



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

8015-B6, 8016-B6 8018-B6 Low-Alloy Steel Electrode

U.S. ALLOY CO.
dba Washington Alloy
7010-G Reames Rd.
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ALLOY DESCRIPTION AND APPLICATION;

USA 801X-B6 (formerly 502 family) is a Cr-Mo 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; 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- 90 -100	90- 140 -160	130- 170 -220	190- 235 -290	265- 325 -400
Vertical up & Overhead	60- 85 -90	80- 110 -120	110- 145 -170		

Arc Length = Very short arc, Flat use 15° angle from 90°, Vertical up & Overhead use weaving techniques within puddle
8015-B6 = Low-hydrogen sodium coating /DCEP
8016-B6 = Low-hydrogen potassium coating /DCEP or ac
8018-B6 = Low-hydrogen potassium, iron powder coating /DCEP or ac

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			
Manganese	1.00 max	0.649	Tensile Strength (psi)	80,000 min.	101,800
Silicon	0.90 max	0.277	Yield Strength (psi)	67,000	90,300
Phosphorus	0.030 max.	0.017	Elongation in 2"	19 % min.	21%
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 801X-B6 = 10 # containers of 3/32, 1/8,
Other sizes may be available – please inquire

SPECIFICATIONS; ANSI/AWS A5.5 E8015-B6 , E8016-B6 , 8018-B6
ASME SFA A5.5 E8015-B6 , E8016-B6 , 8018-B6
(Formerly AWS A 5.4, Class E502-15 , E502-16 , N/A FOR -18)

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