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**Steel trade of the future: MEBA implements automated and digitized sawing system with high-bay warehouse connection**

*MEBA Metall-Bandsägemaschinen GmbH implements a lighthouse project to increase productivity at Günther + Schramm, southern Germany's leading system service provider for steel, stainless steel and aluminium.*

MEBA Metall-Bandsägemaschinen GmbH has recently implemented one of the most complex projects in its company history: The sawing system at Günther + Schramm GmbH, the leading system service provider for steel, stainless steel and aluminum in southern Germany. In a very tight planning phase of under one year, the two companies jointly developed and implemented a fully automated and digitized sawing system with roller conveyors, high-bay warehouse connection, short parts disposal and groundbreaking machinery innovations. The starting point for the project was two outdated saw mills, a circular saw and a band saw, which were to be replaced. The very clear target from the customer's side was: In principle, the process should remain the same as before, but the output must be significantly increased. MEBA and Günther + Schramm were no strangers to each other: In the past, the two companies had already implemented a joint project to introduce thin-cut technology.

Andreas Priel, technical project manager and head of development at MEBA, proudly reports on the completed system: "Managing this project was a challenge and at the same time great fun. The dialogue with the customer and the collaborative project management with Günther + Schramm project manager, Mr. Walz, were very constructive. MEBA has broken new ground, especially with regard to the warehouse connection. As a result, the technology of the entire system is simply without compromise. We were able to implement the customer's wishes down to the last detail and according to the highest technical standards." And indeed, as a result, the available space at Günther + Schramm is now being used more compactly. The high degree of automation and digitization provided a clearly measurable increase in productivity possible for the steel distributor. In phase one, MEBA evaluated the output quantity of the existing machines for 2 years. The new plant will be able to produce almost twice as much.



automated and digitized sawing system with high-bay connection

For MEBA, the special features of the project certainly included the fully automatic system in conjunction with a high-bay warehouse as well as the implementation of short parts disposal. MEBA is a specialist for band saw machines, but does not build its own storage systems and has no in-house cooperation systems. The warehouse connection therefore required a high degree of flexibility from MEBA. With this project, the band saw specialist has faced the customer's tasks and in the end has once again substantiated its motto of benefit orientation with facts: Very important results for the customer are the increase in performance, a higher cutting performance, short distances, an intelligent distribution concept, the simple operation through modern, digitized technology and the high degree of automation.

### **Two identical high-performance band saws connected to high-bay warehouses**

The basis for the complete sawing system is formed by two MEBamat 330 high-performance automatic machines. Both machines are technically identical, but arranged in a mirror image, left and right to each other. In contrast to the previous solution, the identical saws have the same components and wear parts, which optimizes the procurement of spare parts and the maintenance effort. The automatic sawing machines are networked with the Remmert high rack. Orders are automatically generated by work preparation via SAP interface. Via networking and an interface, cutting values are also automatically generated and the integration of conveyor systems to the rack warehouse takes place. The operator can select on the computer whether he wants to execute the order on the left or right of the machine, depending on the load or whether it is longer or shorter pieces. The sections are placed in the correct sorting box according to a defined distribution concept.

The sawing system is equipped with an automatic picking system, also from Remmert. The customer material is stored in cassettes, suitable for a maximum material length of 6m. The automatic picking system removes the material from the cassette and places it on a spherical roller conveyor. By cross-linking, the shelf knows where which material is located. To enable this process to take place from the central controller, the spherical roller stalks have been equipped with new sensors. For MEBA, this meant a retrofit of the sensors. Depending on which material is selected via SAP, the cassette is outsourced. The pick system, an automatic gripping system specially developed for long material materials, reaches into the cassette and places the material on the aerial tramway. The picker even picks up residual pieces and stores them back in the high-bay warehouse.



MEBamat330 with special short parts disposal

### **Technical innovations in the high-performance automatic band saws**

The MEBamat 330 high-performance saws have received some technical innovations as part of the project. For example, the transport rollers in the new machines are synchronously driven. There is also a zero stop that aligns the material. The clamping stick can be moved for parts disposal. A conveyor belt system (hinged belt conveyor) is integrated into the automatic sawing machines. The conveyor belt extends into the machine. This is equipped with discharge-side pushers for long and short parts. Cuts and remnants fall out. The sawed parts are removed to designated sorting boxes and transported by forklift. MEBA plans to take over some of these innovations in series production.

