

## **Spray-In-Air Misprint Cleaning Perspective**

### **Question?**

Can spray-in-air cleaning equipment be utilized to clean misprinted assemblies?

### **Aqueous Technologies Perspective:**

Trident is equipped with screens and filters but is not designed to remove raw, non-reflowed solder paste. While some batch-format defluxing system manufacturers recommend the use of their products to remove non-reflowed solder paste, the process remains very risky.

At issue is the fact that while the flux component of solder paste solubilizes in to the wash solution, the solder spheres never solubilize/dissolve. Any and all spray-in-air based cleaning systems will cause the individual solder spheres to distribute "wildly" through the air once the flux portion of the solder paste has been "dissolved". While most of the solder spheres will be directed down into the sump tank and into filters /other devices, there is no guarantee that all of the solder spheres will follow that route. Considering that there are tens of thousands or even hundreds of thousands of individual solder spheres on any misprinted assembly, it only takes a few spheres pushed into vias or lodged under "A-Side" components to cause real issues. Additionally, it is unlikely that 100% of all of the individual solder spheres will be captured and segregated. Some of the solder spheres will remain in the spray system and be dislodged in subsequent wash cycles.

Regardless of brand and despite claims from various manufacturers, Aqueous Technologies would not recommend cleaning raw solder paste in any spray-in-air product. Ultrasonic technology which utilizes a cavitation process which pulls the solder spheres off of the assembly rather than pushing them off is far superior and less likely to result in unintended solder sphere transfer.