CEWELD®

ER 90S-B3

CATEGORY	GMAW-GTAW Solid wires
TYPE	Copper coated MIG welding wire for welding creep resistant ferritic steels
APPLICATIONS	MIG filler metal for high temperature creep resistant 2.25%Cr-1%Mo ferritic steel. These steels are used for creep resisting applications up to ~600°C. Typical applications in power generation plant include steam piping, turbines and boilers; the alloy also finds applications in the chemical and petro-chemical industries.
PROPERTIES	The filler metal has low levels of tramp elements (eg. Sn, As, Sb and P) providing a low Bruscato Factor. (X<10 ppm)for temper embrittlement resistant applications.
CLASSIFICATION	AWS A 5.28: ER 90S-B3 EN ISO 21952-B: G 62 M 2C1M
SUITABLE FOR	For matching 2.5%Cr1%Mo creep resisting ferritic steels. 10CrMo 9-10, G-17CrMo 9-10, ASTM: A182 F22, A199/A200 grades T21/T22, A213 T22, A217 WC9, A234 WP22, A335 P22, A387 grades 21/22
APPROVALS	CE approved
WELDING POSITIONS:	

WELD METAL ANALYSIS (TYPICAL) %

C	Mn	Si	Cr	Cu	Mo	P	S	Ni	Other
0.09	0.55	0.55	2.50	0.35	1.10	0.025	0.025	0.20	0.50

MECHANICAL PROPERTIES (AFTER HEAT TREATMENT)

Heat treatment PWHT	$R_{P0,2}$ (N/mm^2)	Rm (N/mm^2)	A5 (%)	Impact Energy (J) ISO-V 20°C	-40°C
690°C/2hr	> 540	> 620	> 17	> 100	> 47

Preheat 200°C / interpass max. 300°C

WELDING PARAMETERS / PACKING

Welding Parameters			Packing		
D (mm)	Voltage (V)	Current DC+ (A)	spool type	kg/spool	kg/pallet
1,0	18-28	80-280	S/D 300	15	1080

REDRYING TEMPERATURE	not required
GAS ACC EN ISO 14175:	I1