Thermanit 308 H-PW

Flux cored wire, high-alloyed, rutile

Classifications

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22	Mat. No.
T Z 19 9 H P M21 1 T Z 19 9 H P C1 1	TS308H-FB1	E308HT1-4 E308HT1-1	1.4948

Characteristics and typical fields of application

Thermanit 308 H-PW is a strip alloyed flux cored wire with rutile slag characteristic for position welding of high temperature austenitic CrNi steels. The sustain effect of the fast freezing slag enables out of position welding with high current and high welding speed with mixed gas M21 and 100% CO2 according to EN ISO 14175. Fine droplet, almost spatter free welding, very intensive spray arc, secure penetration, self detaching slag, as well as good wetting bead appearance lead to high welding quality and simultaneously short welding times. Easy handling, low heat input because of higher welding speed and lower cleaning and pickling are additional user advantages. The weld metal is suitable for service temperatures to approx. 700 °C (1292 °F). It is resistant to scaling and because of controlled ferrite content it shows good resistance to hot cracking and low affinity to embrittlement.

For flat and horizontal welding (PA, PB) Thermanit TG 308 H is recommendet.

Base materials

High temperature steels matching

1.4948 – X6CrNi18-10, 1.4878 – X8CrNiTi18-10, AISI 304, 304H, 321H, 347H

Typical analysis of all-weld metal (wt.-%)

	C	Si	Mn	Cr	Ni	Gas
wt-%	0.05	0.6	1.2	19.4	10.1	M21

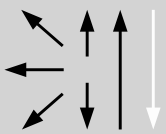
Structure: Austenite with part ferrite (FN 3 – 8)

Mechanical properties of all-weld metal

Heat-treatment	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact work ISO-V KV J
	MPa	MPa	%	+20 °C
aw	350	550	35	47
aw 500 °C	310	440	30	

aw = as welded – Shielding gas Ar + 18 % CO_2

Operating data



Polarity:	Shielding gas:	ø (mm)	Spool	Amps A	Voltage V
DC (+)	(EN ISO 14175) M21, C1 Consumption: 15 – 18 l/min	1.2	B300	125 – 210	21 – 29

Approvals

TÜV (11347), CE