

Avesta LDX 2101

Solid Wire

Classifications

high-alloyed

EN ISO 14343-A:

G 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. 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

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	EN	ASTM	BS	NF	SS
Outokumpu LDX 2101®	1.4162	S32101	-	-	-

Typical composition of solid wire (Wt-%)


C	Si	Mn	Cr	Ni	Mo	N
0.02	0.5	0.8	23.2	7.3	<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	520	710	32	150	110

Operating data

	Polarity = +	Shielding gas: 1. Ar + 30% He + 2.5% CO ₂ . 2. Ar + 2% O ₂ or 2–3% CO ₂ . Welding is best performed using argon with an addition of approx. 30% He and 2 – 3% CO ₂ . The addition of helium (He), will increase the energy of the arc. Gas flow rate 12 – 16 l/min.
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Dimensions (mm)

0.8	1.0	1.2	1.6
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