



## HI-ALLOY TSH - TIG

### HOT WORK TOOL STEEL WIRE

**DESCRIPTION:** Hi-Alloy TSH - TIG is a chromium, tungsten, molybdenum, alloy that is extremely abrasion resistant, very tough, and chip resistant. Designed for use on hot working tools, this product works equally well in cold cutting and trimming tool applications. It may also be used on many other types of steels for general fabrication, repair, or hardfacing when no post weld heat treatment is required.

**TYPICAL APPLICATIONS:** Hot working punches, headers, rams, shear knives, and cutting dies; cold cutting and trimming edges, blanking and forming dies.

**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 54 - 56 RC

DEPOSIT IS HEAT TREATABLE. USE H -12 PROCEDURE