

Classification

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22
T 19 9 L R M/C 3	-	E308LT0-4/-1

Characteristics and typical fields of application

Avesta FCW-2D 308L/MVR is designed for welding 1.4301/ASTM 304 type stainless steels. It also suitable for welding steels that are stabilised with titanium or niobium, such as 1.4541/ASTM 321, 1.4878/321H and 1.4550/347 in cases where the construction will be operating with the temperatures below 400°C. For higher temperatures a niobium stabilised consumable such as Avesta FCW-2D 347/MVNB is required.

Avesta FCW-2D 308L/MVR provides excellent weldability in flat as well as horizontal-vertical position. Welding in vertical-up and overhead positions is preferably done using FCW 308L/MVR-PW. FCW-2D 308L/MVR diam. 0.9 mm can be welded in all positions.

Avesta FCW-2D 308L/MVR should be welded using direct current positive polarity (DC+) with a recommended wire stick-out of 15 – 20 mm.

Corrosion resistance:

Very good under fairly severe conditions, e.g. in oxidising acids and cold or dilute reducing acids.

Base Materials

Outokumpu	EN	ASTM	BS	NF	SS
4301	1.4301	304	304S31	Z7 CN 18-09	2333
4307	1.4307	304L	304S11	Z3 CN 18-10	2352
4311	1.4311	304LN	304S61	Z3 CN 18-10 Az	2371
4541	1.4541	321	321S31	Z6 CNT 18-10	2337

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

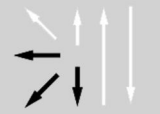
	C	Si	Mn	Cr	Ni
wt-%	0.025	0.8	1.5	19.3	10.9

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	-196°C	HB
u	380	560	35	60	50	35	200

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	voltage V	ø (mm)
				100 – 160	21 - 28	0.9
				125 – 280	20 – 34	1.2
				200 – 350	25 - 35	1.6

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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