RD-80

BASIC LOW HYDROGEN ELECTRODE FOR WELDING STEELS WITH A MINIMUM UTS OF 550N/mm^2. USED IN A DIVERSE RANGE OF APPLICATIONS

DATA SHEET NO. 33

SPECIFICATION	AWS A5.5	JIS Z 3212
CLASSIFICATION	E8016-G	D5316

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

For welding high tensile strength steels used in shipbuilding, off-shore and pressure vessel construction.
Also used on high carbon steels as a buffer layer prior to hardfacing and cast carbon steels with poor weldability - particularly those high in sulphur.

WELD METAL ANALYSIS COMPOSITION % BY Wt.

	C	Mn	Si	S	P	Fe
MIN	-	1.0	-	-	-	
MAX	0.10	2.0	0.6	0.03	0.03	
TYPICAL	0.06	1.5	0.4	0.01	0.02	Bal.

** Undiluted weld metal shall have the minimum of at least one of the element as specified on AWS A5.5-2006*

WELD METAL PROPERTIES (ALL WELD METAL)

PROPERTY	UNITS	MINIMUM	TYPICAL	OTHERS
Tensile strength	N/mm^2	550	750	
0.2% Proof stress	N/mm^2	460	650	
Elongation on 4d	%	19	28	
Reduction of Area (RA)	%	-	75	
Impact energy -30°C	J	-	80	

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.