



Techalloy 652

Description

Techalloy 652 is used to weld base metal alloy 690, used extensively in the power boiler and nuclear power industries. This filler metal contains high levels of chromium to resist stress corrosion cracking and increased niobium to resist ductility dip cracking. This filler metal may be used to overlay low alloy and stainless steel

Specifications & Approvals:

AWS A5.14 ERNiCrFe-7A

UNS N06054

CWB

Typical Chemical Composition

C	Mn	Si	Fe	Cr	Co	Ni	Nb	W	S	P	Al	Ti	Cu
.02	.3	.2	9.5	30.0	.02	Bal	.75		.002	.006	.4	.5	

Typical Mechanical Properties

Tensile Strength	92,000 PSI	634 MPA
Yield Strength	52,000 PSI	360 MPA
Elongation	45%	

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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