



**ESAB Welding &
Cutting Products**

CERTIFICATE OF CONFORMANCE
TO SPECIFICATION REQUIREMENTS
FOR WELDING ELECTRODES

SECTION NO.: 24

SUPPLIED TO:

YOUR ORDER NO.:
QUANTITY:
DIAMETER:
HEAT:

This is to certify that Spoolarc 86 electrode, AWS/ASME Classification ER70S-6 H4, as supplied on the above order, are of the same classification, manufacturing process and material requirements as the electrode combination tested on February 1, 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-6 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	1.54	.92	.004	.007	.04	.02	.04	.02	<.50

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

.09	1.20	.72	<.003	.008	.08	.03	.05	<.01
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Weld Deposit Analysis meets the requirements of ASME Section IX A Number 1.

WELD TEST NO.: 100201-1AW

AS-WELDED

CHARPY V-NOTCH IMPACT
Ft-Lbs @ -22°F (Joules @ -30°C)

Tensile Test:

Yield Strength, ksi (MPa)	65.5 (451)	44 (59)
Tensile Strength, ksi (MPa)	82.5 (568)	45 (61)
Elongation, 2-in. %	29.0	37 (50)
		37 (50)
		<u>56 (76)</u>
		42 (avg.3) (57) (avg.3)

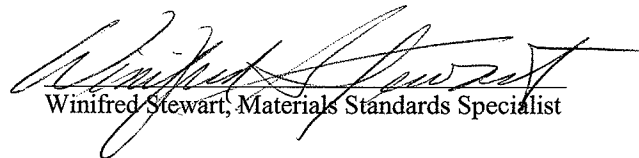
Radiography Test: Met all requirements

Welding Conditions:

Arc Voltage:	30.0	Base Plate:	A515/516 Gd. 70, 3/4 in. Thick
Amperage:	341 DCEP	Set-up:	45° incl. angle, 1/2 in. Root gap
Travel Speed:	12 ipm	No. of Layers:	6 layers of 2 passes, 1 of 3 passes
Diameter:	1/16 in.	Preheat/Interpass:	RT/300 ± 25°F

WELD METAL DIFFUSIBLE HYDROGEN
ml/100g: 2.0, 1.8, 1.8, 2.7 (2.1 avg.)

The electrode diameter 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.


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