

For welding steel such as:

Outokumpu	EN	ASTM	SS*	BS*	NF*
2205	1.4462	S32205	2377	318S13	Z3 CND 22-05 Az

*Obsolete national standards, replaced by EN 10088.

Characteristics

AVESTA 2205-4D is a thin-coated, rutile-acid type electrode specially developed for the welding of thin walled pipelines and sheets, mainly in the chemical process and papermaking industries.

AVESTA 2205-4D is characterised by its exceptionally good arc stability, weld pool control, slag removal and restriking properties. This makes it highly suitable for welding in restrained positions and under difficult site conditions, where it offers considerably higher productivity than manual TIG-welding.

AVESTA 2205-4D is also recommended for root runs and multipass welds in general fabrication of duplex stainless steels in all material thicknesses.

Welding directions

AVESTA 2205-4D is designed for the continuous welding of pipes.

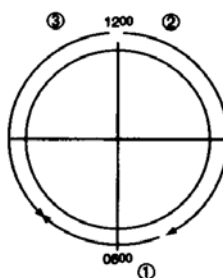
The combination of low welding currents and good fluidity means that pipes with a wall thickness of 2 mm can be welded using an electrode with a diameter of 2 mm.

Pipe welding can be performed in several different ways. One possibility is to start in the overhead position (1), followed by vertical down on both (2 and 3).

Another possibility is to start at the

7 o'clock position and weld vertical up to the 11 o'clock position on both sides. This requires an inverter power source with a remote control.

To bridge large root gaps DC- is often preferred.



Packaging data

Diam. mm	Length mm	Weight/capsule, kg	Approx. No. of electrodes/capsule	Weight/ carton, kg
2.0	300	1.70		10.20
2.5	300	1.81		10.86
3.25	350	4.10		12.30

Approvals: –

Standard designations

EN 1600	E 22 9 3 N L R
AWS A5.4	E 2209-17

Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	Mo	N
0.02	0.8	0.7	23.0	9.4	3.0	0.15

Ferrite 30 FN WRC-92

Mechanical properties

	Typical values (IIW)	Min. values EN 1600
Yield strength, R _{p0.2}	630 N/mm ²	450 N/mm ²
Tensile strength, R _m	820 N/mm ²	550 N/mm ²
Elongation, A ₅	25 %	20 %
Impact strength, KV		
+20°C	45 J	
-40°C	35 J	
Hardness approx.	240 Brinell	

Welding data

DC+/- or AC	Diam., mm	Current, A
	2.0	25– 55
	2.5	30– 85
	3.25	45–110

Interpass temperature: Max. 150°C.

Heat input: Max. 2.0 kJ/mm.

Heat treatment: Generally none. In special cases quench annealing at 1050°C.

Structure: Austenite with approx. 30 % ferrite.

Scaling temperature: Approx. 850°C (air)

Corrosion resistance: Excellent resistance to general, pitting and intercrystalline corrosion in chlorine containing environments.

Welding positions

