KIC's Ecosystem: Solutions to Your Thermal Reflow Problems

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In the sales world it's advantageous to carry products that are understandable, impactful and easy to use. Customers appreciate this type of performance in products and in sales. KIC and its ecosystem of thermal products do exactly this. The company's products are easy to use, provide solutions for all reflow thermal requirements, are easy to deploy and easy to extract results that are actionable and impactful.
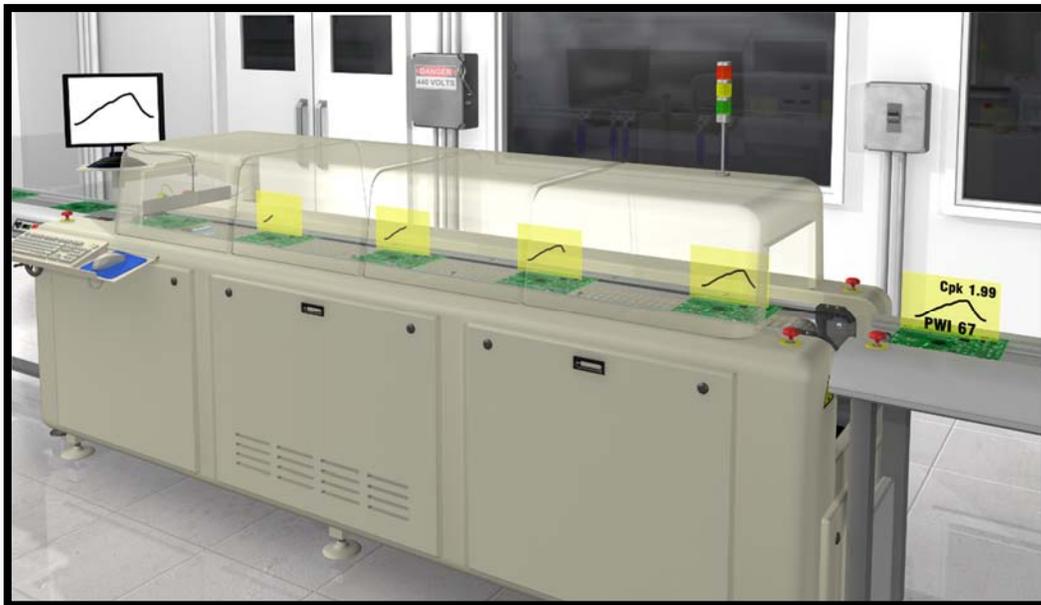
There are three main tasks to the reflow process: find the correct profile to set up the oven; make sure all the PCBs are built in spec; and show that PCBs were built in spec anytime, anywhere, at the user's fingertips, along with C_{pk} data.

Profiling

KIC's Smart Profiler System (SPS) allows users to quickly define a process within specification and to truly understand their processes. One simple number enables the user to discuss in spec/out of spec, while providing the data that matters.

Ease of use is key for KIC. Options include KIC's award winning Navigator Power Optimizer tool, Auto Focus profile creation tool, and Sweet Spot, which allows users to generate their profile and recipe, optimize their process and adjust the center point if needed. Everything needed in one package, along with 24-hour technical support.

KIC's Process Window Index (PWI) is a key feature of its ecosystem, in that it allows the user to know quickly if your process is in spec or not, and if not, why. It is also the first step toward automation, and eventually, MES integration and Industry 4.0.

KIC offers dynamic and automatic reflow profiling.

Smart Reflow Analyzer (SRA) is KIC's latest product. It is a tool that allows users to quickly determine an oven's stability and measure conveyor belt speed, as well as heat transfer index for each zone, side-by-side or run-to-run and KIC's PWI process analysis. The SRA is a measurement tool in comparison to a product-related profile instrument, such as a profiler.

Automatic Profiling

Reflow Process Inspection (RPI) is one of several automation tools from KIC and is designed to reduce the amount of profiling required and line downtime. Users can monitor each reflow process and obtain process control data and traceability data for each product in the production run in real time.

RPI is also a first component in automating the data stream, using live data output (LDO) and remote process monitoring (RPM). No longer will operators have to ask what happened during a particular process. The historical is there to understand if there were any process trending warning (C_{pk}) or out-of-process specification alarms. KIC's system can also prevent PCBs from entering the oven in the event a process is out of specification — preventing defects and rework.

Connectivity

KIC's Vantage factory software is designed to bring meaning to data and make the data actionable. As part of an Industry 4.0 initiative, Vantage uses connected devices at the reflow oven to automatically feed analytical data to the database.

It is then displayed on a dashboard, allowing users to achieve MES integration and/or further analysis/understanding. Being browser-based, the solution allows access to your data when its most needed. It can be sorted, analyzed and shared. This eliminates the 'black box' syndrome of ovens and is an easy point of entry in Industry 4.0 initiatives, without big budgets or complexity issues.