

# Certificate of Conformance

National Standard, LLC  
1631 Lake Street  
Niles, Michigan 49120

Product: **Tru-Core FC71T-CG**  
Classification: **E71T-1C, E71T-9C H4**  
Specification: **AWS A5.20, ASME SFA5.20**  
Test completion date: **June 10, 2013**

This is to certify that the product named above and referenced on the sales invoice number is of the same classification, manufacturing process, and raw material requirements as the electrode (cored wire) which was used for the tests conducted on the date shown, the results of which are displayed below. All tests required by the specifications required for classification were performed at that time and the product tested met all requirements. The electrode (cored wire) was manufactured and supplied in accordance with the Quality System Program of RevWires, LLC, located in Troy, Ohio, U.S.A. This Quality System Program meets the requirements of ISO 9001 and ANSI/AWS 5.01.

Operating Parameters	AWS/ASME Requirements	Data and Test Results
Electrode Size (in.)	1/16	1/16
Polarity	DCEP	DCEP
Shielding Gas (per AWS A5.32)	100% CO <sub>2</sub>	100% CO <sub>2</sub>
Wire Feed Speed (in/min)		28
Current (amps)	25-55	253
Average heat input (kJ/in)		278
Contact tip to work distance (in.)		38.6
Passes/Layers		¾-1
Preheat Temp. °F	60Min	14/7
Interpass Temp. °F	300 +/- 25	RT

Test Assembly Material: ASTM A36  
Radiographic Test: Conforms  
Fillet Weld Test: Conforms  
Tensile Condition: Aged per AWS A5.20

### Mechanical Properties of the Weld Deposit (As-welded condition)

Tensile Strength (ksi)	70-95	80.5
Yield Strength, 0.2% offset (ksi)	58 Min	69.1
% Elongation	22 Min	33
Average CVN Impact properties ft·lbf @0°F	20 Min	
Average CVN Impact properties ft·lbf @-20°F	20 Min	60

### Chemical Composition of the Weld Deposit (Weight %)

Element	C	Mn	Si	P	S	Cr	Ni	Mo	V	Al	Cu
AWS/ASME Requirements	0.12 Max	1.75 Max	0.90 Max	0.03 Max	0.03 Max	0.20 Max	0.50 Max	0.30 Max	0.08 Max	--	0.35 Max
Results	0.05	1.38	0.35	0.010	0.007	0.05	0.48	0.0	0.014	--	0.06

### Diffusible Hydrogen Data:

AWS A4.3 Requirements (mL/100g) for Diffusible Hydrogen	4
Results (mL/100g)	3.2

  
 Michael T. Merlo, Vice President, Quality  
 Date: 6/10/13