



Techalloy 99

Description

Techalloy 99 is used for TIG and MIG welding of cast iron. This wire is extensively employed to repair gray iron castings. It can also be used for overlay and buildup. However, dilution from the casting influences the mechanical properties of the metal. The welds are easily machinable. A preheat and inter-pass temperature of 350°F (175°C) minimum is recommended during welding.

Specifications & Approvals:

AWS A5.15 ERNiCr UNS N02215 CWB

Typical Chemical Composition

C	Mn	Si	Fe	Cr	Mo	Ni	Nb	W	S	P	Al	Ti	Cu
.05	.22	.05				99.6							

Typical Mechanical Properties

Tensile Strength	66,500 PSI	460 MPA
Yield Strength	36,000 PSI	250 MPA
Elongation	40%	

Welding Parameters

Process	Diameter	Voltage	Amperage	Gas
TIG	.035" (0.9mm)	12-15	60-90	100% Argon
	.045" (1.2mm)	13-16	80-110	100% Argon
	1/16" (1.6mm)	14-18	90-130	100% Argon
	3/32" (2.4mm)	15-20	120-175	100% Argon
	1/8" (3.2mm)	15-20	150-220	100% Argon
MIG	.035" (0.9mm)	26-29	150-190	75% Argon + 25% Helium
	.045" (1.2mm)	28-32	180-220	75% Argon + 25% Helium
	1/16" (1.6mm)	29-33	200-250	75% Argon + 25% Helium
SAW	3/32" (2.4mm)	28-30	275-350	Suitable Flux may be used
	1/8" (3.2mm)	29-32	350-450	Suitable Flux may be used
	5/32" (4.0mm)	30-33	400-550	Suitable Flux may be used

Standard Packages:

MIG Wire– 33# wire basket	TIG Wire– 10# tube/30# Master Carton	SAW– 60# Coil
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