




# CEWELD E 9018-B9

TYPE	Basic, Cr and Mo-alloyed electrode for heat resistant steels T/P91 and T/P92																						
APPLICATIONS	Headers, main steam piping and turbine casings, in fossil fueled power generating plants. Oil refineries and coal liquefaction and gasification plants. Preheat and Interpass temperature 200°C - 300°C.																						
PROPERTIES	CEWELD E 9018-B9 is designed to weld equivalent 'type T91' CrMo steels modified with small additions of niobium and Vanadium to give improved long term creep properties. These consumables are specifically intended for high integrity structural service at elevated temperature so the minor alloy additions responsible for its creep strength are kept above the minimum considered necessary to ensure satisfactory performance. In this case, weldments will be weakest in the softened (intercritical) HAZ region of parent material, as indicated by so-called 'type IV' failure in transverse weld creep tests.																						
CLASSIFICATION	<table border="0"> <tr> <td>AWS</td> <td>A 5.5: E 9018-B91</td> </tr> <tr> <td>EN ISO</td> <td>3580-A: E CrMo91 B42 H5</td> </tr> <tr> <td>F-nr</td> <td>4</td> </tr> <tr> <td>FM</td> <td>4</td> </tr> </table>	AWS	A 5.5: E 9018-B91	EN ISO	3580-A: E CrMo91 B42 H5	F-nr	4	FM	4														
AWS	A 5.5: E 9018-B91																						
EN ISO	3580-A: E CrMo91 B42 H5																						
F-nr	4																						
FM	4																						
SUITABLE FOR	<b>9%Cr, 1%Mo, VNb</b> 1.7389, 1.7386, 1.4922, 1.4935, 1.4904, 1.4903, 1.4955, X11CrMo9-1, X12CrMo9.1, X20CrMoV10-1, X10CrMoVNb9-1, GX12CrMoVNbN9-1 ASTM Grade 91, T91, P91, F91, FP91, WP91, C12A STPA28, STBA28																						
APPROVALS	CE																						
WELDING POSITIONS																							
TYPICAL CHEMICAL ANALYSIS OF WELD METAL (%)	<table border="1"> <thead> <tr> <th>C</th> <th>Si</th> <th>Mn</th> <th>P</th> <th>S</th> <th>Cr</th> <th>Ni</th> <th>Mo</th> <th>V</th> <th>Nb</th> <th>N</th> </tr> </thead> <tbody> <tr> <td>0.09</td> <td>0.3</td> <td>0.9</td> <td>0.01</td> <td>0.01</td> <td>9</td> <td>0.6</td> <td>0.9</td> <td>0.2</td> <td>0.06</td> <td>0.04</td> </tr> </tbody> </table>	C	Si	Mn	P	S	Cr	Ni	Mo	V	Nb	N	0.09	0.3	0.9	0.01	0.01	9	0.6	0.9	0.2	0.06	0.04
C	Si	Mn	P	S	Cr	Ni	Mo	V	Nb	N													
0.09	0.3	0.9	0.01	0.01	9	0.6	0.9	0.2	0.06	0.04													
MECHANICAL PROPERTIES	<table border="1"> <thead> <tr> <th rowspan="2">Heat Treatment</th> <th rowspan="2">R<sub>P0.2</sub> (MPa)</th> <th rowspan="2">R<sub>m</sub> (MPa)</th> <th rowspan="2">A<sub>5</sub> (%)</th> <th colspan="2">Impact Energy (J) ISO-V</th> <th rowspan="2">Hardness</th> </tr> <tr> <th colspan="2">RT</th> </tr> </thead> <tbody> <tr> <td>As Welded</td> <td>550</td> <td>700</td> <td>21</td> <td colspan="2">55</td> <td>HRc</td> </tr> </tbody> </table>	Heat Treatment	R <sub>P0.2</sub> (MPa)	R <sub>m</sub> (MPa)	A <sub>5</sub> (%)	Impact Energy (J) ISO-V		Hardness	RT		As Welded	550	700	21	55		HRc						
Heat Treatment	R <sub>P0.2</sub> (MPa)					R <sub>m</sub> (MPa)	A <sub>5</sub> (%)		Impact Energy (J) ISO-V		Hardness												
		RT																					
As Welded	550	700	21	55		HRc																	
REDRYING	400°C / 1 hr																						
GAS ACC. EN ISO 14175																							



# CEWELD E 9018-B9

E 9018-B9 2,5 X 300MM

Packaging	KG/unit	EanCode
Can	2,5	8720663400505

E 9018-B9 3,2 X 350MM

Packaging	KG/unit	EanCode
Can	2,6	8720663400536

E 9018-B9 4,0 X 450MM

Packaging	KG/unit	EanCode
Can	3,3	8720663400567