DURAMAX STAINLESS ELECTRODE DM410NiMo-16

Classification: **E410NiMo-16 AWS A5.4 / ASME SFA 5.4**

Description, Characteristics & Applications:

DURAMAX E410NiMo-16 has a nominal composition (wt.-%) of 12 Cr, 4.5 Ni, 0.5 Mo. These electrodes are used for welding ASTM CA6NM (CA-6NM) castings or similar materials, as well as light-gauge Type 410, 410S, and 405 base metals. Weld metal deposited by the DM410NiMo electrodes are modified to contain less chromium and more nickel than weld metal deposited by DM410 electrodes. The objective is to eliminate ferrite in the microstructure, as ferrite has a deleterious effect on the mechanical properties of this alloy. Final postweld heat treatment should not exceed 1150°F (620°C). Higher temperatures may result in rehardening due to untampered martensite in the microstructure after cooling to room temperatures.

Typical Chemical Composition (%)

AWS Spec.	C	Cr	Ni	Mo	Mn	Si	P	S	Cu	
A5.4	0.06 max	11.0-12.5	4.0 - 5.0	0.40-0.70	1.0 max	0.90 max	0.04 max	0.03 max	0.75 max	
Typical	0.031	12.1	4.70	0.50	0.50	0.32	0.021	0.01	0.05	

Typical Mechanical Properties as Welded

Tensile Strength (n/mm²)	Yield Strength (n/mm²)	Elongation (%)	Hardness	Preheat / Interpass	PWHT
760 Min	------	15% Min	-------	150 ~ 260°C	595°C ~ 620°C for 1hr

Note: air cool to ambient.

Typical Welding Parameters DCEP or AC

Diameter	3/32"	1/8"	5/32"	3/16"	7/32"
Amps	65 - 90	90 - 120	120 - 150	160 - 200	200 - 260

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