



Techalloy 309LMo

DESCRIPTION

Techalloy 309LMo is of the same composition as ER309L, with the addition of 2.0 - 3.0 percent Molybdenum to improve pitting corrosion properties in chloride containing environments. Techalloy 309LMo may be used to join base metals of similar composition, dissimilar ferrous alloys and most often is used to overlay carbon and low alloy base metals.

Techalloy 309LMo chemistry is slightly modified from the AWS grade chemistry with regard to Chromium (21.25 vs AWS 24.24) and Nickel (14.75 vs AWS 13.75) specifically to meet overlay composition requirements.

SPECIFICATIONS & APPROVALS

Quality Systems :

ISO Q9001-2000

ASME QSC-395

Specifications :

AWS/ASME SFA: N/A

UNS: N/A

Approvals

TYPICAL CHEMICAL COMPOSITION

C	Mn	Si	S / P	Cr	Ni	Mo	Cu	N	Al
0.025	2.00	0.35	.01 / .01	21.25	14.75	2.50	0.20	0.050	0.002

TYPICAL MECHANICAL PROPERTIES of WELD METAL

Tensile Strength	Yield Strength	Elongation 4d
85 Ksi	45.0 Ksi	40%
585 Mpa	310 Mpa	

WELDING PARAMETERS

Process	Electrical	Voltage	Amperage	Shielding Gas	Gas Flow, CFH	Welding Speed
<u>GMAW</u>	DCEP	29-33	.035" (0.90mm) 160-180	98 Ar - 2CO ₂	30 - 50	30-50 IPM
			.045" (1.14mm) 180-220	Spray ↑ / Pulsed		
			.062" (1.60mm) 210-250	Ar/15He/1CO ₂		
<u>GTAW</u>	DCEN			100%Ar	30 - 40	
<u>SAW</u>	DCEP	28	3/32" (2.50mm) 300-350	N/A		30-50 IPM
			1/8" (3.14mm) 400-550			
			5/32" (4.00mm) 500-650			