RD-18C2

LOW HYDROGEN - IRON POWDER ELECTRODE FOR WELDING 3 to 3.5% NICKEL STEELS USED FOR CRYOGENIC WORK DOWN TO -80^{0}C

DATA SHEET NO. 35

SPECIFICATION	AWS A5.5	BS EN ISO 2560-B
CLASSIFICATION	E8018-C2	E5518-N7

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

Fabrication of cryogenic plant and pipework mainly in the petrochemical industry operating down to -80 °C.

Materials to be welded include:

ASTM A333 - Grade 3 BS1503 - Grade 503

ASTM A350 - Grade LF3

Castings BS1504 - Grade 503 LT and ASTM A352 - Grade LC3

For service temperature below -80 °C please contact technical department.

WELD METAL ANALYSIS COMPOSITION % BY Wt.

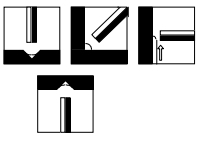
	C	Mn	Si	S	P	Ni	Fe
MIN	-	-	-	-	-	3.0	
MAX	0.12	1.25	0.8	0.03	0.03	3.75	
TYPICAL	0.06	0.5	0.3	0.01	0.015	3.5	Bal.

WELD METAL PROPERTIES (ALL WELD METAL)

PROPERTY	UNITS	MINIMUM	TYPICAL	OTHERS
Tensile strength	N/mm^2	550	630	PROPERTIES MAINTAINED AFTER PWHT AT 600 ºC
0.2% Proof stress	N/mm^2	460	550	
Elongation on 4d	%	19	23	
Reduction of Area (RA)	%	-	65	
Impact energy -75 ºC	J	27	90	

WELDING AMPERAGE AC or DC+

Ø (mm)	2.6	3.2	4.0	5.0
MIN	60	90	140	180
MAX	100	150	190	220



OTHER DATA

Electrodes that have become damp should be re-dried at 150^{o}C for 1 hour.

RELATED PRODUCTS

Please contact our Technical Department for detail.