ABERLINK
Innovative Metrology

Case Study

Subcontract Case Study 01/2017

Company: Holtex Engineering Solutions

Xtreme

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The remarkable sales success of Aberlink's recently launched Xtreme CMM has justified the company's contention that industry needed a cost-effective, robust Coordinate Measuring Machine that could provide accurate measurements at the point of manufacture. In addition to satisfying the needs of accurate shop-floor measurement, the speed of Aberlink's advanced new CNC driven CMM allows parts to be inspected within machine tools' cycle times.

Typical of the early users of the unique Aberlink machine is Holtex Engineering Solutions, a precision engineering firm based in Holmfirth, West Yorkshire. Having been attracted by the publicity related to the CMM, Holtex Engineering Solutions Director, Ben Robinson requested a demonstration.

In anticipation of high levels demand for Xtreme demonstrations, and given that many potential users are unable to visit Aberlink's regional demonstration facilities, Aberlink produced a number of small, portable versions of the CMM. These quarter size machines allow Aberlink Sales Representatives to carry the technology demonstrators in their cars, to visit potential customers' premises and to prove the outstanding capabilities of the Xtreme CNC CMM on potential customers' own parts. The 'plug and play' nature of the Xtreme demonstration units make any visit and demonstration a very quick process.

Ben Robinson explained. "We manufacture a large variety of high-end, high-precision complex components, as one-offs and in small batches. Previously we have used manual metrology equipment, although a growing order book and rising pressure on our quality control facilities meant that we needed to automate as many of our inspection tasks as possible. In addition, the demanding nature of our work meant that we needed a CMM that would provide the required levels of precision.

"Though we considered other brands, we were aware of Aberlink's excellent reputation and had also had recommendations from several Aberlink users that we know. Although, as we were too busy to travel to an Aberlink facility for a demonstration, it helped that our local Aberlink representative was able to bring a Xtreme demonstration unit to our premises.

"A thorough in-house demonstration was able to prove the Aberlink CMM's capabilities and to convince us that the Xtreme was perfect for our needs, therefor we were happy to place an order.

"Now located on our shop floor, the Xtreme CMM has proven very easy to use, extremely accurate, and due to its CNC nature, extremely fast. As our machine operators have responsibility for the quality of their own output, they have quickly mastered the use of the Xtreme and make regular use of the CMM. Typically our personnel will use the Xtreme to measure fist-offs before commencing on production runs and to make occasional in-process check.

"Our new Aberlink CMM is also used for final inspection tasks by our quality personnel. As we have written programs for repeat work, we are now able to load multiple parts on to the machine, recall the applicable program and to perform a fully automated final inspection routine.

"The use of our new Aberlink Xtreme has increased our inspection precision capability and speeded-up both our production and inspection routines. Our new CMM can be seen as a commitment to help preserve our reputation for the quality of our work."

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The Xtreme CMM demonstration unit.

The Aberlink Xtreme CMM was designed with a novel non-Cartesian structure and uses linear motors and mechanical bearings, this advantageous arrangement ensures that it maintains its accuracy at very fast measurement rates and does not suffer from the accumulative inaccuracies that occur in conventional 3-axis Cartesian arrangements.

As the inexpensive Xtreme requires no compressed air and has the shortest learning curve of any equivalent system - just one day without prior CMM experience - the robust Xtreme represents an ideal 'plug and go' solution. In addition, the CMM's integral temperature control function ensures that accuracy is maintained even when the surrounding ambient temperature is not controlled.

Ensuring greater user productivity and profitability, the Xtreme utilises Aberlink's renowned 3D software. A welcome bi-product of any Aberlink 3D inspection routine is that a simultaneous picture of the measured component is created on the computer screen. Dimensions between the measured features, mirroring those that appear on the component drawing, can be simply picked off as required. In essence this 'smart' software represents an intelligent measuring system that is able to automatically recognise and define the various features being measured. Aberlink 3D is the easiest to use and most intuitive CMM software currently available.

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