

Wave Soldering Myths and Facts

MYTH Rework and touch-up are part of production.

FACT Rework and touch-up are necessary only because of production failures on the assembly lines. Defects are production failures. Rework and touch-up cost huge sums of money in labor, floor space, rework stations, inspection, hand soldering equipment, consumables, management time, slower throughput, and the increased risk of field failures. You don't have to live with your current defect rate. Don't accept it.

MYTH The key to good wave soldering is thermal profiling.

FACT Thermal profilers give no accurate information on how your boards pass through your solder waves or on your fluxer performance. Without this information the process is fatally uncontrolled.

MYTH A glass plate provides all the information we need.

FACT A glass plate gives no precise, repeatable, quantified or retrievable data. Neither does it measure immersion depth. Assessments are subjective, depending on human judgment, eyeballing and reflex.

MYTH If I change the chemistry I can eliminate my defects.

FACT What if your wave solder defects are not due to your flux type or solder alloy? What if your defects are due to a wave soldering process that can be improved? In that case, changing chemistry is futile. Before changing your flux vendor or your solder type, endeavor to attack and eliminate your defects with the most proven technology and techniques available. It could save you a time consuming, costly and ineffective changes.

MYTH Our defects are caused by bad board design and cannot be eliminated.

FACT Sometimes a board does have design errors that provoke wave solder defects. Before giving up or engaging in a slow moving, costly redesign, you can employ clear procedures to attack these defects. This will determine if the defects can be overcome by refining your wave soldering process for the specific boards in question. Many if not most wave soldering defects caused by bad board design can be overcome with improved process targeted by board type.

MYTH The new wave machine controls process.

FACT Some look to expensive wave machine upgrades to solve process deficiencies. But old equipment does not equal defects and new equipment does not equal good boards. It is the process and manufacturing engineers who must control and optimize your wave soldering process, because no wave solder machine can. An optimized process is the best way to determine whether an expensive investment is needed in your wave machines. Even more so it is the best way to attack and eliminate your wave soldering defects. A good wave machine will not eliminate defects caused by poor process.

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