

## Case Study

### Trumpf offers road to automation

To help combat a diminishing pool of reliable labour in the northwest of England, Leyland-based subcontract fabricator Main Road Sheet Metal has ordered an automated TruLaser Tube CNC laser tube and profile cutting centre from Trumpf. The new machine will complement its Trumpf BendMaster automated bending cell, installed in September 2007.

Since its formation in 1981 Main Road Sheet Metal has enjoyed considerable growth, today occupying 80,000 sq ft across three sites in Leyland, Lancashire, from where the business turns over in the region of £4 million.

Although founded on a base of traditional sheet metal fabrication expertise, the company recognised a worrying industry trend in recent years. "It was becoming hard enough to find labour anyway, but finding reliable labour has proved very difficult in the past couple of years," says Managing Director Graham John. "It became clear that automation would make good sense."

Already a well-equipped Trumpf shop, the ISO9002-accredited company saw no reason to look elsewhere for an automated press brake, opting to install a Trumpf BendMaster automated bending cell in the autumn of 2007. The cell comprises a TruBend CNC press brake tended by a robotic sheet manipulation unit, both of which are operated by a single control and programmed jointly with TruTops Bend software.

"The cell has given us so many benefits," says Mr John. "Because we handle quite sizeable sheets, bending was previously a two-man operation – this has now been eliminated. Furthermore, we now run unmanned overnight and at weekends, which makes us even more competitive."

The installation is rare because Main Road is running a 14m ground track, the longest available. Also, because many of the sheets it processes are perforated, traditional sucker pads used by the robot to lift and manipulate the material are ineffective. To overcome the problem, Trumpf engineered a solu-



tion using magnetic grippers, one of only two such installations in the world. And despite having a capacity of 2 m x 1 m sheets, the BendMaster at the family-owned business is processing 2.8 m sheets thanks again to innovative applications engineering by Trumpf.

Aside from perforated sheet, Main Road also processes a substantial amount of tube. At present, this arrives at the Leyland facility cut to length and bundled together in stacks. With each job taking two or three operations to complete, tube stacks of work-in-progress are a common sight around the factory.

"We knew that investment in an automated tube cutter that could finish parts complete in a single set-up would reduce WIP and free up valuable floor space," explains Mr John. "The TruLaser Tube will undertake all of the necessary operations, such as drilling and trimming, and get parts ready for welding in a single hit. Cycle time and lead-time will therefore reduce and we can also take jobs away from our existing Trumpf flat bed laser, freeing up valuable capacity."

The machine, which is automatically loaded and fed, is due to ship from Germany in late April 2008. It is intended that the machine will also help Main Road fulfil a new order to supply tram frame assemblies.

"As a subcontract manufacturer we play a key role in the industry supply chain," concludes Mr John. "We have a clear vision of the way ahead and are confident of our ability to provide a competitive edge. Through a policy of continuous investment we now have extensive plant resource that equips Main Road with the production capability, flexibility and control that our customers demand."

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