

Covered electrode, high-alloyed, duplex stainless

Classifications	
EN ISO 3581-A	AWS A5.4
E 22 9 3 N L R	E2209-17

Characteristics and typical fields of application

Primarily designed for welding 22Cr duplex stainless steels used in offshore, shipyards, chemical tankers, chemical/petrochemical, pulp & paper, etc.

Avesta 2205 is an all-position electrode of E2209-17 type. The weld metal has very good resistance to pitting and stress corrosion cracking in chloride containing environments. PREN >35. Duplex alloys have good weldability, but the welding procedure should be adapted to the base

material considering fluidity, joint design, heat input, etc.

Base materials

1.4462 X2CrNiMoN22-5-3, 1.4362 X2CrNiN23-4, 1.4462 X2CrNiMoN22-5-3 together with 1.4583 X10CrNiMoNb18-12, 1.4462 X2CrNiMoN22-5-3 with P235GH/ P265GH, S255N, P295GH, S355N, 16Mo3

UNS S31803, S32205

Typical analysis of all-weld metal							
	С	Si	Mn	Cr	Ni	Мо	N
Wt%	0.02	0.8	0.7	22.6	9.4	3.0	0.16

Mechanical properties of all-weld metal – typical values (min. values)						
Condition	Yield strength R _{p0.2}	Tensile strength R _m	Elongation (L ₀ =5d ₀)	Impact work ISO-V KV J		Hardness
	MPa	MPa	%	20°C	-40°C	НВ
u	620 (≥ 450)	810 (≥ 690)	25 (≥ 20)	45	35	240
u untreated, as-welded						

Operating data							
	Polarity	Electrode ID	Ø mm	L mm	Current A		
▼ ↑ ↑	DC +	2209-17/2205	2.5	350	45 – 80		
← ;			3.2	350	70 – 120		
✓ † √			4.0	450	90 – 160		
			5.0	450	150 – 220		

Interpass temperature max. 150°C Heat input 0.5–2.5 kJ/mm Metal recovery approx. 110%. Scaling temperature approx. 850°C

Approvals

TÜV (07139.), DB (30.014.20), Certified by CWB to CSA W48, CE