310 AC-DC

AWS E310-16

Replaces 020520 160-E, INDEX: 060131

DESCRIPTION:

The all position **310 AC-DC** is ideal for welding base metal of similar composition, when the stainless base metal is of unknown composition, as well as for dissimilar metals. Also excellent for welding and building up parts for heat treatment and case hardening furnaces, cement kilns and other burners subject to high temperature oxidation in a non-sulphurous atmosphere It has a smooth running arc that results in a uniform bead that is flat to slightly convex.
Note: Actual certs are included in every master carton of stainless stick electrodes at no charge.

Features	Benefits
• Easy strike and re-strike	• Easy to use, less chance of starting defects
• Electrode doesn't overheat	• Less stub loss, cost-effective
• Spray-like arc transfer	• Less spatter and less clean-up
• Easy slag release	• Less chance of slag inclusions
• Extremely high moisture resistance	• Extends shelf life of product in open environments
• Directional arc	• Metal goes where directed
• All-position	• Welds extremely well in flat, horizontal, vertical (up) and overhead positions

TYPICAL WELD METAL PROPERTIES* (CHEM PAD):

Weld Metal Analysis		AWS Spec
Carbon (C)	0.14	0.08 to 0.20 max
Manganese (Mn)	2.02	1.0 to 2.5
Phosphorus (P)	0.015	0.03 max
Sulphur (S)	0.015	0.03 max
Silicon (Si)	0.46	0.75 max
Copper (Cu)	0.15	0.75 max
Chromium (Cr)	26.12	25.0 to 28.0
Nickel (Ni)	21.00	20.0 to 22.5
Molybdenum (Mo)	0.12	0.75 max

TYPICAL MECHANICAL PROPERTIES* (AS WELDED):

		AWS Spec
Tensile Strength	86,000 psi (593 MPa)	80,000 psi
Yield Strength	63,000 psi (435 MPa)	not required
Elongation % in 2"	40%	35%
DeLong Ferrite Number Range	0	not required
Schaeffler Number Range	0	not required
WRC Number Range (1992)	0	not required

CONFORMANCES AND APPROVALS:

• AWS Spec A5.4, Class E310-16 • ASME SFA5.4

*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and McKay expressly disclaims any liability incurred from any reliance thereon. Typical data are obtained when welded and tested in accordance with AWS A5.4 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 McKay.

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Recommended Welding Procedures:

GENERAL: DCEP (electrode positive, work negative) or AC

ARC LENGTH: Short (less than half the diameter of the electrode)

FLAT & HORIZONTAL: Angle electrode 10-15° from 90°

VERTICAL-UP: Use weaving techniques. Reduced amperage compared to flat position setting

OVERHEAD: Use slight weaving motion within the puddle

STORAGE: AC-DC electrodes have a high degree of moisture resistance; however, for critical applications, the electrodes should be held at 225° F after opening.

RECONDITIONING: If exposed to atmosphere for extended periods, recondition at 500°F for 1 hour

Recommended Operating Parameters:

Diameter			FLAT & HORIZONTAL		
Inches	mm	Type of Power	Minimum Amps	Optimum Amps	Maximum Amps
3/32	2.4	DCEP or AC	45	65	80
1/8	3.2	DCEP or AC	55	105	120
5/32	4.0	DCEP or AC	65	140	170
3/16	4.8	DCEP or AC	160	170	205

Available Diameters and Packages:

Diameter		Length		6-lb. Can	10-lb. Can
Inches	mm	Inches	mm		
3/32	2.4	10	254	S480430-032	—
1/8	3.2	14	355	—	S480444-033
5/32	4.0	14	355	—	S480451-033
3/16	4.8	14	355	—	S480458-033

Material Safety Data Sheets on any McKay product may be obtained from McKay Customer Service.