



CEWELD ER 90S-B9 (P91)

TYPE	Medium alloyed copper-plated welding wire for welding creep and hydrogen pressure resistant steels. 9%Cr-alloyed steels (CrMo91i, B91)																
APPLICATIONS	CEWELD® ER 90S-B9 (P91) is designed for welding equivalent type 91~ 9% Cr Steels modified with small additions of Niobium, Vanadium and Nitrogen to offer improved long term creep properties. This alloy is specially intended for high integrity structural service at elevated temperature such as: Headers, main steam piping and turbine casings, gasification plants etc..																
PROPERTIES	CEWELD® ER 90S-B9 (P91) is specially designed for use in high-strength constructions at elevated temperatures. The optimized chem. The optimized chemical composition guarantees that the minor alloy additives responsible for creep resistance are above the minimum.																
CLASSIFICATION	<table border="0"> <tr> <td>AWS</td> <td>A 5.28: ER 90S-B91</td> </tr> <tr> <td>EN ISO</td> <td>21952-A: G CrMo91</td> </tr> <tr> <td>F-nr</td> <td>6</td> </tr> <tr> <td>FM</td> <td>4</td> </tr> <tr> <td>W.Nr.</td> <td>1.4903</td> </tr> </table>	AWS	A 5.28: ER 90S-B91	EN ISO	21952-A: G CrMo91	F-nr	6	FM	4	W.Nr.	1.4903						
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SUITABLE FOR	<p>P91, 9%Cr1%Mo modified 1.4903, 1.4955 X10CrMoVNb9-1, GX12CrMoVNbN9-1 A 213 T91, A335 P91, A387 Gr91, A 182/A336 F91, 1503 Gr91, AFNOR NF A-49213/A-49219 Gr TU Z 10, CDVNb 09-01</p>																
APPROVALS	CE																
WELDING POSITIONS																	
TYPICAL CHEMICAL ANALYSIS OF THE FILLER METAL (%)	<table border="1"> <thead> <tr> <th>C</th> <th>Si</th> <th>Mn</th> <th>Cr</th> <th>Ni</th> <th>Mo</th> <th>V</th> <th>Nb</th> </tr> </thead> <tbody> <tr> <td>0.07</td> <td>0.4</td> <td>0.5</td> <td>9</td> <td>0.45</td> <td>0.95</td> <td>0.2</td> <td>0.05</td> </tr> </tbody> </table>	C	Si	Mn	Cr	Ni	Mo	V	Nb	0.07	0.4	0.5	9	0.45	0.95	0.2	0.05
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ALL WELD MECHANICAL PROPERTIES	<table border="1"> <thead> <tr> <th>Heat Treatment</th> <th>R_{p0,2} MPa</th> <th>R_m MPa</th> <th>A₅ (%)</th> <th>Impact Energy (J) ISO-V RT</th> </tr> </thead> <tbody> <tr> <td>730°C- 760°C /2h</td> <td>560</td> <td>780</td> <td>23</td> <td>60</td> </tr> </tbody> </table>	Heat Treatment	R _{p0,2} MPa	R _m MPa	A ₅ (%)	Impact Energy (J) ISO-V RT	730°C- 760°C /2h	560	780	23	60						
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730°C- 760°C /2h	560	780	23	60													
REDRYING TEMPERATURE	Not required																
GAS ACCORDING EN 14175	M21																



CEWELD ER 90S-B9 (P91)

ER 90S-B9 (P91) 0,8MM

Type	KG/unit	EANCode
BS-300	15	8720663416926

ER 90S-B9 (P91) 1,0MM

Type	KG/unit	EANCode
BS-300	15	8720663416940

ER 90S-B9 (P91) 1,2MM

Type	KG/unit	EANCode
BS-300	15	8720663416988