Thermanit 308 H - Marathon 805

SAW wire/flux combination, high-alloyed, austenitic stainless, heat and creep resistant

(Avesta 308H - Avesta Flux 805)

Classifications

EN ISO 14343-A	AWS A5.9 / SFA-5.9	EN ISO 14174
S 19 9 H	ER308H	S A AF 2 DC

Characteristics and typical fields of application

Thermanit 308 H - Marathon 805 is a wire/flux combination for submerged arc welding for joining and surfacing applications with matching and similar stabilized and unstabilized austenitic CrNi(N) and CrNiMo(N)-steels and cast steel grades. The wire has an enhanced carbon content compared to 308L. This provides improved creep resistance properties, which is advantageous at temperatures above 400ºC. 308H type consumables are normally used at temperatures up to 600ºC. Good resistance to general corrosion similar to ASTM 304, however the enhanced carbon content, compared to 308L, makes it slightly more sensitive to intercrystalline corrosion. The former product name of the SAW wire was "Avesta 308H".

Marathon 805 is an agglomerated basic flux that ensures good welding properties with nice bead appearance and good slag detachability. The flux avoids excessive Cr-burn-out (Cr-support). For more information regarding this sub-arc welding flux, see the separate datasheet. The former product name of the SAW flux was "Avesta Flux 805".

Base materials

1.4550 X6CrNiNb18-10, 1.4878 X12CrNiTi18-9, 1.4948 X6CrNi18-1
AISI 304H, 321H, 347H

Typical analysis

wt.-%	C	Si	Mn	Cr	Ni
wire	0.05	0.4	1.7	20.0	10.0
all-weld metal	0.05	0.6	1.3	20.5	10.0

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	410 (≥ 320)	580 (≥ 550)	36 (≥ 30)	85 (≥ 65)

u untreated, as-welded

Operating data

Dimension mm
2.0
2.4
3.2

No preheating.
Suggested heat input max. 1.5 kJ/mm and interpass temperature max. 150ºC. Polarity: DC+
Post-weld heat treatment generally not needed. In special cases, solution annealing can be perfiormed at 1050ºC followed by air cooling.

Approvals

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