Avesta LDX 2101

TIG rod

Classifications			high-alloyed
EN ISO 14343-A:			
W 23 7 N L			

Characteristics and field of use

Avesta LDX 2101 is designed for welding the duplex stainless steel Outokumpu LDX 2101, a „lean duplex" steel with excellent strength and medium corrosion resistance. The steel is mainly intended for applications such as civil engineering, storage tanks, containers etc. Avesta LDX 2101 is over alloyed with respect to nickel to ensure the right ferrite balance in the weld metal. Welding can be performed using short, spray or pulsed arc. Welding using pulsed arc provides good results in both horizontal and vertical-up positions. Pulsed arc and 1.20 mm wire will give the best flexibility. 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:
Good resistance to general corrosion. Better resistance to pitting, crevice corrosion and stress corrosion cracking than 1.4301/AISI 304.

Base materials

For welding steels such as					
Outokumpu	EN	ASTM	BS	NF	SS
LDX 2101®	1.4162	S32101	-	-	-

Typical composition of welding rod (Wt-%)

C	Si	Mn	Cr	Ni	Mo	N	
0.02	0.5	0.8	23.0	7.5	<0.5	0.14	

Ferrite 45 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:*	*-40°C:*
untreated	600	750	34	180	180

Operating data

Polarity = –

Shielding gas:
Ar (99.95%). An addition of up to 2% nitrogen (N2) and 20 – 30% helium (He) is advantageous and will have a positive effect on both mechanical and corrosion properties. The addition of helium (He) will increase the energy of the arc.
Gas flow rate 4 – 8 l/min.

Dimensions (mm)

1.2	*1.6*	*2.4*	*3.2*