



ESAB Welding & Cutting Products

**CERTIFICATE OF CONFORMANCE
TO SPECIFICATION REQUIREMENTS
FOR WELDING ELECTRODES**

SECTION NO. 23

SUPPLIED TO:

YOUR ORDER NO.:

QUANTITY:

DIAMETER:

HEAT:

This is to certify that Spoolarc 85 electrode, AWS/ASME Classification ER70S-4 H4, as supplied on the above order, are of the same classification, manufacturing process and material requirements as the electrode combination tested on March 23, 2010 using CO₂ shielding gas.

All tests required by Specification AWS /ASME SFA5.18 (F-No. 6) and ANSI/AWS A5.01 Schedule G were performed. The materials tested met all the requirements for Classification ER70S-4 H4. The chemical composition of the electrode and mechanical properties of the deposited weld metal were as follows:

CHEMICAL COMPOSITION OF ELECTRODE:

<u>C</u>	<u>Mn</u>	<u>Si</u>	<u>S</u>	<u>P</u>	<u>Cu</u>	<u>Ni</u>	<u>Cr</u>	<u>Mo</u>	<u>Total Other Elements</u>
.09	1.28	.74	.006	.006	.13	.01	.01	.01	<.50

CHEMICAL COMPOSITION OF DEPOSITED WELD METAL (A-No. 1):

.08	10.1	.55	.007	.004	.08	.02	.02	<.01
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WELD TEST NO.: 100323-1AW

AS-WELDED

Tensile Test:

Yield Strength, ksi (MPa)	63.0	(434)
Tensile Strength, ksi (MPa)	78.5	(541)
Elongation, 2-in. %	31.0	

Radiography Test: Met all requirements

Welding Conditions:

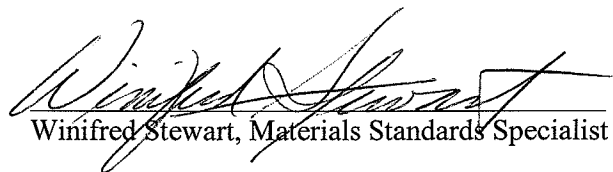
Arc Voltage: 28.5
Amperage: 350 DCEP
Travel Speed: 12 ipm
Diameter: 1/16 in.

Base Plate: A515/516 Gd. 70, 3/4 in. Thick
Set-up: 45° incl. angle, 1/2 in. Root gap
No. of Layers: 3 layers of 2, 1 layers of 3, 1 layer of 4
Preheat/Interpass: RT/300 ± 25°F

WELD METAL DIFFUSIBLE HYDROGEN

ml/100g: 3.2, 2.8, 3.1, 3.8 (3.2 avg.)

The electrode required to be tested for this Classification is either .045 or 1/16 in. The .030, .035 and .052 sizes will also meet this requirement. This certification complies with the requirements of EN 10204 Type 2.2.


Winifred Stewart, Materials Standards Specialist

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