



LDX 2101-4D

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

Standard designations

EN ISO 3581 E 23 7 N L R

Characteristics

AVESTA LDX 2101-4D is designed for welding thin-walled pipes in the ferritic-austenitic (duplex) stainless steel Outokumpu LDX 2101®. LDX 2101 is a "lean duplex" steel with excellent strength and medium corrosion resistance.

Avesta LDX 2101-4D provides a ferritic-austenitic weldment that combines many of the good properties of both ferritic and austenitic stainless steels. The duplex microstructure gives a high tensile strength and thus also a good resistance to stress corrosion cracking.

To ensure the right ferrite balance in the weld metal, Avesta LDX 2101-4D is over-alloyed with respect to nickel.

Outokumpu LDX 2101 should be welded as an ordinary austenitic stainless steel, i.e. high amperages should be avoided and the material should be allowed to cool to below 150°C between passes.

Welding data

DC+	Diam., mm	Current, A
	1.60	15 – 35
	2.00	25 – 50
	2.50	30 – 80

Welding should be done using a very short arc. For best control when welding extra thin-walled pipes (t = 1.5 mm), 1.60 mm diameter electrodes and DC- current are recommended.

Weld deposit data

Metal recovery approx. 110 %.

Typical analysis, % (All weld metal)

C	Si	Mn	Cr	Ni	Mo	N
0.03	0.9	0.6	23.5	7.4	0.4	0.16

Ferrite 35 FN WRC-92

Mechanical Properties

	Typical values (IIW)	Min. values EN 1600
Yield strength R _{p0.2}	640 N/mm ²	–
Tensile strength R _m	785 N/mm ²	–
Elongation A ₅	25 %	–
Impact strength KV		
+20°C	50 J	
–40°C	36 J	
Hardness, approx.	260 Brinell	

Interpass temperature: Max. 150°C.

Heat input: 0.3 – 1.5 kJ/mm

Heat treatment: Generally none. In special cases quench annealing at 1020 – 1080°C.

Structure: Duplex (austenite with 30 – 65 % ferrite).

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

Corrosion resistance: Good resistance to general and stress corrosion. Better resistance to pitting and crevice corrosion than AISI 304.

Approvals: –

Welding positions

Ø 1.6–2.5

