MRT-1054 Prepping Solder Nozzle

****USE THE PROPER PROTECTIVE EQUIPMENT WHICH INCLUDES HEAT RESISTANT GLOVES AND SAFETY GLASSES FOR ALL NOZZLE TINNING****

Solder Nozzle Preparation

1. There are many different tip sizes which require the same process for tinning. Choose the proper one designated for the job you are running.

2. When using 6mm or smaller sized nozzles, it is recommended to place the barrel of the nozzle in the flowing solder, as seen in **Figure 1**. Doing this will heat the nozzle thoroughly allowing you to place it on the riser and get flow without the solder freezing inside the barrel.

Figure 1: Preheating smaller nozzle in solder bath

3. After preheating, place the nozzle on the riser and ensure that you have 360 degrees of flow around the nozzle. Flow that appears less than this can compromise the quality of solder joints. As seen in **Figure 2.**

Figure 2: Improper tin

4. If you are seeing an improper tin, as in **Figure 2**, you will need to use the provided **Superior #75** flux, and lightly brush the dry areas to give the solder a smooth surface, as seen in **Figure 3**. **Superior #75 is the only flux we have qualified to use for this process due to its chemical characteristics. This flux is used for tinning ONLY and NOT to be used soldering boards!**

Figure 3: Applying flux to nozzle

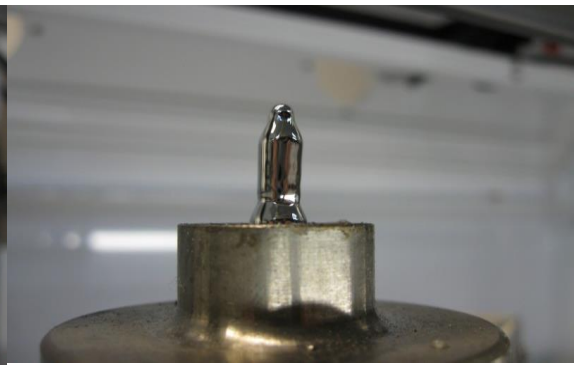

Figure 4: Properly flowing nozzle

5. For 6mm and smaller nozzles, it is recommended to use the provided titanium probe to plunge the nozzle a couple of times (**Figure 5**) while the pump is running. This ensures there is no blockage in the nozzle, resulting in the need for excess pump speed or instability of the wave.

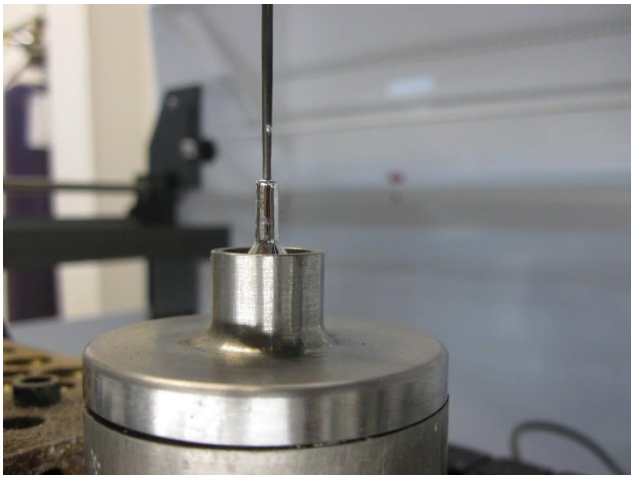

Figure 5: Plunging the nozzle

6. If you are unable to get the desired flow from the nozzle using these procedures, the nozzle may need exterior cleaning. If your nozzle needs to be cleaned externally because there is a buildup of black residue on the outside of the barrel (**Figure 6**).

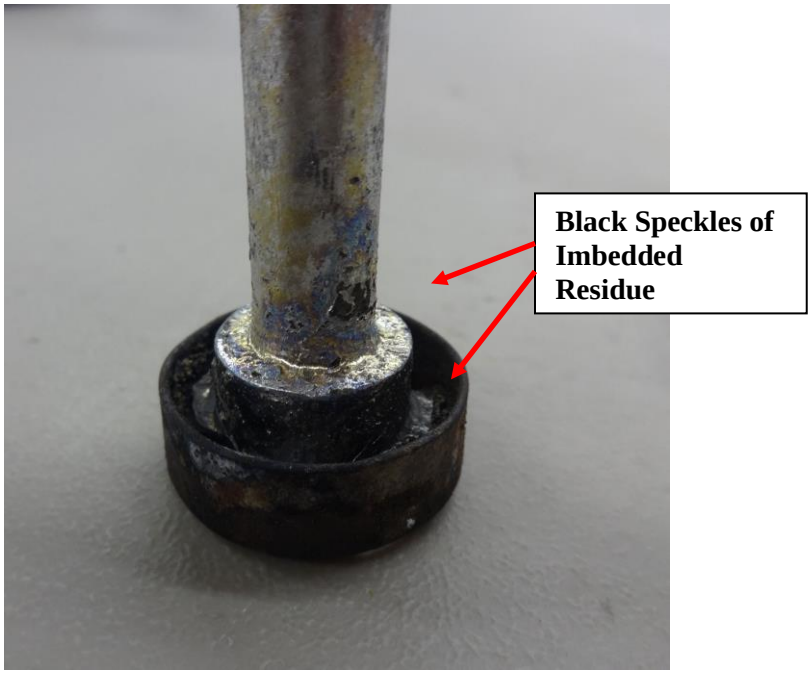

Figure 6: Black speckled areas imbedded residue

The residue pictured in **Figure 6** would need to be much higher up the barrel to cause problems with tinning and flow. If the residue is present, you should use a wire brush or scrubbing pad and remove the deposits from the outside of the nozzle. Once the nozzle has been scrubbed clean it will need to be tinned before using.

Re-tinning a nozzle

Note: You will need to use protective gloves and safety glasses for this procedure

7. After the nozzle has been properly cleaned, you will want to dip the entire nozzle barrel in the Superior #75 flux. Then as pictured in **Figure 1**, you will need to roll the entire barrel through the solder wave to create a full layer of solder on the nozzle. A second coating is recommended. For further instructions on this please refer to MRT-1036.

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