

## 16.8.2

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
4948	1.4948	304H	304S51	Z6 CNT 18-10	2333
4541	1.4541	321	321S31	Z6 CNT 18-10	2337
–	1.4941	321H	321S51	–	–
–	1.4550	347	347S31	Z6 CNNb 18-10	2338
–	1.4961	347H	347S51	–	–
–	–	316H	316S51/316S53	–	–

### Standard designations

AWS A5.4                      E16-8-2-17

### Characteristics

AVESTA 16.8.2 has a rutile-acid coating, which ensures good weldability when working with both positive pole DC and AC.

AVESTA 16.8.2 has a controlled composition, optimised for performance in structural service at temperatures up to around 800°C. Rather than matching any single parent metal, it has applications for welding all the "3XXH series" of stainless steels with 0.40–0.10 % carbon. The optimised composition gives good creep, oxidation and general corrosion resistance.

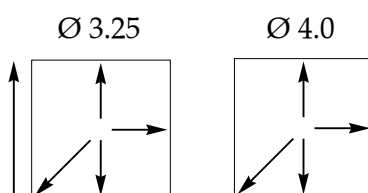
### Welding data

DC+ or AC	Diam., mm	Current, A
	3.25	70 – 110
	4.0	100 – 150

### Weld deposit data

Metal recovery approx. 100 %.

### Welding positions



### Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	Mo
0.05	0.45	1.6	15.5	8.0	1.2
Ferrite		3 FN	DeLong		

### Mechanical Properties

	Typical values (IIV)	Min. values EN 1600
Yield strength $R_{p0.2}$	470 N/mm <sup>2</sup>	–
Tensile strength $R_m$	740 N/mm <sup>2</sup>	550 N/mm <sup>2</sup>
Elongation $A_5$	40 %	35 %
Impact strength KV		
+20°C	80 J	
–40°C	50 J	

**Interpass temperature:** Max 150°C.

**Heat input:** Max. 2.0 kJ/mm.

**Heat treatment:** Generally none. For constructions that include low-alloy steels in mixed joints, a stress-relieving annealing stage may be advisable. However, this type of alloy may be susceptible to embrittlement inducing precipitation in the temperature range 550–950°C. Always consult the supplier of the parent metal or seek other expert advice to ensure that the correct heat treatment process is carried out.

**Structure:** Austenite with 1–6 % ferrite. Hot cracking is not reported at low ferrite content.

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

**Corrosion resistance:** Primarily designed for high temperature service or applications that should be heat treated. However, the corrosion resistance is superior to that of 308L.

### Approvals

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