

ER90S-B3

MIG (GMAW)

2 1/4 Cr-1Mo CREEP RESISTING STEEL MIG WIRE

PRODUCT DESCRIPTION

Wire for MIG welding 2 1/4 Cr-1Mo creep resisting steels, conforming to the AWS/ASME specification.

CLASSIFICATIONS

AWS A5.28M ER90S-B3
ISO 21952-B G 2C1M

ASME IX QUALIFICATION

QW432 F-No 6
QW442 A-No 4

CHEMICAL COMPOSITION (WIRE WT %)

	C	Mn	Si	S	P	Cr	Mo	Cu	Ni
Min.	0.07	0.40	0.40	--	--	2.30	0.90	--	--
Max.	0.12	0.70	0.70	0.020	0.020	2.70	1.20	0.35	0.20
Typical	0.1	0.5	0.5	0.010	0.015	2.4	1	0.1	< 0.1

ALL-WELD MECHANICAL PROPERTIES

Properties after PWHT	Min.	Typical 690°C/1h
Tensile strength [MPa]	620	655
0.2% proof strength [MPa]	540	540
Elongation (%) 4d	17	23
5d	15	20
Impact ISO-V(J) -10°C	--	> 95
Hardness (HV) [HV]	--	220
(HB)	--	215

TYPICAL OPERATING PARAMETERS

Shielding gas	Current	Diameter (mm)	Parameters
Ar-5%CO ₂	DC+	1.2	280A, 26V

PACKAGING DATA

Diameter (mm)	Weight (kg)	Packaging	Item number
0.8	15	S300	MER90SB3-08
0.9	15	S300	MER90SB3-09
1.0	15	S300	MER90SB3-10
1.2	15	S300	MER90SB3-12

FUME DATA (WT % TYPICAL)

Fe	Mn	Ni	Cr ³	Cu	Mo	OES (mg/m ³)
55	5	<0.1	1.3	1.2	< 0.5	5