

HOSHIZAKI AMERICA, INC. SERVICE BULLETIN

SB99-0013 July 9, 1999

Subject: Ultrasonic Weld Joints

Hoshizaki uses the procedure of ultrasonic welding to seal the refrigeration system process tubes on the assembly line. Ultrasonic welding is usually a very reliable method of sealing the process tubes. Self-contained units will have two process tubes. Remote units have 4 tubes.

The ultrasonic welding procedure uses ultrasonic frequency to bond the copper molecules together and seal the tubing. The welding tool actually crimps the end of the tubing and bonds the copper together about 3/8" from the end. The result is a crimped tube without solder in the end. These welded joints are thoroughly leak-checked after they are sealed. If a leak is detected at the factory, we will seal the end with solder.

We have received several warranty claims of leaking process tubes. The claim usually states that there was no solder on the process tube ends. We suspect technicians may have soldered process tubes after a quick visual inspection, because they didn't see any solder. This could easily happen in a case with one process tube which is soldered because it leaked at the factory, while others have the standard crimped ultrasonic weld.

If you suspect a leak on a process tube, please verify the leak prior to repair. All suspect leaks should be confirmed using some method of leak detection before evacuation.

Note: Remember that proper refrigeration practice requires a thorough evacuation and refrigerant drier replacement if non-condensable's or a leak exists.