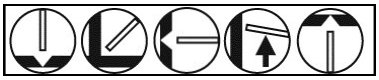
# Pipemaster® 70

**AWS E7010-P1 (E4310*)**
**EN ISO 2560-A-E 42 3 C21**

**WELDING POSITIONS:**



| FEATURES: | BENEFITS: |
|---|---|
| • Quick-starting | • Easy arc striking and increased welding efficiency |
| • All-position | • Welds in flat, horizontal, vertical and overhead positions |
| • Excellent vertical down | • Faster travel speeds |
| • Excellent arc stability | • Welding accuracy and efficiency |
| • Superior arc drive | • Excellent penetration |
| • Excellent wash-in | • Maximizes fusion of joints |
| • Light slag | • Quick and easy cleaning of weld bead |

**APPLICATIONS:**

- Drill platforms
- Storage tanks
- Pipeline welding using downhill travel
- Welding of high-yield pipe steels
- Shipbuilding

**TYPE OF CURRENT:** Direct Current Electrode Positive (DCEP)

**RECOMMENDED WELDING TECHNIQUES:**

| | |
|---|---|
| **GENERAL:** | Electrode positive, work negative (DCEP) |
| **ARC LENGTH:** | Average length (1/8" to 1/4") |
| **FLAT:** | Stay ahead of puddle and use slight whipping motion |
| **VERTICAL-UP:** | Slight whipping or weaving technique |
| **VERTICAL-DOWN:** | Use higher amperage and faster travel, staying ahead of puddle |
| **OVERHEAD:** | Use similar technique as for vertical-up, multi-pass for build-up |
| **PIPE:** | Use downhill travel |

**STORAGE:** Dry at room temperature.

**RECONDITIONING:** Not recommended

**TYPICAL WELD METAL PROPERTIES* (Chem Pad):**

| Weld Metal Analysis (%) | | AWS Spec (max) |
|---|---|---|
| Carbon (C) | 0.15 | 0.20 |
| Manganese (Mn) | 0.54 | 1.20 |
| Phosphorus (P) | 0.01 | 0.03 |
| Sulphur (S) | 0.01 | 0.03 |
| Silicon (Si) | 0.14 | 0.60 |
| Chromium (Cr) | 0.02 | 0.30 |
| Vanadium (V) | 0.01 | 0.10 |
| Nickel (Ni) | 0.72 | 1.00 |
| Molybdenum (Mo) | <0.01 | 0.50 |

**TYPICAL MECHANICAL PROPERTIES* (As Welded):**

| | | AWS Spec (min) |
|---|---|---|
| Tensile Strength | 83,000 psi (570 MPa) | 70,000 psi |
| Yield Strength | 69,000 psi (475 MPa) | 60,000 psi |
| Elongation % in 2" | 25% | 22% |

**TYPICAL CHARPY V-NOTCH IMPACT VALUES* (As Welded):**

| | | AWS Spec (min) |
|---|---|---|
| Avg. at -20°F (-34°C) | 57 ft•lbs (78 Joules) | 20 ft•lbs |

NOTE: Pipemaster 70 is a low-alloy cellulosic electrode. Preheat, interpass and post-heating temperatures between 325°F and 375°F should be employed if ambient temperatures are below 32°F (0°C).



Hobart Brothers Company • 101 Trade Square East • Troy, OH 45373
PH: (800) 424-1543 • FX: 800-541-6607 • www.hobartbrothers.com

# Pipemaster® 70

| Diameter Inches | mm | Type of Power | Minimum Amps | Optimum* Amps | Maximum Amps |
|---|---|---|---|---|---|
| 1/8 | 3.2 | DCEP | 70 | 110 | 140 |
| 5/32 | 4.0 | DCEP | 80 | 160 | 190 |
| 3/16 | 4.8 | DCEP | 120 | 190 | 230 |

*For out of position welding, reduce amperages shown by 15%.

## TYPICAL DEPOSITION DATA (at optimum):

| Diameter Inches | mm | Type of Power | Amps | Volts | Deposition Rate lbs/hr | Deposition Efficiency*% |
|---|---|---|---|---|---|---|
| 1/8 | 3.2 | DCEP | 110 | 26-28 | 2.19 | 69.9 |
| 5/32 | 4.0 | DCEP | 140 | 26-28 | 2.68 | 69.2 |
| 3/16 | 4.8 | DCEP | 180 | 26-28 | 3.86 | 72.5 |

*Allowance made for 2" stub loss included.

- **Maintaining a proper welding procedure - including pre-heat and interpass temperatures - may be critical depending on the type and thickness of steel being welded.**

**STANDARD DIAMETERS AND PACKAGES:** For a complete list of diameters and packaging, please contact Hobart Brothers at (800) 424-1543, or (937) 332-5188 for International Customer Service.

| Diameter Inches | mm | Length Inches | mm | 50-lb Can |
|---|---|---|---|---|
| 1/8 | 3.2 | 14 | 355 | S116644-035 |
| 5/32 | 4.0 | 14 | 355 | S116651-035 |
| 3/16 | 4.8 | 14 | 355 | S116658-035 |

## CONFORMANCES AND APPROVALS:

- **AWS A5.5,** E7010-P1, ASME SFA 5.5, F-3, A-1, E7010-P1
- **ABS** E7010-P1
- **Lloyd's** Grade 3m, 3Ym

**CAUTION:**
Consumers should be thoroughly familiar with the safety precautions on the warning label posted in each shipment and in the American National Standard Z49.1, "Safety in Welding and Cutting," published by the American Welding Society, 550 NW LeJune Road, Miami, FL 33126; OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210

Material Safety Data Sheets on any Hobart Brothers Company product may be obtained from Hobart Customer Service or at www.hobartbrothers.com.

Because Hobart Brothers Company is constantly improving products, Hobart reserves the right to change design and/or specifications without notice.



**Revision Date: 131001** (Replaces 130607)
**612-AB, INDEX**

HOBART FILLER METALS