

Avesta FCW P12-PW

Flux cored wire

Classifications

nickel-based

EN ISO 12153:

AWS A5.34:

T Ni 6625 P M21 2

ENiCrMo3T1-4

Characteristics and field of use

Avesta FCW P12-PW is a nickel base wire primarily intended for welding the nickel base alloys type 625 and 825 and 6 Mo steels such as Outokumpu 254 SMO. It can also be used for welding 9 Ni steels for use in cryogenic applications. Avesta FCW P12-PW is designed for allround welding and can be used in all positions without changing the parameter settings. Weldability is excellent in the verticalup and overhead welding positions. To minimise the risk of hot cracking when welding fully austenitic steels 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 FCWP12-PW should be welded using direct current positive polarity (DC+) with a recommended wire stick-out of 15 – 20 mm.

Corrosion resistance:

Excellent resistance to general corrosion in various types of acids and to pitting, crevice corrosion and stress corrosion cracking in chloride containing environments. Meets the corrosion test requirements per ASTM G48 Methods A, B and E (50°C).

Base materials

For welding steels such as					
Outokumpu	EN	ASTM	BS	NF	SS
254 SMO®	1.4547	S31254	-	-	2378
Also for welding nickel base alloys to stainless or unalloyed steels and for surfacing.					

Typical composition of all-weld metal (Wt-%)


C	Si	Mn	Cr	Ni	Mo	Nb	Fe
0.02	0.4	0.1	20.5	bal.	8.7	3.3	<1.0

Ferrite 0 FN

Mechanical properties of all-weld metal

Heat Treatment	Yield strength 0.2%	Tensile strength	Elongation ($L_0=5d_0$)	Impact values in J CVN		
	MPa	MPa	%	+20°C:	-40°C:	-196°C:
untreated	460	750	40	75	60	45

Operating data

	Polarity = +	Shielding gas: Ar + 15 – 25%CO ₂ Gasflow rate 20 – 25 l/min.
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Dimensions (mm)

Amperage A

1.2

150-240