

Classification		
EN ISO 17633-A	EN ISO 17633-B	AWS A5.22
T 22 9 3 N L R M21 3	TS2209-F M21 0	E2209T0-4
T 22 9 3 N L R C1 3	TS2209-F C1 0	E2209T0-1

Characteristics and typical fields of application

Avesta FCW-2D 2205 is primarily designed for welding austenitic-ferritic duplex stainless steels. Avesta FCW-2D 2205 provides excellent weldability in flat as well as horizontal-vertical position.

Corrosion resistance:

Very good resistance to pitting and stress corrosion cracking in chloride containing environments. PREN >35. Meets the corrosion test requirements per ASTM G48 Methods A, B and E (22°C), ASTM G36 and NACE TM 0177 Method A.

Base Materials

Same and similar alloyed duplex steels, as well as dissimilar joints or weld claddings
 1.4462 X2CrNiMoN22-5-3, 1.4362 X2CrNiN23-4,
 1.4462 X2CrNiMoN22-5-3 with 1.4583 X10CrNiMoNb18-12,
 1.4462 X2CrNiMoN22-5-3 with P235GH/ P265GH, S255N, P295GH, S460N, 16Mo3
 UNS S31803, S32205

Typical analysis of all-weld metal (wt.-%)


	C	Si	Mn	Cr	Ni	Mo	N		PREN	FN
wt.-%	≤ 0.03	0.8	0.9	22.7	9.0	3.2	0.13		35	30-50

Mechanical properties of all-weld metal

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	
u	600	800	27	60	45	240

u untreated, as-welded – shielding gas Argon + 18 % CO₂

Operating data

	Polarity:	Shielding gases:	Redrying:	Amps A	Voltage V	ø (mm)
		DC (+)	M1-M3; C1	if necessary 150°C / 24 h	125 - 280 200 - 350	22 - 36 25 - 35

Welding with standard GMAW power source possible, slightly trailing torch position (angle appr. 80°), when using 100% CO₂ as shielding gas it is necessary to increase the voltage by 2 V; Stick out 15-20mm; the gas flow should be 15 – 18 l/min

Approvals

TÜV(10742.), DB (43.014.44), CWB, DNV, GL, LR, RINA