


<b>RD-100D2</b>	<b>LOW HYDROGEN IRON POWDER ELECTRODE FOR WELDING STEELS WITH A MINIMUM UTS OF 700 N/mm<sup>2</sup></b>				<b>DATA SHEET NO. 41</b>				
SPECIFICATION	AWS A5.5			BS EN ISO 18275B					
CLASSIFICATION	E10018-D2			E6918-4M2					
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>Suitable for welding steels with a minimum UTS of 700 N/mm<sup>2</sup> meeting the properties both as welded or after PWHT.</p> <p>Typical materials include ASTM A514 used for pressure vessels, bridges and offshore constructional work. The addition of Mo increases weld metal strength at elevated temperature and maintains UTS after PWHT and provides increased resistance to corrosion.</p>								
WELD METAL ANALYSIS COMPOSITION % BY Wt.		C	Mn	Si	S	P	Ni	Mo	Fe
	MIN	-	1.65	-	-	-	-	0.25	
	MAX	0.15	2.0	0.8	0.03	0.03	0.9	0.45	
	TYPICAL	0.12	1.9	0.4	0.01	0.02	0.5	0.35	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 <sup>2</sup>	690	800	PROPERTIES ACHIEVED EITHER AS WELDED OR AFTER PWHT				
	0.2% Proof stress	N/mm <sup>2</sup>	600	720					
	Elongation on 4d	%	16	22					
	Reduction of Area (RA)	%	-	65					
	Impact energy -50°C	J	27	48					
WELDING AMPERAGE AC or DC+	Ø (mm)	2.6	3.2	4.0	5.0				
	MIN	60	90	140	180				
	MAX	100	150	190	240				
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.								