## Avesta 316L/SKR

böhlerwelding

SAW wire/flux combination, high-alloyed, high corrosion resistant

Class	ifica	ation

Wire:	Flux:		
EN ISO 14343-A	EN ISO 14343-B	AWS A5.9	EN ISO 14174
S 19 12 3 L	-	ER316L	-

## Characteristics and typical fields of application

Avesta 316L/SKR is designed for welding austenitic stainless steel of type 17 Cr 12 Ni 2.5 Mo or similar. The filler metal is also suitable for welding titanium and niobium stabilized steels such as ASTM 316Ti and ASTM 316Nb in cases where the construction is used at temperatures not exceeding 400 °C. For higher temperatures, a niobium stabilized consumable such as Avesta 318-Si/SKNb-Si is required

Structure: Austenite with 5 – 10 % ferrite. Scaling temperature: Approx. 850 °C (air).

## **Corrosion resistance:**

Excellent resistance to general, pitting and intercrystalline corrosion in chloride containing environments.

Base materials													
Outokumpu		EN		ASTM		BS I		NF			SS		
4436		1.4436		316		316S33 Z		Z7 CND	Z7 CND 18-12-03		2343		
4432		1.4432		316L			316S13 Z		Z3 CND 17-12-03		2353		
4429		1.4429		S31653			316S63 Z		Z3 CND 17-12 Az		12 Az	2375	
4571		1.4571		316Ti		320S31 Z		Z6 CND	Z6 CNDT 17-12		2350		
Typical ana	lysis	s of the sol	id wi	ire an	d all-	weld	-metal (wt	%)					
		C Si		Mn		Cr	Ni		Ferrite				
Wire		0.02	2 0.4		1.7		18.5	12	2.0	8 F	8 FN (WRC-92)		)
Flux 801		0.02 0.9			1.0		19.0	12	2.0	13 (DeLong)			
Flux 805		0.02 0.6		5 1.2			19.5	12	2.0	14 (DeLong)			
Mechanical properties of all-weld-metal													
Flux	Yie R <sub>p0</sub>	ld strength	strength Tensile streng R <sub>m</sub>		ngth	$\begin{array}{c} \text{Elongation} \\ (L_0=5d_0) \end{array} \begin{array}{c} \text{Impac} \\ \text{ISO-V} \end{array}$		t wo KV	i work KV J		ardness		
	MP	а	Ν	MPa		%		+20 °0	C	-196 °C	Br	inell	
801	430	)	5	580		36		70			21	0	
805	430	)	5	570			36		80		35		
Operating data													
		Po	larity				Re	-dr	vina			a	(mm)

	Polarity:	Re-drying:	ø (mm)
	DC ( + ) / DC ( - )	300 – 350 °C / min. 2 h	1.6
← _			2.0
			2.4
			3.2
			4.0

Heat treatment: Generally none (in special cases quench annealing at 1050 °C). Interpass temperature: Max. 150 °C. Heat input: Max. 2.0 kJ/mm.



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Approvals						
In combination with flux						
801	CN	DNV	ΤÜV			
805	CN	DNV	ΤÜV			