ABERLINK
Innovative Metrology

Case Study

Subcontract Case Study 07/2015

Company: Impress Group

Zenith too

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Based on two sites in the North East of England, the Impress Group is one of the UK's leading sub-contract engineering services providers. Since Impress' inception in 1997, the company has continually expanded its range of capabilities, allowing it to diversify and to offer what is now a truly comprehensive 'one-stop-shop' sub-contract service.

Over nearly two decades an expansion of the company's skilled workforce and continual investment in the best available technologies has resulted in significantly increased production capacity. In addition to high quality CNC milling and turning, the Impress Group's broad range of manufacturing activities now include pressings, CNC sheet metal forming, tool engineering, specialised welding services, fabrication, laser cutting, fibre optic laser cutting and wire erosion services.

To ensure that the Impress Group retains its hard-won reputation for the quality of its output, the company has continually matched its investments in the latest CNC Machine Tools with the purchase of the best available quality control technology.

Recently, an expanding order book, increasing requests for the production of larger parts and a rising number of components passing through the company's busy QA department, motivated a search for an advanced Coordinate Measuring Machine (CMM). The chosen CMM needed to have the required levels of precision for the measurement of extremely accurate machined components and also the capacity to accommodate large fabrications.

Jason Young Commercial Director Explained. "We have developed our internal systems to ensure that the components we supply are to world class standards. In addition to in-process inspection, components go through rigorous final inspection routines prior to despatch. Operating within our UKAS, ISO, British Standards approved, quality system, our QA department ensures the continued high quality of our output.

"Higher levels of machined component production and the need to measure ever larger fabrications prompted us to look for a CMM that had ability to measure one-off large parts and that could also inspect multiple machined components in a rapid fully automatic mode.

After considering other similar capacity CMMs, we decided that the 1.5 x 1 x 0.8 metre Zenith too from Aberlink was the ideal CMM for our needs. Not only did the Zenith too have capacity to accommodate our fabrications, it had the speed to keep-up with the production of machined components by accurately measuring multiple parts in a CNC mode.

"As we were aware of the excellent reputation of Aberlink CMMs and impressed at the range of advantages that the Zenith too had over comparable CMMs, we were pleased to learn that the Aberlink CMM was also the least expensive of the machines we considered.

"Following a short training course, our QA personnel quickly mastered the new Zenith too's controls and software. Now, in addition to manually measuring a single part on the CMM, having written and saved measurement programs, our operators are then able to recall them when required, load numerous small parts onto the machine and quickly measure them in a fully automatic CNC mode.

"If required, on completion of a measuring routine, the Zenith too can automatically generate a variety of inspection reports, with options for dimensioned graphical representations in tabulated report formats.

"Our Aberlink's Zenith too has proven to be an excellent addition to our QA department, it has considerably speeded-up the throughput of components in our Quality Department and further improved our accuracy capability."

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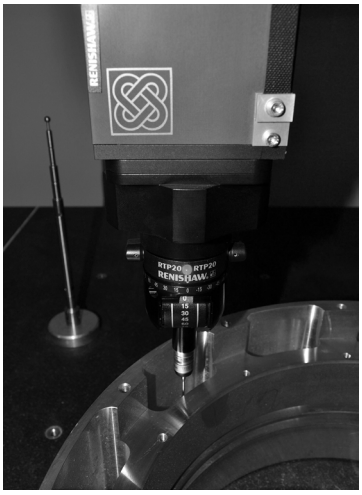

Manufactured by Aberlink Innovative Metrology, the largest UK owned Coordinate Measuring Machine manufacturer, the large capacity Zenith too range consists of 10 machines with XYZ capacities from 1000x1000x600mm –1000x3000x800mm.
The range's cutting edge, all aluminium construction, advanced drive design and raised guide-ways ensures that despite their generous measuring envelopes, the machines' extremely low inertia characteristics guarantees high operational speed. Impressive accuracy and repeatability figures are further aided by the Zenith too's measuring structure being completely independent of the machine's granite surface table.
Although the Aberlink series is perfectly suited to use within environmentally controlled inspection departments, it is on the shop floor where the Zenith too range's low thermal mass and extremely robust characteristics come to the fore, enabling the accurate measurement of large components to take place nearer to their point of manufacture.

The impressive hardware of the new Zenith too is complemented by the range's intuitive Windows based software. A welcome bi-product of any Zenith too CMM inspection routine is that a simultaneous picture of the measured component is created in real-time on the operator's computer screen. Dimensions between the measured features, mirroring those that appear on the component drawing, are then picked off as required. In essence Aberlink's '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 CMM software currently available, so much so, that a complete novice is usually able to perform relatively involved measurement routines after just 5 minutes training.

Aberlink supply a complete Zenith too 'turn-key' package, including a comprehensive training programme, a wide choice of motorised or manual probes, Aberlink's celebrated 3D software and not least the latest generation of high speed custom controllers, that are capable of generating true, three dimensional contours.

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