



Superior all position, controlled-hydrogen electrode  
for welding structural steel  
when impact properties are called for

# **EutecTrode®** **7018-1**



- Excellent for steels and joints subject to stress and strain
- Provides exceptional impact toughness at low service temperatures
- Runs smooth in all positions with excellent vertical-up capabilities
- High quality, flexible flux coating with less break-off or chipping, even when bent or mishandled

# EutecTrode® 7018-1

EutecTrode 7018-1 is a high strength ferritic electrode. This high quality, all position, low hydrogen electrode features rapid deposition, moisture resistant coating and excellent slag removal.

Deposits have good ductility, are dense, crack-free, and of X-ray quality. EutecTrode 7018-1 is excellent for steels sensitive to cracking when welded with conventional mild steel electrodes.

Comforms to:

- AWS A5.1-91: E7018-1
- ASME SFA 5.1: E7018-1
- CWB: CSA W48

## DONNÉES TECHNIQUES

Typical Values	
Tensile Strength:	80,000 psi (550 MPa)
Yield Strength:	71,000 psi (489 MPa)
Charpy V-Notch:	Up to 70 ft-lb at -45°C (-50°F)
Polarity:	AC / DC (+)

Diameter	Amperage
2.4 mm (3/32")	60-100
3.2 mm (1/8")	110-150
4.0 mm (5/32")	140-220
4.8 mm (3/16")	220-280

## WELDING PARAMETERS

### PREPARATION

Clean weld area of scale and/or oxide. A nominal preheat of 65°C (150°F) is advised if part is below 5°C (40°F) or over 25 mm (1") thick. For higher carbon steels, higher preheats will be needed. Do not preheat manganese steel castings above 205°C (400°F) as this will cause time-temperature embrittlement.

### TECHNIQUE

Maintain the optimum electrode stickout and hold a 75° angle from the vertical in the direction of travel. Do not weave excessively. Wide beads can cause porosity, excessive base metal overheating, and degrade the weld deposit wear properties. Back whip craters to reduce cracking tendencies and potential out-gassing.

### POST WELDING

Allow parts to slow cool in still air. High carbon steels and air hardenable steels should be covered with a heat-retardant blanket or by other means. If steel composition is unknown, slow cool at a rate of 38°C (100°F) per hour.

## APPLICATIONS TYPIQUES

For "tramp" and "problem" steels high in sulphur, phosphorus, or other elements added to improve the machinability of the steel.

For fabrication of "H" and "I" beams, angle and channel iron, pipelines, and all other steel structures. For circular tube to plate welds, and other type joints subject to stress and strain. Excellent for applications where low temperature charpy V-notch impacts are required.

