

Classifications

EN ISO 17634-A	EN ISO 17634-B	AWS A5.29 / SFA-5.29
T ZCrWMo9Vnb P M21 1 H5	T 69 T1-1M21-G-H5	E91T1-B92M-H4

Characteristics and typical fields of application

FOXcore P 92 RC is a rutile- basic flux-cored wire for welding creep resistant, tempered 9-12% chromium steels in turbine-, boiler- and pipeline construction as well as in the foundry technology. The wire is especially designed for the ASTM steels T92/P92. This flux-cored wire is developed for welding with conventional power sources on DC + under mixture gas (Ar + 15- 25% CO₂). It is also suitable for positional welding.

Base materials

similar alloyed creep resistant steels
1.4901 X10CrWMoVnb9-2, NF 616
ASTM A 213 Gr. T92, ASTM A335 Gr. P92

Typical analysis

	Gas	C	Si	Mn	Cr	Ni	Mo	W	V	Nb	N
wt.-%	M21	0.10	0.2	0.6	9.0	0.5	0.5	1.5	0.2	0.04	0.04

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength R _{p0.2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact energy ISO-V KV J
	MPa	MPa	%	20°C
s	620 (≥ 565)	750 (690-890)	17 (≥ 16)	30 (≥ 27)

s - stress relieved 760°C/4 h/furnace down to 300°C/air – shielding gas Ar + 18% CO₂

Operating data

	Polarity	DC +	Dimension mm
	Shielding gas (EN ISO 14175)	M21	1.2

Preheating and interpass temperature 200-280°C. After welding, the weld joint should cool down below 80°C to finish the martensite transformation. In case of greater wall thickness or complex components the possibility of residual stresses must be considered. The following post weld heat treatment is recommended: annealing 760°C/min. 2 hrs, heating and cooling rates below 550°C max. 150°C/hr, above 550°C max. 80°C/hr.

For optimised toughness values a welding technology should be applied which produces thin welding layers.

Approvals

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