

Classifications

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|-----------------------|------------------|
| EN ISO 14171-A | AWS A5.17 |
| S4 | EH14 |

Characteristics and typical fields of application

Union S EH14 is a copper coated wire for submerged arc welding of unalloyed and low alloyed fine grain steel. It is a kind of high Manganese type welding wire. It matches with low-manganese and low-silicon type welding flux.

Union S EH14 can be applied both for high-speed welding steel plate of tensile strength 490N/mm² and filling welding. Mechanical properties of deposited metal is very stable. It is universally applicable in shipbuilding, steel construction and in the fabrication of boilers and containers.

Base materials

General and fine grained steels up to a yield strength of 460 MPa.

A572 Gr. 50 – A678 Gr. A, Boiler plates up to A516 Gr. 60, 70 especially for pipe steel up to API 5L Gr. X52 and unalloyed boiler tubes.

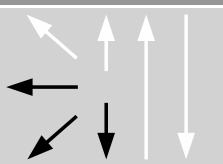
Typical analysis of the wire and of all-weld metal (wt.-%)

| | C | Si | Mn | P | S | Cu |
|------|------|------|------|-------|-------|------|
| Wire | 0.10 | 0.05 | 1.80 | 0.019 | 0.013 | 0.05 |

Typical Mechanical properties of all-weld metal – typical values (min. values)

| Union S EH14 with flux combination | Yield strength R _{p0,2} | Tensile strength R _m | Elongation A (L ₀ =4d ₀) | Impact work ISO-V CVN J | |
|------------------------------------|----------------------------------|---------------------------------|---|-------------------------|-------|
| | MPa | MPa | % | -40°C | -60°C |
| UV C 418 TT (AW) | 470 | 550 | 30 | 150 | 120 |

Operating data



SAW – Single wire process DCEP or AC
Interpass temp. 180 - 220°C, Preheat according to base material

Approvals

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Size and Packaging

| Size mm | Spooling | Weight (Kg) |
|---------|---------------|-------------|
| 1.6 | Basket (K415) | 25 |
| 2.0 | Basket (K415) | 25 |
| 2.4 | Basket (K415) | 25 |
| 3.2 | Basket (K415) | 25 |
| 4.0 | Basket (K415) | 25 |