



MODEL 7800

HOT SPRAY POWDER TORCH

DESCRIPTION: The Hi-Alloy Model 7800 Hot Spray Powder Torch is essentially a modified oxygen-acetylene brazing torch. In the middle of the torch, attached to the handle, is a powder dispensing unit. Specially cut and blended metal powders are gravity fed into the torch and propelled out through the tip end by the pressure of the oxygen and acetylene gases. By depressing and releasing a powder feed control lever the operator is able to control the size, shape, and thickness of the deposited metal.

TYPICAL APPLICATIONS: The Model 7800 Hot Spray Powder Torch is used primarily for buildup and hardfacing of steel parts but possible applications are numerous and depend largely on the desired result and the type of metal powder being used. See the following pages for descriptions of the available Hi-Alloy Easy Spray Powders and their typical applications.

PROCEDURES: Thoroughly clean and degrease the work piece to a bright, clean, bare metal. Make sure the number stamped on the tip end matches the number stamped on the mixer which is located in the powder dispensing unit. (The torch comes standard with a #8 tip end and #8 mixer installed.) Adjust the acetylene regulator output pressure to 14 pounds and the oxygen regulator output pressure to 18 pounds. Attach a bottle of the desired powder to be deposited onto the hopper of the powder dispensing unit. Light the torch as you would a standard oxygen-acetylene brazing torch and adjust to a neutral flame. Preheat the work piece to 600° F and spray a thin coating of powder over the entire surface approximately .004 to .007" thick. Go back over the entire surface with only the flame heating the part until the pre-sprayed powder melts and bonds to the surface, (approximately 1900° - 2000° F). Go back and continue to heat and spray small amounts of powder melting and bonding the deposited metal as you go until the procedure is completed. Allow the finished part to cool slowly in still air.