Avesta FCW LDX 2101-PW

GMAW flux cored wire, high alloyed, special application

Classification

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22
T 23 7 N L P M/C 1	-	-

Characteristics and typical fields of application

Avesta FCW LDX 2101-PW 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 LDX 2101-PW has a stronger arc and a faster freezing slag compared to the 2D type. It is designed for all-round welding and can be used in all positions without changing the parameter settings. Weldability is excellent in the vertical-up and overhead welding positions.

Avesta FCW LDX 2101-PW 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
2205	1.4462	S32205	318S13	Z3 CND 22-05 Az	2377

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

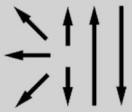
	C	Si	Mn	Cr	Ni	Mo	N
wt-%	0.025	0.7	0.9	24.3	9.0	0.3	0.13

Mechanical properties of all-weld metal

Heat-treat-ment	Yield strength R_e N/mm^2	Tensile strength R_m N/mm^2	Elongation (L_0=5d_0)	Impact work ISO-V KV J		Hardness
	MPa	MPa	%	+20 °C	–40 °C	HB
u	575	765	30	70	50	240

u untreated, as-welded – shielding gas Argon + 18 % CO_2

Operating data



Polarity	shielding gases:	re-drying if necessary:	amps A	voltage V	ø (mm)
DC (+)	Ar + 15 – 25% CO_2 100 % CO_2	150°C / 24 hrs	150 – 240 130 – 160 150 – 200 120 – 180	24 – 32 23 – 28 24 – 29 22 – 27	1.2

Ar + 15 – 25% CO_2 offers the best weldability, but 100% CO_2 can be also used (voltage should be increased by 2V). Gas flow rate 20 – 25 l/min.

Approvals

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