


Classification							
EN ISO 17633-A	EN ISO 17633-B	AWS A5.22					
T 22 9 3 N L R M/C 3	-	E2209T0-4/-1					
Characteristics and typical fields of application							
<p>Avesta FCW-2D 2205 is primarily designed for welding duplex stainless steels such as 2205. Avesta FCW-2D 2205 provides excellent weldability in flat as well as horizontal-vertical position. Welding in vertical-up and overhead positions is preferably done using FCW 2205-PW. Avesta FCW-2D 2205 should be welded using direct current positive polarity (DC+) with a recommended wire stick-out of 15 – 20 mm.</p> <p>The weldability of duplex steels is excellent, but the welding should be adapted to the base material, considering fluidity, joint design, heat input etc. For detailed welding recommendations, please see "How to weld duplex stainless steels" or contact voestalpine Böhler Welding.</p> <p>Corrosion resistance:</p> <p>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.</p>							
Base Materials							
Outokumpu	EN	ASTM	BS	NF	SS		
2205	1.4462	S32205	318S13	Z3 CND 22-05 Az	2377		
Typical analysis of all-weld metal (wt.-%)							
	C	Si	Mn	Cr	Ni	Mo	N
wt-%	0.025	0.7	0.9	22.9	9.2	3.2	0.13
Mechanical properties of all-weld metal							
Heat-treatment	Yield strength	Tensile strength	Elongation	Impact work		Hardness	
	R _e N/mm ²	R _m N/mm ²	(L ₀ =5d ₀)	ISO-V KV J			
	MPa	MPa	%	+20 °C	-40 °C	HB	
u	615	800	25	60	40	240	
u untreated, as-welded – shielding gas Argon + 18 % CO ₂							
Operating data							
	Polarity	shielding gases:	re-drying if necessary:	amps A	voltage V	ø (mm)	
	DC (+)	Ar + 15 – 25% CO ₂ 100 % CO ₂	150°C / 24 hrs	125 – 280 200 - 350	20 – 34 25 - 35	1.2 1.6	
Ar + 15 – 25% CO ₂ offers the best weldability, but 100% CO ₂ can be also used (voltage should be increased by 2V). Gas flow rate 20 – 25 l/min.							
Approvals							
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