


HV-350	RUTILE - LOW ALLOY - HIGH EFFICIENCY HARDFACING ELECTRODE WITH EXCELLENT RESISTANCE TO IMPACT LOADING COMBINED WITH MEDIUM ABRASION RESISTANCE				DATA SHEET NO. 111						
SPECIFICATION	DIN 8555		JIS Z 3251								
CLASSIFICATION	E1-UM-350-GP		DF2A-350R								
PRODUCT DESCRIPTION	<p>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.</p> <p>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.</p>										
WELDING FEATURES OF THE ELECTRODE	<p>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 pre-heat of 150 °C should be used.</p>										
APPLICATIONS AND MATERIALS TO BE WELDED	<p>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.</p>										
WELD METAL ANALYSIS COMPOSITION % BY Wt.		C	Mn	Si	S	P	Cr	Mo	V	W	Fe
	MIN	0.2	0.4	-	-	-	1.0	0.1	-	-	
	MAX	0.3	1.2	0.8	0.03	0.03	2.0	0.3	-	-	
	TYPICAL	0.25	0.5	0.6	0.02	0.02	1.2	0.2	0.02	0.007	Bal.
WELD METAL HARDNESS (ALL WELD METAL)	AS WELDED 150°C PRE-HEAT		HRC	HV	QUENCHED 850°C		TEMPERED 650°C HV				
	1 st Layer		24	260							
	2 nd Layer		32	320	300 – 500		HV				
	3 rd Layer		39	380			290 – 310				
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	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.										