

Tokai Engineering expands its in-house measurement capabilities with Faro



Most of Tokai's customers are automotive industry players - amongst them JBML, Caparo and Krishna Maruti.

All good manufacturers fuss over quality control and quality assurance. Maintaining high standards and ensuring that sound processes are in place is of utmost importance because it helps get things right each and every time. This emphasis on quality is perhaps even greater when manufacturers supply products to other businesses that also maintain high standards for their output. And Tokai Engineering, a Manesar-based Indian firm, is one such manufacturer who's taken great lengths to build and maintain a relationship

of trust with its customers.

Established in 2006, Tokai is a technology-based company that manufactures precision dies, jigs and fixtures. As an example of the company's commitment to maintaining high standards and quality, Tokai obtained the 'ISO 9001:2008' certification by TÜV SÜD within 3 years of starting operations. The bulk of Tokai's customers are from automotive industry, and amongst them are well-established firms such as Jay Bharat Maruti Ltd. (JBML), Caparo and Krishna Maruti.



Tokai manufactures welding accessories, equipment, tables and fixtures in its Machine Shop and Tool room facilities.

Tokai spares no expense when maintaining its reputation of being a trusted partner of choice. The company's approach to satisfying each customer's high requirements is by first strengthening its capabilities. Mr. Rajesh Khanna, Director of Tokai Engineering shared, "Quality is delivered only when you have sound infrastructure. We equip our manufacturing facility with the most advanced technology equipment available in order to deliver the best." Part of Tokai's state-of-the-art manufacturing unit is a high precision, portable coordinate measurement machine (CMM) - the FaroArm. This allows Tokai to verify that its products are within tolerance, with high accuracy and confidence

Complex Metrology Needs

As a specialist toolmaker, Tokai supplies a wide variety of welding accessories, equipment, tables and fixtures, complete with hydraulics, pneumatics and programmable logic controller (PLC) systems. Armed with extensive knowledge of the industry, Tokai also helps its customers to automate existing production lines and perform "fail-safing" work (otherwise known as Poka-yoke) to improve on existing fixtures.

With the projects that Tokai undertakes, inspection work and dimensional calculations need to be performed on its

products before delivery. Additionally, some tasks require reverse engineering in order to obtain results. The sizes of objects to be measured can vary significantly, ranging from 500mm to 3m.

Prior to owning the FaroArm, Tokai handled all basic metrology needs in-house, mostly with hand tools, and farmed out complex jobs to vendors. "In the past, we used to outsource the more complicated measurement items," revealed Rajesh. "Not only was it costly for us, it also meant longer production schedules because we weren't able to fully anticipate results and timelines."

Motivated by the need for more control of time and costs, Tokai Engineering went in search of a better solution.

A Better Alternative

When FARO first carried out an on-site demonstration, Tokai was amazed by the full suite of capabilities that the FaroArm offered. The FaroArm high levels of precision and user-friendliness meant increased productivity for Tokai in multiple ways. Rajesh shared, "We instantly realized that with the FaroArm, we could save time from doing complex measurements in-house and complete inspections more quickly in general. Having seen how user-friendly the FaroArm and its software were, we were certain that our staff could be trained in no time too."

Tokai Engineering decisively purchased the 8-ft Faro Platinum Arm in 2009. Since owning the FaroArm, Tokai has seen many positive changes. "The first major benefit we enjoyed was eliminating the lengthy process of outsourcing our measurement jobs," said Rajesh. "That gave us more control and shortened our production schedules, which ultimately benefits our customers."

As the FaroArm replaced traditional hand tools, the higher accuracy of inspections and dimensional calculations also allowed Tokai to provide tighter tolerances on their jigs and fixtures. In addition, as a portable device, the arm could be deployed right where production is done, withstanding harsh conditions yet still providing precision measurement results. This is in contrast with fixed CMMs that require a controlled environment in order to function accurately. "The shop floor is typically very dusty and humid," shared Rajesh. "Despite temperatures of 30-40°C, the arm always gave accurate readings of the parts measured."

In particular, staff at Tokai appreciate the infinite rotation that the 7-axis FaroArm provides. "It is easy to analyze complex components as the FaroArm can rotate to reach awkward angles," stated Rajesh. "The versatility of movements makes it a breeze when taking measurements. FARO's solution continues to meet our measurement needs perfectly."

Also valued deeply is FARO's after-sales service that continues to help Tokai maintain

Harsh conditions of the shop floor pose no difficulty to the FaroArm, which can be deployed anywhere.



Taking precise measurements of small components with the FaroArm

its high quality standards. The presence of local support by FARO minimizes any downtime that may surface in daily operations. What Tokai found in FARO was more than a mere one-time solution. Rajesh concluded, "We value the continuous effort that FARO has taken to ensure that we are able to maximize usage of the FaroArm in the production of our high quality products. Just as Tokai Engineering constantly takes great lengths to build and maintain a relationship of trust with our customers, FARO adopts the same approach with us. We are delighted to have found a trusted partner supplier in FARO that has the ability to deliver long-lasting results where it matters."

About Tokai Engineering Pvt Ltd

Tokai Engineering Private Limited is an ISO 9001 : 2008 certified company engaged in manufacturing and supplying of precision Dies, Jigs and Fixtures. We are a technology based company having the Machine Shop and Tool room facilities. With our years of experience in this field, we manufacture different types of welding accessory, MIG welding accessories, MIG welding equipment, welding tables, welding screen, MIG welding machines, welding Jigs, SPMs, and all types of fixtures with complete Hydraulic, pneumatics and PLC systems. We have been undertaking projects for complete automations of the existing lines in order to minimize worker's fatigue and maximize the productivity.

For more information, please visit www.tokaiengineering.com

About FARO

FARO is a global technology company that develops and markets computer-aided coordinate measurement devices and software. Portable equipment from FARO permits high-precision 3D measurement and comparison of parts and compound structures within production and quality assurance processes. The devices are used for inspecting components and assemblies, production planning, inventory documentation, as well as for investigation and reconstruction of accident sites or crime scenes. They are also employed to generate digital scans of historic sites.

With FARO, 3D measurement and documentation needs can be fulfilled confidently. As a pioneer and market leader in portable computer-aided measurement, FARO consistently applies the latest advances in technology to make its industry-leading product offerings more accurate, reliable, and easy to use. The focus is on simplifying workflow with tools that empower customers, thereby dramatically reducing the on-site measuring time and lowering overall costs.

Worldwide, approximately 10,000 customers are operating more than 20,000 installations of FARO's systems. The company's global headquarters are located in Lake Mary, Florida, with its European head office in Stuttgart, Germany and its Asia-Pacific head office in Singapore. FARO has branch locations in Japan, China, India, South Korea, Thailand, Malaysia, Vietnam, Canada, Mexico, United Kingdom, France, Spain, Italy, Poland, and The Netherlands.

For more information, please visit www.faroasia.com

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This customer's results depend upon its unique business and environment, the way it used FARO products and services and other factors. These results that you read from the article may not be typical; your results may vary.

The logo for FARO, featuring the word "FARO" in a bold, blue, sans-serif font. A horizontal line with a circular end on the right side passes through the letters.

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