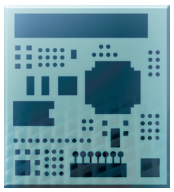

China: Solving the Quality Dilemma

With consumers, retailers, industry groups, and politicians all weighing in on the issue of quality in China, today's manufacturers are taking it on the chin. There's been a lot of noise about boycotting toys, clothes, electronics, and other consumer goods made in China, but it's easier said than done.

The fact is that China is just too good to pass up — the cost and volume advantages are critical to meeting consumers' practically insatiable demands of new and innovative products — lots of them, at an accessible price. Still, the taint of bad quality has to be redressed.

Overcoming the quality dilemma is not easy. The challenges range from the basic language and cultural differences between Eastern and Western businesses to more complex issues, such as the development of new supply chains and the need for monitoring and scrutiny of partners. And there can be hundreds of partners for electronics manufacturing in Asia. So, how can manufacturers gain control over quality, overcome the challenges of outsourcing to China, and deliver what the consumers want and need — at the right cost?

As is so often the case, the key lies in clearly established lines of accountability, driven by oversight. Product test is the linchpin. Based on experience in managing the deployment and support of more than 1,500 test systems in China in the past three years, we believe that it is possible to design and implement a successful approach to ensuring quality and reliability when manufacturing in China.

Know When to Go

Launching a new product is fraught with risk. When a product is in the earliest stages of development, it's best to stick close to home. Creation and implementation of a test strategy during the design phase, design validation test (DVT) development, functional test design deployment, pilot production, and ramp to volume require the kind of nurturing and attention that only those whose names are going on the box can provide. It's here where critical issues can be resolved quickly and most cost effectively, and the risk of failure best can be controlled.

The real benefits of manufacturing in China are realized for a company once a product moves to volume production. Ideally, prior to and during this phase, company champions are deployed to the site in China to oversee the development and deployment of functional testers; finalize system and manufacturing line integration and synchronization across multiple contract manufacturers (CMs); manage the production launch; and provide sustaining engineering services once the production line is shipping in volume.

"China is just too good to pass up — the cost and volume advantages are critical."

Co-locating test where immediate issues can be quickly traced back to the source of the problem — and corrective action can be made and monitored to ensure completion — possibly is the biggest way to ensure the quality of a product.

Information Rules

We are increasingly seeing a call for better information throughout the entire manufacturing process, and the role of test in this new imperative is large. Information collected at multiple stages — during production, in-field testing, and more often at the return and repair stage — has real value.

Understanding which components fail most often and under what conditions; how materials hold up when products are truly used by the end users; and what creative approaches this group of product owners finds for using their devices beyond the original function, have the potential to allow companies to make better decisions in dozens of ways.

For manufacturers, the ability to gather test and quality data easily from globally distributed locations, perform correlation and analysis, and then provide predictive decision making in real-time is compelling. Knowing what is happening across the globe without having to travel there saves time and money.

The peace of mind that comes with knowing that a product failure won't be splashed across the front page of the newspaper, or that a company's logo won't appear on the morning business report — linked to a story about potentially harmful toys, or an automotive recall, or computer failures —is priceless.

Conclusion

Even with all of the recent uproar about products made in China, it is clear that manufacturing in China is not going away any time soon. Until recently, manufacturers treated returns and repairs as the cost of doing business, but changes in accounting principles now require that warranty costs show up on the balance sheet. That, along with the impact on branding, makes quality an executive-level problem.

The good news is that, with the right approach to integrating product test and the information gleaned from the process, China no longer represents a choice between quality and cost — manufacturers can have them both.

Chris Rehl, director of marketing, CIMTEK, may be contacted at 144 Gould St, Suite 210, Needham, Mass. 02494; (781) 726-6227; crehl@cimtek.