DURAMAX STAINLESS ELECTRODE DM310H-16

Classification: **E310H-16** **AWS A5.4 / ASME SFA 5.4**

Description, Characteristics & Applications:

DURAMAX E310H-16 electrodes weld deposit is similar in composition to that of type 310 except that the carbon ranges from 0.35 to 0.45 percent. These electrodes are use primarily for welding or repairing high-alloy heat and corrosion-resistant castings of the same general composition which are designed as Type HK by the Alloy Castings Institute.
DM310H-16 has high strength at temperatures over 1700°F {930°C}. It is not recommended for high-sulfur atmospheres or where severe thermal shock is present. Long time exposure to temperatures in the approximate range of 1400°F to 1600°F {760°C to 870°C} may induce formation of sigma and secondary carbides which may result in reduced corrosion resistance, reduced ductility, or both. The composition of this electrode should not be confused with the stainless steel wrought ally 310H which has a lower carbon content of 0.04 - 0.10 percent.

Typical Chemical Composition (%)

AWS Spec.	C	Cr	Ni	Mo	Mn	Si	P	S	Cu	
A5.4	0.35-0.45	25.0-28.0	20.0-22.5	0.75 max	1.0 - 2.5	0.75 max	0.03 max	0.03 max	0.75 max	
Typical	0.41	26.40	21.40	0.62	2.00	0.52	0.02	0.01	0.10	

Typical Mechanical Properties as Welded

Tensile Strength (n/mm²)	Yield Strength (n/mm²)	Elongation (%)	Hardness	Ferrite WRC (FN)	CVN Impacts (J) @ +20 °C
620 Min	-----	10% Min	-------	------	60 - 90 J

Typical Welding Parameters DCEP or AC

Diameter	Type of Current	Amperage Range		Voltage Range
		Flat	Out of Position	
3/32"	DCEP or AC	70 - 80	65 - 80	20 - 23
1/8"	DCEP or AC	80 - 110	75 - 95	21 - 24
5/32"	DCEP or AC	120 - 160	100 - 120	22 - 25
3/16"	DCEP or AC	170 - 190	Not recommended	23 - 25

NOTE: Maintaining a proper welding procedure, including pre-heat and interpass temperatures, may be critical depending on the type and thickness of material being welded.

POLARITY: DCEP or AC
DCEP = DC, Electrode Positive (reverse polarity) has the most weld penetration.
AC: medium weld penetration (can have more spatter)
WELDING POSITIONS: All Positions
USE LESS AMPS ON THIN METAL; MORE AMPS ON THICK METAL