

Classifications

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|-------------------------|------------|--------------|
| EN ISO 14172 | AWS A5.11 | Material-No. |
| E Ni 6182 (NiCr15Fe6Mn) | E NiCrFe-3 | 2.4807 |

Characteristics and field of use

UTP 7015 is employed for joining and surfacing of nickel-base materials. UTP 7015 is also recommended for welding different materials, such as austenitic to ferritic steels, as well as for weld claddings on unalloyed and low-alloyed steels, e. g. for reactor construction.

Weldable in all positions, except vertical down. Stable arc, good slag removability. The seam is finely rippled and notch-free. The weld deposit has a fully austenitic structure and is high-temperature resistant. Not prone to embrittlement either at high or low temperatures

The preheating must be matched to the parent metal. Any thermal post-treatments can be applied without regard for the weld metal.

Typical analysis in %

| C | Si | Mn | Cr | Ni | Nb | Fe |
|-------|-----|-----|------|---------|-----|-----|
| 0,025 | 0,4 | 6,0 | 16,0 | balance | 2,2 | 6,0 |

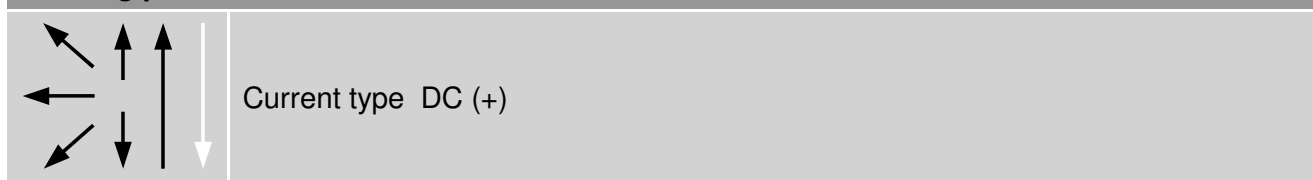
Mechanical properties of the weld metal

| Yield strength R _{p0,2} | Tensile strength R _m | Elongation A | Impact strength K _v | Hardness Brinell |
|-------------------------------------|------------------------------------|-----------------|-----------------------------------|---------------------|
| MPa | MPa | % | J | -196 °C |
| 400 | 670 | 40 | 120 | 80 |
| | | | | approx. 170 |

Welding instruction

Opening angle of the prepared seam approx. 70°, root gap approx. 2 mm. The stick electrode is welded with a slight tilt and short arc. Use string beads welding technique. The interpass temperature of 150° C and a max. weaving width 2,5 x diameter of the stick electrode core wire should not be exceeded. Redry stick electrode prior welding for 2 – 3 h at 250 – 300° C, welding out of a hot stick electrode carrier.

Welding positions



Approvals

TÜV (No. 00875), GL, DNV, KTA (No. 08036)

Recommended welding parameters

| Electrodes Ø x L [mm] | 2,5 x 300 | 3,2 x 300 | 4,0 x 350 | 5,0 x 400 |
|-----------------------|-----------|-----------|-----------|-----------|
| Amperage [A] | 50 – 70 | 70 – 95 | 90 – 120 | 120 – 160 |