

Classification

Wire:			Flux:
EN ISO 14343-A	EN ISO 14343-B	AWS A5.23	EN ISO 14174
S 22 9 3 N L	SS2209	ER2209	SA FB 2 DC

Characteristics and typical fields of application

Avesta 2205 is primarily designed for welding the duplex grade Outokumpu 2205 and similar but it can also be used for SAF 2304 type of steels. Avesta 2205 provides a ferritic-austenitic weldment that combines many of the good properties of both ferritic and austenitic stainless steels.

Structure: Austenite with 45 – 55 % ferrite.

Scaling temperature: Approx. 850 °C (air).

Corrosion resistance:

Very good resistance to pitting and stress corrosion cracking in chloride containing environments.

Base materials

Similar duplex stainless steels, also combinations of duplex, ferritic and austenitic steels

1.4462 X2CrNiMoN22-5-3, 1.4362 X2CrNiN23-4,
1.4462 X2CrNiMoN22-5-3 with 1.4583 X10CrNiMoNb18-12,

UNS S31803, S32205

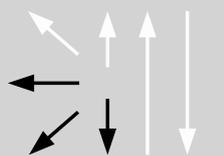
Typical analysis of the solid wire and all-weld-metal (wt.-%)

	C	Si	Mn	Cr	Ni	Mo	N	PRE _N
Wire	≤ 0.015	0.40	1.6	22.8	8.8	3.2	0.15	36.0
Flux	0.013	0.50	1.1	22.5	8.8	3.2	0.14	35.0

Mechanical properties of all-weld-metal

Flux	Yield strength R _{p0.2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J	
	MPa	MPa	%	+20 °C	-40 °C
805	≥ 450	≥ 550	≥ 20	140	≥ 32

Operating data

	Polarity: DC (+) / DC (-)	Re-drying: 300 – 350 °C / min. 2 h	ø (mm) 3.0
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Heat treatment: Generally none (in special cases quench annealing at 1100 – 1150 °C).

Interpass temperature: max. 150 °C.

Heat input: 0.5 – 2.5 kJ/mm.

Approvals

Draht-Flux-Kombination: xx