

Stick electrode, low-alloyed, basic

Classifications					
EN ISO 3580-A	AWS A5.5	AWS A5.5M			
E CrMo9 1 B 4 2 H5	E9015-B91H4R	E6215-B91H4R			

# 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.

Generally for vertical up welding with very good welding characteristics.

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. This electrode is core wire alloyed thus a very homogeneous alloy dispersal is provided.

## **Base materials**

1.4903 - X 10 CrMoVNb 91,

ASTM A199 Gr. T91; A213/213M Gr. T91; A355 Gr. P91 (T91)

Typical analysis of all-weld metal									
	С	Si	Mn	Cr	Мо	Ni	٧	Nb	N
wt-%	0.09	0.2	0.6	9.0	1.1	0.8	0.2	0.05	0.04

#### Mechanical properties of all-weld metal Tensile strength Elongation Impact work Heat-Yield strength treatment A $(L_0=5d_0)$ ISO-V KV J $R_{m}$ $R_{p0.2}$ **MPa** MPa % +20 °C sr (760 °C/2 h) 550 680 17 47 sr (760 °C/4 h) 530 620 17 47

Creep rupture properties: According to base metal P91

Operating data							
<b>~</b> ^ ^ 1	Polarity:	Electrode identification:	ø mm	L mm	Amps A		
	DC(+)	Chromo 9V/9015-B91/E CrMo91 B	2.5	250	70 – 100		
			3.2	350	100 - 145		
			4.0	350	140 - 190		
V 1 V			5.0	450	160 – 240		

### Welding instruction Postweld heat treatment Materials Preheating 200 - 250 °C / 200 - 300 °C ≤ 100 °C 760 °C/2 h

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

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TÜV (06173), CE

