

Ivent Solutions Market Trend Update

July 2018

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Plastic Molding Suppliers in China

A recent trip to the Fujian Province of China provided the Directors of Ivent an excellent insight into the plastic molding capability of Chinese manufacturers. The city of Xiamen is a modern part of China that is a popular holiday destination for the local provincial population. The city of Xiamen is actually an island and there are a number of large bridges and tunnels providing connection through to mainland China. Historically the island has had a large population with factories intermingled between the residential apartments and commercial centre. The Chinese government made a decision in recent years to relocate all of the factories back to the mainland. This would free up land on the island and create a more favourable and cleaner residential environment.

This transition to the mainland has meant that the factories are now in new buildings with excellent facilities. This provides a much more professional environment for plastic molding and the associated tool shops. Additionally, the factories that we visited had invested in new machinery both in the tool shop and the factory. This included CNC machines, milling machines and spark erosion machines. It was interesting to note the use of carbon spark eroding tools as well as the more traditional copper tools.

The level of skill from the tool makers was also evident and it was pleasing to see a well laid out, tidy tool shop. The design of the tool is also done in-house at the manufacturers we visited with between 2 and 4 engineers dedicated solely to the CAD design of injection molding tools. The factories are happy to share these CAD files and are open to collaboration between the factory and customers to achieve the desired outcome. However left to their own devices the tool outcomes were excellent with much thought given to the design.



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The turnaround time on tooling is also impressive with most tools being available in a 3-4 week leadtime. Even complicated water cooled tools such as the one below have been completed in a 4-5 week leadtime. Tools are maintained in bin identified racking systems and all etched with the appropriate part/serial number. Some tools are painted for easy identification, with each customer selecting their own colour.



Skilled engineers in the tool shop.



One part of a 5 tonne tool being produced at present for one of our major New Zealand customers.

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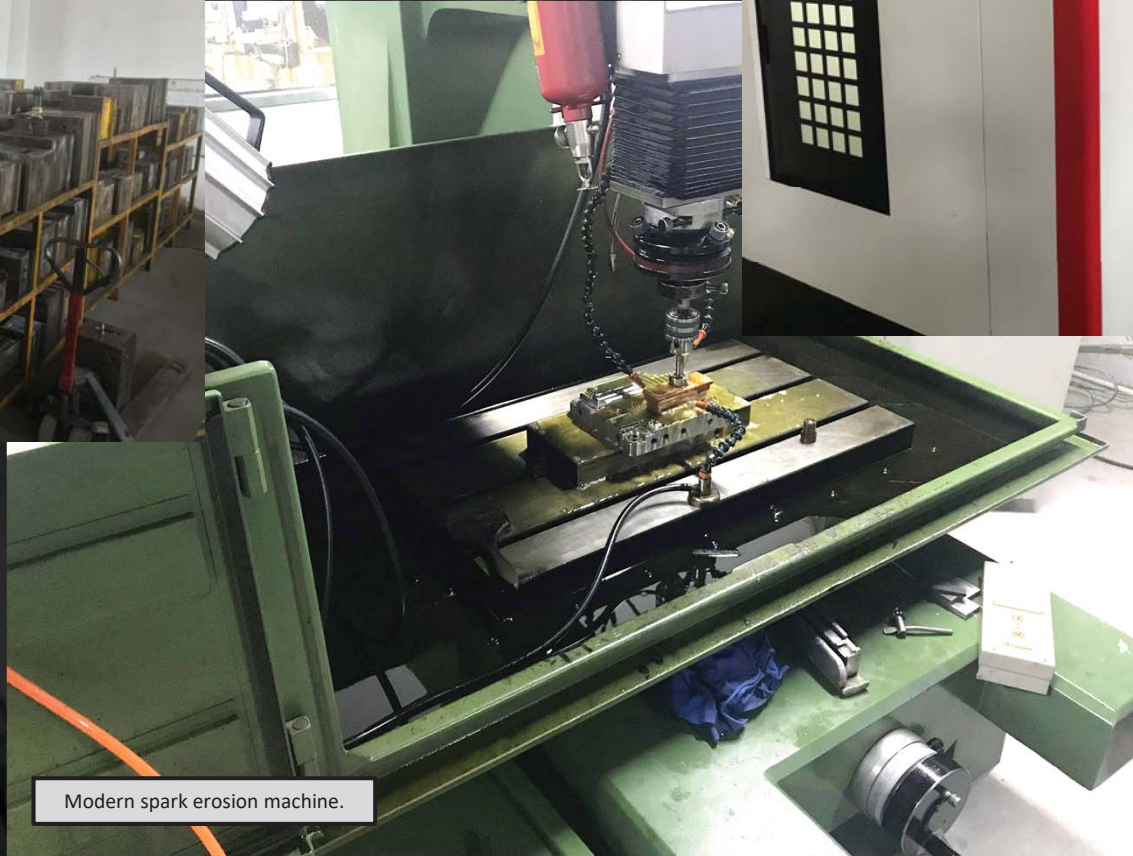
Tool inventory and warehousing.



