Avesta 308/308H AC/DC

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

Classifications

EN ISO 3581-A	AWS A5.4 / SFA-5.4
E 19 9 R 4 2	E308H-17

Characteristics and typical fields of application

Rutile coated electrode of E 19 9 R / E308H-17 type. Designed for welding of creep resistant austenitic stainless steels such as 1.4948 / 304H, exposed to temperatures above 400ºC. Resulting weld microstructure is austenite with 5 – 10% ferrite. Good general corrosion resistance equal to base material 1.4301 / 304. The scaling temperature is approximately 850ºC in air.

Base materials

1.4301 X5CrNi18-10, 1.4541 X6CrNiTi18-10, 1.4550 X6CrNiNb18-10, 1.4878 X8CrNiTi18-10, 1.4948 X7CrNi18-9
UNS S30400, S30409, S32100, S34700
AISI 304, 304H, 321, 321H, 347, 347H

Typical analysis

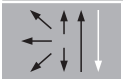
	C	Si	Mn	Cr	Ni
wt.-%	0.06	0.7	1.1	20	10

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	%	20°C	HB
u	430 (≥ 350)	600 (≥ 550)	37 (≥ 30)	60 (≥ 32)	200

u untreated, as-welded

Operating data



Polarity	DC+ / AC
Electrode identification	308/308H-17

Dimension mm	Current A
2.5 × 300	50 – 80
3.2 × 350	80 – 120
4.0 × 350	100 – 160

Suggested heat input is max. 2.0 kJ/mm and interpass temperature max. 150ºC.
Post-weld heat treatment generally not needed. In special cases, solution annealing can be performed at 1050ºC followed by water quenching.
Re-drying at 120 – 200ºC for min. 2 h if necessary.

Approvals

TÜV (12841), CE