Avesta 2507/P100 Solid Wire

Classifications		high-alloyed
EN ISO 14343-A:		
G 25 9 4 N L		

Characteristics and field of use

Avesta 2507/P100 is intended for welding super duplex alloys such as 2507, ASTM S32760, S32550 and S31260. Welding can be performed using short, spray or pulsed arc. Welding using pulsed arc provides good results in both horizontal and vertical- up positions. The best flexibility is achieved by using pulsed arc and Ø 1.20 mm wire. The weldability of duplex steels is excellent but the welding should be adapted to the base material, considering fluidity, joint design, heat input etc.

Corrosion resistance

Very good resistance to pitting and stress corrosion cracking in chloride containing environments. PREN>41.5. Meets the corrosion test requirements per ASTM G48 Methods A, B and E (40°C).

Base materials

For welding steels such as					
Outokumpu	EN	ASTM	BS	NF	SS
2507	1.4410	S32750	-	Z3 CND 25-06 Az	2328

Typical composition of solid wire (Wt-%)

C	Si	Mn	Cr	Ni	Mo	N
0.015	0.35	0.5	25.0	9.5	3.9	0.25

Ferrite 50 FN; WRC-92

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:*	*-50°C:*
untreated	600	830	27	140	100

Operating data

Polarity = +

Shielding gas:
1. Ar
2. Ar + 30% He + 2.5% CO_2
3. Ar + 2% O2 or Ar + 2–3% CO_2.

Welding using pure argon will give a porosity free weld, but at the cost of arc stability. Mixtures with 2%CO_2 or 2% O_2 can also be used but may result in some porosity.
Gas flow rate 12 – 16 l/min.

Dimensions (mm)

0.8	*1.0*	*1.2*	*1.6*