



ESAB Welding & Cutting Products

CERTIFICATE OF CONFORMANCE
TO SPECIFICATION REQUIREMENTS
FOR WELDING ELECTRODES AND FLUXES

SECTION NO. 12

SUPPLIED TO: QUANTITY:
DIAMETER:
HEAT:
FLUX LOT:

This is to certify that Spoolarc 53 electrode, Classification EH12K, and ESAB OK Flux 10.71 submerged arc welding flux, AWS/ASME Classification F7A5-EH12K-H8, as supplied on the above order, are of the same classification, manufacturing process and material requirements as the flux-electrode combination tested on February 23, 2011. It was manufactured and supplied according to the Quality System Program of ESAB Welding & Cutting Products, Ashtabula, Ohio, which meets the requirements of ISO9001, NCA3800, ANSI/AWS A5.01, and other specification and Military requirements, as applicable. The Quality System Program has been approved by ASME, ABS, and VdTUV.

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 F7A5-EH12K-H8. The chemical composition of the electrode and mechanical properties of the deposited weld metal were as follows:

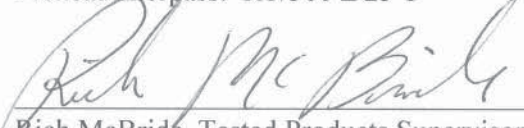
CHEMICAL COMPOSITION OF ELECTRODE:						Total
<u>C</u>	<u>Mn</u>	<u>Si</u>	<u>S</u>	<u>P</u>	<u>Cu</u>	<u>Other Elements</u>
.11	1.64	.26	.011	.006	.06	<.50

CHEMICAL COMPOSITION OF DEPOSITED WELD METAL:					
.08	1.91	.63	.012	.014	.08

WELD TEST NO.: 110223-3AW	AS-WELDED	CHARPY V-NOTCH IMPACT	
Radiography Test: Met all requirements		Ft-Lbs @ -50°F (Joules @ -46°C)	
Tensile Test:		53	(72)
Yield Strength, ksi (MPa)	71.0 (490)	51	(69)
Tensile Strength, ksi (MPa)	85.5 (590)	74	(100)
Elongation, 2-in. %	30.0	55	(75)
		<u>22</u>	<u>(30)</u>
		53 (avg.3)	(72) (avg.3)

Welding Conditions:			
Arc Voltage:	28	Base Plate:	A515/516 Gd 70, 1 in. thick
Amperage:	525 DCEP	Set-up:	30° incl. angle, 1/2 in. root gap
Travel Speed:	16 ipm	No. of Layers:	7 layers of 2 passes
Diameter:	5/32-in.	Preheat/Interpass:	RT/300 ± 25°F

WELD METAL DIFFUSIBLE HYDROGEN
ml/100g (Flux baked @ 550° F for 2 hour)
5.6, 5.9, 5.2, 6.3 (5.7 avg.)


Rich McBride, Tested Products Supervisor