



JOB SHOP

MICRO RYDFRI SMIDI EHF

FISHING IN THE NORTHERN SEAS... WITH A LASERTUBE?

The first laser tube cutting system in Iceland is an LC5 combination system, installed at a dynamic job shop working mainly for the naval sector and the food industry. Processing of stainless steel, great operating capacity and the will to be different: this is MICRO RYDFRI SMIDI EHF in Garðabær, at the outskirts of Reykjavík.

Iceland - the origin of the name defines the snow and ice that cover this island for the majority of the year, but on a sunny day in August, the view extends over unlimited stretch of volcanic rocks and a cobalt color sea that leaves you bewitched. It is a natural paradise and you need to be focused in order to speak about the industrial realities that operate in this region. The island is inhabited by 320,000 people in all, one of the less populated areas in Europe.

Fishing is one of the main economic resources and many important industries, especially in the food sector, were born around it. This is the environment where MICRO was born and has grown, as Steinn Arni Asgeirsson tells us and who, together with Sveinn Sigurðsson, was the founder of the company of which he is currently the owner.

“We started our business in 1996; a workshop of 80 sqm only, repairing fishing boats. We worked mainly for Marel, a large industrial food processing company, and built accessories and equipment, until we evolved to on-board systems for fish processing.” Today, in a hangar of 1,000 sqm, MICRO EHF is able to design and fabricate complete products ranging from boat and motorboat accessories, to kart frames, assembly and welding included.

In few years, the company moved from a manual and artisan production to automatic systems. Some CNC machines, a cutter and a lathe, started the modernization process that reached its pinnacle with the purchase of the laser system in early 2017.

The addition of a laser system could be considered a logical and natural step for a metal job shop that outsourced most of its laser cut parts. “Iceland has a limited population and the market is not very wide, but the food industry is raising food equipment standards, which increases the need for laser processing”, explains Asgeirsson and continues, “There are already many companies here in Iceland that perform

sheet metal laser processing and we realized that we had to distinguish ourselves. That is why we made the decision from the beginning to buy a laser system to process tubes.”

MICRO uses a lot stainless steel and aluminum tubes to create frames and support structures for its products. They immediately realized the significant advantage that could be obtained from laser cutting and began looking for a product suitable to their needs.

“We had been told that ADIGE was the best for tube cutting and many times at exhibitions, we would watch the Lasertube in action and every time we told ourselves that we absolutely had to buy it.”

When they visited BLM GROUP in Levico Terme with the intent to buy the system, there was an unexpected development, as Asgeirsson explains:

“By this time we’d seen many Lasertube systems in operation, and almost by chance, BLM proposed the LC5 ‘combination’ system. At first we didn’t know what they were talking about, but when we saw it we immediately knew it was the right machine for us.”

LC5 is a system, unique in its kind, for tube and sheet metal laser cutting. It combines two automatic systems in one compact solution and offers the maximum level of flexibility.

“We made our decision in an instant, guided by instinct. We thought more about the future than about present. The world is moving in that direction and we decided to follow it.” Asgeirsson explains and continues: “We thought that tube processing would have let us acquire new customers and

the sheet metal cutting was considered an added bonus that would have given us the opportunity to process work that we were outsourcing.”

A few months after installation, the LC5 is processing tube 40% of the time. Expectations are confirmed. Asgeirsson shows us some production parts; a filtering system for the biochemical industry consisting of a drilled panel with an aluminum tubular frame.

“It was a product that we made before having the LC5 system, using outsourced processes, now we are completely autonomous”, explains Asgeirsson.

Another example is the tubular frame for a rescue motorboat prototype with a new type of keel to ensure greater stability in rough seas.



“With traditional methods we needed almost a day to cut these parts, and now it is done in few seconds. If we consider the entire assembly and welding process, savings in terms of time and cost are even greater”, concludes Asgeirsson.

Certainly, tube processing has its peculiarities compared to sheet metal processing: material to be machined is constantly moving and you must gain experience.

Asgeirsson, smiling, explains how he gained experience, “I remember the first time we put a 10x15 profile on the machine. We were below the system operation limit and the



tube was too flexible... I don't want to say what happened, but I can confirm I've learned a lot from that experience.” Asgeirsson adds, “But to learn machine operation has not been difficult. We sent the young guys to train in ADIGE-SYS, they are familiar with computers and automatic systems, so everything went well.”

“But it will still take some time to raise awareness of the possibilities and benefits offered by tube laser processing. It is a new machine here in Iceland and engineers still have to get to know it”, concludes Asgeirsson. As a matter of fact, MICRO has invited the engineers of its customer to see the new system in order to understand the opportunities of laser cutting.

Production management is controlled from the office where

projects and production orders are generated. 3D CAD models can be easily imported into Artube, the CAD/CAM software from ADIGE. The models are converted to native files, where you are essentially ready for production. “Often customers send their request on a hand drawn piece of paper or even by telephone and we must draw it from scratch, but major customers send projects of complex structures with parts already bent and

Artube is an important advantage as it can import these structures and calculate the development of curved tubes and realize the correct work program. Furthermore, it enables us to also add specific parts as joints to industrialize the project and save on assembly time.” The advantages in using the laser on tube processing are not limited to time saving during cutting or in the automation of the cutting process, but also and above all in the subsequent phases.

The main competitive advantage MICRO EHF has, is the quality of the service it can offer. We pride ourselves on meeting commitments made to the customer, by supplying the desired product before the deadline and always answering every question. “We enjoy challenges and complex projects that we can find and propose a solution to the customer, even when the request seems impossible. We like to define ourselves as a customer driven company” a subject with which we at BLM GROUP agree without any exceptions.

