

Classification

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22
T 19 12 3 L P M/C 1	-	E316LT1-4/-1

Characteristics and typical fields of application

Avesta FCW 316L/SKR-PW is designed for welding 1.4436/ASTM 316 type stainless steels. It is also suitable for welding steels that are stabilised with titanium or niobium, such as 1.4571/ASTM 316Ti for service temperatures not exceeding 400°C.

Avesta FCW 316L/SKR-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 316L/SKR-PW should be welded using direct current positive polarity (DC+) with a recommended wire stick-out of 15 – 20 mm.

Corrosion resistance:

Excellent resistance to general, pitting and intergranular corrosion in chloride containing environments. Intended for severe service conditions, e.g. in dilute hot acids.

Base Materials

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

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

	C	Si	Mn	Cr	Ni	Mo
wt-%	0.025	0.8	1.5	18.8	11.8	2.7

Mechanical properties of all-weld metal

Heat-treatment	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	-40°C	HB
u	400	560	37	60	55	210

u untreated, as-welded – shielding gas Argon + 18 % CO₂

Operating data

	Polarity DC (+)	shielding gases: Ar + 15 – 25% CO ₂ 100 % CO ₂	re-drying if necessary: 150°C / 24 hrs	amps A 150 – 240	voltage V 24 – 32	ø (mm) 1.2
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Ar + 15 – 25% CO₂ offers the best weldability, but 100% CO₂ can be also used (voltage should be increased by 2V). Gas flow rate 20 – 25 l/min.

Approvals

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