

Classifications

EN ISO 3581-A	AWS A5.4 / SFA-5.4
E Z 25 22 2 L B 2 2	E310Mo-15 (mod.)

Characteristics and typical fields of application

Rutile coated austenitic electrode of E 25 22 2 N L R / E310Mo-15 type. Particularly suited to corrosion conditions in urea synthesis plants. For joining and surfacing applications with matching / similar steels. For weld cladding on high temperature steels and for fabricating joints on claddings. Excellent corrosion resistance in strongly oxidizing and slightly reducing environments. High resistance to intergranular, selective, chloride-induced pitting and stress corrosion. Max. service temperature 350°C. Seawater resistant, good resistance to nitric acid. Huey test in acc. ASTM A 262: max. 1.5 µm / 48 h max. (0.54 g/m²h), selective attack max. 100 µm. Resistant to scaling up to 1050°C. Resulting all weld metal microstructure is austenite with max. 0.5% ferrite.

Base materials

1.4335 X1CrNi25-21, 1.4435 X2CrNiMo18-14-3, 1.4465 X1CrNiMoN22-25-3, 1.4466 X1CrNiMoN25-22-2, 1.4577 X3CrNiMoTi25-25
UNS S31050, S31603
AISI 316L, 725LN

Typical analysis

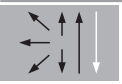
	C	Si	Mn	Cr	Ni	Mo	N
wt.-%	< 0.035	< 0.4	5.0	24.5	22.0	2.2	0.15

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
	MPa	MPa	%	20°C
u	400 (≥ 320)	600 (≥ 510)	30 (≥ 25)	80

u untreated, as-welded

Operating data

	Polarity	DC+	Dimension mm	Current A	
	Electrode identification	Thermanit 25/22 H EZ 25 22 2		2.5 × 300	55 – 80
		N L B		3.2 × 350	80 – 105
				4.0 × 350	90 – 135

Suggested heat input is max. 1.5 kJ/mm, interpass temperature max. 150°C.

Post-weld heat treatment generally not needed. In special cases, solution annealing can be performed at 1050°C followed by water quenching.

Approvals

TÜV (04171), CE