

BLM 'super-size' CNC tube laser provides stockholder with the ultimate in tube processing performance

The Revolutionary Lasertube

Stockholding in the past equated to little more than 'breaking bulk'; buying in volume from mills and selling on smaller quantities to lots of different customers.

However, as customers began to request material 'cut-to-length', stockholders responded by offering a processing service using relatively low-tech equipment such as bandsaws and circular saws.

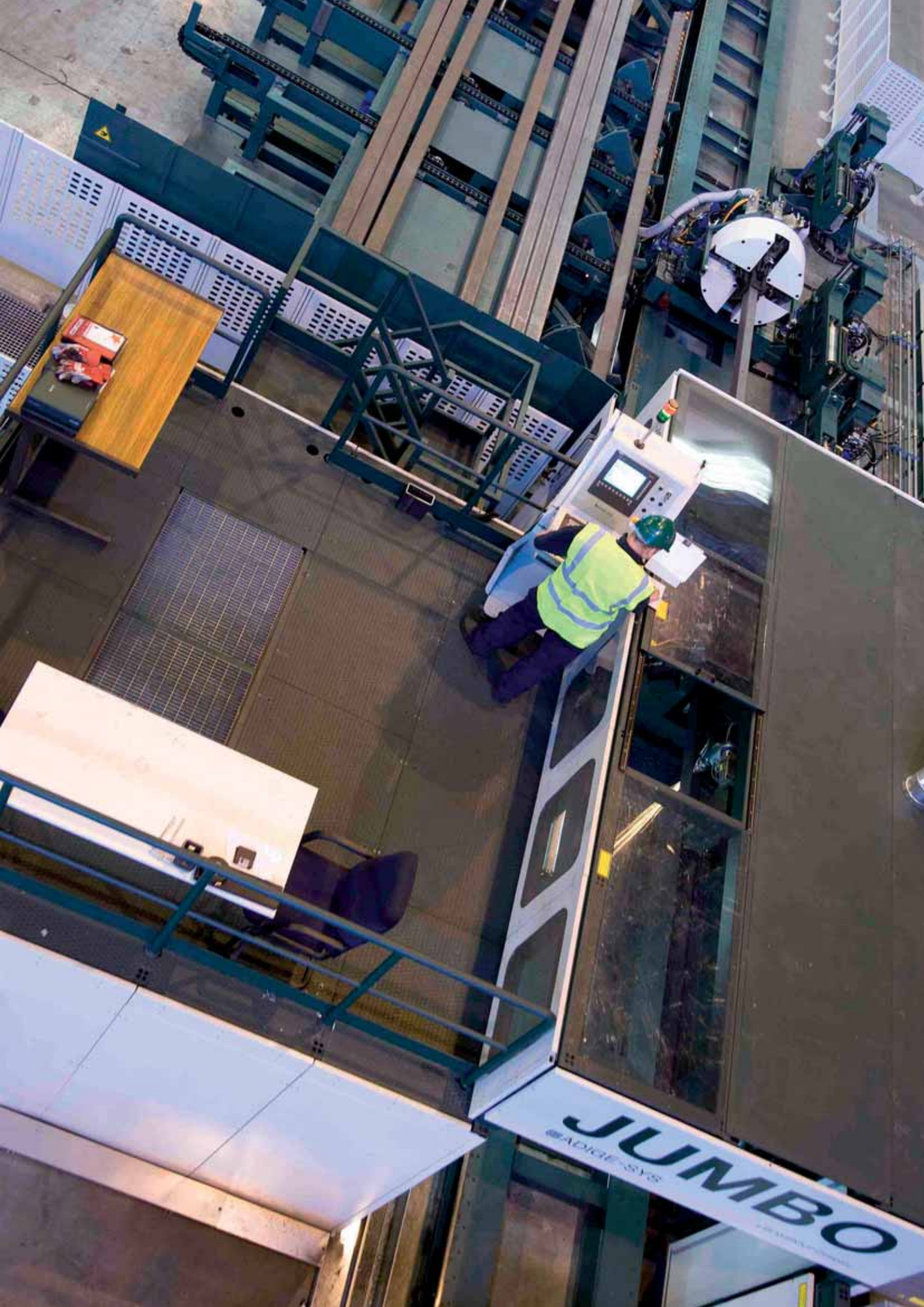
Says Ralph Robinson, Managing Director of Barrett Steel Ltd's Tubes Division: "We then realised that customers actually wanted more than just a cut-to-length capability. What they really want is a finished component, and we knew we could both justify and fund the purchase of the high-tech equipment needed to deliver exactly that...while taking cost out of the customer's manufacturing process."



