Thermanit 30/10 W

Covered electrode, high-alloyed, austenitic stainless, special applications

Classifications

EN ISO 3581-A	AWS A5.4 / SFA-5.4
E 29 9 R 1 2	E312-16 (mod.)

Characteristics and typical fields of application

Rutile coated electrode of E 29 9 R / E312-16 type. Max. service temperature 300°C. High resistance to hot cracking and good toughness at high yield strength. For joining and surfacing applications with matching and similar steel grades. For fabricating tough joints on unalloyed and low-alloyed structural steels of higher strength, on high manganese and CrNiMn-steels, between dissimilar metals e.g. between stainless or heat resistant and unalloyed or low-alloyed steels and cast steel grades.

Base materials

For welding of unalloyed steels with limited weldability and low-alloyed steels of higher strength. Used as stress-relieved buffer layer when cladding cold and warm machine tools. For joining of high manganese and CrNiMn-steels, as well as for combinations on steels of different chemical composition or strength.
1.3401 X120Mn12, 1.4006 X10Cr13, 1.4339 GX32CrNi28-10, 1.4340 GX49CrNi27-4, 1.4347 GX8CrCrNiN26-7 1.4460 X3CrNiMoN27-5-2 UNS S41000 AISI 329, 410. S235, E295

Typical analysis

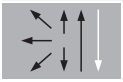
	C	Si	Mn	Cr	Ni	N
wt.-%	0.10	1.1	0.8	29.0	9.0	0.1

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)
	MPa	MPa	%
u	> 550 (≥ 450)	> 700 (≥ 660)	> 18 (≥ 15)

u untreated, as-welded

Operating data



Polarity	DC+ / AC
Electrode identification	Thermanit 30/10 W E 29 9 R

Dimension mm	Current A
2.0 × 250	45 – 60
3.2 × 350	60 – 110
4.0 × 350	90 – 150

Suggested heat input max. 2.0 kJ/mm and interpass temperature max. 150°C.
Preheating and interpass temperature as required by the base metal.
Weld with a short arc, use stringer beads or slight weaving, as applicable.
Redrying at 250 – 300°C for min. 2 h if necessary.

Approvals

DB (30.138.06), CE