

FCW 316L/SKR-PW

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
4436	1.4436	316	316S33	Z7 CND 18-12-03	2343
4432	1.4432	316L	316S13	Z3 CND 17-12-03	2353
4429	1.4429	S31653	316S63	Z3 CND 17-12 Az	2375
4571	1.4571	316Ti	320S31	Z6 CNDT 17-12	2350

Standard designations

EN ISO 17633 T 19 12 3 L P M/C 1

AWS A5.22 E316LT1-4/-1

Characteristics and welding directions

AVESTA FCW 316L/SKR-PW is designed for welding austenitic stainless steel type 17 Cr 12 Ni 2.5 Mo or similar. It is also suitable for welding titanium and niobium stabilised steels such as ASTM 316Ti in cases where the construction will be operating at temperatures below 400°C.

AVESTA FCW 316L/SKR-PW is designed for all-round welding and can be used in all positions without changing the parameter settings.

Welding data

Diameter mm	Welding position	Current A	Voltage V
1.20	Flat, horizontal	150 – 240	24 – 32
	Vertical-up	130 – 160	23 – 28
	Overhead	150 – 200	24 – 29
	Vertical-down	120 – 180	22 – 27

Shielding gas

Ar + 15 – 25% CO₂ offers the best weldability, but 100% CO₂ 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	Mo
0.03	0.7	1.5	18.0	12.5	2.7

Ferrite	7 FN	DeLong
	6 FN	WRC-92

Mechanical properties	Typical values (IIW)	Min. values EN ISO 17633
Yield strength R _{p0,2}	400 N/mm ²	320 N/mm ²
Tensile strength R _m	560 N/mm ²	510 N/mm ²
Elongation A ₅	37 %	25 %
Impact strength KV		
+20°C	60 J	
-40°C	55 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 5 – 10% ferrite.

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

Corrosion resistance: Excellent resistance to general, pitting and intercrystalline corrosion in chloride containing environments. Intended for severe service conditions, i.e. in dilute hot acids.

Approvals

- CE
- DB
- TÜV
- CWB
- DNV