The first step was to set up LaserTUBE Cutting, initially as a subsidiary of ISO 9001:2000-accredited tube and hollow section stockholder Tubes (UK) Ltd, to process stainless steel hollow sections for the coach-building industry. Now a separate company within the £240 million-plus turnover Barrett Steel Group, one of the largest independent steel stockholders in the UK, LaserTUBE Cutting in partnership with Tubes UK provides what Ralph Robinson describes as "the total solution in processing tubes and hollow steel sections".

As part of a continuing investment programme LaserTUBE Cutting has installed a massive 48 metre long by 20 metres wide, £1.25 million, tube laser alongside its four existing laser machines. Nine lorries were needed in November 2007 to transport the component parts of the aptly-named BLM ADIGE LT JUMBO CNC tube laser to the Tividale, West Midlands site where it is now processing round tube from 80 to 508 mm diameter, square hollow section up to 400 mm by 400 mm and hollow sections up to 500 mm by 300 mm in cutting thicknesses up to 16 mm. The maximum length of bar that can be loaded automatically is 18 metres.

The first LT JUMBO installed in the UK, the new machine, which has two Siemens 840D CNCs controlling up to 28 axes, is housed in an extended 100,000 sq. ft. building situated adjacent to more than 5000 tonnes of hot and cold formed tube and hollow section stock held by Tubes UK. This





additional 3500 W laser source power processing capacity means that LaserTUBE Cutting can now machine the whole of the Tubes UK range for a wide range of customers in the construction industry, railways and shipyards. Tubes UK also supplies round, square and rectangular hollow sections to manufacturers of heavy-duty trucks, earthmoving equipment, agricultural machinery and machine tools.

"The reaction among customers to the installation of the LT JUMBO has been one of excitement because they can see that this latest investment will give them a competitive edge," says Ralph Robinson. "It's a win-win situation because we are helping customers to grow their businesses and to retain work in the UK, while at the same time we are expanding our role."

Back in 2000, having taken the decision to install the first BLM ADIGE tube laser, it was, he adds, "a case of saying to customers that it is better to produce a finished product in a single process than to move a piece of tube through several discrete operations on several different machines. We needed to change peoples' perceptions by showing that significant savings can be made

simply by switching to a new way of working. No longer is there any need for special tooling or jigs and fixturing, and should there be a design change it is a simple reprogramming exercise because the laser cutting and profiling process remains the same. In fact, all the inherent costs associated with the traditional multi-machine approach disappear."

Dave Cleaver, General Manager, LaserTUBE Cutting, acknowledges that when it comes to promoting added-value laser cutting, there is still a strong element of 'we've always done it this way, so why should we change?'. His response? "Once you can convince a designer of the benefits that laser cutting gives, the ideas really start to flow because designers are always seeking to move to the next level," he says. "You then find that the production manager sees the advantages that could result, for example, from minimising the flow of material through the workplace. Not having to move a component from machine to machine means that the accuracy and repeatability of the laser cutting process are unrivalled, and this eliminates the requirement for inspection of every component in a batch. It also provides additional benefits



in subsequent welding and fabrication operations because parts fit together in exactly the same way every time."

Since installing a BLM ADIGE LT 651 CNC tube laser in 2000, LaserTUBE Cutting has added an LT 652 and a later-generation LT 712D capable of processing raw tube lengths of up to 8.5 metres. These three machines were joined in February 2007 by a BLM ADIGE LT COMBO capable of laser cutting tube as well as flat sheet material. Taking less than three minutes to change automatically between flat sheet and tube, the LT COMBO can profile tube up to 225 mm OD and 6.5 metres long and steel sheet up to 3 m by 8 m.

Highlighting the versatility and flexibility of this 'two systems in one' machine, LaserTUBE Cutting recently used the LT COMBO to produce scalloped joints on structural components for Burton on Trent-based Conder Structures, a major designer and manufacturer of architectural steelwork structures. Laser cutting resulted in a 70 per cent time saving over previous methods while, as Jason Hensman, Managing Director, Conder Structures, points out, enabling complex connections to be made that have re-

sulted in a more aesthetically pleasing structure, with clean lines and free flowing spans, and the added benefit of greater structural integrity.

Summarising the strengths of the Tubes UK/LaserTUBE Cutting partnership, Ralph Robinson says: "We ensure consistent quality because we purchase material from quality suppliers and, in turn, provide our customers with full traceability and the reassurance that material and any subsequent processing will be consistent batch after batch. In addition to an extensive machining and processing capability that includes tube manipulation (bending and swaging) and deburring, we offer finishing services such as galvanising, powder coating and painting."

To which Dave Cleaver adds: "We now have several years' experience of laser cutting, so rather than just quote against a drawing we look at ways of enhancing a design and making manufacture easier and less costly. All of a sudden, the buyer doesn't have the final say, because discussions focus on more than price and delivery, and it's no exaggeration to say that laser cutting is revolutionising the way in which tubular components are produced."

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