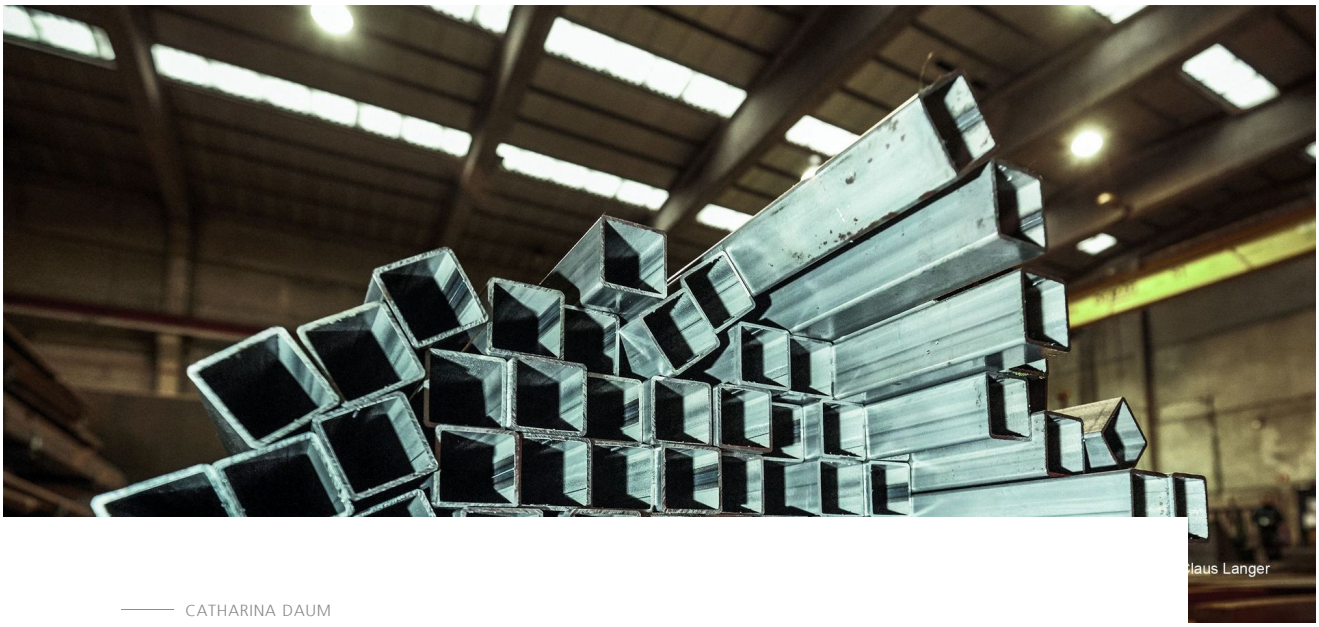

CATHARINA DAUM

Entering the field to being experts in tube cutting in just 12 months

With the acquisition of RotoLas, Dcoup Laser — a Belgian job shop — set out in the field of laser tube cutting. Just a year later, and with the high-end TruLaser Tube 7000 on the shop floor, this family firm has become a specialist in tube processing.

Laser tube cutting is a relatively new technology, and demand for semi-finished tube products is growing. That is why more and more job shops have decided to utilize the great potential offered by laser processing of tubes and profiles. Those firms are entering a market with great promise for the future. They can often expand their range of services almost at once. The example offered by Dcoup Laser in the Belgian town of Florennes shows that it is not so terribly difficult and can be accomplished a step at a time.

Laser tube cutting offers tremendous potentials and we intend to put them to use.

Flexible at every turn

RotoLas is the perfect answer for companies just entering the field or where tubes are to be worked only now and again. This option makes it possible to convert 2D laser cutting machines so that they can also work tubes, and it does so in the shortest possible time. A flexible loading system accurately guides a wide range of tubes and profiles. Using the TruTops Tube software with its efficient operating concept makes programming easy. Cutting patterns can readily be analyzed and the contours to be cut are precisely calculated. Even complex assignments such as machining the corners of rectangular sections can be done by TruTops Tube – fully automatically. "In the past we mostly produced plates made of steel and aluminum. Using the TruLaser 3040 and the RotoLas let us, in the shortest time imaginable, make the leap into another, very versatile field of manufacturing. With it we have been able to expand our spectrum of services considerably," reports Frédéric

Demarche.

