Avesta FCW-2D P10

GMAW flux cored wire, high alloyed, special application

Classification

EN ISO 12153-A	EN ISO 17633-B	AWS A5.34
T Ni 6182 (NiCr15Fe6Mn) R M 3	-	ENiCr-3T0-4/-1

Characteristics and typical fields of application

Avesta FCW-2D P10 is a nickel base wire for welding nickel base alloys of the 600 type and similar. It provides high resistance to cracking and is well suited for dissimilar welding of stainless and nickel alloys to mild steels and some copper alloys.

Avesta FCW-2D P10 can be used for welding many high-temperature steels and nickel base materials. The austenitic structure is very stable and the risk of cracking is low.

Avesta FCW-2D P10 can also be used as a buffer layer in many difficult-to-weld applications. The high nickel content will minimize the carbon transfer from the mild steel into the stainless material.

To minimize the risk of hot cracking when welding fully austenitic stells and nickel base alloys, heat input and interpass temperature must be low and there must be as little dilution as possible from the parent metal.

Avesta FCW-2D P10 should be welded using direct current positive polarity (DC+) with a recommended wire stick-out of 15-20 mm.

Corrosion resistance:

Very good resistance to stress corrosion cracking. Also very good resistance to intergranular corrosion due the low carbon content and absence of sigma phase.

Base Materials

Outokumpu	EN	ASTM	BS	NF	SS
All-round flux-cored wire suitable for many difficult-to-weld combinations.					

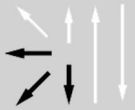
Typical analysis of all-weld metal (wt.-%)

	C	Si	Mn	Cr	Ni	Nb	Fe
wt-%	0.05	0.4	3.2	20.0	bal.	2.5	<2.0

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	–196 °C	HB
u	380	640	41	130	115	200
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	125 – 280 200 - 350	20 – 34 25 - 35	1.2 1.6

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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