



Quality Control

Quality Control is a very important part of our operation in China, we have developed our own quality control systems and infrastructure as part of our own parts production and sourcing operations. With over 10 years experience in China, we have found that by taking an 'active role' in the production and quality control of our parts, the benefits are substantial, no longer do we experience delays or disappointment, the products we receive are exactly what we want.

Playing an 'active role' in quality control allows us to customize the quality control programme to suit the product, to suit the requirements of the customer and the economics/price we require. Regardless of price, levels of quality control can and should be implemented. Finding the balance between cost and quality is important, as is executing your quality control programme in the most efficient and effective way. Our experience is such that we can produce items based on price, based on a specific quality standard or a balance of both. China's biggest advantage is cost of manufacturing, it is having the management and experience on the ground to harness this advantage and turn it into a longer term profit for your business.

We are regularly asked by Western and Chinese businesses alike, why does GTM CHINA implement its own quality control programme? Why doesn't GTM CHINA leave it upto the factories, they have their own quality control systems in place?

The simple answer is, factories orientated for export, have export sales history and good management will have their own quality control systems in place. However a shortfall in any part of their quality control system can still result in products that fall below your requirements, in the world of global trade, shortfalls like this can have costly consequences. Often we work with these factories to add our own second layer of quality control and monitoring of products they produce for us. This action allows us to implement a level of risk management and have confidence in the products we have purchased.

The end result of our efforts are easy to measure, instead of receiving products that just meet our minimum requirements or worse still are below our standards, we now receive products that exceed our quality requirements and our customers quality requirements. As a result of this change our customers have reported increased operational life of our products and satisfaction has increased. After customers have inspected the workmanship of our China manufactured products, they can not believe that the parts were built in China. The quality of our high end products shatter their perception that China only manufactured poor quality products that don't last.

We have proven time and again, that 'Made in China' doesn't have to mean poor quality. Boeing Passenger Jet Liners are an excellent example of 'Made in China' products being built to an extremely high quality standard, Chinese factories produce components for all Boeing Jet Liners including the 737, 747, 767, 777 and 787 models. China has an important, highly visible role on the 737 - building horizontal stabilizers, vertical fins, portions of the aft tail section, doors, wing-panels and other parts. China builds all the trailing edge wing ribs for every 747. China has an important role on the new 787 Dreamliner airplane,

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building the rudder, wing-to-body fairing panels and leading edge of the vertical fin. China is the first location for conversions for the new 747-400 Boeing Converted Freighter - with many parts and assemblies built in China and conversion, test, certification in China and delivery from China. Once again the key point is, China can deliver parts as per your requirements at a substantial discount to current suppliers. If you and your customers require a specific level of quality, then GTM CHINA will develop a quality control system and production plan for each product that will meet that requirement. The end result is you get products that meet your expectations and requirements.

It is important to remember that the level, depth and extent of the quality control programme you require will have an impact the final price we can supply your products for. There is a cost involved with quality production and quality control checking, the more intense the quality control programme, the higher the end price of the product, but the end result is products that can be supplied at a substantial discount to current suppliers.

To illustrate this, we have put together two examples of quality control programmes, requiring different levels of quality control and production process monitoring.

For example an engineering company building high tensile bolts for a critical project such as a road bridge may require GTM CHINA to develop an intense quality control programme in conjunction with specific standards set down by engineers and Standards Authorities. The Quality Standards set down may require a very detailed inspection process and a form of unit certification. These processes could include x-ray, ultra-sonic and ultra-violet examination of each bolt, metallurgical and load testing of selective bolts (sampling) and finally product dimensional examination of each bolt. The customer may require GTM CHINA to identify and label each part. Then we maybe required to catalog, file and remit the test data relating to each part.

In contrast a building products distributor that requires non-critical wall screws, may require a less intense quality control program based on a quality sampling program, were we inspect product at specific intervals looking at dimensional conformity and surface finish quality. The end result for both customers is products that meet their requirements and their customers requirements. We develop the quality control programme to met the requirements of the customer. In both instances the product will be exactly what the customer wants but delivered at a significant discount to locally produce parts and of equal or better quality.

We have been applying the same quality control systems and overall process management to our mining, quarrying, oil exploration and trike parts production operations. We use our experience to customize the quality control and production programme based on the each products requirements, the end result is a properly implemented quality control system that delivers lower cost products of equal or better quality. Once implemented our program consistently delivers, all this comes down to playing an active role in the parts production and the quality control process, someone needs to take the lead.

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We have also developed specific quality control programmes and strategies to deal with factories with developed product lines. For example, when we are purchasing turnkey, packaged, production line assembled electrical equipment we will apply a slightly different production and quality control programme. Often we will source products from manufacturers that are producing thousands of pieces per day for numerous customer around the world. In these circumstances we will still execute factory audits, audit sample products then quality control and check final product. Coming from a position of experience allows us to work closely with all manufacturers and enables us to ensure the product being supplied is as per the sample quality and specifications required of the customer.

Our Processes:

Our quality control checking processes depend on the quality control programme we develop. We can develop programmes ranging from intensive, unit by unit quality control checking down to cost efficient, effective sampling programmes. These programmes may require us to supervise the entire production process from the start of the production run until the goods are loaded into the container, or we may implement an end product quality control system where we inspect the products before loading into the container. The programme we develop will be based on the price, the quality requirements of the customer and the factory producing the parts. Regardless of the process used, GTM CHINA will deliver products to our customers as per the standards set and agreed.

