HV-1000

LIME RUTILE HARDFACING ELECTRODE DEPOSITING WELD METAL WITH COMPLEX CARBIDE PROVIDING HIGH HOT HARDNESS WITH EXCELLENT RESISTANCE TO ABRASION

DATA SHEET NO. 121

SPECIFICATION	-
CLASSIFICATION	

PRODUCT DESCRIPTION

The design emphasis of the flux is designed to ensure a slag solidification range that allows the chrome carbide particles to be evenly distributed within the austenitic alloy matrix, so ensuring complete uniformity of hardness.

The balanced lime rutile flux contains the appropriate alloying elements and is bound with a blend of silicates that ensures both coating strength and resistance to moisture absorption.

WELDING FEATURES OF THE ELECTRODE

The electrode welds with a stable arc and strikes and re-strikes readily. The weld bead is smooth but not as bright as that obtained with straight chrome carbide types and the weld profile is slightly more convex.

The metal recovery is some 180% with respect to weight of the core wire, thus reducing welding time. The weld deposits are non-machinable and non heat treatable.

APPLICATIONS AND MATERIALS TO BE WELDED

In addition to conventional applications, involving heavy abrasion resistance against minerals etc, this alloy is used to particular advantage when the component to be surfaced is subject to use at elevated temperatures, eg: bell housings on blast furnaces, cement furnaces, pump casings and so forth.

WELD METAL ANALYSIS COMPOSITION % BY Wt.

	C	Mn	Si	Cr	Mo	W	Nb	V	B	Fe
MIN	3.0	-	0.5	24	2.0	3.0	2.0	1.0	-	
MAX	4.0	1.5	1.5	32	3.5	4.5	3.0	2.0	-	
TYPICAL	3.2	0.8	1.0	25	3.0	3.5	2.4	1.5	0.001	Bal.

WELD METAL HARDNESS (ALL WELD METAL)

AS WELDED 150°C PRE-HEAT	HRC	HV
1st Layer	48 – 54	475 – 575
2nd Layer	56 – 62	675 – 700
3rd Layer	60 – 66	700 – 850

The weld metal exhibits thermal stability and resistance to oxidation up to 1000°C.

HV (typical)
400°C HV 350
600°C HV 290
800°C HV 240

Actual hardness will be affected on base material composition, number of layers, heat input and welding conditions

WELDING AMPERAGE AC or DC+

Ø (mm)	3.2	4.0	5.0
MIN	100	150	200
MAX	150	220	260

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.