

## Classification

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22
T 23 7 N L R M/C 3	-	-

## Characteristics and typical fields of application

Avesta FCW-2D LDX 2101 is designed for welding the duplex stainless steel Outokumpu LDX 2101. The steel is a "lean duplex" steel with excellent strength and medium corrosion resistance. LDX 2101 is mainly intended for applications such as civil engineering, storage tanks, containers etc.

Avesta FCW-2D LDX 2101 provides excellent weldability in flat as well as horizontal-vertical position. Welding in vertical-up and overhead positions is preferably done using FCW LDX 2101-PW.

Avesta FCW-2D LDX 2101 should be welded using direct current positive polarity (DC+) with a recommended wire stick-out of 15 – 20 mm.

The weldability of duplex steels is excellent, but the welding should be adapted to the base material, considering fluidity, joint design, heat input etc. For detailed welding recommendations, please see "How to weld duplex stainless steels" or contact voestalpine Böhler Welding.

### Corrosion resistance:

Good resistance to general corrosion. Better resistance to pitting, crevice corrosion and stress corrosion cracking than 1.4301/AISI 304.

## Base Materials

Outokumpu	EN	ASTM	BS	NF	SS
LDX 2101 <sup>®</sup>	1.4162	S32101	-	-	-

## Typical analysis of all-weld metal (wt.-%)

	C	Si	Mn	Cr	Ni	Mo	N
wt-%	0.025	0.7	1.1	24.0	9.0	0.5	0.14

## Mechanical properties of all-weld metal

Heat-treatment	Yield strength R <sub>e</sub> N/mm <sup>2</sup>	Tensile strength R <sub>m</sub> N/mm <sup>2</sup>	Elongation (L <sub>0</sub> =5d <sub>0</sub> )	Impact work ISO-V KV J		Hardness HB
	MPa	MPa	%	+20 °C	-40 °C	
u	550	740	31	65	45	240

u untreated, as-welded – shielding gas Argon + 18 % CO<sub>2</sub>

## Operating data

	<b>Polarity</b> DC (+)	<b>shielding gases:</b> Ar + 15 – 25% CO <sub>2</sub> 100 % CO <sub>2</sub>	<b>re-drying if necessary:</b> 150°C / 24 hrs	<b>amps A</b> 125 – 280	<b>voltage V</b> 20 – 34	<b>ø (mm)</b> 1.2
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Ar + 15 – 25% CO<sub>2</sub> offers the best weldability, but 100% CO<sub>2</sub> can be also used (voltage should be increased by 2V). Gas flow rate 20 – 25 l/min.

## Approvals

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