For high quality products, our inspectors will review all aspects of the production process, starting with the materials used to produce the part/products. During every production run or production cycle, there will be Quality Control inspectors on site with a senior QC manager supervising each quality control inspector. Strict guidelines are set down as per the quality control programme, ensuring that all the critical aspects of the quality control plan are implemented.

Our quality control programmes are developed from our own experiences, these experiences come from the production of our own parts and of course our own 'hip pocket' experience. For example, we have learned if your manufacturer or supplier does not select the correct starting materials for your product, then the product will be flawed from the start. In this example, the customers will not see the effect of this action until the product is delivered or in use. As you can see it is important to have quality control systems in place at the most critical levels of the production process.

For high quality products, the process of examining and monitoring parts throughout the production process will allow the manufacturer to correct any issues before its too far down the process, saving time and money for all involved. We understand that fixing a production issue at the factory is far cheaper than having to fix the problem once the product has been shipped to the customer.



When we move to produce your order we will conduct some, all or a hybridization of the following quality control processes:

- **Factory Audit.**

Factory audits are done to ensure the manufacturer has the right equipment to do the job, ensuring the manufacturer has sufficient resources available for production and the right tools are available. We also make sure that we identify the critical locations/areas that our Quality Control staff are to be positioned based upon the level of quality control required or the process being undertaken.

Some factories outsource aspects of their production processes, such as chrome plating, anodizing, heat treating etc. It is important that we understand all the processes being undertaken outside the factory and we formulate appropriate monitoring systems. Depending on the quality level required, we may conduct off-site quality control monitoring of these processes. This adds another level of complexity and cost to the process as some processes maybe done in other cities or even provinces. However if this is required, we can do this and we have the foresight and experience to realize the importance of identifying all critical parts of the process, we will examine and evaluate the entire production process of your parts.

- **Production Plan and Quality Control Plan.**

Working with the customer, we identify the key requirements and qualities of the product to be produced, we then work closely with the factories involved in the production to develop a production plan. The plan will identify the processes undertaken and equipment to be used to produce the product or part. We work with the customer and the factory to set down binding production timetables and if necessary build a traceability programme/plan into the overall process (at an additional cost).

- **Start-up Quality Control.**

Quality control checking of materials used in the production of your parts or products is critical for high quality products. As detailed prior, we have come across situations where incorrect materials were used for production, only for the product to fail once installed by the customer. These situations will almost always lead to a product that is less than satisfactory, disappointed customers and much wasted time and resources.

Depending on the parts being produced and the quality standard, we may need to ensure and supervise the calibration of production equipment before the start of the production run. In the past this has included GTM CHINA checking that the correct dies or moulds have been loaded into equipment etc.



We also need to ensure that all the production systems and equipment are online, working or available for our production. In some circumstances, specific production equipment is specified by our customers and we need to make sure that equipment is used. Finally, we make sure that all our quality controllers have the correct tools, paperwork and we ensure we have access to the factory foreman and the factory management team to quickly rectify any problems we encounter.

- **In process Quality Control**

If we have implemented a 'start to finish' quality control programme, then once production is underway our strategically placed quality control staff will monitor and check samples of parts being produced. We will monitor the factory to ensure they are complying with our plan and not substituting, skipping or abbreviating any specific processes we have agreeded on. Depending on the parts produced and quantities, we may undertake vigorous quality control checking or we may apply a more conservative sampling programme.

We also work with our suppliers to identify their exact quality requirements, if necessary we will remove samples throughout the production process, label and catalog these parts in various stages of their completion and preserve these samples or remit these samples to our customer. This level of quality control is typically tied to a specific standard set down by higher authorities and is typically reserve for critical, high quality products. China is more than capable of delivering the quality required, but the right processes must been developed, implemented and adhered to.

- **Final Quality Control – Finished Product**

With the product finished, our quality control process will work through new checklists, with new guidelines. The guidelines are all based on the product and our customers requirements. Depending on the quality control programme and our customers requirements we may even be required put some samples through an operational test, send specific samples out to external laboratories or testing facilities for testing. In some instances we may even test every unit to ensure they are operable and meet operational standards. Once again, quality control programmes are developed based on the customers requirements.



- **Quality Control information**

All quality control information is collated and depending on the programme requirements, the records can be digitized. We will then retain this information or make it available to our customers for their own quality control records.

- **Conclusion**

The parts/products are loaded into the shipping container and shipped to the customer for distribution or use. We survey our customers to identify any issues relating to production, review warranty claims and work with our customers to implement any modifications they make to their products.

At the end of the entire process, our goal is to deliver to the customer what they have ordered, in the condition they have ordered it.

The Goals, The Execution, The Outcome!

Together with GTM CHINA you have a partner in China that understands what western companies and their customers require. We are available 24/7 and most importantly the person at the other end of the phone or email understands manufacturing processes, terminology and what you require.

We believe in long term relationships, we will work hard to deliver products that meet your expectations, thus everyone can enjoy and prosper from the relationship. GTM CHINA is a partner you can trust, just look at the products we produce for our own use, we stand behind our "made in china" products. We produce high end three-wheel motorcycles/trikes that are packed with custom components manufactured in China. We also produce parts and products for mining, quarrying and oil exploration operations. These parts are going into remote locations, in extremely abrasive/hard operating conditions where product failure is not an option.

Our products go head-to-head against North American and European manufactured products, our customers can't tell the difference in quality. The number 1 difference is the price, a difference they truly appreciate and notice.