Avesta 2205-HF

Rutile-Acid stick electrode, high-alloyed, chemical resistant

Classifications

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

Characteristics and typical fields of application

Avesta 2205-HF is a rutile-acid duplex covered electrode for welding duplex steel castings such as 2205 (4A). The electrode is chemically tailored to meet tough duplex requirements while at the same time offering weld metal ferrite levels of 40-60% after post weld heat treatment.

Avesta 2205-HF can successfully be used for repair welding of castings, but can also be used as a substitute for standard electrodes whose chemistry cannot give acceptable ferrite levels after heat treatment.

Corrosion resistance:

Very good resistance to pitting and stress corrosion cracking in chloride containing environments. Pitting resistance according to ASTM G48-E is higher than 22°C after the recommended PWHT. PREN > 35 (Annealing at 1100-1150°C followed by short air cooling and quenching.)

Base materials

EN	UNS		
1.4462 X2CrNiMoN22-5-3	S32205		

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

	C	Si	Mn	Cr	Ni	Mo	N
wt.-%	0.03	0.8	1.0	22.7	8.9	3.2	0.12

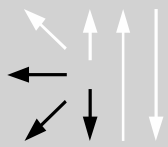
Mechanical properties of all-weld metal

Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation ($L_0=5d_0$)	Impact work ISO-V KV J	
	MPa	MPa	%	+20 °C	-50°C
u	**650** (≥450)	**750** (≥690)	**22** (≥20)	**40**	**30**
a	**490**	**700**	**28**	**65**	**50**

u untreated, as-welded

a annealed, at 1100 – 1150°C followed by short air cooling and quenching

Operating data



Polarity:	Electrode identification:	ø (mm)	L mm	Amps A
DC (+)	2205-HF	4.0	400	90 – 160
		5.0	350	150 – 220

Approvals

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