SORALUCE

Setting new standards

STROMAB

CUSTOMER EXPERIENCES

Sebastian Bertesi, Managing Director of STROMAB Spa:

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More information available for us to analyse, less time needed for machine programming and reduced work errors are the main advantages of the digital platform. Analysis of the processes is key to understanding possible changes in procedures that currently display critical aspects.

INTELLIGENT PRODUCTION PROCCESSES

SORALUCE has recently supplied STROMAB with a SORALUCE FLP 6000 multitasking milling and turning centre for the machining of of woodworking machinery components.

This is a completely versatile multitasking solution aimed at maximizing productivity, with the ability to perform milling and turning operations on a single machine and setup, enabling the machining of different shapes and sizes.

This is a highly capable machine, both in terms of part size and in the type of operations which can be performed. With a longitudinal travel of 6,000 mm, vertical travel of 2,200 mm and cross travel of 1,300 mm, the machine's working area has been customized to meet the customer's particular needs. With this aim, the machine incorporates two workstations; one equipped with a turning table of 1,600 mm diameter and the second with a base plate of 4,500 x 1,500 mm.

The architecture of the mobile column machine facilitates work in pendulum mode, guaranteeing continuous machining. Workpieces are loaded/unloaded on one workstation while the machine continues to work on another station simultaneously. Machining in different work areas by means of a pendulum mode is possible thanks to the CNC's ability to assign asynchronous axes, allowing workpiece loading/unloading tasks to be performed in the inactive zone while machining continues in the active zone, thus increasing productivity.

The machine is also equipped with the new SORALUCE H200T multifunction head for turning and milling operations. The H200T head is equipped with an innovative spindle rotation locking system, allowing the use of both milling and turning tools directly without the need for intermediate elements.

DIGITALIZATION

STROMAB, a benchmark in the woodworking machines sector since 1965, has the most modern production systems, controlling all phases of its machines' production cycle.

STROMAB controls the production of its machines through an integrated production process, using the most advanced computer systems.

The solution supplied by SORALUCE incorporates the monitoring system SORALUCE Data System, an analysis tool that extracts valuable information from the data generated by the machine and monitors its state to ensure the highest possible performance of the machining process, with the ability to see the status of the machine in real time.

In addition, using the same hardware as that used for monitoring, SORALUCE has developed a solution that facilitates the connection of the machine to the SAP ERP system implemented in the factory, according to the customer's specific requirements.

SORALUCE has developed a web server, a software program on an industrial PC, which manages the data traffic between the ERP and the operator.

The machine's CNC has an interface where operators can select the manufacturing order after identifying themselves. A barcode scanner scans the manufacturing order assigned to the part and compares it with the one selected by the operator, starting the execution of the program if they match or displaying an error in there is a discrepancy.

In addition, the software developed by SORALUCE provides information about the number of parts machined and the reasons for a machine stop.

SORALUCE is committed to the development of digital manufacturing concepts, facilitating the interaction between machines, people and processes.
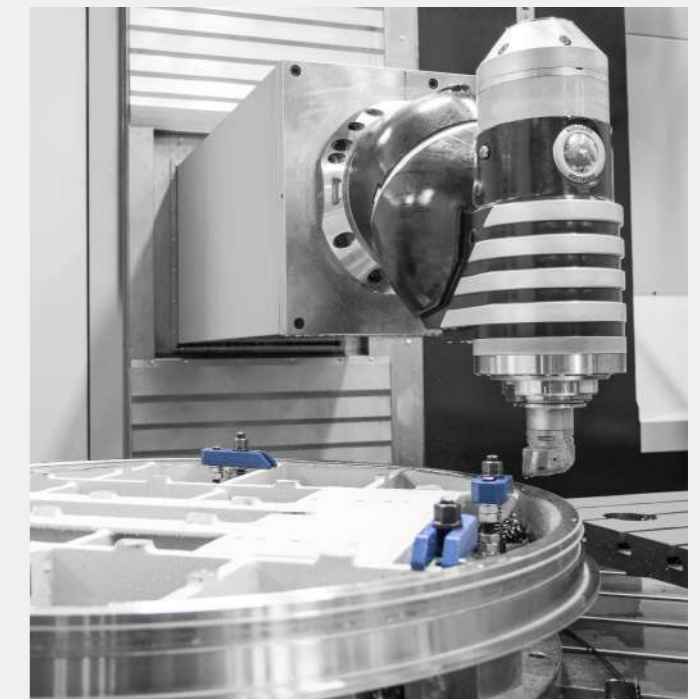
INTERVIEW

Interview with Sebastian Bertesi, Managing Director STROMAB Spa, about the SORALUCE Digital platform:

Do you believe the new digital paradigm in production simplifies the interaction between machines, people and processes?
Yes, I'm sure it does, and since the first jobs done on the SORALUCE FLP 6000 we've had the proof.

