

## Classifications

high-alloyed

EN ISO 3581-A:

AWS A5.4:

E 19 12 3 LR

E316L-17

## Characteristics and field of use

Avesta 316L/SKR-4D is a thin-coated, rutileacid type electrode specially developed for welding thin-walled pipes and sheets in 1.4436/ASTM 316 type steel, mainly in the chemical process and papermaking industries. It is highly suitable for welding in restrained positions and under difficult site conditions, where it offers considerably higher productivity than manual TIG-welding. It is also recommended for root runs and multi-pass welds in general fabrication of ASTM 316-type stainless steels in all material thicknesses. Pipe welding can be performed in several different ways. One possibility is to start welding in the overhead position (1), followed by vertical-down on both sides from the 12 o'clock position (2 and 3). Another possibility is to start at the 7 o'clock position and weld vertical up to the 11 o'clock position on both sides. This requires an inverter power source with a remote control. To bridge large root gaps DC- is often preferred.

## Base materials

For welding steels such as					
Outokumpu	EN	ASTM	BS	NF	SS
4436	1.4436	316	316S33	Z7 CND 18-12-03	2343
4432	1.4432	316L	316S13	Z3 CND 17-12-03	2353
4429	1.4429	S31653	316S63	Z3 CND 17-12 Az	2375
4571	1.4571	316Ti	320S31	Z6 CNDT 17-12	2350


## Typical analysis of all-weld metal (Wt-%)

C	Si	Mn	Cr	Ni	Mo
0.02	0.8	0.7	18.2	12.2	2.6

## Mechanical properties of all-weld metal

Heat Treatment	Yield strength 0.2%	Tensile strength	Elongation ( $L_0=5d_0$ )	Impact values in J CVN	
	MPa	MPa	%	+20°C:	-20°C:
untreated	480	590	34	60	55

## Operating data

	Polarity = + / ~
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Dimensions (mm)	Amperage A
1.6	15-40
2.0	25-55
2.5	30-85
3.25	45-110