SCH Technologies

Conformal Coating Services, Equipment,
Technical Support & Humiseal Materials.

Case Study

SCH equipment provides a solution to another coating problem

Customer: Deutsch Interconnections Solutions, UK

Deutsch UK is part of the global Deutsch Group. Based in East Sussex, Deutsch UK produces interconnection solutions for harsh environments around the world.

In 2005, Deutsch were producing electronic circuit board assemblies for the high-reliability market and certain products required conformal coating. At the time, they were considering coating their boards with a solvent based coating, applied via aerosol. Although a perfectly adequate choice as far as their production process was concerned, the lack of fume extraction within the facility made this option potentially hazardous to the operators and it became clear they needed a solution fast.

Deutsch approached the engineers at SCH for a solution to their coating problem. Once SCH became involved, it was quickly established that the best option for Deutsch would be a CB100 spray booth, equipped with a double pressure pot system, automated turntable and combined UV / white lighting system.

Deutsch consider the safety of their operators of paramount importance and appreciated that these three options would provide the ultimate in protection for operators, minimising the dangers that solvent-based atomised spraying can involve. The double pressure-pot system consists of one pot containing a pre-blend of conformal coating, specially prepared to spray on to the boards, and a second pot containing thinners for flushing. Once the operator has coated the board, they simply turn a switch and flush out the gun head. Consequently, time spent cleaning the gun system has been minimised, which has drastically reduced exposure of the operators to potentially harmful solvents. In addition, the automated turntable allows the wet coated board to be rotated through 90 degrees during spraying by depressing a foot pedal, enabling Deutsch to effectively minimise any contact with coating whilst processing.

The dual UV / White light system affords fantastic flexibility to the operator. The in-situ UV lighting can be utilised safely whilst spraying to illuminate the coating during application, whilst the white light can be used for set up of the process, or during maintenance periods where the UV light is inadequate.

“The introduction of conformal coating equipment at Deutsch represents our commitment to invest not only for individual customer requirements, but also extending our capabilities in this area.” Matt Davidson, Chief Production Engineer at Deutsch continued: “Conformal Coating has become an industry standard method in sealing delicate electronics from environmental contamination and SCH Technologies were instrumental in helping us meet our customer expectation strategy. We worked very closely with SCH to provide a flexible solution to conformal coating of components and assemblies. This partnership has generated knowledge, which we can confidently transfer to other customers and their products, as well as meeting future demands in this area. Our sales teams are now equipped to add this feature to an already complex product specification, further enhancing its performance.

Installation at Deutsch was completed in the summer of 2006 and has been successfully integrated as a standard production process. Flexibility is a key driver for Deutsch and this system allows for a quick changeover from one conformal coating type to another. The minimal service connections ensured a rapid installation phase, bringing the system into immediate use. The level of personal protection available for operators impressed during training. The in-built feature of UV trace inspection whilst applying proved very useful, as did the pressure pot system for flushing and cleaning the system. Further developments in the conformal coating service offered by Deutsch is the dip coating application method, which is due on line at the beginning the second quarter of 2007. Once again SCH services have provided the necessary expertise and equipment for retrofitting an attachment within the existing spray booth. This enables smaller components and highly complex surface geometry’s to be coated consistently. Utilising the existing spray booth extraction system and pneumatic services, this has reduced installation costs and maximised the overall investment. All in all, this has been a very competent installation by SCH and proved to be a sound investment by Deutsch.”

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