# Select 75

## Description:

**SELECT 75** is a carbon steel electrode for flux cored arc welding with external gas shielding. This electrode is intended for single and multiple-pass welding of carbon, and certain low alloy, steels where a minimum tensile strength of 70,000 psi and good low temperature notch toughness are required. Carbon dioxide is the recommended shielding gas, with a suggested flow rate of 35-50 cfh and a minimum dew point of -40 degrees F. 75-80% Argon/balance carbon dioxide may also be used but the tensile strength will be higher.

## Classifications & Approvals:

- E70T-5C-H4, E70T-5M-H4 per ANSI/AWS A5.20, SFA 5.20

## Characteristics:

**SELECT 75** is a flux cored electrode with a basic slag system, which provides better mechanical properties and diffusible hydrogen levels in the weld deposit than E70T-1C electrodes. The arc transfer is quite globular in nature, producing more spatter than the T-1C slag systems. However, the welding performance of **SELECT 75** is much improved over the usual T-5C types; in fact, the slag removal and bead geometry are quite similar to those of E7018 electrodes. The viscosity of these lime-fluoride slags limits welding of this electrode to the flat and horizontal positions.

## Applications:

**SELECT 75** is an ideal choice for those applications involving difficult steels, such as high carbon and free-machining types. It is also well suited to those situations where an adequate preheat cannot be maintained on heavy section fabrications and delayed hydrogen cracking must be averted, such as crane sections, heavy machine bases, boom assemblies, and construction equipment. Typical steels welded with this electrode are ASTM A36, A285, A515 Gr. 70, and A516 Gr. 70.

## Typical Mechanical Properties:

| | CO2 | 75% Ar/25% CO2 |
|---|---|---|
| **Ultimate Tensile Strength (psi)** | 81,400 | 87,000 |
| **Yield Strength (psi)** | 68,200 | 71,800 |
| **Percent Elongation** | 30 | 28 |
| **CVN (ft•lb *ƒ*) @ -20º F.** | 77 | 79 |

## Typical Deposit Chemistry:

| Sheilding Gas | C | Mn | P | S | Si |
|---|---|---|---|---|---|
| CO2 | .05 | 1.29 | .009 | .010 | .44 |
| 75Ar/25 CO2 | .04 | 1.46 | .008 | .010 | .57 |

## Suggested Welding Parameters:

| | Optimum | | | Range | |
|---|---|---|---|---|---|
| Diameter | Amperage | Voltage | WFS | Amperage | Voltage |
| 1/8" | 475 | 28 | 115 | 375-650 | 26-36 |
| 3/32" | 400 | 28 | 185 | 350-550 | 26-34 |
| 5/64" | 370 | 28 | 250 | 280-500 | 26-33 |
| 1/16" | 300 | 29 | 320 | 250-450 | 26-34 |
| .045" | 250 | 28 | 380 | 120-320 | 22-31 |

**Rev 0 (03/05/2014)**