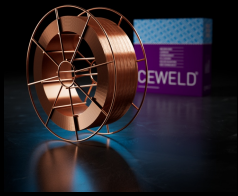


CEWELD ER 90S-B9 (P91)

TYPE	Medium alloyed copper-plated welding wire for welding creep and hydrogen pressure resistant steels. 9%Cr-alloyed steels (CrMo91, 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>W.Nr.</td> <td>1.4903</td> </tr> <tr> <td>F-nr</td> <td>6</td> </tr> <tr> <td>FM</td> <td>4</td> </tr> </table>	AWS	A 5.28: ER 90S-B91	EN ISO	21952-A: G CrMo91	W.Nr.	1.4903	F-nr	6	FM	4						
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W.Nr.	1.4903																
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SUITABLE FOR	<p>P91: 9%Cr-1% Mo ISO 15608: ~5,4 C ≤ 0,35 %, 7,0 % ≤ Cr < 10,0 % und 0,7 < Mo ≤ 1,2 % 1.4903, 1.4904, 1.4922, 1.4955, 1.7386, 1.7389, X12CrMo 9 1, GX12CrMo 10 1, X11CrMo9-1, X7CrMo9-1, X10CrMoVNb9-1, ASTM: Grade 91, T91, P91, F91, FP91, A182/A336 grade F91, A213 grade T91, A217 grade C12A, A234 grade WP91, A387 grade 91, A335 grade P91 STPA28, STBA28</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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MECHANICAL PROPERTIES	<table border="1"> <thead> <tr> <th rowspan="2">Heat Treatment</th> <th rowspan="2">R_{P0,2} (MPa)</th> <th rowspan="2">R_m (MPa)</th> <th rowspan="2">A₅ (%)</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>730°C- 760°C 2h</td> <td>560</td> <td>780</td> <td>23</td> <td colspan="2">60</td> <td>HRc</td> </tr> </tbody> </table>	Heat Treatment	R _{P0,2} (MPa)	R _m (MPa)	A ₅ (%)	Impact Energy (J) ISO-V		Hardness	RT		730°C- 760°C 2h	560	780	23	60		HRc
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730°C- 760°C 2h	560	780	23	60		HRc											
REDRYING	Not required																
GAS ACC. EN ISO 14175	M21																



CEWELD ER 90S-B9 (P91)

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

Packaging	KG/unit	EanCode
BS-300	15	8720663416926

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

Packaging	KG/unit	EanCode
BS-300	15	8720663416940

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

Packaging	KG/unit	EanCode
BS-300	15	8720663416988