HV-90

BASIC FLUX COATED ELECTRODE THAT DEPOSITS WELD METAL CORRESPONDING TO THAT OF A HIGH SPEED TOOL STEEL

DATA SHEET NO. 132

SPECIFICATION CLASSIFICATION	-
PRODUCT DESCRIPTION	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. 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.
WELDING FEATURES OF THE ELECTRODE	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. The metal recovery of the electrode is some 120% with respect to weight of the core wire.
APPLICATIONS AND MATERIALS TO BE WELDED	The weld deposit corresponds in analysis and properties to that of a high speed tool steel which provides hardness and toughness on many applications up to 600°C, eg: suited to the repair of reclamation of high speed cutting and machinery tools in either the 'as welded' or 'heat treated' condition.

WELD METAL ANALYSIS COMPOSITION % BY Wt.

	C	Mn	Si	S	P	Cr	Mo	W	V	Fe
MIN	0.7	0.5	-	-	-	4.0	4.0	6.0	1.0	
MAX	1.5	2.0	1.5	0.03	0.03	7.0	7.0	12	2.5	
TYPICAL	0.9	1.3	0.9	0.02	0.02	5.0	6.0	7.5	1.8	Bal.

WELD METAL HARDNESS (ALL WELD METAL)

CONDITION	HRC	HV
As Welded	61	740
Annealed 800°C furnaced cooled	23	250
Q & T (Quenched Oil 1200 °C / Tempered 600 °C)	63	770

Heat input, cooling rate, and dilution will affect hardness in the first two layers but no significant affect in next layers

WELDING AMPERE 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.