Thermanit Chromo T 91

Basic stick electrode, creep resistant

Classifications

EN ISO 3580-A	EN ISO 3580-B	AWS A5.5	AWS A5.5M
E CrMo 9 1 B 4 2 H5	E6218-9C1MV H5	E9018-B91 H4	E6218-B91 H4

Characteristics and typical fields of application

The basic coated CrMoVNb electrode is specially designed for welding of creep resistant tempered martensitic 9 % Cr steels used for turbine and boiler fabrication in thermal power plants as well as in the chemical industry.

Thermanit Chromo T 91 is especially designed for root pass welding on P91 (DC -). Generally for vertical up welding with very good welding characteristics on AC and DC +/-. The chemical composition is optimized in order to provide a high creep resistant and ductile weld metal and is characterized by low hydrogen content and low level of trace elements. The cover concept is synthetic.

Base materials

Modified 9Cr-1Mo steels like 1.4903, X10CrMoVNb9-1, GX12CrMoVNbN9-1, ASTM Grade 91

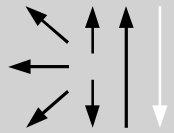
Typical analysis of all-weld metal

	C	Si	Mn	Cr	Mo	Ni	V	Nb	N
wt.-%	0.09	0.3	0.6	9.0	1.0	0.6	0.2	0.05	0.04

Mechanical properties of all-weld metal at + 20 °C

Heat-treatment	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A 5	Impact work ISO-V
	MPa	MPa	%	J
760 °C / 2 h	≥ 530	≥ 620	≥ 17	≥ 47

Operating data



Polarity:	Electrode identification:	ø mm	L mm	Strom A
DC +/-	Chromo T 91/9018 - B91/E CrM 91 B	2.5	350	70 – 90
AC		3.2	350	90 – 130
		4.0	350	130 – 170

Welding instruction

Preheating / Interpass temperature	Cooling down before PWHT	Postweld heat treatment (PWHT)
180 – 300 °C	≤ 100 °C	760 ± 10 °C / 2 h

Re-drying: 300 – 350 °C / 2 h. Not necessary straight from the tin.

Approvals

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