



WASHINGTON ALLOY'S
Quality Management System is
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Cert # 05-R0925

320LR

Welding Wire and Rod

U.S. ALLOY CO.
dba Washington Alloy
7010-G Reames Rd.
Charlotte, NC 28216
www.weldingwire.com



ALLOY DESCRIPTION AND APPLICATION;

USA 320LR is basically a modified version of USA 320, where the “residuals” – carbon, silicon, phosphorus and sulfur are specified at lower maximum levels. The columbium and manganese content of USA 320LR is also maintained within a tighter range. These strict controls help eliminate hot cracking and micro-fissuring frequently encountered in austenitic stainless steel.

TYPICAL GMAW WELDING PROCEDURES; DCEP

<i>Spray</i> 0.030	280-600	160-220	24-28	3/8-1/2"	(1)25-35	(1) 98%Ar 2%O ₂
0.035	250-470	170-295	23-29	1/2-3/4"	(1)25-35	
0.045	200-385	195-360	24-30	1/2-3/4"	(1)30-35	
1/16"	110-200	210-380	25-31	1/2-3/4"	(1)35-40	

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	3/8"	20	1/16-1/8"
3/32"	3/32"	150-250	12	3/8"	25	1/8- 3/16"
1/8"	1/8"	200-375	12	1/2"	35	1/4-1/2"

Keep the arc length as short as possible to ensure a low heat as well as to prevent contamination of the surrounding air being pulled into weld puddle. Backing gas or secondary purge should be used to prevent any possible source of oxidation or corrosion resistance loss. Use caution with crater cracks by using run off tabs, lower currents, faster travel speeds or back-step into puddle prior to breaking.

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

TYPICAL WIRE CHEMISTRY (%) & WELD METAL PROPERTIES

Carbon	0.025	Tensile Strength (psi)	86,000
Manganese	1.60	Yield Strength (psi)	57,000
Copper	3.40	Elongation	35 %
Molybdenum	2.50	Niobium (Nb) or Cb + Ta	0.25
Nickel	34.10	Chromium	19.60

AVAILABLE SIZES: TS 320LR = Spools of 035, 045,
TT 320LR = Cut lengths of 035, 045, 1/16, 3/32, 1/8, 5/32

Other sizes available – please inquire

SPECIFICATIONS; ANSI/AWS A5.9 ER320LR
ASME SFA 5.9 ER320LR

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