ESAB® **ESAB Welding & Cutting Products**

CERTIFICATE OF CONFORMANCE
TO SPECIFICATION REQUIREMENTS
FOR WELDING ELECTRODES AND FLUXES

SECTION NO.: 6

SUPPLIED TO:

QUANTITY:
DIAMETER:
HEAT:
FLUX LOT:

This is to certify that Spoolarc 81 electrode, Classification EM12K, and ESAB OK Flux 10.62 submerged arc welding flux, AWS/ASME Classification F7A8-EM12K-H8, as supplied on the above order, are of the same classification, manufacturing process and material requirements as the flux-wire combination tested on January 21, 2010.

All tests required by Specification AWS/ASME SFA5.17 (F-No. 6) and ANSI/AWS A5.01 Schedule G were performed. The materials tested met all the requirements for Classification F7A8-EM12K-H8. The chemical composition of the electrode and mechanical properties of the deposited weld metal were as follows:

CHEMICAL COMPOSITION OF ELECTRODE

C	Mn	Si	S	P	Cu	Total Other Elements
.11	.94	.21	.010	.006	.08	<.50

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

.09	1.04	.29	.005	.012	.07

WELD TEST NO.: 100121-1AW AS-WELDED
Radiography Test: Met all requirements
Tensile Test:

Yield Strength, ksi (MPa)	63.5 (438)
Tensile Strength, ksi (MPa)	75.0 (517)
Elongation, 2-in. %	32.5

CHARPY V-NOTCH IMPACT

Ft-lbs @ -80°F	(Joules @ -62°C)
72	(97)
108	(146)
81	(109)
116	(156)
29	(39)
87 (avg. 3)	(117) (avg. 3)

Welding Conditions:

Arc Voltage:	28.5
Amperage:	535 DCEP
Travel Speed:	16 ipm
Diameter:	5/32 in.

Base Plate:	A515/516, 1 in. thick
Set-up:	30° incl. angle, 1/2 in. root gap
No. of Layers:	8 layers of 2 passes, 1 of 3
Preheat:	60°F min.
Interpass:	300 ± 25°F

WELD METAL DIFFUSIBLE HYDROGEN
ml/100g (Flux baked @ 800° F for 2 hours)
5.1, 5.5, 5.4, 6.1 (5.5 avg.)

Winifred Stewart, Materials Standards Specialist

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