



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

# 7010-A1 Low Alloy Steel Coated Electrode

U.S. ALLOY CO.  
dba Washington Alloy  
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## ALLOY DESCRIPTION AND APPLICATION;

**E7010-A1 is a high cellulose electrode developed specifically for welding pipe lines. Although this electrode may be used in any position, it is best suited for vertical up or vertical down welding. E7010-A1 yields a forceful arc with deep penetration, producing a weld puddle that wets and spreads well, with rapid solidification. Weld deposits are of X-ray quality, with 70,000 psi tensile strengths and containing ½% Mo. E7010-A1 electrodes may be used with AC or DC (reverse polarity). Preheating - When welding carbon-molybdenum steels, preheating at 300°-575°F is recommended. Exact preheat temperature will depend upon the thickness and hardening characteristics of the work piece. 7010-A1 is most commonly used for welding carbon-moly piping used in high pressure, high temperature steam service and structural shapes, plates and castings, which have a ½% Mo content.**

### TYPICAL WELDING PROCEDURES; DCEP

Diameter	Amps (Flat)	Volts
3/32"	50-100	18-22
1/8"	70-130	21-24
5/32"	100-180	19-23

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	0.12	0.09	Tensile Strength (ksi)	70	81
Manganese	0.60	0.43	Yield Strength (ksi)	57	67
Silicon	0.40	0.14	Elongation in 2" (%)	22%	29%
Phosphorus	0.03	0.012	Charpy V-notch	N/S	65
Sulphur	0.03	0.010			
Molybdenum	0.40-0.65	0.49			

**AVAILABLE SIZES: TE 7010-A1 = 3/32", 1/8", 5/32"**

**SPECIFICATIONS; ANSI/AWS A5.5 E7010-1A  
ASME SFA 5.5 E7010-1A**

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