

# CERTIFICATE OF CONFORMANCE

Manufactured For :  
**Techniweld**

Date: July 19, 2007

Customer Order Number : 152454

Order Number : 43732

Weight :5,016 lbs

Lot/ Production No. Shipped: 1050AE718A481,1050E718A511,3  
1051E718A511,1086E721A974,1087E721A971,4  
1050E721A972,1050E720A984,1086E720A982  
1087E721A302,4,3302G715A861,3302G716A161,2

This is to certify that Smoothcor 81T1-W electrode, classification E81T1-W2, as supplied on the above order number, is of the same classification, manufacturing process and material requirements as the electrode used for testing. All tests required by specifications AWS A5.29/ASME SFA-5.29, for wire diameters .045" through 1/16", were performed in conformance with these specifications and the results met all requirements. The test results were as follows:

**CHEMICAL ANALYSIS (%)**

	Carbon	Manganese	Silicon	Sulphur	Phosphorus	Nickel	Chromium	Copper
Requirements:	0.12 max.	0.50-1.30	0.35-0.80	0.03 max.	0.03 max.	0.40-0.80	0.45-0.70	0.30-0.75
Deposit Analysis: 1/16" dia.	0.04	0.85	0.38	0.012	0.011	0.60	0.54	0.47

**RADIOGRAPHIC TEST**

Met requirements

**FILLET WELD TEST**

Met requirements

**WELD METAL DIFFUSIBLE HYDROGEN** (mL/100g) by Gas Chromatography method per AWS A4.3-93

**MECHANICAL PROPERTIES**

AS WELDED

STRESS RELIEVED (    hr @    °F)

**WELDING PARAMETERS:**

Electrode Diameter (in): 1/16  
Amperage: 280  
Arc Voltage: 28.0  
Current Polarity: DCEP  
Electrical Extension (in): 3/4  
Shielding Gas: CO<sub>2</sub>  
No. of Passes/Layers: 13/7  
Preheat/Interpass Temp (°F): 300 +/-25

**TEST RESULTS:**

	<u>Requirements</u>	<u>Actual Results</u>
Tensile Strength (psi):	80-100,000	93,600
Yield Strength (psi):	68,000 min.	78,400
Elongation (%):	19 min.	22.1
Charpy V-notch Impact:		19,21,24,18,26
ft•lb f @ -20°F	20 min. avg.	21 avg.

The undersigned certifies that the product supplied will meet the requirements of the applicable AWS Filler Metal Specification when tested in accordance with that specification, and that no significant change has been made in the formulations and manufacturing procedures described in the qualification approval.



Signed by: \_\_\_\_\_  
Ronald B. Smith, Technical Director