



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

USA 7018 Coated Electrode

U.S. ALLOY CO.
dba Washington Alloy
7010-G Reames Rd.
Charlotte, NC 28216
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American Welding Society
Sustaining Company Member



ALLOY DESCRIPTION AND APPLICATION;

7018 is the most efficient general purpose, iron powder – low hydrogen electrode used for welding carbon steels, free-machining steels and low alloy steels with minimum yield strength of 50,000 psi. 7018 has a very good deposition rate, providing a quiet steady arc with low spatter and medium penetration. Weld deposits are of X-ray quality with easy slag removal, exceptional mechanical properties and a smooth uniform bead appearance. 7018 has excellent operator appeal and may be used in any position with AC or DC (reverse polarity). 7018 electrodes are used for many ASTM specifications. More specific applications would include process piping, cold rolled steels such as found in heavy machinery fabrications, fired and unfired pressure vessels, shop and field welding of bridges and structural steels, cast steels, shipbuilding, just about any medium carbon, low alloy steel where the welds are subject to X-ray inspection.

TYPICAL WELDING PROCEDURES; DCEP & AC

Diameter	Amps (Flat)	Volts	Diameter	Amps (Flat)	Volts
3/32"	60-100	23-27	3/16"	200-240	25-31
1/8"	90-150	24-28	7/32"	210-270	25-33
5/32"	130-200	25-31	1/4"	250-340	25-35

Use a short arc – dragging with 10-15% from 90°

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

TYPICAL WELD METAL CHEMISTRY (%) & PROPERTIES (AWS values are maximum)

	AWS Spec.	Weld metal		AWS Spec.	Weld metal
Carbon	0.15	0.07	Tensile Strength (ksi)	70	86
Manganese	1.60	0.97	Yield Strength (ksi)	58	72
Silicon	0.75	0.57	Elongation in 2" (%)	22%	31%
Phosphorus	0.035	0.012	Charpy V-notch at -20°F	20 ft·lbs min.	65 ft·lbs
Sulphur	0.035	0.011			

AVAILABLE SIZES: TE 7018 = 5/64", 3/32", 1/8", 5/32", 3/16", 7/32", 1/4"

SPECIFICATIONS; ANSI/AWS A5.1 E7018
ASME SFA 5.1 E7018

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