



PROJECT PROFILE

SUSTAINING ENGINEERING – ELECTRONIC REPACKAGING

CLIENT CHALLENGE

A world leader in the design and manufacture of mass spectrometers had recognized the need for improvements in the electronics for a particular model of mass spectrometer. There was a need to increase the heat dissipation from existing components and redesign the Power Supply Module. In addition they wanted to incorporate a new air cooling system for the machine. This upgrade program was driven by tight geometric tolerances and time to market constraints.

Several current Palladium personnel were retained (prior to the incorporation of Palladium Product Development & Design) to assist with the electronic refreshing of the product.

PROJECT HIGHLIGHTS

The outsourced engineering team was involved throughout the redesign, mock up, testing and supplier interface for manufacturing phases.

The redesign of the System Power Supply Module had to include all of the previous circuit boards (card cage) and components with the addition of a new MKS instrument. The components had to be mounted in the same space claim, and be readily accessible for servicing and routine maintenance. The work also included the determination of airflow requirements in order to position components so as to ensure appropriate operating temperatures would be maintained in all areas of the entire machine.

SUSTAINING ENGINEERING REQUIREMENTS

Following the incorporation of Palladium Product Development and Design ongoing engineering services have been provided to the company and several of the same personnel are still active with the client in continued upgrades and product improvement programs. Design modifications related to manufacturing efficiencies, researched quality improvements and implementation of client/user feedback are part of the company's continued quality improvement ideology.

