

# Hobart 610



AWS E6010

**WELDING POSITIONS:**



**FEATURES:**

- Excellent arc stability
- Quick-starting efficiency
- Excellent vertical-down
- Superior arc drive
- Excellent wash-in
- Light slag

**BENEFITS:**

- Welding accuracy and efficiency
- Easy arc striking and increased welding efficiency
- Faster travel speeds
- Excellent penetration
- Easy weld lay-in and smooth bead appearance
- Quick and easy cleaning of weld bead

**APPLICATIONS:**

- Pipe welding
- Construction and shipbuilding
- Vertical and overhead plate welding
- General purpose fabrication
- Maintenance welding

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

**RECOMMENDED WELDING TECHNIQUES:**

- ARC LENGTH:** Average length (1/8" to 1/4")
- FLAT:** Stay ahead of puddle and use slight whipping motion
- HORIZONTAL:** Angle electrode slightly toward top plate
- 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:** Store at room temperature and keep away from heat source.

**RECONDITIONING:** Not recommended

**TYPICAL CHEMISTRY VALUES:**

	Hobart 610	AWS Spec (Max)
Carbon (C)	0.15	0.20
Manganese (Mn)	0.52	1.20
Silicon (Si)	0.40	1.00
Phosphorus (P)	0.007	Not required
Sulphur (S)	0.015	Not required
Chromium (Cr)	0.04	0.20
Nickel (Ni)	0.06	0.30
Molybdenum (Mo)	0.003	0.30

**TYPICAL TENSION TEST RESULTS (As Welded):**

	Hobart 610	AWS Spec (Min)
Tensile Strength	84,000 psi (576 MPa)	60,000 psi
Yield Strength	70,000 psi (479 MPa)	48,000 psi
Elongation % in 4 x diameter length	26%	22%
Reduction of Area	58%	Not required

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

	Hobart 610	AWS Spec (Min)
Avg. at -20°F (-30°C)	37 ft•lbs (50 Joules)	20 ft•lbs

\*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and Hobart Brothers LLC expressly disclaims any liability incurred from any reliance thereon. Typical data are those obtained when welded and tested in accordance with the AWS A5.1 specification. Other tests and procedures may produce different results. No data is to be construed as a recommendation for any welding condition or technique not controlled by Hobart Brothers LLC.

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Diameter		Type of Current	Amperage Range		Optimum Parameters		Deposition Rates*	
Inches	(mm)		Min.	Max.	Amps	Volts	lbs/hr	(kg/hr)
3/32	(2.4)	DCEP	40	70	55	26-28	1.30	(0.60)
1/8	(3.2)	DCEP	80	120	100	26-27	1.62	(0.73)
5/32	(4.0)	DCEP	100	160	140	26-29	1.98	(0.90)
3/16	(4.8)	DCEP	140	225	170	26-30	2.60	(1.20)

Reduce optimum amperage by 15% when welding out of position.

\*Calculated using optimum parameters and DCEP polarity. Allowance made for 2" stub loss.

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

#### AVAILABLE DIAMETERS AND PACKAGES:

Diameter		Length		50-lb. Can	5-lb. PPak	10-lb. PPak	10-lb. Can
Inches	(mm)	Inches	(mm)				
3/32	(2.4)	14	355	S129432-035	S129432-045	S129432-089	S129432-033
1/8	(3.2)	14	355	S129444-035	S129444-045	S129444-089	S129444-033
5/32	(4.0)	14	355	S129451-035	S129451-045	S129451-089	S129451-033
3/16	(4.8)	14	355	S129458-035	—	—	—

#### CONFORMANCES AND APPROVALS:

- AWS A5.1, E6010
- ASME SFA 5.1, F3, A1, E6010
- CWB, CSA W48-06 E4310
- Lloyds Register, 3m

**TECHNICAL QUESTIONS?** For technical support of Hobart Filler Metals products, contact the Applications Engineering department by phone toll-free at 1-800-532-2618 or by e-mail at [Applications.Engineering@hobartbrothers.com](mailto:Applications.Engineering@hobartbrothers.com)

#### 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, 8669 NW 36th St., Miami, FL 33166 (can also be downloaded online at [www.aws.org](http://www.aws.org)); OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210

Safety Data Sheets on any Hobart Brothers LLC product may be obtained from Hobart Customer Service or at [www.hobartbrothers.com](http://www.hobartbrothers.com).

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

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