

For welding steels such as					
Outokumpu	EN	ASTM	BS	NF	SS
4845	1.4845	S310S	310S16	Z8 CN 25-20	2361

Standard designations

EN 1600 E 25 20 R
 AWS A5.4 E310-17

Characteristics and welding directions

AVESTA 310 is a 25Cr-20Ni electrode for welding ASTM 310S and related types of high temperature stainless steels. 310 has a fully austenitic structure, which makes it somewhat more sensitive to hot cracking than, for example, 309L weld filler. Welding should be performed taking great care about low heat input and interpass temperature.

Welding data

DC+ or AC	Diam., mm	Current, A
	2.5	50 – 75
	3.25	70 – 100
	4.0	100 – 150

Weld deposit data at maximum welding current

Electrode diam. mm	length mm					Metal recov. ~%
		N	B	H	T	
2.5	300	0.60	82	0.90	49	123
3.25	350	0.62	42	1.31	65	119
4.0	350	0.64	28	1.83	70	114

Chemical composition (typical values, %)

C	Si	Mn	Cr	Ni
0.10	0.5	2.1	26.0	21.0

Ferrite 0 FN

Mechanical Properties

	Typical values (IIW)	Min. values EN 1600
Yield strength $R_{p0.2}$	430 N/mm ²	350 N/mm ²
Tensile strength R_m	625 N/mm ²	550 N/mm ²
Elongation A_5	35 %	20 %
Impact strength KV		
+20°C	80 J	
-196°C	35 J	
Hardness approx.	190 Brinell	

Interpass temperature: Max. 100°C.

Heat input: Max. 1.0 kJ/mm

Heat treatment: Generally none.

Structure: Fully austenitic.

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

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

Approvals

- CWB

Welding positions

