RD-51

LOW HYDROGEN ELECTRODE FOR WELDING COPPER CONTAINING FERRITIC WEATHER-PROOF STEELS

DATA SHEET NO. 27

SPECIFICATION	AWS A5.5	BS EN ISO 2560-B	JIS Z 3214
CLASSIFICATION	E8018-W2	E5518-NCC1	DA5816W

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 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.

WELDING FEATURES OF THE ELECTRODE

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.

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.

APPLICATIONS AND MATERIALS TO BE WELDED

Used mainly for 'weathering' steels containing a similar controlled copper addition, eg:

BS4360 Grades WR50A to WR50C
ASTM A588 Grades A, B, C, K. A421 types 1 and 2
DIN 1.8960, 1.8961, 1.8963.
Proprietary Corten A-B1 (Corus and US steel).

WELD METAL ANALYSIS COMPOSITION % BY Wt.

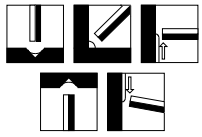
	C	Mn	Si	S	P	Cr	Ni	Cu	Fe
MIN	-	0.5	0.35	-	-	0.45	0.4	0.30	
MAX	0.12	1.3	0.8	0.03	0.03	0.7	0.8	0.75	
TYPICAL	0.06	1.0	0.6	0.013	0.011	0.5	0.6	0.5	Bal.

WELD METAL PROPERTIES (ALL WELD METAL)

PROPERTY	UNITS	MINIMUM	TYPICAL	OTHERS
Tensile strength	N/mm^2	550	620	
0.2% Proof stress	N/mm^2	460	536	
Elongation on 4d	%	19	27	
Reduction of Area (RA)	%	-	75	
Impact energy -20°C	J	27	80	

WELDING AMPERAGE AC or DC+

Ø (mm)	2.6	3.2	4.0	5.0
MIN	65	90	130	180
MAX	110	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.