NSB-307

A BALANCED LIME-RUTILE FLUX COATED SURFACING ELECTRODE DEPOSITING FULY AUSTINITIC WELD METAL WITH A NOMINAL 19Cr-9Ni-6Mn

DATA SHEET NO. 139

SPECIFICATION	AWS A5.4
CLASSIFICATION	E307-16
PRODUCT DESCRIPTION	The design of the electrode is synthetic, ie: a mild steel core wire with the alloying elements contained in the flux. The weld deposit is austenitic and metal recovery is some 135% with respect to weight of the core wire. A blend of silicates is used to bind the flux that ensures both coating strength and resistance to moisture absorption.
WELDING FEATURES OF THE ELECTRODE	The electrode is stable on both AC and DC. Initial arc strike is easy, as is restriking. The weld seams are smooth, bright and convex in shape. Slag is readily detachable. The weld metal is more resistant to solidification cracking than straight 14Mn types thus allowing higher pre-heats and interpass temperatures to be used on thick sections.
APPLICATIONS AND MATERIALS TO BE WELDED	The electrode may be used to weld Hadfield 13/14% manganese steel or similar, or surfacing mild steel components. As deposited the weld is soft and ductile but under impact loading, it rapidly work hardens and thus resistant to wear by friction and abrasion. Recommended for rail tracks, crossing parts, crusher rolls, bucket teeth and similar.

WELD METAL ANALYSIS COMPOSITION % BY Wt.

	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	Fe
MIN	0.04	3.3	-	-	-	18	9.0	0.5	-	
MAX	0.14	4.75	0.9	0.03	0.04	21.5	10.7	1.5	0.75	
TYPICAL	0.1	4.2	0.5	0.02	0.02	20.1	10	0.7	0.1	Bal.

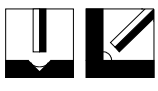
WELD METAL HARDNESS (ALL WELD METAL)

Hardness using pre-heat or interpass temperature up to 200°C on either mild steel (3 layers) or 14Mn steel (1 layers) HV as welded 220 work hardening will achieve HV450.

The weld metal is not-heat-treatable, thus surfaced thick steel sections may be stress relieved.

WELDING AMPERAGE AC or DC+

Ø (mm)	2.6	3.2	4.0	5.0
MIN	80	100	140	170
MAX	120	150	190	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.