WA. ALLOY CO.

Quality Management System
in accordance with
ISO 9001
Cert # 05-R0925

Alloy 82
Welding Parameters

American Welding Society
Sustaining Company Member

GAWDA
GASES AND WELDING DISTRIBUTORS ASSOCIATION

Washington Alloy 82 is a nickel-chromium-iron filler metal used for MIG, TIG, submerged arc and plasma arc welding of nickel base Inconel® 600, 601 and 690 as well as Incoloy® 330, 800 and 800 HT to themselves or to carbon steel, stainless steel, high nickel base 200 and to nickel-copper Monel® 400. Washington Alloy 82 can also be used for joining high nickel base 200 to stainless steel, nickel-copper Monel® 400 to carbon steel and for overlaying on steel. Used for welding of ASTM B163, B166, B167 and also B168 having UNS N06600.

TYPICAL GMAW WELDING PROCEDURES; DCEP Spray Arc

Wire Diameter	Wire Speed (ipm)	Amps	Volts	Electrical Stick-out	Argon (cfh)
0.030	550-750	175-250	26-32	3/8-1/2”	30-40
0.035	425-575	175-300	26-32	3/8-1/2”	30-40
0.045	250-350	200-310	26-32	3/8-1/2”	35-50
0.062	125-200	250-330	27-33	1/2"-5/8”	35-50

TYPICAL GMAW WELDING PROCEDURES; DCEP Short Circuit

Wire Diameter	Wire Speed (ipm)	Amps	Volts	Electrical Stick-out	(cfh) 75Ar/25He
0.035	150-200	90-110	19-21	3/8-1/2”	35-45
0.045	175-225	100-140	22-24	3/8-1/2”	40-50

TYPICAL GTAW WELDING PROCEDURES; DCEN with EWTh-2 truncated conical tip

Filler Wire Size	Tungsten	Amps	Volts	Gas Cup Size	Argon (cfh)	Base thickness
1/16”	1/16”	80-150	12	1/2”	20	1/16-1/8”
3/32”	3/32”	150-250	12	3/4”	25	1/8- 3/16”
1/8”	1/8”	200-375	12	5/8”	30	1/4-1/2”

Procedures may vary with change in position, base metals, filler metals, equipment and other changes.

AWS CHEMISTRY REQUIREMENTS (%) & TYPICAL WELD METAL STRENGTHS;

Carbon	0.10 max	Tensile Strength (psi)	80,000
Manganese	2.50 – 3.50	Yield Strength (psi)	40,000
Iron	3.00 max	Elongation	30%
Phosphorus	0.030 max		
Sulphur	0.015 max	Niobium (or Cb) + Tantalum	2.0-3.0
Silicon	0.50 max	Cobalt max if specified	0.12
Copper	0.50 max	Chromium	18.0-22.0
Nickel + Co	67.0 min.	Titanium	0.75 max

AVAILABLE SIZES: TN 82 = Spools of 030, 035, 045, 1/16,
TN 82/ = Cut lengths of 030, 035, 045, 1/16, 3/32, 1/8, 5/32
Other sizes available – please inquire

SPECIFICATIONS; **ANSI/AWS** A5.14 ERNiCr-3
ASME SFA 5.14 ERNiCr-3