

Classification

EN ISO 14343-A	AWS A5.9
G 25 20	ER310

Characteristics and typical fields of application

Avesta 310 is designed for welding high temperature steels such as ASTM 310S. The consumable can as be used for welding some ferritic chromium steels, 14 %-Mn steels and stainless to mild steel connections. Avesta 310 gives a fully austenitic type 26 Cr 21 Ni weld metal and is therefore somewhat more sensitive to hot cracking than 316 type steels. Welding should therefore be performed minimizing the heat input, interpass temperature and dilution with parent metal.

Structure: Fully austenitic.

Scaling temperature: Approx. 1150 °C (air).

Corrosion resistance:

Initially intended for constructions running at high temperatures. Wet corrosion properties are moderate.

Base materials

Outokumpu	EN	ASTM	BS	NF	SS
4845	1.4845	310S	310S16	Z8 CN 25-20	2361

Typical analysis of the solid wire (wt.-%)

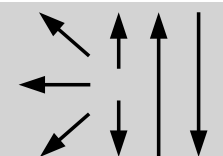
	C	Si	Mn	Cr	Ni	Ferrite
wt.-%	0.12	0.35	1.6	25.5	21.0	0 FN

Mechanical properties of all-weld-metal

Heat treatment	Yield strength R _{p0.2}	Tensile strength R _m	Elongation (L ₀ =5d ₀)	Impact work ISO-V KV J	Hardness
	MPa	MPa	%	+20 °C	Brinell
u	360	570	35	120	210

u untreated, as welded – Shielding gas Ar + 30 % He + 2.5 % CO₂

Operating data

	Polarity DC (+)	Shielding gas: Ar + 30 % He + 2.5 % CO ₂ Gas flow rate: 12 – 16 l/min	ø (mm) 1.0 1.2
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Heat treatment: Generally none.

Interpass temperature: max. 100 °C.

Heat input: max. 1.0 kJ/mm.

Approvals

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