HI-ALLOY TSM - TIG

HIGH SPEED TOOL STEEL WIRE

DESCRIPTION: Hi-Alloy TSM - TIG was designed for the repair of M2 and other grades of high speed tool steels. It may also be used for fabrication and overlay of composite dies and tools. The deposits retain their hardness and impact resistance up to 1100° F. The high as welded hardness also makes this product useful for hardfacing steels where extra resistance to abrasion and metal to metal wear are required.

TYPICAL APPLICATIONS: Repair of cutting and shaving knives, shear blades, blanking, punching, and piercing dies, drills and boring tools.

PROCEDURES: Completely clean the area to be welded, remove all fatigued metal, and round off sharp edges. Slowly and uniformly preheat according to base metal specifications and maintain temperature throughout the welding procedure. Try to position part so welding can be done on a slight incline. Use the smallest diameter filler rod and lowest amperage possible to minimize heating of the part yet providing for a stable arc and suitable weld penetration. Amperage will be dictated by the thickness of the base metal and tungsten diameter. Argon shielding gas is recommended. Skip weld if necessary to distribute heat evenly, do not heat base metal beyond the tempering temperature to avoid loss of hardness. Lightly peen each bead while still red hot to relieve stresses. Allow the part to cool slowly in still air, if welding in a cool environment take measures to provide for slow cooling of the finished part such as use of a furnace or a suitable insulating material. When part cools to about 200° F, post heat to base metal specifications and slow cool to ambient temperature.

AVAILABLE SIZES:	.045 1/16 3/32
POLARITY:	DC Straight
HARDNESS:	As Welded Hardness 61 - 63 RC

DEPOSIT IS HEAT TREATABLE. USE M-2 PROCEDURE