What main advantages do you think the application of Industry 4.0 concepts will bring to your activity?
More information available for us to analyse, less time needed for machine programming, reduced work errors.

What are the main difficulties you come across when implementing Industry 4.0 in your company?
The average age in our company is low and we have many young people who have open minds regarding the use of technology. We've therefore had no problems in terms of learning new technologies. The only area where we may perhaps see some resistance is in changes to the logistics interconnection processes, which entails new tasks for operators. However, we anticipate that these will be accepted within the context of the overall system.

Do you have a digital strategy in your company?
Yes. I believe that the control of some processes that have not previously been analysed will certainly bring benefits. Thinking about the future, after the I4.0 pilot project with SORALUCE FLP 6000 and Gestore ERP, I intend to extend the implementation of the I4.0 principles to purely manufacturing and assembly processes.

Is the SORALUCE FLP6000 milling machine you bought the first machine in your company to use the data-driven analytics tool?
Yes. It's the first machine with these characteristics and we consider it a pilot project for future developments.

Is the machine connected to logistics management software? If so, what are the advantages?
Yes. The machine is connected to our SAP ERP system for both logistics and process control.

What devices do you use to obtain this information? PC, smartphone or tablet?
We use PCs, barcode readers and the Cloud.

Who is responsible for managing the Data System instrument in your company?
I'm the manager responsible for the machine tool department and for our IT.

Do you find the SORALUCE Data System easy to use?
Yes. Easy and intuitive.

Does the Data System help in your decision-making process?
We're currently in a start-up phase and don't yet have a database that allows us to make decisions in the production process. I believe that after two or three weeks of work we'll be able to start making analyses with data and I'm sure that they'll help in the decision-making processes.

How important is it to you to have real time access to machine information and process status?
It's essential for various aspects, such as industrial accounting, in order to verify the machine's real consumption, both for assistance and for the process analysis that's key to understanding possible changes in procedures currently displaying critical aspects.

Is the information provided by the Data System relevant enough for you to make decisions about the production process?
As far as our company is concerned, yes it is.

How much do you value the different reports offered by SORALUCE Data System? Which do you think are the most interesting? Are there any specific reports missing?
The reports currently available are intuitive and sufficient. The reports most likely to help in the analysis of procedures are the management of processes (machine-work stoppages), machine errors and consumption.

Does the SORALUCE Data System help you to improve the production process?
I'm sure that once sufficient information is available in the machine's database for it to be analysed, we'll be able to make better process decisions with more knowledge.

Does the SORALUCE Data System help you reduce unnecessary power consumption?
I think that right now it's the technologies installed in the machine - at the level of motorization, absorption and software management - that are reducing unnecessary consumption.

Does the SORALUCE Data System help you to optimise machine performance?
We expect this will be the case after we've analysed the data and assessed the anomalies in the process management procedures.

How important to you are the key alarm signal diagnostics for maintenance?
I believe that this is the part of the system that can bring the greatest benefits in reducing machine downtimes and reliably identifying problems, with consequent improvements in our reaction time to resolve anomalies.

Does the SORALUCE Data System help in the maintenance activity?
Definitely.

How do you rate the secure connection offered by SORALUCE?
I think it's an excellent solution in terms of infrastructure, security of sensitive data and company network.

Does the Data System help during SORALUCE maintenance activities?
It helps a lot and I think it's essential to shorten intervention times and, above all, because the alarm signal database is unique and recognized by SORALUCE technicians. Previously, the problem analysis phase was carried out in conjunction with machine operators who often didn't have the skills or terminology to enable the maintenance technician to immediately understand the problems and carry out an analysis.