



FCW-2D 2304

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
2304	1.4362	S32304	–	Z3 CN 23-04 Az	2327

Standard designations

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Characteristics and welding directions

AVESTA FCW-2D 2304 is designed for welding the ferritic-austenitic (duplex) stainless steel Outokumpu 2304 with excellent strength and good corrosion resistance. The steel is mainly intended for applications such as chemical industry, civil engineering, storage tanks, containers etc.

AVESTA FCW-2D 2304 provides excellent weldability in flat as well as horizontal-vertical (PC) position.

Welding data

Diameter mm	Welding position	Current A	Voltage V
1.20	Flat, horizontal	125 – 280	20 – 34

For further recommendations, please contact Avesta Welding.

Shielding gas

Ar + 15 – 25% CO₂ offers the best weldability, but 100% CO₂ can also be used (voltage should be increased by 2V).

Gas flow rate 20 – 25 l/min.

Chemical composition, all weld metal (typical values, %)

C	Si	Mn	Cr	Ni	Mo	N
0.03	0.7	0.8	24.0	9.0	0.7	0.14

Ferrite 30 FN WRC-92

Mechanical properties

	Typical values (IIW)	Min. values EN ISO 17633
Yield strength R _{p0,2}	580 N/mm ²	–
Tensile strength R _m	760 N/mm ²	–
Elongation A ₅	25 %	–
Impact strength KV		
+20°C	50 J	
–20°C	40 J	
Hardness	240 Brinell	

Interpass temperature: Max. 150°C.

Heat input: 0.5 – 2.0 kJ/mm.

Heat treatment: Generally none (in special cases, quench annealing at 1020 – 1080°C).

Structure: Austenite with 30 – 70% ferrite.

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

Corrosion resistance: Very good resistance to pitting and stress corrosion cracking in nitric acid environments.

Approvals

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