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	EN ISO 2560-A
CLASSIFICATION	E7018-1	E 46 4 B

PRODUCT DESCRIPTION

The design emphasis of the chemically basic flux is engineered to ensure the optimum weld metal properties demanded by the specification are fully met.

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.

WELDING FEATURES OF THE ELECTRODE

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.

Overall the arc is very stable, slag detachability is good and metal recovery is some 115% with respect to the core wire.

APPLICATIONS AND MATERIALS TO BE WELDED

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 values are specified down to -45 ºC.
These toughness properties are maintained even after extended PWHT, 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.

WELD METAL ANALYSIS COMPOSITION % BY Wt.

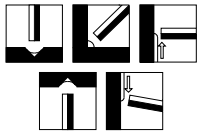
	C	Mn	Si	S	P	Cr	Ni	Mo	V	Fe
Min.	-	-	-	-	-	-	-	-	-	
Max.	0.15	1.6	0.75	0.035	0.035	0.2	0.3	0.3	0.08	
Typical	0.08	1.4	0.25	0.01	0.02	0.05	0.05	0.01	0.02	Bal.

WELD METAL PROPERTIES (ALL WELD METAL)

PROPERTY	UNITS	MINIMUM	TYPICAL	OTHERS
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 -45ºC	J	27	80	

WELDING AMPERAGE AC or DC+

Ø x Length (mm)	2.6 x 350	3.2 x 350	4.0 x 400	5.0 x 400
Min.	60	75	130	180
Max.	100	140	180	220



OTHER DATA	Electrodes that have become damp should be re-dried at 150ºC for 1 hour
RELATED PRODUCTS	Please contact our Technical Department for detail
APPROVED BY	LR – Grade 4Y H5