



# FCW-2D 308H

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
4301	1.4301	304	304S31	Z7 CN 18-09	2333
4541	1.4541	321	321S31	Z6 CNT 18-10	2337
–	1.4550	347	347S31	Z6 CNNb 18-10	2338

## Standard designations

AWS A5.22 E308HT0-4/-1

## Characteristics and welding directions

AVESTA FCW-2D 308H is designed for welding austenitic stainless steel type 18 Cr 10 Ni or similar. It has a higher carbon content, compared to 308L. This provides improved creep resistance properties, which is advantageous at temperatures above 400°C. 308H is also suitable for welding titanium and niobium stabilised steels such as ASTM 321 and ASTM 347 for service temperatures not exceeding 600°C.

AVESTA FCW-2D 308H is primarily designed for flat welding but can also be used in the horizontal-vertical position with good result.

## Welding data

Diameter mm	Welding position	Current A	Voltage V
1.20	Flat, horizontal	150 – 280	24 – 32

## Shielding gas

Ar + 15 – 25% CO<sub>2</sub> offers the best weldability, but 100% CO<sub>2</sub> can also be used (voltage should be increased by 2V).

Gas flow rate 20 – 25 l/min.

## Chemical composition, all weld metal (typical values, %)

C	Si	Mn	Cr	Ni
0.06	0.4	1.5	19.0	9.5
Ferrite	5 FN 5 FN	DeLong WRC-92		

## Mechanical properties

	Typical values (IIW)	Min. values AWS A5.22
Yield strength R <sub>p0,2</sub>	390 N/mm <sup>2</sup>	–
Tensile strength R <sub>m</sub>	580 N/mm <sup>2</sup>	550 N/mm <sup>2</sup>
Elongation A <sub>5</sub>	41 %	35 %
Impact strength KV +20°C	90	
–70°C	50 J	
Hardness	210 Brinell	

**Interpass temperature:** Max. 150°C.

**Heat input:** Max. 2.0 kJ/mm.

**Heat treatment:** Generally none (in special cases quench annealing at 1050°C).

**Structure:** Austenite with 3 – 8% ferrite.

**Scaling temperature:** Approx. 850°C (air).

**Corrosion resistance:** Corresponding to ASTM 304, i.e. good resistance to general corrosion. The enhanced carbon content, compared to 308L, makes it slightly more sensitive to intercrystalline corrosion.

## Approvals

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