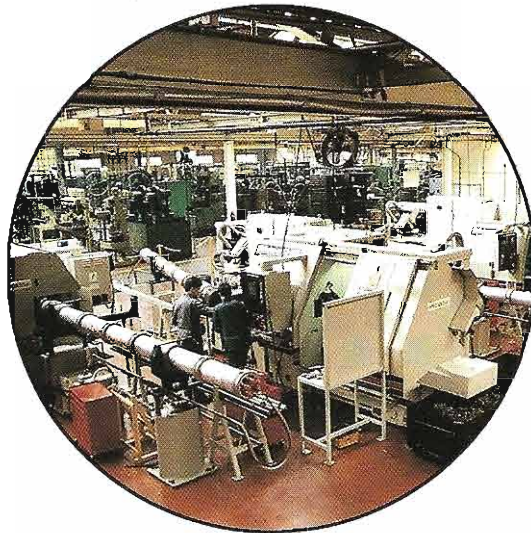


WICKMAN CNC



IN ACTION



The WICKMAN CNC LATHES DIVISION has recently completed an order for a turning cell of six machines for A.P. LOCKHEED.

The order was won against strong international competition. WICKMAN CNC provided both the technical ability to produce parts to the high specification set by A.P. Project Engineers and an acceptable commercial package.

The general requirements of the A.P. tender were to supply turning centres for complete component manufacture, with bar feed units, capable of producing a wide range of components with milling and cross hole drilling details. Other important requirements were thread rolling, surface finishes of 0.48 Ra and tolerances of .025mm. Due to the large number of different components and the frequency of 'change-overs', tool setting probes and the ability to input programmes from a remote source were also a requirement. This effectively meant that each machine had to operate within a DNC system and that part of the NC programme had to include both the input of offsets and an automatic probing cycle. Finally, machine acceptance would be based on producing a total of twenty-four components within SPC parameters. A pipless part-off was also an important feature of the project.

As the above installation was to be installed into a division of A.P. LOCKHEED which had no depth of CNC machine tool experience, the technical back-up and training strengths of WICKMAN CNC were also an important factor in their choice of supplier. WICKMAN CNC and A.P. Engineers liaised closely in order for the project to be brought to a successful conclusion. This included component design rationalisation cutting tool rationalisation, DNC systems, CAM systems post-processor requirements and many more matters which at the conclusion of such a contract decide the efficiency and effectiveness of the project.

In order to comply with all the parameters that A.P. issued, WICKMAN CNC undertook to supply a mix of both 2 axis and 4 axis CNC Turning Centres. Each machine had to be capable of producing the complete range of components. This resulted in a typical machine specification capable of 52mm bar capacity, driven tool facility, spindle positioning, 12 station turrets, 18/22 kw main spindle power, tool setting probes, pipless part-off attachments, bar feed units, DNC links, common tooling packages and component ejection to a conveyor.

After considering their component range and quantities, orders were placed for four, 2 axis turning centres and two, 4 axis machines. With the facility on the 4 axis machines to simultaneously mill and drill using both driven, upper and lower turrets, the more complex parts could still be machined on the 4 axis units in approximately the same time as the less involved components on the 2 axis machines. At the same time, however, should necessity demand it, those more complex parts could still be produced on the 2 axis machines, giving A.P. great flexibility in response to short lead times.

Within six months of A.P. placing the order, all six machines were installed and running at the Leamington plant with 24 components 'passed off' to A.P. requirements. Training of A.P. personnel had also been achieved, although this is an on-going requirement as A.P. strive to increase and widen the skills of their workforce.

More recently, a requirement for an additional CNC Turning Centre occurred. A further machine of a very similar specification was needed to manufacture a single component to a high degree of quality. With the experience of the previous project, WICKMAN CNC Engineers were able to supply a solution very quickly, utilising the existing tooling used on one of the 2 axis machines already supplied. Within a short period, a seventh machine was delivered, tooled to manufacture the new component. In this time special tooling was designed and manufactured, machine modifications were completed and component pass-off to SPC requirement achieved.

In conclusion, all seven machines are now installed and running smoothly, giving A.P. LOCKHEED a C.N.C. Lathe Production Facility able to meet the demands of the 1990's.



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