

Classifications

EN ISO 3581-A	AWS A5.4	Mat. No.
E 18 16 5 N L R 1 2	E317L-17 (mod.)	≈1.4440

Characteristics and typical fields of application

Stainless; resistant to intercrystalline corrosion and wet corrosion up to 400 °C (752 °F). High Mo content provides elevated resistance to Cl-bearing environments and pitting corrosion. Non magnetic. Well suited for joining and surfacing with matching and similar austenitic non stabilized and stabilized stainless and non magnetic CrNiMo(N) steels/cast steel grades.

Base materials

TÜV certified parent metals

1.4429 – X2CrNiMoN17-13-3; 1.4438 – X2CrNiMo18-16;

1.4439 – (G)X3CrNiMoN17-13-5;

AISI 316Cb, 316LN, 317LN, 317L, UNS S31726

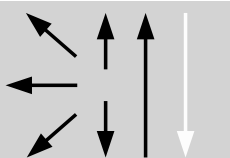
Typical analysis of all-weld metal (wt.-%)

	C	Si	Mn	Cr	Mo	Ni	N
wt-%	< 0.035	< 1.0	1.2	18.0	4.5	17.5	0.15

Structure: Austenit

Mechanical properties of all-weld metal

Heat-treatment	Yield strength R _{p0.2}	Yield strength R _{p1.0}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J
	MPa	MPa	MPa	%	+20 °C
aw	320	350	570	34	50

Operating data				
	Polarity: DC (+) / AC	ø (mm) 3.2	L mm 350	Amps A 60 – 110
		ø (mm) 4.0	L mm 350	Amps A 90 – 150
Welding instruction				
Materials	Preheating	Postweld heat treatment		
Matching and similar non stabilized and stabilized as well as nonmagnetic steels / cast steel grades	None. Interpass/service temperature 150 °C (302 °F)	Mostly none; if necessary annealing according to parent metal, otherwise solution annealing at 1050 °C (1922 °F)		
Joining of aforementioned austenitic steels to unalloyed / low alloy steels / cast steel grades	According to ferritic parent metal	According to parent metals. Attention must be paid to resistance to intercrystalline corrosion and susceptibility to embrittlement		
Cladded plates with matching / similar metal	According to ferritic parent metal	According to parent metals. Attention must be paid to resistance to intercrystalline corrosion and susceptibility to embrittlement		
Approvals				
TÜV (03842), CE				