Grinding and deburring machine is proven

Optimum edges and surfaces are a quality feature in sheet metalworking. However, from the customer’s perspective it’s precisely the grinding and deburring that usually needs to be inexpensive. A sheet metalworking company from Switzerland shows how the right plant technology can be used to implement efficient processes and manufacture high-quality components.

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Meyer Blech Technik AG has its headquarters in Grosswangen in Switzerland and is a classic sheet metalworking company. As a contract manufacturer, the company operates in a number of different sectors, including the manufacture of various proprietary products for agriculture. The company’s customers include engineering, automotive and shopfitting companies, crafts and small businesses plus the chemical and pharmaceutical plant construction sector. Over 190 staff are currently employed at their three sites in Brittnau, Grosswangen and Buttisholz.

Meyer relies on an efficient machine pool to achieve success among its competitors. “We must be set up to be versatile in our operations and have the appropriate machine in each field. That is the only way to be competitive and, of course, profitable”, says Reto Thalmann, General Manager of Meyer Blechtechnik AG in Brittnau.

Investment in proven technology

By investing in a grinding and deburring machine from Lissmac, Meyer Blech Technik guarantees quality, efficiency and flexibility for its processes.

Accordingly, it is also important for Meyer Blechtechnik that the machine pool is forward-looking and designed for flexibility. Their latest acquisition is a grinding and deburring machine from Lissmac.

“The SBM-L G1S2 is suitable for highly effective two-sided deburring and edge rounding of punched, laser and fine plasma cut workpieces in one single pass. It distinguishes itself over conventional grinding machines by more efficient machining times and up to 60 per cent saving on working
“time”, says Bertrand Laroche, Area Sales Manager Metal Processing at Lissmac Maschinenbau GmbH, describing the machine’s potential. He took care of the acquisition process.

The new machine achieved an important expansion in capacity for Meyer. This was a necessary investment due to the company’s continuous growth and the large number of different parts. At least 3.4 million parts were produced in 2018, using around 5,000 tonnes of materials.

As the new acquisition was being planned, the owners Urs and Alex Meyer and General Manager Reto Thalmann visited various exhibitions to gain an overview of the current technology. Naturally they had some problematic parts machined at various suppliers, so that they could obtain comparable, practical results. Ultimately the efficiency and associated time saving with the Lissmac technology, as well as the uniform, deburred finish, proved convincing.

“The decision to invest in this exact machine was made very quickly. We were familiar with the technology because an almost identical system has been in use at the Großwangen site for around 3 years. It has more than proven itself and so at Blechexpo 2017 we decided to buy another”, says Thalmann.

### A great addition to the wet grinding machines

So the benefits, particularly for machining aluminium sheets, were well known. That's a very big field for the Swiss company, who process more than 500 tonnes of aluminium a year.

“The machine operates efficiently because it deburrs the top and bottom simultaneously. The deburring process is also kind to the hands. In other words: you cannot cut yourself and you can handle the metal sheet without problem. The parts that are manufactured are often installed in machines, so that’s important” says Reto Thalmann, naming some of the benefits.

Particularly with aluminium, the great benefit of dry grinding and deburring is that the parts are free from moisture, so there is no staining. When parts will be welded afterwards, the additional benefit of dry-working is that the cut edges are not contaminated by the emulsion required for wet-working. That's part of the reason why chrome steel parts as well as aluminium parts are machined on the Lissmac. As a result, the new installation is a great addition to the single-sided wet grinding machines.

Another benefit of this machine is that it can machine parts with dimensions of 1500 mm x 3000 mm.
Machine pool to guarantee vertical integration and efficiency
The size may be beneficial for machining, but it means, of course, that the corresponding space must be available in the production hall. In 2018, a new building with increased production capacities and greater vertical integration was built at the Brittnau site, so even this was planned with pinpoint precision with a view to the new plant technology. The company moved into the new building in August 2018. Today, the machining processes here run in the optimum sequence, starting with blanking and bending and progressing to complete part production and assembly. The grinding and deburring process is integrated in the process. The Lissmac SBM-L G1S2 is available in three working widths. At Meyer Blechtechnik the machine at Grosswangen has a working width of 1000 mm, while in Brittnau it is 1500 mm. “The intention is for each of the operations at the three sites to be equipped with machines that are not yet available within the group. That way we can guarantee high vertical integration and efficiency”, says Thalmann, regarding the concept for the machine pool. As a result, less work had to be outsourced.

Quality, price and delivery times must all be right
Reto Thalmann knows that grinding and deburring processes need to be inexpensive from the customer’s perspective. That’s why the surface appearance is quite a challenge. This much is certain: when the turnaround times are fast, as they are with two-sided machining on the Lissmac, then the machining costs are also lower. The ability to retool quickly from steel or chrome steel to aluminium also contributes towards the efficiency of the process. What’s more, there is no contamination on the cut edges, as is the case with wet deburring, and so no problems when welding. Finally, dry working requires less maintenance and cleaning.
And since early 2019 Lissmac has a service partner locally in Switzerland: that completes the package.

Well set for the future
Today, Meyer Blechtechnik is one of the largest companies in this sector in Switzerland. With its flexible machine pool, it is well equipped to meet the challenges of the future. However, there are other issues alongside the plant technology that are important to the company. That’s why the
latest building technology was installed in the new building, along with solar power and heat recovery.

A construction team comprising an average of six persons ensures that processes are reliable and is responsible for operational building work and assembly tasks. There is also an in-house service team for plant maintenance. Last but not least there’s also the matter of in-house expertise: where a forming part needs to be produced, a tool is now to be developed in-house and manufactured.

All of this, alongside the investment in new machinery, is a good investment in the future. And in November this year, the company celebrates its 50th anniversary.

This is what the new machine can do

- Deburring and edge rounding of workpieces up to 50 mm sheet thickness
- Removal of spots on the sheet surface
- Two-sided deburring of workpieces saves the cost-intensive turning of what are often very heavy and unwieldy workpieces and the need to machine the parts twice
- Simultaneous deburring and edge rounding on the interior and exterior contours
- Dry processing
- Simple, intuitive operation
- The machining units can be individually adjusted or turned on and off electrically
- Consistent machining quality
- The cross-machining principle guarantees optimum tool utilisation over the entire working width
- Fast, simple tool change within just a few minutes
- Improved working environment: less dust, dirt and noise
- Available as an option: conveyor technology; handling systems, automation; custom solutions