

Classifications

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22
T 25 9 4 N L P M21 2	TS 2594-F M21 1	E2594T1-4
T 25 9 4 N L P C1 2	TS 2594-F C1 1	E2594T1-1

Characteristics and typical fields of application

Avesta FCW 2507/P100-PW is a rutile flux-cored wire designed for welding ferritic-austenitic superduplex steel and equivalent steel grades such as Zeron 100 (S32760, EN 1.4501) and 2507 (S32570, EN 1.4410). Avesta FCW 2507/P100-PW can also be used for joints between superduplex grades and austenitic stainless steels or carbon steels. Superduplex steels are particularly popular for desalination, pulp & paper, flue gas desulphurization and sea water systems. The properties of the weld metal match those of the parent metal, offering high tensile strength and toughness as well as an excellent resistance to stress corrosion cracking and localized corrosion. The operating temperature range is -40°C to 220°C.

Base materials

SAF 2507, EN 1.4410, ASTM S32750, ASTM 32760 and similar alloyed duplex steels

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

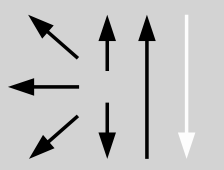
	C	Si	Mn	Cr	Ni	Mo	N		PRE _N	FN
wt.-%	0.03	0.7	0.9	25.3	9.8	3.7	0.23		> 40	> 35

Mechanical properties of all-weld metal

Condition	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
u	670 (≥ 550)	880 (≥ 760)	27 (≥ 18)	≥ 50	≥ 32

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

Operating data

	Polarity:	Shielding gases:	Redrying:	ø (mm)	Amps A	Voltage V
	DC (+)	M1-M3, C1	150°C/24 h	1.2	130 – 220	23 – 31

Welding with standard GMAW equipment possible, slightly trailing torch position angle appr. 80°

The gas flow should be 15 – 18 l/min

Interpass temperature: max 120 °C

Heat Input: 0.5 – 1.5 kJ/mm

Approvals

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