



ESAB Welding & Cutting Products

CERTIFICATE OF CONFORMANCE
TO SPECIFICATION REQUIREMENTS
FOR WELDING ELECTRODES AND FLUXES

SECTION NO.: 14

SUPPLIED TO:

QUANTITY:
DIAMETER:
HEAT:
FLUX LOT:

This is to certify that Spoolarc 75 electrode, Classification ENi1K, and ESAB OK Flux 429 submerged arc welding flux, AWS/ASME Classification F7A4, F8A4-ENi1K-Ni1-H8, as supplied on the above order, are of the same classification, manufacturing process and material requirements as the flux-electrode combination tested on January 12, 2011.

All tests required by Specification AWS/ASME SFA5.23 and ANSI/AWS A5.01 Schedule G were performed. The materials tested met all the requirements for Classification F7A4, F8A4-ENi1K-Ni1-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 | Ni | Cu | Cr | Mo | Total Other Elements |
|-----|-----|-----|------|------|-----|-----|-----|-----|-------------------------|
| .08 | .89 | .46 | .008 | .004 | .89 | .07 | .02 | .01 | <.50 |

CHEMICAL COMPOSITION OF DEPOSITED WELD METAL

| C | Mn | Si | S | P | Ni | Cu | Cr | Mo | Ti+V+Zr |
|-----|------|-----|------|------|-----|-----|-----|------|---------|
| .07 | 1.48 | .65 | .007 | .021 | .81 | .08 | .05 | <.01 | <.01 |

WELD TEST NO.: 110110-1AW AS-WELDED

Radiography Test: Met all requirements

Tensile Test:

| | |
|-----------------------------|------------|
| Yield Strength, ksi (MPa) | 70.0 (483) |
| Tensile Strength, ksi (MPa) | 84.5 (583) |
| Elongation, 2-in. % | 29.0 |

CHARPY V-NOTCH IMPACT

Ft-lbs @ -40°F (Joules @ -40°C)

| | |
|-------------|---------------|
| 27 | (37) |
| 37 | (50) |
| 34 | (46) |
| 27 | (37) |
| <u>31</u> | <u>(42)</u> |
| 28 (avg. 3) | (38) (avg. 3) |

Welding Conditions:


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

Base Plate: A516 Gd 70, 1 in. thick
Set-up: 30° incl. angle, 1/2 in. root gap
No. of Layers: 9 layers of 2 passes,
Preheat & Interpass: 300 ± 25°F

WELD METAL DIFFUSIBLE HYDROGEN

ml/100g (Flux baked @ 800° F for 2 hours)

5.0, 5.0, 4.5 (4.8 avg.)


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