

QIT measures success with Zeiss CMM

by Jerry Cook - Editor

The Zeiss PRISMO coordinate measuring machine shown here is helping Quality Inspection Technologies to diversify into new markets.

A recently installed Zeiss coordinate measuring machine (CMM) is playing a critical role in helping Quality Inspection Technologies (QIT), Beamsville, ON to diversify away from its traditional automotive market into a variety of new market sectors.



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“Automotive has definitely been one of our markets although the ratio has been slipping,” says Bill Reilly, QA/Technology manager with QIT. “That was one of the reasons why we bought the Zeiss CMM to get into other markets such as aerospace, nuclear, power generation, and others.”

QIT (qualityinspection.net), which began operations in 2000, is a third-party inspection laboratory that is Laboratory Accreditation Bureau accredited to ISO/IEC 17025. QIT provides a wide range of inspection and measurement services to industry including contract inspection services (first article inspection, prototype inspection, lot inspection, capability studies); reverse engineering, gauge calibration and repair; turnkey gauging solutions; and more.

Two years ago, in order to further expand the range of services it offers, QIT launched a sister company, Elite Tool & Gauge, which manufactures fixtures and gauges for CMMs as well as variable and attribute gauging solutions. QIT and Elite serve a variety of markets including automotive, die casting, plastics, digital media, mould makers, tool and die, aerospace, precision machining, gauge and fixture, foundries, and medical. QIT and Elite occupy two facilities totalling 4,000 sq. ft.

Given the well-documented problems facing the Canadian automotive industry and the drop in automotive-related work, QIT’s desire to diversify into new markets is not hard to understand. As a result, in order to assist with its diversification efforts, QIT recently installed a Zeiss PRISMO Navigator HTG CMM. The Zeiss CMM was supplied by Elliott-Matsuura Canada Inc., Oakville, ON (elliottmachinery.com).

The need for improved inspection and measurement accuracy and speed to serve potential new markets such as aerospace was the driving factor behind the installation of the Zeiss CMM, says Wayne Jordan, general manager with QIT. “To get into these other markets such as aerospace you have to have more accurate machines for measurement and inspection. With the CMMs we already had and, now with the Zeiss CMM, we cover approximately 90% of the market on (software languages for) CMMs.

“Previously, some of our existing customers already had Zeiss machines but we couldn’t do any programming for them. Often, customers won’t have time to do programming in-house so they come to us to write the program for them. We were missing that third major chunk of

the market which is the Zeiss CMMs. Installing the Zeiss has made us a more rounded company in terms of selling a service,” says Jordan.

Adds Reilly, “Markets such as aerospace are already fairly heavy Zeiss users. That is where many Zeiss CMMs already are in industries such as aerospace because of the (high accuracy) inspection needs that they have. We also create programs for turnkey packages for customers. As a result, we can make a customer a CMM program, a holding fixture, and a complete turnkey package for their CMM. With the installation of the Zeiss CMM, we can now program in all of the three main software languages (Calypso, Cosmos, PCDMIS).”

The Zeiss PRISMO Navigator CMM offers a measuring range of 900mm (X) x 1200mm (Y) x 700mm (Z). The Zeiss PRISMO CMM features Navigator sensor technology that provides maximum speed and accuracy. It enables continuous scanning while providing multiple point (thousands of points) scanning for greater accuracy and speed compared to a single-point CMM. Consequently, the Zeiss PRISMO is ideal for high tolerance applications in such sectors as aerospace, automotive, medical, and more.

Significantly improved accuracy is only one benefit that the Zeiss CMM has provided to QIT, notes Reilly. “Previously, a touch probe CMM that we had offered us accuracy of plus or minus 2 or 3 microns. However with the Zeiss CMM and its VAST Gold (active measuring probe) I can measure down to .6 micron accuracy and .3 micron repeatability. We are probably achieving five or six times the accuracy and repeatability with the Zeiss compared to our existing CMM. The Zeiss has added to our overall capabilities and our accuracy is now much tighter.”

Installing the Zeiss CMM has had a major impact in allowing QIT to diversify into new market areas and open up new opportunities for business, says Jordan. “The Zeiss machine has opened up the marketplace for us.” Whereas previously about 90% of QIT’s work was automotive-related now the company’s business comprises 50% automotive, 25% aerospace, 20% nuclear, with the remainder split between various market segments.

Reilly also feels that the Zeiss CMM has made a major impact on QIT’s mix of business. “The new CMM gives us a niche in which we are (one of) the only inspection labs in Ontario to offer Zeiss inspection, scanning, and programming.”