



**MANUFACTURERS OF A DIVERSE RANGE OF
ADVANCED WELDING CONSUMABLES**

**SECTION
5**

WI-0304 DS48A RD-16BV Rev. 1, Date 01.12.2012

RD-16BV	LOW HYDROGEN ELECTRODE FOR WELDING 1.25Cr-0.5Mo-0.2V STEELS SUBJECTED TO SERVICE AT ELEVATED TEMPERATURES UP TO 550 °C				DATA SHEET NO. 48A					
SPECIFICATION	AWS A5.5		GB							
CLASSIFICATION	E8016-B2 (mod.)		E5515-B2-V							
PRODUCT DESCRIPTION	<p>The design emphasis of the chemically basic flux is engineered to ensure the optimum weld metal properties demanded by the specification are fully met.</p> <p>The basic flux containing the appropriate alloying elements but minimal iron powder, is extruded onto a high purity ferritic core wire and bound with a blend of silicates that ensure both coating strength and a coating resistant to subsequent moisture absorption.</p> <p align="center">UNCONTROLLED</p>									
WELDING FEATURES OF THE ELECTRODE	<p>The chemical nature of the flux together with its controlled coating factor allows the electrode to be used at relatively low amps. This factor together with the fairly fluid but quick freezing slag facilitate vertical up welding including controlled penetration root runs.</p> <p>Overall the arc is very stable, slag detachability is good, fillet welds are slightly convex and metal recovery is some 98% with respect to weight of the core wire.</p>									
APPLICATIONS AND MATERIALS TO BE WELDED	Typically used for welding of 12Cr1MoV steel for such applications : high pressure, over-high pressure, or superheater of pre-critical power station boiler and pipeline, collecting box and mainly adapt to the catheter smoke which operated at elevated temperature up to 550 °C.									
WELD METAL ANALYSIS COMPOSITION % BY Wt.		C	Mn	Si	S	P	Cr	Mo	V	Fe
	MIN	0.05	-	-	-	-	0.8	0.4	0.1	
	MAX	0.12	0.9	0.6	0.03	0.03	1.5	0.65	0.35	
	TYPICAL	0.06	0.8	0.4	0.01	0.01	1.2	0.45	0.2	Bal.
	* Cr levels for AWS A5.5 E8016-B2 is 1.0 – 1.5									
ALL WELD METAL PROPERTIES (AFTER PWHT : 690 ± 15°C)	<u>PROPERTY</u>		<u>UNITS</u>	<u>MINIMUM</u>	<u>TYPICAL</u>	<u>OTHERS</u>				
	Tensile strength		N/mm ²	540	800	AS WELDED HARDNESS 250 HV				
	0.2% Proof stress		N/mm ²	440	700					
	Elongation on 4d		%	17	22					
	Reduction of Area (RA)		%	-	50					
Impact energy 20 °C		J	-	33						
WELDING AMPERAGE AC or DC+	Ø (mm)	2.6	3.2	4.0	5.0					
	MIN	50	75	130	180					
	MAX	85	125	170	220					
OTHER DATA	Electrodes that have become damp should be re-dried at 150°C for 1 hour									
RELATED PRODUCTS	Please contact our Technical Department for detail.									