



2205-4D

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 1600 E 22 9 3 N L R
AWS A5.4 E2209-17

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. It 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. It is also recommended for root runs and multipass welds in general fabrication of duplex stainless steels in all material thicknesses.

Pipe welding can be performed in several different ways. One possibility is to start welding in the overhead position (1), followed by vertical-down on both sides from the 12 o'clock position (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.

Welding data

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

Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	Mo	N
0.02	0.8	0.7	23.0	9.5	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	

Interpass temperature: Max. 150°C.

Heat input: Max. 2.0 kJ/mm.

Heat treatment: Generally none.

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.

Approvals

- CE
- TÜV

Welding positions