Modern milling machine.



Modern spark erosion machine.



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Tool loaded and ready for action!



Factory layouts are clean and tidy.

As part of the audit process the factories were reviewed for their process control around raw materials. It was pleasing to see name brands such as Chimei, LG and BASF being used and it is easy for customers to specify the exact raw materials to be used if desired. Raw materials are also suitably maintained and dried prior to use.

A number of factories in China, across many industries work closely together. For example, and in regards to plastics molding, certain factories will have particular machines and they will have relationships with other factories with different machines. This allows our partners in China to offer a range of equipment that will meet most requirements. It is not uncommon for tools to be transported between these factories to ensure the correct blend of tool and machine is utilized.

Another point of interest was the use of low level robotics throughout the factories for improved efficiency. Historically it has been cheaper to use human labour in this regard so it was interesting to see investment being made in this area.



Raw material stores.



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A wide range of plastic moldings, rubberized products, metal inserts and different material utilisations was impressive to view. Overmolding and other techniques are also very much available. It was a very successful visit and great to see that Chinese factories are becoming more modern and collaborative in their approach to working with their customers.



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NZD versus AUD - AU\$0.915 vs NZ\$1.00



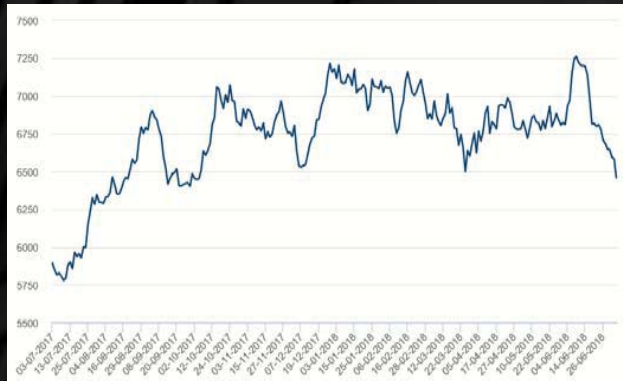
NZD versus USD - US\$0.675 vs NZ\$1.00



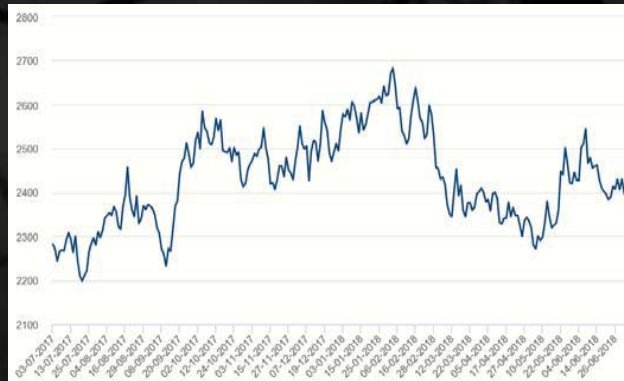
NZD versus EUR - EU\$0.595 vs. NZ\$1.00



Copper - USD6500 / tonne



Lead - USD2350 / tonne



Nickel - USD14000 / tonne

