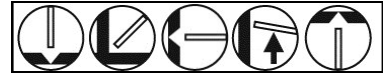


Hobart® 418



AWS E7018-1 H4R

WELDING POSITIONS:



FEATURES:

- Effortless starts
- Low moisture absorption rate
- Very stable arc with low spatter
- Good wetting action
- Easy slag removal

BENEFITS:

- No starting porosity; ideal for tacking; increases productivity
- Reduces potential for hydrogen cracking
- Ideal for all positions; produces good looking welds; reduces clean-up time
- Produces a flat bead contour; prevents cold lap and undercutting
- 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)	0.02	0.15
Manganese (Mn)	0.84	1.60
Silicon (Si)	0.45	0.75
Phosphorus (P)	0.010	0.035
Sulphur (S)	0.010	0.035
Chromium (Cr)	0.01	0.08
Nickel (Ni)	0.02	0.30
Molybdenum (Mo)	0.01	0.30
Mn + Ni + Cr + Mo + V	1.19	1.75

TYPICAL TENSION TEST RESULTS* (As Welded):

		AWS Spec
Tensile Strength	76,000 psi (523 MPa)	70,000 psi (490 MPa) Minimum
Yield Strength	62,000 psi (427 MPa)	58,000 psi (400 MPa) Minimum
Elongation % in 2" (50 mm)	32%	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)	64 ft •lbs (87 Joules)	20 ft •lbs (27 Joules) Minimum

TYPICAL DIFFUSABLE HYDROGEN TEST RESULTS*:

	AWS Spec (Max.)
2.5ml/100g	4.0ml/100g

*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and Hobart Brothers Company 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 Company.

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Diameter		Type of Current	Amperage Range		Optimum Parameters		Deposition Rate*		Deposition Efficiency*
Inches	(mm)		Min.	Max.	Amps	Volts	lbs/hr	(kg/hr)	
3/32	(2.4)	DCEP or AC	80	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%
7/32	(5.6)	DCEP or AC	220	350	290	30.0	6.5	(2.9)	68.7%
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		Length		5-Lb. Plastic Pak	10-Lb. Plastic Pak	10-Lb. Can	50-Lb. Can
Inches	(mm)	Inches	(mm)				
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
7/32	(5.6)	18	(457)	—	—	—	S119970-035
1/4	(6.4)	18	(457)	—	—	—	S119981-035

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**, 3H5, 3Y
- **CWB**, E4918-1-H4
- **Lloyd's Register**, BF3, 3YMH5, 3MH5

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.

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