


318/SKNb

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
4571	1.4571	316Ti	320S31	Z6 CNDT 17-12	2350

Standard designations

EN 1600 E 19 12 3 Nb R
 AWS A5.4 E318-17

Characteristics

AVESTA 318/SKNb is a Nb-stabilised Cr-Ni-Mo electrode for welding Ti-stabilised steels such as ASTM 316Ti.

Welding data

DC+ or AC	Diam. mm	Current, A
	2.0	35 – 60
	2.5	50 – 80
	3.25	80 – 120
	4.0	100 – 160
	5.0	160 – 220

Weld deposit data at maximum welding current

Electrode diam. mm	length mm					Metal recov. ~ %
		N	B	H	T	
2.0	300					
2.5	350	0.58	75	1.05	46	110
3.25	350	0.59	45	1.58	51	109
4.0	450	0.63	26	2.23	63	108
5.0	450					

Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	Mo	Nb
0.02	0.8	0.8	18.5	12.0	2.8	≥10xC

Ferrite 10 FN DeLong

Mechanical properties

	Typical values (IIW)	Min. values EN 1600
Yield strength $R_{p0.2}$	470 N/mm ²	350 N/mm ²
Tensile strength R_m	605 N/mm ²	550 N/mm ²
Elongation A_5	34 %	25 %
Impact strength KV		
+20°C	60 J	
-40°C	50 J	
Hardness approx.	220 Brinell	

Interpass temperature: Max. 100°C.

Heat input: Max. 1.5 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: The corrosion resistance corresponds to that of ASTM 316Ti, i.e. good resistance to general, pitting and intercrystalline corrosion.

Approvals

- CE
- DB
- DNV
- TÜV

Welding positions