

IMI Components turns to EdgeCAM for fast and accurate quotations and order fulfilment

What do you do...?

...when your Operations Director says, "This company needs to improve its turnaround time on quotations and needs to base them on accurate information." Simple: you do what IMI Components did, and turn to EdgeCAM, the leading Computer Aided Manufacturing (CAM) system from Pathtrace Engineering Systems. IMI Components is using ensure that customer quotations are accurate and that once won, orders can be executed on time and generate the expected returns.

IMI Components Limited is a 160 - strong company within IMI plc. Its product range includes high precision machined and formed components, mechanical assemblies and welded fabrications used in very demanding applications where quality, delivery, performance and price competitiveness are paramount. Over the last six years, the company has doubled its staff and trebled the size of its manufacturing facility.

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Time is money

IMI Components converts customer-supplied part drawings into finished components by creating CNC programmes to machine the required parts as efficiently as possible to the required quality. With batch sizes in excess of 500, and with highly-complex phased machining cycles of up to four hours, the scope for cost over-run and wastage from CNC programme inefficiencies and errors is high,

edgeCAM[®] in Action

especially given the cost of the special materials generally used in its products. Customer quotes must be based on an exact knowledge of manufacturing set-up, machining and assembly process times, for time is money. Graham James, Technical Manager, wanted an easy way of creating and evaluating accurate, proven and trustworthy CNC programmes at the quotation stage without incurring high and irrecoverable cost on machine set up and sample production.

Getting manufacturing times right

In 1998 IMI evaluated a range of well-known CAM systems. Potential suppliers were asked to prove their capabilities on a real live part rather than a test piece. Pathtrace passed with flying colours and were selected as the supplier. Now all 16 of IMI's lathes and their 8 machining centres are connected to EdgeCAM. The configuration includes three seats of EdgeCAM with turning, multi-axis milling, C-axis turning and simulation. Training was carried out at Pathtrace's Wakefield facility. Tim Wakeman, IMI's Product Development Engineer, comments, "Training was very good. We could not have used EdgeCAM to best advantage without it. It got us going on the right track. And since we have just upgraded to EdgeCAM Part Modeler and EdgeCAM Solid Machinist we will be back for more." IMI implemented EdgeCAM progressively over a period of several years but now, all new parts sets are manufactured using EdgeCAM. However, existing part programmes have been left as they are, since they are already working satisfactorily.



A real time-saver

Did IMI make the right decision? A resounding 'yes' comes from Tim Wakeman. He notes, "I can now turn a quote round in days, not weeks. Times and costs are accurate. The key is getting manufacturing times right, and with EdgeCAM, we do just that." According to Tim Wakeman, other benefits include, "...reduced CNC programming times. We used to create and edit programmes off-line then take them to the machines to test. Now we do it completely in EdgeCAM including simulation, and before cutting metal.

We have reduced the number of test runs and we are able to produce samples without impacting significantly on available production time. There are no strange moves, no collisions. With EdgeCAM, we know we can cut it." When asked which particular aspect of EdgeCAM was most important to IMI, Tim Wakeman replied, "All of it. We are very pleased with it. If anything, it's the simulation. That, together with very accurate cycle times means that our quotes are accurate, too. The part programme manipulation is a godsend. For example, if you need to modify a series of identical holes, you only need to change one, and they are all changed. Compared with how we used to have to do it, it is a real time-saver." The 'rationalise' function comes in for praise, too, since it optimises sequences, reduces the number of tool changes and the time spent changing tools. Providing excellent software, though, is just part of the equation. IMI have found Pathtrace to be, "...very flexible. We have a good relationship and excellent support from the help desk."

No more worries

Now that Tim Wakeman is an experienced user, how would he respond to others looking for a CNC solution? He says, "I would show them the parts assessed with EdgeCAM and tell them the time saved, and that I don't have to worry about programmes any more. Now I can concentrate on development."



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