



# High-tech route to bridging the skills gap

**You don't have to have to be one of the big boys, with lots of financial clout, to commit yourself to training apprentices in-house**

**T**he in-house training of apprentices in the UK is typically the domain of large OEMs who have the financial support to provide the necessary infrastructure.

However, High-Tech Engineering is setting an example to small and medium sized businesses through its commitment to apprentice training.

Steve Tickner, High-Tech Engineering's managing director, is determined to protect his business from the chronic skills shortage here in the UK. He is committed to training all of the skilled employees that the precision sub-contractor could need. However, what makes this strategy more interesting is the fact that, of the company's 28 employees, 11 are apprentices. "We had to ensure a continuous flow of multi-skilled employees to secure the future of the business," says Tickner, "and the only way we could see of achieving that is to train them ourselves."

Although the aim of the firm – based in Houghton Regis, Bedfordshire – is for



Photographs: Charlie Milligan

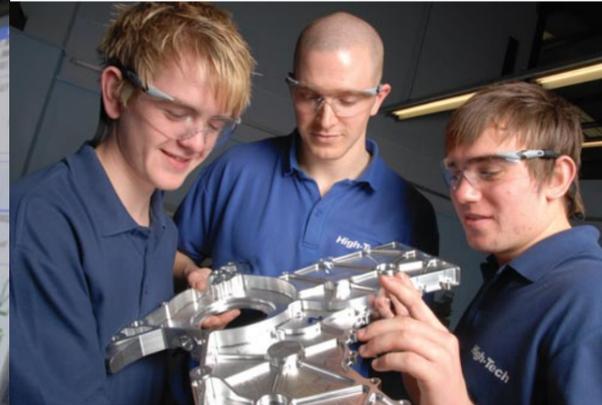
**Apprentices are not given meaningless tasks but involved in the manufacture of the more simple production jobs on longer lead times**

**Left, the company was the first precision engineering firm to win an SC21 Bronze award**

every employee to have been through the company's Training Academy within the next four years, he acknowledges that not every student will be able to benefit from a job at High-Tech when their five-year apprenticeship ends. However, the training is being recognised by local education departments, businesses and the sector skills council Semta in Bedfordshire.

For example, when one trainee left to

NVQ assessor from Aylesbury Training College, he has worked alongside Tickner to create a training programme tailored to produce the highly skilled CNC machinists required for the company's expansion plans. This also dovetails perfectly with the company's overall quality and operational standards, and active participation on the Aerospace SC21 (Supply Chain 21<sup>st</sup> Century) Improvement Programme. Tickner is proud that High-Tech



Engineering was the first precision engineering company to receive a Bronze SC21 award, in September 2008.

SC21 and the Training Academy are all part of the bigger picture for High-Tech Engineering, which knows that

take up a position at a Formula One team, High-Tech was delighted to receive a letter from the senior manufacturing manager, praising the high quality of training it had provided. It also gave a glowing commendation of the High-Tech Engineering initiative and refers to the possibility of the company becoming a future training partner for the team.

The Training Academy is an extremely serious aspect of the company's business plan – costing around £90,000 per year to run – and represents a significant investment for a family-run concern. As any other business investment, it expects to see a return, which is a steady stream of locally based, multi-skilled engineers. A dedicated room in the academy contains a Haas CNC machining centre and CNC lathe. Upstairs is a classroom environment where apprentices undertake theoretical work, as well as learning the intricacies of programming, using two Haas CNC control simulators.

The investment also includes the appointment of John Chopping as the academy's training instructor. An ex-

it has constantly to develop and improve, and that the encouragement of new recruits and development of skills is crucial to that strategy.

Unlike traditional training centres, High-Tech Engineering takes a very practical approach. Following initial training, apprentices become part of the day-to-day production environment – an approach that Tickner sees as having numerous advantages. "Once we are certain apprentices are confident in their own abilities, I see very little sense in continuing to present them with meaningless training tasks to complete. For example, rather than have them producing test pieces as a gauge of their ability, we identify simple production parts on longer lead times for them to produce under our normal manufacturing procedures. This way, they understand the need to produce components correct to drawing, with all the associated inspection checks, etc, that are essential for manufacture."

They realise the importance of what they are being asked to do, a genuine work ethic is also instilled in them and, with the correct supervision in place,

they contribute directly to the cost of their training.

On account of some of the challenging materials being cut at High-Tech Engineering, the academy also has the advantage of being able to call on the extensive knowledge of its suppliers, such as cutting tool specialist WNT (UK). A case in point is Duncan Slough, the local technical sales engineer for WNT (UK), who has a very close working relationship with High-Tech Engineering. He is frequently to be found on the shopfloor, offering the benefit of his extensive cutting tool knowledge, particularly concerning aerospace materials that are a common feature of the components being machined. This knowledge is cascaded into the Academy and is of real benefit to apprentices as they become involved with the latest cutting tools and techniques.

Having started the Training Academy to develop highly skilled CNC machinists specifically for their own purpose the company has now, with the help of Semta and awarding body EAL, been approved to deliver NVQs, which is a reflection of the quality of the training being delivered. This excellent training record was also made known to local MP Andrew Selous, who has been instrumental in involving the local authority, along with the Learning and Skills Council, in inviting High-Tech Engineering to become part of a consortium bidding to deliver the new Engineering Diploma for 14-to-19 year old students in Bedfordshire.

"The Engineering Diploma is the best thing I have heard of in a long time," enthuses Tickner. "For us, it can identify students who, at the age of 14, show a particular interest in the subject. More importantly, the diploma will enable us to identify young people who are genuinely interested in engineering as a career. In return, we are able to give them the training they need to succeed and provide a direct route into full-time employment, which is fantastic. Our plans include a possible 3000 ft<sup>2</sup> extension to the Training Academy, which we will achieve with the support of suppliers such as WNT (UK)."

