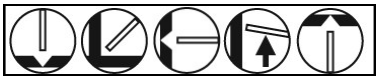
Hobart® 418

AWS E7018 H4R, E7018-1 H4R

WELDING POSITIONS:



FEATURES: **BENEFITS:**

Features:	Benefits:
• Effortless starts	• No starting porosity; ideal for tacking; increases productivity
• Low moisture absorption rate	• Reduces potential for hydrogen cracking
• Very stable arc with low spatter	• Ideal for all positions; produces good looking welds; reduces clean-up time
• Good wetting action	• Produces a flat bead contour; prevents cold lap and undercutting
• Easy slag removal	• Quick clean-up, increases productivity

APPLICATIONS:

- Power, petrochemical and boiler plants
- Steel structures/field erections
- Shipbuilding/barge offshore drilling rigs
- Rail cars
- General fabrication/maintenance
- Non-alloyed and fine grain steels
- Heavy equipment fabrication and repair

TYPE OF CURRENT: Direct Current Electrode Positive (DCEP) or AC

RECOMMENDED WELDING TECHNIQUES:

ARC LENGTH:	Less than half the diameter of the electrode
FLAT:	Angle electrode 10° - 15° from 90°
HORIZONTAL:	Angle electrode slightly toward top plate
VERTICAL-UP:	Use weaving technique
VERTICAL-DOWN:	Not recommended
OVERHEAD:	Use slight weaving motion within puddle

STORAGE: To ensure a low hydrogen weld deposit, storage in an oven at 220°F to 350°F (104°C to 117°C) is recommended.

RECONDITIONING: If exposed to atmosphere for extended periods, the electrode should be reconditioned for one hour at 575°F (302°C).

TYPICAL CHEMISTRY VALUES*:

		AWS Spec (max)
Carbon (C)	0.03	0.15
Manganese (Mn)	0.89	1.60
Silicon (Si)	0.48	0.75
Phosphorus (P)	0.010	0.035
Sulphur (S)	0.012	0.035
Chromium (Cr)	0.03	0.08
Nickel (Ni)	0.06	0.30
Molybdenum (Mo)	0.01	0.30
Mn + Ni + Cr + Mo + V	0.99	1.75

TYPICAL TENSION TEST RESULTS* (As Welded):

		AWS Spec
Tensile Strength	75,000 psi (518 MPa)	70,000 psi (490 MPa) Minimum
Yield Strength	60,000 psi (413 MPa)	58,000 psi (400 MPa) Minimum
Elongation % in 2" (50 mm)	29%	22% Minimum
Reduction of Area	72%	not required

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

		AWS Spec
Avg. at -20°F (-30°C)	94 ft •lbs (127 Joules)	20 ft •lbs (27 Joules) Minimum
Avg. at -50°F (-45°C)	84 ft •lbs (114 Joules)	20 ft •lbs (27 Joules) Minimum

TYPICAL DIFFUSABLE HYDROGEN TEST RESULTS*:

	AWS Spec (Max.)
2.9ml/100g	4.0ml/100g

*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 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 Inches	(mm)	Type of Current	Amperage Range Min.	Max.	Optimum Parameters Amps	Volts	Deposition Rate* lbs/hr	(kg/hr)	Deposition Efficiency*
3/32	(2.4)	DCEP or AC	75	100	90	22.0	1.8	(0.8)	62.7%
1/8	(3.2)	DCEP or AC	90	150	130	26.5	2.6	(1.2)	73.1%
5/32	(4.0)	DCEP or AC	110	230	170	28.0	3.9	(1.8)	62.5%
3/16	(4.8)	DCEP or AC	150	300	220	28.5	5.2	(2.4)	69.2%
1/4	(6.4)	DCEP or AC	270	380	340	32.0	8.0	(3.6)	70.6%

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 and thickness of steel being welded.**

Available Diameters and Packages:

Diameter Inches	(mm)	Length Inches	(mm)	5-Lb. Plastic Pak	10-Lb. Plastic Pak	10-Lb. Can	50-Lb. Can
Net Pallet Weight				**2000-lb (907.2kg)**	**2100-lb (952.5kg)**	**1260-lb (571.5kg)**	***3000-lb (1360.8kg)**
3/32	(2.4)	14	(355)	S119932-045	S119932-089	S119932-033	S119932-035
1/8	(3.2)	14	(355)	S119944-045	S119944-089	S119944-033	S119944-035
5/32	(4.0)	14	(355)	S119951-045	S119951-089	S119951-033	S119951-035
3/16	(4.8)	14	(355)	—	—	—	S119958-035
1/4	(6.4)	18	(457)	—	—	—	S119981-035

*Net Pallet Weight for 1/4" (6.4 mm) diameter is 2450-lb (1111.3 kg)

Conformances and Approvals:

- **AWS A5.1,** E7018 H4R, E7018-1 H4R
- **AWS A5.1M,** E4918
- **ASME SFA5.1,** F-4, A-1 E7018 H4R
- **ABS,** 3Y H5
- **CWB,** E4918-1-H4
- **Lloyd's Register,** BF3, 3YM, 3M
- **DNV GL,** 3Y H5

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

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); 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.

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

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612-L, INDEX

HOBART FILLER METALS