



Understanding Chinese Manufacturing and What Went Wrong When Hoverboards Explode

By Rosemary Coates

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I spend a lot of time qualifying Chinese factories, helping my clients identify new sources and resolving production and quality problems. You wouldn't believe some of the things I have seen. And when a new fad product arrives on the scene, I cannot help but wonder what might go wrong because there are plenty of things that can. Take hoverboards for example.

Exploding hoverboards have been all over the news lately, especially as these boards were very popular as holiday gifts. Based on the number of incidents of the boards exploding or catching fire, many retailers including Amazon.com and Target stopped selling them before Christmas, and several commercial airlines banned them aboard their aircraft.

So what happened in the production of these items to make them so dangerous? In the reported incidents, it was the lithium ion batteries in the hoverboards that caught fire. The science about the actual combustion process is pretty clear about what happens when a battery is defective. We have seen this battery problem in the past with laptops and other electronics that include lithium batteries. We know they can be dangerous. What isn't so clear is the sourcing and manufacturing processes in China and how the defective batteries got into the hoverboards.

Hoverboards are new and very popular products and this combination creates a frenzy of manufacturing activity at production sites in China. The original boards may be patented and the batteries may meet safety standards developed a few years ago. But because of the popularity and the potential for high profits, knock-off brands quickly proliferate among the extremely competitive manufacturing community in China. A knock-off hoverboard design may be slightly changed to avoid patent infringement. Raw materials for production are likely to be completely different from the original products, including lower quality lithium batteries. Cheaper knock-off products usually means cutting corners with raw materials and with processes in manufacturing to contain production costs. It is up to the buyer of these products to keep tight control and oversight of all the links in its supply chain and the quality of the manufacturing.

Because of the newness of the hoverboards, the US safety standards are not all in place yet either. US Customs may be allowing imports to enter the US based on safety standards for similar products. But that may not be good enough. Some manufacturers likely have certifications such as UL, for component parts of the board but not for the product as a whole. Further, the batteries that are used in production may be knock-offs, too. You cannot trust the so-called "top brands" to produce a safe product either. Because of high demand, top brands may be sourcing from multiple Chinese factories with limited experience and an array of tier two or tier three component suppliers. Control over multiple production lines at multiple factories is extremely difficult if not impossible when things are moving so fast. No agency is in control over the quality and safety of manufactured products for export from China.

With the knowledge and experience in dealing with Chinese manufacturers, I help attorneys and their clients understand these complicated Chinese supply chain issues and the Chinese manufacturing environment. I have written about and testified in cases involving Chinese supplier contracts, quality issues, IP protection, and importing into the US.

I help my clients (and the attorneys representing them) to understand the nature of doing business in the rough and tumble and very high-energy environment of Chinese manufacturing. The standards and practices are different and the culture of course, is a world apart.



About the
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Rosemary Coates is the President of Blue Silk Consulting, a Global Supply Chain consulting firm, with an impressive list of over 80 clients worldwide. She is a seasoned executive with an MBA and 25 years of experience in industry, consulting and as an Expert Witness. She is also a Licensed US Customs Broker. Ms. Coates is the author of [42 Rules for Sourcing and Manufacturing in China](#), a Best Seller on Amazon.com.

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