Alloy: COREWELD ST1 | Class: ERCoCr-C

ERCoCr-C • Weld Process: GTAW (TIG)

CERTIFIED TO
AWS A5.21
ASME SFA A5.21

AWS CHEMICAL COMPOSITION REQUIREMENTS | DEPOSITED CHEMICAL COMPOSITION % (TYPICAL)

AWS REQUIREMENT (%)	
C	2.0 – 3.0
Mo	1.0 max
Mn	1.0 max
Fe	3.0 max
Si	2.0 max
W	11.0 – 14.0
Cr	26 – 33
Co	Remainder
Ni	3.0 max
Other	0.50 max

DEPOSITED CHEMICAL COMPOSITION % (TYPICAL)

TYPICAL DEPOSIT (%)	
C	2.4
Mo	0.10
Mn	0.06
Fe	2.3
Si	1.2
W	12.2
Cr	31.0
Co	Balance
Ni	2.2

DEPOSITED ALL WELD METAL PROPERTIES % (AW)

HARDNESS	
Hardness (2 layer)	HRC 53 – 54

CHARPY-V-NOTCH IMPACT
Not Applicable

RECOMMENDED OPERATION OF WELDING RODS — GTAW (TIG)

DIAMETER	DIAMETER (MM)	AMPS DCEN	VOLTS	SHIELDING GAS
1/8 in	3.20	90–120	20–40	Argon
5/32 in	4.00	120–140	20–40	Argon
3/16 in	4.80	140–180	20–40	Argon

APPLICATION

Type #1 bare wire/rod has the highest hardness of the cobalt alloys and is used for elevated temperature wear applications. Machine with carbide tools or grinding. It bonds well with stainless and other weldable grades of steel.

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