

AWS E6010 [E4310*]

Pipemaster® 60

DESCRIPTION:

Pipemaster 60 is a quick-starting, cellulosic mild steel electrode that provides you with outstanding arc stability, penetration and wash-in. It's ideal for welding in all positions and produces an X-ray quality weld with light slag that's easy to remove. Pipemaster 60 can be used to weld the following API 5L steels: Grade A, B, X-42, X-46, X-52, X-56 and for the root pass on material up to X-80.

APPLICATIONS:

Construction and shipbuilding, general purpose fabrication, maintenance welding, out-of-position X-ray welds, pipe welding and vertical and overhead plate welding.

FEATURES:

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

BENEFITS:

- Easy arc striking and increased welding efficiency
- Welds in flat, horizontal, vertical and overhead positions
- Faster travel speeds
- Welding accuracy and efficiency
- Excellent penetration
- Easy weld lay-in and smooth bead appearance
- Quick and easy cleaning of weld bead

TYPICAL WELD METAL PROPERTIES**(Chem Pad):

Weld Metal Analysis		AWS Spec (max)
Carbon (C)	0.06	not required
Manganese (Mn)	0.40	not required
Silicon (Si)	0.20	not required

TYPICAL MECHANICAL PROPERTIES**(AW):

		AWS Spec (min)
Tensile Strength	76,000 psi (524 MPa)	60,000 psi
Yield Strength	61,000 psi (421 MPa)	48,000 psi
Elongation % in 2"	26%	22%
Reduction of Area	64%	not required

TYPICAL CHARPY V-NOTCH IMPACT VALUES**(AW):

		AWS Spec (min)
Avg. at -20°F (-29°C)	34 ft•lbs (46 Joules)	20 ft•lbs

TYPE OF CURRENT: DCEP

CONFORMANCES AND APPROVALS:

- AWS A5.1, E6010, ASME SFA 5.1, F-3, A-1, E6010
- ABS E6010
- Lloyd's Grade 3m

* Metric AWS classification

**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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RECOMMENDED WELDING PROCEDURES:

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

RECOMMENDED OPERATING PARAMETERS:

Diameter		Type of Power	Minimum Amps	Optimum* Amps	Maximum Amps
Inches	mm				
3/32	2.4	DCEP	40	50	70
1/8	3.2	DCEP	65	100	130
5/32	4.0	DCEP	90	140	175
3/16	4.8	DCEP	140	170	225

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

TYPICAL DEPOSITION DATA (at optimum):

Diameter		Type of Power	Amps	Volts	Deposition Rate lbs/hr	Deposition Efficiency*%
Inches	mm					
3/32	2.4	DCEP	60	26-29	1.30	53
1/8	3.2	DCEP	110	26-27	1.60	54
5/32	4.0	DCEP	140	26-28	1.90	55
3/16	4.8	DCEP	180	26-28	2.60	54

*Allowance made for 2" stub loss included.

AVAILABLE DIAMETERS AND PACKAGES:

Diameter		Length		5-lb Plastic Pak	10-lb Plastic Pak	50-lb Can
Inches	mm	Inches	mm			
3/32	2.4	14	355	S116532-045	S116532-089	S116532-035
1/8	3.2	14	355	S116544-045	S116544-089	S116544-035
5/32	4.0	14	355	S116551-045	S116551-089	S116551-035
3/16	4.8	14	355	—	—	S116558-035

Material Safety Data Sheets on any Hobart Brothers Company product may be obtained from Hobart Customer Service.

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

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