



HI-ALLOY TSH

HOT WORK TOOL STEEL ELECTRODE

DESCRIPTION: This electrode is designed for repair welding in both hot and cold work tooling applications when subsequent heat treatment is not required. It has a special flux coating which promotes excellent re-strike, and porosity free high density weld deposits.

TYPICAL APPLICATIONS: Hi-Alloy TSH electrodes work well for repairing hot or cold work trimmers, shears, blanking and forming dies where chipping, spalling, and cracking are a problem. Some hot work uses are forging dies, coining dies, header dies, punches, extrusion mandrels and tong bits. Cold work applications include forming dies, blanking dies, sledge hammer faces, cutting edges of hatchets, and punches.

PROCEDURES: Prepare the area to be welded by removing all cracks, heat checks or other defects by grinding or gouging with Hi-Alloy Metal Mover electrode. Clean surface of any slag, scale, rust, oil, or drawing compounds. Preheat die blocks and other parts where the entire working surface is to be welded to 800° F. On other alloys preheat and post heat to specifications for the base metal. Maintain temperature during welding, hold the electrode on a slight angle in the direction of travel and maintain a short arc gap, use stringer bead technique and peen the weld while hot to relieve stresses. After welding allow to cool in still air to 300° F, post heat to 1000° F, hold at temperature for one hour per inch of thickness, and allow cooling in still air to room temperature to obtain the ultimate grain refinement and uniform hardness in the weld deposit.

AVAILABLE SIZES:	3/32	1/8	5/32
AMPERAGE RANGES:	60 - 90	80 - 125	125 - 175
POLARITY:	AC or DC Reverse		
HARDNESS:	Rockwell C 52 - 55 as Welded		

THE DEPOSIT IS HEAT TREATABLE. USE H-12 PROCEDURE