

RD-718-1	LOW HYDROGEN - IRON POWDER ELECTRODE FOR WELDING DEOXIDISED C-Mn STEELS WITH HIGHER SUB-ZERO TOUGHNESS PROPERTIES				DATA SHEET NO. 25						
	SPECIFICATION		AWS A5.1		BS EN ISO 2560-B						
CLASSIFICATION		E7018-1		E4918-1							
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 with a controlled balanced addition of iron powder is extruded onto a high purity ferritic core wire with a blend of silicates that ensures both coating strength and a coating resistant to subsequent moisture absorption.</p>									
WELDING FEATURES OF THE ELECTRODE		<p>The chemical nature of the flux together with a significant proportion of iron powder ensures maximum deposition efficiency without detracting from its ability to be used in all positions except vertical down.</p> <p>Overall the arc is very stable, slag detachability is good and metal recovery is some 115% with respect to the core wire.</p>									
APPLICATIONS AND MATERIALS TO BE WELDED		<p>As with RD-718 it is suitable for all grades of C-Mn structural steels. However, it is used to best advantage on fully deoxidised C:Mn steels when high toughness valves are specified down to -45 °C.</p> <p>These toughness properties are maintained even after extended P.W.H.T. making it ideal for pressure vessel work. The low weld Si and high Mn to Si ratio ensure maximum resistance to solidification cracking on thick restrained sections.</p>									
WELD METAL ANALYSIS COMPOSITION % BY Wt.		C	Mn	Si	S	P	Cr	Ni	Mo	V	Fe
MIN		-	-	-	-	-	-	-	-	-	-
MAX		0.15	1.6	0.75	0.035	0.035	0.2	0.3	0.3	0.08	
TYPICAL		0.08	1.4	0.35	0.01	0.02	0.05	0.05	0.01	0.02	Bal.
WELD METAL PROPERTIES (ALL WELD METAL)		<u>PROPERTY</u>		<u>UNITS</u>	<u>MINIMUM</u>	<u>TYPICAL</u>	<u>OTHERS</u>				
		Tensile strength		N/mm ²	490	580					
		0.2% Proof stress		N/mm ²	400	500					
		Elongation on 4d		%	22	28					
		Reduction of Area (RA)		%	-	70					
		Impact energy -45°C		J	27	90					
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.									
APPROVED BY		LR – Grade 4Y H5									