### **New system brings increased production**

In connection to the feed roller conveyor, a shuttle roller conveyor is attached to the MEBA machines, and two roller conveyors parallel to each other. One of the two serves as a preparation roller conveyor. The material is pulled out after processing, then moved transversely and new material can be retracted into the machine for processing. Günther + Schramm can work with a reduced number of non-productive times by moving the material via two roller conveyors.

### **Interface problems solved by intelligent software**

The new sawing system at Günther + Schramm is completely digitized and equipped with modern software. The MEBA NC server plays a central role in interfacing this system. The sawing system communicates with external systems, SAP, and the high-bay warehouse. MEBA has complete access to all controllers, so that Günther + Schramm can be supported via modem in diagnostics and operation. The data from Remmert is processed and special programs with parameters are created and fed into the saw. MEBA can give the customer a status message at any time reporting how much longer the saw needs to complete the job, i.e. how far the order has progressed - an extremely important feedback on capacity utilization for Günther + Schramm.

Michael Johannsen, who is responsible for MEBA sales projects, sums up: "I have already implemented many complex orders over the years. This project is certainly one of the largest, especially in terms of automation and digitization. The modern technology and high level of automation has increased system performance and overall operations at Günther + Schramm. The customer can achieve a higher cutting performance, short distances and a distribution concept that makes everything easier. At MEBA, we stand for benefit-oriented sawing concepts, and it is clear that it is not possible without the customer. It is simply great to realize the system in dialogue with the customer. Due to the good cooperation, everything worked very well. With this project management, we have shown that we can respond flexibly to customer requirements and also react on short notice."



Two identical high-performance machines connected to high-bay warehouses

### **Commissioning: a crucial project phase**

In addition to the development and technical implementation of the entire sawing system, commissioning was one of the decisive project phases. The aim of the customer Günther + Schramm was, of course, to keep downtimes as low as possible, even during commissioning. The declared target time for the commissioning of 2 new automatic sawing machines with new technology and high-bay warehouse connection was only 3 weeks. All three parties, MEBA for the sawing system, Remmert as supplier for the shelf and pick system and Günther + Schramm as the customer had to coordinate extremely well especially during this phase. Remmert took care of the retrofitting of the high-bay storage technology. MEBA and Günther + Schramm dismantled the old machines and prepared the course. Subsequently, MEBA was able to set up the new machines. The roller conveyors had to be replaced and cables retracted. Within just one week, the MEBA machines were completely functional,



and the commissioning was moved forward. Overall, the target time of only 3 weeks was achieved. All those involved did an equally large amount of work, hand-in-hand and highly concentrated. Only in this manner was this achievement possible. After only 3 weeks, the operation testing phase commenced, in which customer orders were already processed. Project manager Walz from Günther + Schramm draws a positive conclusion: "Commissioning was another decisive phase in the project for us, and it went flawlessly. Overall, we have a very good cooperative cooperation with MEBA behind us. The plant brings us great added value in this form."



Briefing and commissioning at Günther & Schramm

#### *About Günther + Schramm*

*Günther + Schramm is southern Germany's leading system service provider for steel, stainless steel and aluminium. The company was founded in 1930 and employs around 180 people at its four locations in Oberkochen, Königsbronn, Stuttgart and Mannheim. On the one hand, the steel trader and system service provider is active in classic metal trading. On the other hand, the company offers various services in contract manufacturing and implements complex outsourcing projects in the field of material and process logistics.*

#### *About MEBA*

*MEBA is a specialist for metal band saw machines and has developed since its foundation in 1958 from a technically managed company into an internationally active industrial company. Today, MEBA offers its customers from trade, metal and steel construction as well as large and heavy industry a complete product range of user-oriented individual saws, complete systems with material handling and length measuring systems in almost all degrees of automation as well as networked sawing solutions and the associated services. The company's services also include being there for the customers from the initial consultation to the planning, construction, implementation of the project, commissioning, spare parts service and sustainable support of the sawing solutions. Even in the digital world, MEBA keeps an eye on benefit orientation - because digitization should bring something to everyone.*