ESAB Welding & Cutting Products

CERTIFICATE OF CONFORMANCE
TO SPECIFICATION REQUIREMENTS
FOR WELDING ELECTRODES AND FLUXES

SECTION NO.: 7

SUPPLIED TO:

QUANTITY:
DIAMETER:
HEAT:
FLUX LOT:

This is to certify that Spoolarc 81 electrode, Classification EM12K and ESAB OK Flux 10.72 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 June 2, 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
.10	.96	.20	.006	.006	.11	<.50

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

.08	1.51	.27	.006	.012	.08

WELD TEST NO.: 100602-2AW AS-WELDED

Tensile Test:	
Yield Strength, ksi (MPa)	65.0 (448)
Tensile Strength, ksi (MPa)	77.0 (531)
Elongation, 2-in. %	31.0

Radiography Test: Met all requirements

CHARPY V-NOTCH

Ft-lbs @ -80°F	(Joules @ -62°C)
80	(108)
102	(138)
38	(51)
83	(112)
19	(26)
67 (avg. 3)	(90) (avg. 3)

Welding Conditions:

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

Base Plate: A516, 1 in. Thick
Set-up: 30° incl. angle, 1/2 in. Root gap
No. of Layers: 8 layers of 2 passes
Preheat: 60 °F
Interpass: 300 ± 25°F

WELD METAL DIFFUSIBLE HYDROGEN
ml/100g (Flux baked @ 550° F for 2 hours)
2.0, 5.2, 5.0, 2.2 (3.6 avg.)

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