

For welding steel such as:

Outokumpu	EN	ASTM	SS*	BS*	NF*
LDX 2101®	1.4162	S32101	–	–	–

* Obsolete national standards, replaced by EN 10088.

Characteristics

AVESTA LDX 2101 AC/DC is designed for welding the ferritic-austenitic (duplex) stainless steel Outokumpu LDX 2101. LDX 2101 is 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 AC/DC provides a ferritic-austenitic weldment that combines many of the good properties of both ferritic and austenitic stainless steels. The duplex microstructure gives high tensile strength and hereby also good resistance to stress corrosion cracking.

AVESTA LDX 2101 AC/DC is “over alloyed” with respect to nickel to ensure the right ferrite balance in the weld metal.

Welding directions

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 300°F (150°C) between passes.

AVESTA LDX 2101 AC/DC should be welded with a short arc or with its coating sliding along the workpiece. Direct current (+pole) is preferable. Optimum results are achieved using an amperage in the upper part of the amperage range given, i.e. somewhat higher than the amperage generally used for other electrode types. It is often advantageous to tack weld with a somewhat larger gap than that used when welding with rutile and basic electrodes, thus ensuring good penetration

Weld deposit data

Metal recovery approx 110 %.

Packaging data

Diam. inch	Diam. mm	Length mm/inch	Weight/ capsule lbs	Electrodes/ capsule, approx.	Weight / carton, lbs
3/32	2.5	300 / 12	8.0	191	24
1/8	3.25	350 / 14	9.1	109	27
5/32	4.0	400 / 16	10.0	71	30

Standard designations

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Typical analysis % (All weld metal)

C	Cr	Ni	Mo	Mn	N
0.04	23.5	7.0	0.3	0.7	0.14

Ferrite 45 FN WRC-92

Mechanical properties

Typical values (IIW)

Yield strength, Rp _{0.2}	640 N/mm ²	93 ksi
Tensile strength, R _m	800 N/mm ²	116 ksi
Elongation, A ₅	25 %	25 %
Impact strength, KV		
+20°C	45 J	33 ft-lb
-40°C	28 J	21 ft-lb
Hardness approx.	260 Brinell	

Welding data

DC+ or AC	Diam., inch	Current, A
	3/32	50 – 80
	1/8	70 – 120
	5/32	100 – 160

Interpass temperature: Max. 300°F (150°C)

Heat input: 12.7-63.5 kJ/in (0.5 – 2.0 kJ/mm)

Heat treatment: Generally none. In special cases quench annealing at 1868-1976°F (1020 – 1080°C).

Structure: Austenite with 30 – 65 % ferrite.

Scaling temperature: Approx. 1562°F (850°C) (air).

Corrosion resistance: Good resistance to general corrosion. Corrosion resistance is on a level with or better than AISI 304.

Approvals: –

Welding positions

