

Classifications

Material-No.	AWS A5.11 / SFA-5.11	EN ISO 14172
2.4807	ENiCrFe-3	E Ni 6182 (NiCr15Fe6Mn)

Characteristics and typical fields of application

UTP 7015 is designed 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 removal. 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 post heat treatments can be applied without regard for the weld metal


Typical analysis

	C	Si	Mn	Cr	Ni	Nb	Fe
wt.-%	0.025	0.4	6.0	16.0	bal.	2.2	8.0

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

Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A ($L_0=5d_0$)	Impact energy ISO-V KV J		Hardness
	MPa	MPa	%	J	-196°C	HB
u	400	650	40	120	80	ca. 170

Operating data

	Polarity	DC +	Dimension mm	Current A
	Redrying	2-3 h / 250 - 300 °C	2.5 × 300	50 – 70
			3.2 × 300	70 – 95
			4.0 × 350	90 – 120
			5.0 × 400	120 – 160

Welding instructions

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.

Approvals

TÜV (No. 00875), DNV, KTA (No. 08036)



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