NUMBER	PART DESCRIPTION		CERTIFICATION																			
1/4"X3" FLAT BAR	1838182	1/4"X3" FLAT BAR		ASTM B221-14 - AMS QQA 200B																			
<b>Mechanical Properties</b>																							
Lot	Alloy	Test Date	Ultimate Tensile Strength (USD)	Yield Strength (USD)	Percent Elongation	Hardness Rockwell F																	
A.11	6061	Aug/03/2017	41.30	38.20	15.30	86.4, 87.0, 86.7																	
<b>Chemical Composition</b>																							
Cast Number	Lot	Alloy	Si	Fe	Cu	Mn	Mg	Zn	Cr	Ni	Zn	Ti	Co	V	B	Zr	RE	Er	Sr	Ca	Al	Other	
37400	A.11	6061	0.071	0.228	0.0076	0.842	0.0535	0	0.0167	0.0098	0	0	0	0	0	0	0	0	0	0	0	0	Remainder

After the plates are prepared, ship all eight (8) plates along with filled NEE-FRM-019 (WPQ), related Mill test reports, and provide PO# for \$175 to Chris Gerullis in the following address:

1431 Church Avenue, Winnipeg, MB, R2X 1G5

We certify that the following extrusions have been quality inspected/tested and conforms to required dimensional and temper specifications:

*T. Mohabiz*  
 Tulsaram Mohabiz  
 Quality Control Manager

1 - CUSTOMER COPY