

## DESIGNED TO WELD P 91 GRADE STEEL

**DEFINITION** : P 91 STEEL IS FERRITIC - MARTENSITIC (9% CHROMIUM, 1%) MOLYBDENUM STEEL MICRO-ALLOYED WITH VANADIUM & NIOBIUM.

### **OUTSTANDING PROPERTIES**

- Improved creep strength
- Toughness, Fatigue Resistance
- Oxidation Resistance
- Corrosion Resistance



# MF 109

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## FEATURES & APPLICATIONS

**MF 109** Is designed to Weld Modified Steels T 91, P 91 Grades to provided improved creep strength , toughness , fatigue oxidation & corrosion resistance at elevated temperatures. commonly used in power plants, oil refineries & coal liquefaction plants.

**MF 109** Exhibits excellent elevated - temperature strength & creep behavior up to 580°C - 600°C.

## MECHANICAL PROPERTIES:

**MF 109** Design to Weld modified steels T 91, P 91 Grade. Provides improved creep strength, Toughness & Fatigue, Oxidation & Corrosion Resistance at elevated temperatures.

### Undiluted Weld Metal

Tensile Strength  
Yield Strength  
Elongation  
Stress - Relieved 2 hrs. @ 760°C (1400°F)

### Maximum Value Up to:

103,000 PSI  
86,000 PSI  
22.5%



# MF 109

## WELDING CURRENT & INSTRUCTIONS

### Recommended Current :DC (+)

| Diameter (mm)    | 3/32 (2.5) | 1/8 (3.25) | 5/32(4.0) | 3/16(5.0) |
|------------------|------------|------------|-----------|-----------|
| Minimum Amperage | 70         | 80         | 100       | 140       |
| Maximum Amperage | 110        | 140        | 180       | 240       |

### Welding Techniques:

Remove all surface contaminants. Maintain a short arc gap and use stringer bead technique.



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