


MNi-200	BASIC FLUX COATED LOW HYDROGEN ELECTRODE DEPOSITING 14Mn-4Ni WELD METAL FOR SURFACING WHEN IMPACT ABRASION IS INVOLVED			DATA SHEET NO. 138					
SPECIFICATION	AWS A5.13								
CLASSIFICATION	EFeMn-A								
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. To prevent micro solidification cracking, interpass temperature should be kept to a minimum and this may be achieved by interpass cooling.								
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. Similar properties and application to HMN but slightly better toughness.								
WELD METAL ANALYSIS COMPOSITION % BY Wt.		C	Mn	Si	S	P	Cr	Ni	Fe
	MIN	0.5	12	-	-	-	-	2.5	
	MAX	1.0	16	1.3	-	-	-	5.0	
	TYPICAL	0.7	13	0.5	0.02	0.02	0.1	4.3	Bal.
WELD METAL HARDNESS (ALL WELD METAL)	Hardness Values relates to no pre-heat and minimum interpass temperature.								
	3 layer deposit on mild steel 1 layer on 13/14Mn steel	As welded HRC 20			As welded HV 200				
Work hardened HRC 45			Work hardened HV 480						
WELDING AMPERAGE AC or DC+	Ø (mm)	3.2		4.0		5.0			
	MIN	90		140		190			
	MAX	130		180		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.								