



Quality Management System  
in accordance with  
**ISO 9001:2000**  
Cert # 05-R0925

# 8018-B6 Low-Alloy Steel Electrode

U.S. ALLOY CO.  
dba Washington Alloy  
7010-G Reames Rd.  
Charlotte, NC 28216  
[www.weldingwire.com](http://www.weldingwire.com)



## ALLOY DESCRIPTION AND APPLICATION;

USA 8018-B6(formerly in the 502 family) is a low hydrogen potassium, iron powdered covered electrode commonly used in the oil and chemical industries and where base metal such as 5% Cr, 1/2% Mo steels are found. Typical base metals found in this group are ASTM grades: A182-F5/F5a, A336-F5/F5a, A199-T-5, A200-T5, A213-T5, A335-P5, A369-FP5, A426-CP5, A217-C5, and A387-Gr5.

## TYPICAL WELDING PROCEDURES; DCEP or AC **OPTIMUM IN BOLD**

	3/32"	1/8"	5/32"	3/16"	1/4"
Diameter	3/32"	1/8"	5/32"	3/16"	1/4"
Length	14"	14"	14"	14"	18"
Amps Flat	70- <b>90</b> -100	90- <b>140</b> -160	130- <b>170</b> -220	190- <b>235</b> -290	265- <b>325</b> -400
Vertical up & Overhead	60- <b>85</b> -90	80- <b>110</b> -120	110- <b>145</b> -170		

Arc Length = Very short arc, Flat use 15° angle from 90°, Vertical up & Overhead use weaving techniques within puddle

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

## TYPICAL WELD METAL CHEMISTRY (%) AND WELD METAL PROPERTIES;

	AWS Spec.	USA 8016-B6		AWS Spec	Typical
Carbon	0.05-0.10	0.059	Tensile Strength (psi)	80,000 min.	101,800
Manganese	1.00 max	0.649	Yield Strength (psi)	67,000	90,300
Silicon	0.90 max	0.277	Elongation in 2"	19 % min.	21%
Phosphorus	0.030 max.	0.017			
Sulfur	0.030 max.	0.005	(Post weld heat treatment 1375°F for 1 hour)		
Nickel	0.40 max	0.015			
Chromium	4.00-6.00	5.733			
Molybdenum	0.45-0.65	0.517			

**AVAILABLE SIZES:** TE 8018-B6 = 10 # containers of 3/32, 1/8, 5/32,

**SPECIFICATIONS; ANSI/AWS A5.5** E8018-B6  
**ASME SFA A5.5** E8018-B6  
(formerly AWS A 5.4, Class E502 composition range)

**EAST COAST**  
7010-G Reames Rd  
Charlotte, NC 28216  
Tel (888) 522-8296  
Fax (704)598-6673

**WEST COAST**  
8535 Utica Ave  
Rancho Cucamonga, CA 91730  
Tel(800)830-9033  
Fax (909)291-4586



12-2006 DC

Washington Alloy Company believes that all information and data given is correct. Use this information to assist in making your own evaluations or decisions and this information should not be mistaken as an expressed or implied warranty. U.S. ALLOY CO. assumes no liability for results or damages incurred from the use of any information contained herein, in whole or in part.