



# FCW-2D 317L/SNR

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
4438	1.4438	317L	317S12	Z3 CND 19-15-04	2367
4439	1.4439	317LMN	–	Z3 CND 18-14-05 Az	–

## Standard designations

AWS A5.22 E317LT0-4/-1

## Characteristics and welding directions

AVESTA FCW-2D 317L/SNR is designed for welding type 18 Cr 14 Ni 3 Mo austenitic stainless and similar. The enhanced content of chromium, nickel and molybdenum compared to 316L gives improved corrosion properties in acid chloride containing environments.

AVESTA FCW-2D 317L/SNR is primarily designed for flat welding but can also be used in the horizontal-vertical position with good result.

## Welding data

Diameter mm	Welding position	Current A	Voltage V
1.20	Flat, horizontal	125 – 280	20 – 32

## Shielding gas

Ar + 15 – 25% CO<sub>2</sub> offers the best weldability, but 100% CO<sub>2</sub> can also be used (voltage should be increased by 2V).

Gas flow rate 20 – 25 l/min.

## Chemical composition, all weld metal (typical values, %)

C	Si	Mn	Cr	Ni	Mo
0.03	0.7	1.3	18.5	13.3	3.4
Ferrite	6 FN 5 FN	DeLong WRC-92			

## Mechanical properties

	Typical values (IIW)	Min. values AWS A5.22
Yield strength R <sub>p0,2</sub>	420 N/mm <sup>2</sup>	350 N/mm <sup>2</sup>
Tensile strength R <sub>m</sub>	570 N/mm <sup>2</sup>	550 N/mm <sup>2</sup>
Elongation A <sub>5</sub>	32 %	25 %
Impact strength KV		
+20°C	50 J	
-60°C	45 J	
Hardness	210 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:** Better resistance to general, pitting and intercrystalline corrosion in chloride containing environments than ASTM 316L. Intended for severe service conditions, e.g. in dilute hot acids.

## Approvals

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