


HV-450B	LOW HYDROGEN - LOW ALLOY – HIGH EFFICIENCY HARDFACING ELECTRODE FOR BALANCED RESISTANCE TO ABRASION AND IMPACT LOADING				DATA SHEET NO. 112								
SPECIFICATION	AWS A5.13	DIN 8555	JIS Z 3251										
CLASSIFICATION	EFe2	E1-UM-45-GP	DF2A - 450B										
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>												
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>The tough crack resistant weld deposit may be used as a buffer layer both on mild and high carbon steels prior to depositing harder alloys. Used in its own right, it provides an excellent combination of abrasion and impact resistance making it ideal for hardfacing gear wheels, rails, roller guides, slideways, track wheels, sprockets and similar.</p> <p>Machining is not possible but may be profile ground.</p>												
WELD METAL ANALYSIS COMPOSITION % BY Wt.		C	Mn	Si	S	P	Cr	Mo	Fe				
MIN		0.2	0.8	-	-	-	2.0	-					
MAX		0.3	1.5	0.7	0.03	0.03	3.0	0.8					
TYPICAL		0.25	1.4	0.5	0.02	0.01	2.5	0.4	Bal.				
WELD METAL HARDNESS (ALL WELD METAL)	AS WELDED 150°C PRE-HEAT	HRC				HV							
1 st Layer		35				350							
2 nd Layer		43				420							
3 rd Layer		47				465							
	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	90	140	190								
MAX		90	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.												