Thermanit ATS 4

Stick electrode, high-alloyed, austenitic stainless, creep resistant

Classifications

EN ISO 3581-A	AWS A5.4 / SFA-5.4
E 19 9 H B 2 2	E308H-15

Characteristics and typical fields of application

Basic stick electrode of E 19 9 H B / E308H-15 type for joining and surfacing applications on matching and similar creep resistant steel and cast steel grades. Creep resistant up to 700ºC and scaling resistant up to 800ºC.

Base materials

1.4948 X6CrNi18-11, 1.4878 X12CrNiTi18-9, 1.4550 X6CrNiNb18-10
AISI 304, 304H, 321H, 347H

Typical analysis

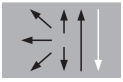
	C	Si	Mn	Cr	Ni
wt.-%	0.05	0.3	1.6	18.5	9.5

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	425 (≥ 350)	600 (≥ 550)	43 (≥ 30)	110 (≥ 70)

u untreated, as welded

Operating data



Polarity	DC+
Electrode identification	Thermanit ATS 4 E 308H-15

Dimension mm	Current A
2.5 × 300	55 – 80
3.2 × 350	80 – 105
4.0 × 350	90 – 135
5.0 × 450	150 – 190

Up to 25 mm wall thickness no preheating or post weld heat treatment. Over 25 mm wall thickness preheating to max. 200ºC and stress relieving treatment at 1050ºC followed by air cooling (to avoid stress corrosion cracking).
Suggested heat input is max. 2.0 kJ/mm and interpass temperature max. 150ºC.
Creep rupture properties according to matching high temperature steels / alloys.

Approvals

TÜV (01526), CE