

# GM 90SB9

## SOLID WIRE FOR CREEP RESISTING STEELS

### IDENTIFICATION

GM 90S-B9, ER 90SB9

### CLASSIFICATION

AWS/SFA 5.28: ER 90SB9

### DESCRIPTION

A non-coppered filler wire of high purity to match creep resisting steels of type 9CrMo modified with controlled additions of niobium, vanadium & nitrogen. Deposited weld metal meets X-ray quality.

### CHEMICAL ANALYSIS (RANGE) %

C	Mn	Si	S	P	Cr	Ni	Mo	Cu	Nb	V	N
0.07 - 0.13	1.25 max	0.15 - 0.30	0.01 max	0.01 max	8.0 - 10.5	0.8 max	0.8 - 1.20	0.2 max	0.02 - 0.10	0.15 - 0.25	0.03 - 0.07

### MECHANICAL PROPERTIES (RANGE)

UTS (MPa)	YS (MPa)	EL (%) (L=4D)
620 min	410 min	16 min

### TYPICAL APPLICATIONS

- These materials are used in components such as, headers, main steam piping and turbine rotors in power generating plant.
- Applications are also anticipated in oil refinery & petrochemical plant. Service temperature is normally 500-600°C, higher temperatures upto 650°C may be limited by parent HAZ properties.

### MATERIALS TO BE WELDED

**ASTM-ASME:** A213 T91 (TUBE), A387 GRADE 91 (PLATE), A335 P91 (PIPE), A182, A336 F91 (FORGINGS).

**DIN:** X10CRMVNB9 1 1.4903

**PREHEAT AND INERPASS TEMPERATURE :** 150 - 260°C

**SHIELDING GAS :** Argon + 2 to 5% CO2

### PACKING PARAMETERS

Size (mm)	Weight / Spool (kg)
0.8	12.5
1.2	12.5
1.6	12.5