Avesta FCW 308H-PW

GMAW flux cored wire, high alloyed, special application

Classification

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22
T 19 9 H P M/ C 1	-	E308HT1-4/-1

Characteristics and typical fields of application

Avesta FCW 308H-PW is designed for welding 1.4948/ASTM 304H type stainless steels. The higher carbon content, compared to 308L, provides improved creep resistance properties, which is advantageous at temperatures above 400°C. It is also suitable for welding steels that are stabilized with titanium or niobium, such as 1.4541/ASTM 321 and 1.4550/ASTM 347 for service temperatures not exceeding 600°C. For higher temperatures a stabilised material, e.g. 347/MVNb, should be used. Avesta FCW 308H-PW has a stronger arc and a faster freezing slag compared to the 2D type. It is designed for all-round welding and can be used in all positions without changing the parameter settings. Weldability is excellent in the vertical- up and overhead welding positions.

Avesta FCW 308H-PW should be welded using direct current positive polarity (DC+) with a recommended wire stick-out of 15 – 20 mm.

Corrosion resistance:

Corresponding to 1.4301/ASTM 304, i.e. good resistance to general corrosion. The enhanced carbon content, compared to 308L, makes it slightly more sensitive to intergranular corrosion.

Base Materials

Outokumpu	EN	ASTM	BS	NF	SS
4948	1.4948	304H	304S51	Z6 CN 18-09	2333
4301	1.4301	304	304S31	Z7 CN 18-09	2333
4541	1.4541	321	321S31	Z6 CNT 18-10	2337
-	1.4550	347	S347S31	Z6 CNNb 18-10	2338

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

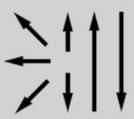
	C	Si	Mn	Cr	Ni
wt-%	0.05	0.6	1.4	19.3	10.4

Mechanical properties of all-weld metal

Heat-treat-ment	Yield strength R_e N/mm^2	Tensile strength R_m N/mm^2	Elongation (L_0=5d_0)	Impact work ISO-V KV J		Hardness
	MPa	MPa	%	+20 °C	–70 °C	HB
u	390	580	41	90	50	210

u untreated, as-welded – shielding gas Argon + 18 % CO_2

Operating data



Polarity	shielding gases:	re-drying if necessary:	amps A	voltage V	ø (mm)
DC (+)	Ar + 15 – 25% CO_2 100 % CO_2	150°C / 24 hrs	150 - 240	24 – 32	1.2

Ar + 15 – 25% CO_2 offers the best weld ability, but 100% CO_2 can be also used (voltage should be increased by 2V). Gas flow rate 20 – 25 l/min.

Approvals

-