CEWELD®

ER 90S-B3 Tig

CATEGORY	GMAW-GTAW Solid wires
TYPE	Copper coated Tig welding wire for welding creep resistant ferritic steels.
APPLICATIONS	TIG/GTAW filler metal for high temperature creep resistant 2.25%Cr1%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: W 62 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 (kg)	
D (mm)	Current (A) (DC-)	single	master
1.6 x 1000	50-80	5	25
2,0 x 1000	70-110	5	25
2,4 x 1000	110-180	5	25
3.2 x 1000	150-250	5	25

REDRYING TEMPERATURE	not required
GAS ACC EN ISO 14175:	I1