Avesta LDX 2101

Solid wire, high-alloyed

Classification

EN ISO 14343-A	AWS A5.9
-	-

Characteristics and typical fields of application

Avesta LDX 2101 was designed for welding of ferritic-austenitic Duplex steels like Outokumpu 2101. Avesta LDX 2101 is a „low-alloyed“ Duplex steel with a high strength and ordinary corrosion resistance. This filler metal is over-alloyed with Ni to ensure the correct ferrite content in the all weld metal. This steel is normally used for constructions, storage tanks, and container tanks. Welding with short- spray or pulsed arc is possible, however the best result provides the pulsed arc.

Corrosion resistance:

A good corrosion resistance in general, comparable with – or little higher than ASTM 304.

Structure: Austenite with 35 – 65 % ferrite.

Scaling temperature: Approx. 850 °C (air).

Base materials

Similar duplex stainless steels and ferritic-austenitic steels with higher strength.

Outokumpu 2101

1.4162 - UNS S32101

Typical analysis of the solid wire (wt.-%)

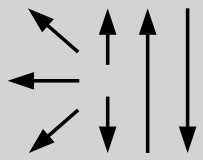
	C	Si	Mn	Cr	Ni	Mo	N	Ferrit
Gew-%	0.02	0.4	0.5	23.0	7.0	< 0.5	0.14	40 FN (WRC-92)

Mechanical properties of all-weld metal

Heat treatment	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact work ISO-V KV J	
	MPa	MPa	%	+20 °C	–40 °C
u	520	710	30	150	110

u untreated, as welded – shielding gas Ar + 20 % He + 2 % CO_2

Operating data



Polarity	Shielding gas:	ø (mm)
DC (+)	Ar + 20 – 30 % He + max. 2 % CO_2	1.0
	Ar + 20 – 30 % He + max. 1 % O_2	1.2
	Gas flow rate 12 – 16 l	1.6

Heat treatment: Generally none (in special cases quench annealing at 1020 – 1080 °C

Interpass temperature: max. 150 °C.

Heat input: 0.5 – 2.5 kJ/mm.