

Classifications

| EN ISO 14172 | AWS A5.11 / SFA-5.11 | Material-No. |
|---------------------------|----------------------|--------------|
| E Ni 6093 (NiCr15Fe8NbMo) | ENiCrFe-3 (mod.) | ~ 2.4807 |

Characteristics and typical fields of application

UTP 7015 NK is suitable for repair and joining heat resistant nickel alloys and cold tough steels, low-alloyed steels with stainless steels as well as hardly weldable steels. Also suited as tough buffer layer for hard-surfacings of nickel or cobalt alloys.

UTP 7015 NK has a stable arc and good slag removal. The seam is finely rippled and notch-free. The fully austenitic weld deposit does not prone to embrittlement either at high or low temperatures. Corrosion resistant and workhardening.

Hardness of the pure weld metal
 untreated: approx. 180 HB
 work-hardened: approx. 350 HB

Typical analysis

| | C | Si | Mn | Cr | Ni | Mo | Nb | Fe |
|-------|------|-----|-----|----|------|-----|----|----|
| wt.-% | 0.03 | 0.4 | 4.5 | 15 | Bal. | 1.2 | 2 | 7 |

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

| Yield strength $R_{p0.2}$ | Tensile strength R_m | Elongation A ($L_0=5d_0$) | Impact energy ISO-V KV J |
|---------------------------|------------------------|-----------------------------|--------------------------|
| MPa | MPa | A | J |
| > 380 | > 650 | > 30 | > 80 |

Operating data

|  | Polarity | DC+ | Dimension mm | Current A | |
|--|----------|-----|--------------|-----------|-----------|
| | | | | 2.5 × 300 | 60 – 80 |
| | | | | 3.2 × 350 | 80 – 120 |
| | | | | 4.0 × 400 | 120 – 160 |

Clean the weld zone thoroughly. Opening angle of seam 70 – 80°. Weld stick electrode with slight tilt and with a short arc. In order to keep the heat input low, the stick electrode shall be welded with low current settings and in string bead technique. The end crater must be filled properly and the arc drawn away to the side.

Redry electrode for 2 – 3 hours at 250 – 300 °C

Approvals

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