Cédric, Christine and Frédéric Demarche chose RotoLas to ease their way into tube processing and, after a short period of time, used the TruLaser Tube 7000 to make the step into the high-end world. (Picture: Claus Langer)

The simple operating concept behind the TruTops Tube software makes possible exact calculation of cutting geometries. Even complex calculations at the corners of rectangular profiles are automatically handled by this program. (Picture: Claus Langer)

New possibilities

Laser processing of pipes and tubes caused excitement at Demarche not only because of its amazing versatility. The laser also saves time and money. Steps like sawing, drilling and milling, frequently encountered during conventional machining of complex parts, can be handled by the laser in a single pass. Laborious and expensive reworking, like deburring and cleaning the tubes, can normally also be eliminated.

Last year Dcoup Laser bumped up against the production limits for the TruLaser 3040 with the RotoLas option. "We received a huge order to manufacture bars for prison cells," Christine says. "The RotoLas feature was in use all the time and, in spite of three-shift operations, we encountered massive capacity bottlenecks. We had to make a decision. Since we had already recognized the great potential offered by pipe and tube work, we decided to invest in a laser tube cutting machine."

"We decided right away on the TruLaser Tube 7000," according to Frédéric Demarche. That is a decision that he has never regretted. "Thanks to our work with the TruLaser 3040, the software was not entirely unfamiliar and what we didn't know we learned quickly in training provided by TRUMPF and also through assistance rendered by V. A. C., its sales agency in Belgium," Christine reports.

Think big

With the selection of the TruLaser Tube 7000, Dcoup Laser purchased a high-end machine that leaves no hopes unmet when machining tubes. Thanks to fully automatic machine set-up with minimum downtimes, it cuts tubes and profiles with outer circle diameters of up to 250 millimeters. The PierceLine option makes it possible to cut mild steel with wall thicknesses of up to ten millimeters. Graduated rollers make for flexible adaptation to the workpiece geometry. Those rollers support the tubing and provide lateral guidance. Self-centering clamp chucks provide additional help. The FocusLine regulation concept keeps the laser's focal position constant and automatically adjusts it to suit the type and thickness of the material.

A flexible part removal station sorts the finished components as required, depositing them on movable convey or tables, into wire mesh boxes or into other containers. A very special highlight is the technology package for bevel cuts. With it the TruLaser Tube 7000 can cut angles up to 45 degrees in stainless steel as much as six millimeters thick. This is the basis for ideal preparation when joining tubes to sheet metal and for realizing innovative pipe designs.

It's just the beginning

"With the purchase of the TruLaser Tube 7000 we gained a competitive advantage that we actually cannot fully exploit as yet," explains Christine. The company is operating at full capacity right now, so that there is simply no time available for well-planned acquisition of new customers. But Frédéric Demarche fully intends to make up for lost time. In the coming year he wants to take the time needed to convince his customers — of the manufacturing opportunities, of the machine itself and of his company's expertise. "Word about the many advantages of using lasers to cut tubes simply has not gotten around yet. But this concept saves us and our customers not only time — and expense — but also makes possible innovative tube designs which we use to manufacture complete assemblies nowadays," explains Frédéric Demarche. Using cut and bent frames, for instance, makes it possible to reduce the number of parts considerably. And positioning and joining aids — such as cut-outs and tabs — as well as unequivocal encoding simplify error-free assembly of the components. "And all that is done on just a single machine," notes Demarche with unbounded enthusiasm. "Laser cutting of tubes offers massive opportunities and we intend to make use of them."

How

TruBend 5230, TruLaser 3030, TruLaser 3040, TruLaser Tube 7000

Who

Dcoup Laser S. A., Florennes, Belgium. Founded in 2010, 16 employees.

What

Among its services, the company supplies custom-cut panels and complete component assemblies to the pharmaceuticals industry, the mechanical industry, breweries, and the aeronautics and aerospace industries.

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