Avesta Welding

347/MVNb-16

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
4541	1.4541	321	321S31	Z6 CNT 18-10	2337
–	1.4550	347	347S31	Z6 CNNb 18-10	2338

Standard designations

EN 1600	E 19 9 Nb R
AWS A5.4	E347-16

Characteristics

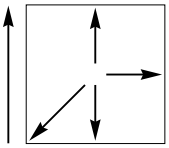
AVESTA 347/MVNb-16 is a Nb-stabilised Cr-Ni electrode for welding stabilised steels such as ASTM 321 and 347 exposed to service temperatures exceeding 400°C. Also used for the second layer (first layer 309 type) when cladding mild steel.

Welding data

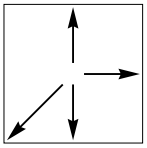
DC+ or AC	Diam., mm	Current, A
	2.5	45 – 70
	3.25	60 – 110
	4.0	90 – 150

Welding positions

Ø 2.5–3.25



Ø 4.0



Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	Nb
0.02	0.7	0.6	19.5	10.0	≥ 10xC

Ferrite 8 FN DeLong

Mechanical Properties	Typical values (IIW)	Min. values EN 1600
Yield strength $R_{p0,2}$	460 N/mm^2	350N/mm^2
Tensile strength R_m	610 N/mm^2	550 N/mm^2
Elongation A_5	35%	25 %
Impact strength KV		
+20°C	55 J	
–40°C	45 J	
Hardness	225 Brinell	

Interpass temperature: Max. 100°C.

Heat input: Max.1.5 kJ/mm.

Heat treatment: Generally none. 347/MVNb-16 can be used for cladding, which normally requires stress relieveing at around 590°C. Such a heat treatment will lower the ductitility at room temperature. Always consult expertise before performing postweld heat treatment.

Structure: Austenite with 5 – 10 % ferrite.

Scaling temperature: Approx. 850°C (air).

Corrosion resistance: 347/MVNb-16 is primarily intended for high temperature service or applications that should be heat treated. However, the corrosion resistance corresponds to that of 308H, i.e. good resistance to general corrosion.

Approvals

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