


WI-0304 DS128 SMC-65 Rev. 3, Date 01.12.2012

SMC-65	LOW HYDROGEN - LOW ALLOY - HIGH EFFICIENCY HARDFACING ELECTRODE FOR BALANCED RESISTANCE TO ABRASION AND IMPACT LOADING				DATA SHEET NO. 128				
SPECIFICATION	JIS Z3251 DF3C-600-B								
CLASSIFICATION									
PRODUCT DESCRIPTION	<p>The design emphasis of the chemically basic flux is engineered to ensure that the weld metal hardness levels demanded by the specification are fully met without detracting from the toughness levels associated with this class of alloy.</p> <p>The basic flux containing the appropriate alloying elements and a balanced addition of iron powder is extruded onto a high purity ferritic core wire using a balance of silicates that ensures both coating strength and resistance to moisture absorption.</p> <p style="text-align: center;">UNCONTROLLED</p>								
WELDING FEATURES OF THE ELECTRODE	<p>The electrode is suitable for both AC and DC and may be used in all positions except vertical down. Arc stability is good as is slag detachability. Weld seams are smooth, evenly rippled and slightly convex in shape.</p> <p>The metal recovery of the electrode is some 120% with respect to weight of the core wire.</p>								
APPLICATIONS AND MATERIALS TO BE WELDED	<p>On high carbon steels HV-250B should be used as a buffer layer.</p> <p>The weld deposit has good resistance to abrasion, under normal circumstances is crack free, and will withstand a reasonable amount of impact loading.</p> <p>Used to particular advantage for : bulldozer blades, crusher jaws, bucket lips and teeth involved in earth moving and mineral crushing. Where the main wear is abrasion, but with some impact resulting from rocks and compacted minerals.</p> <p>Under normal circumstances the weld metal is non-machinable.</p>								
WELD METAL ANALYSIS COMPOSITION % BY Wt.		C	Mn	Si	S	P	Cr	Mo	W V Fe
	MIN	0.5	-	-	-	-	3.0	-	-
	MAX	1.5	3.0	3.0	0.03	0.03	9.0	2.5	4.0
	TYPICAL	0.7	1.5	0.6	0.02	0.02	6.0	0.8	2.0 0.3 Bal.
WELD METAL HARDNESS (ALL WELD METAL)	AS WELDED 150°C PRE-HEAT & INTERPASS		HRC	HV	Similar alloy to HV-600B but increased vanadium and 2% tungsten slightly improves hardness and hot hardness but retains similar toughness.				
	1 st Layer		50 - 55	520 - 600					
	2 nd Layer		52 - 58	540 - 660					
	3 rd Layer		55 - 60	600 - 700					
Heat input, cooling rate, and dilution will affect hardness in the first two layers but no significant affect in next layers									
WELDING AMPERAGE AC or DC+	Ø (mm)	2.6	3.2	4.0	5.0				
	MIN	65	110	140	190				
	MAX	90	140	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.								