


<b>HV-250</b>	<b>RUTILE - LOW ALLOY - HIGH EFFICIENCY HARDFACING ELECTRODE WITH EXCELLENT RESISTANCE TO IMPACT LOADING COMBINED WITH MEDIUM ABRASION RESISTANCE</b>				<b>DATA SHEET NO. 109</b>					
SPECIFICATION	DIN 8555			JIS Z 3251						
CLASSIFICATION	E1-UM-250-GP			DF2A-250-R						
PRODUCT DESCRIPTION	The design emphasis of the alloyed weld metal ensures the desired hardness level of the specification is readily achieved as is the deposits maximum resistance to impact loading combined with medium resistance to abrasion. The flux contains the appropriate alloying elements plus iron powder addition and is extruded onto a ferritic wire with a balance of silicates that ensures both coating strength and resistance to moisture absorption.									
WELDING FEATURES OF THE ELECTRODE	The electrode is suitable for both AC and DC and is used to best advantage in the flat and HF positions. The arc is smooth and stable weld beads are evenly rippled, of bright appearance and the slag readily detachable. the weld deposit is highly crack resistant under normal circumstances, but on high carbon cast steels or restrained sections of mild steel, a preheat of 150 °C should be used.									
APPLICATIONS AND MATERIALS TO BE WELDED	The main applications occur when intermetallic abrasion is involved, eg: to control wear in interconnecting steel components such as gear wheels, shafts, sprockets, couplings etc. The deposit is machinable thus enabling worn or broken sections to be rebuilt and then reshaped. Similarly the repaired component may be oil quenched to increase hardness or may be case hardened by conventional practices.									
WELD METAL ANALYSIS COMPOSITION % BY Wt.		C	Mn	Si	S	P	Cr	Mo	Fe	
MIN		0.15	0.5	-	-	-	0.5	-		
MAX		0.25	1.0	0.5	0.03	0.03	1.5	1.0		
TYPICAL		0.2	0.6	0.3	0.02	0.02	0.7	0.04	Bal.	
WELD METAL HARDNESS (ALL WELD METAL)	TYPICAL HARDNESS VALUES USING 150 °C PRE-HEAT ON MILD STEEL									
		1 <sup>st</sup> Layer		2 <sup>nd</sup> Layer			3 <sup>rd</sup> Layer			
	Vickers HV	210		250			265			
	Rockwell HRC	22		23			25			
		Oil quenched from 900 °C : HV 350				Tempered at 650 °C : HV 220				
	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		
	MIN	60	90	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.									