



# FCW-2D 2205

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
2205	1.4462	S32205	318S13	Z3 CND 22-05 Az	2377

## Standard designations

EN ISO 17633 T 22 9 3 N L R M/C 3

AWS A5.22 E2209T0-4/-1

## Characteristics and welding directions

AVESTA FCW-2D 2205 is designed for welding ferritic-austenitic (duplex) stainless steels such as Outokumpu 2205 and similar.

Welding in the vertical-up and overhead positions is preferably done using FCW 2205-PW.

## Welding data

Diameter mm	Welding position	Current A	Voltage V
1.20	Flat, horizontal	150 – 280	24 – 32
	Vertical-up	140 – 170	23 – 28

## Shielding gas

Ar + 15 – 25% CO<sub>2</sub> offers the best weldability, but 100% CO<sub>2</sub> 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	22.7	9.0	3.2	0.13

Ferrite 40 FN WRC-92

## Mechanical properties

	Typical values (IIW)	Min. values EN ISO 17633
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Yield strength R <sub>p0,2</sub>	600 N/mm <sup>2</sup>	450 N/mm <sup>2</sup>
Tensile strength R <sub>m</sub>	800 N/mm <sup>2</sup>	550 N/mm <sup>2</sup>
Elongation A <sub>5</sub>	27 %	20 %
Impact strength KV		
+20°C	60 J	
-40°C	40 J	
Hardness	240 Brinell	

**Interpass temperature:** Max. 150°C.

**Heat input:** 0.5 – 2.5 kJ/mm.

**Heat treatment:** Generally none (in special cases, quench annealing at 1100 – 1150°C).

**Structure:** Austenite with 45 – 55% ferrite.

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

**Corrosion resistance:** Very good resistance to pitting and stress corrosion cracking in chloride containing environments.

## Approvals

- CE
- DNV
- RINA
- CWB
- GL
- TÜV