

WORKSHOP OPTIMIZATION AND SPECIAL PROGRAMMING AT MEISTER TREPPENTECHNIK

Modern stair building demands high-tech production facilities and efficiency from companies in the industry. Thus, carpenters invest in CNC machines and sophisticated software packages. However, time and again staircase production companies run into problems due to the utilization of too many different systems at once. In many cases stair builders buy software for each individual process.

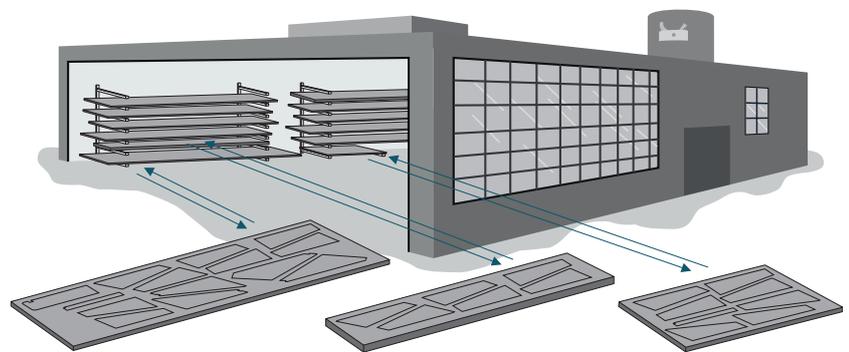
This approach has many disadvantages: There are many different support contacts, the different systems have to be coordinated and connected with each other, in other words different data formats have to be read in and out by different systems, which can be a coordination-nightmare that has to be solved with many different partners involved. Furthermore, there is the risk that one or several components become outdated with time and there is no support available for them anymore.

600 Treads per Shift with One-Man-Operation

This was the dilemma that Meister-Treppentechnik (MTT) from Bavaria, Germany was facing. MTT produces and delivers treads for staircase builders. The company manufactures ca. 600 treads per shift with one-man-operation. In the past MTT used different software packages for communication with the warehouse, plate optimization, and to operate an old CNC machine.

The coordination of the different systems and the fact that their CNC center was outdated and was not supported anymore caused a huge headache for MTT.

Through talking with their major competitors Günzterer Treppenbau GmbH and carpentry and window manufacturer Voß GmbH & Co. KG, MTT became aware of Compass Software.



MTT decided to unify software for the entire workshop. Compass Software was tasked with taking over all programming after the warehouse.

Unification of Different Software Programs and Partners

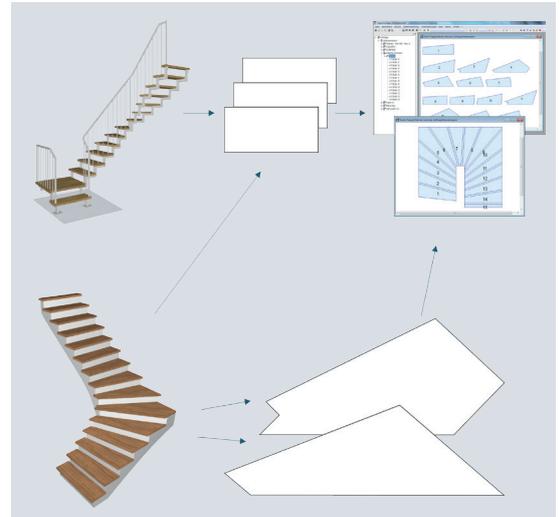
MTT decided to make a change. They ordered a new 3-axis standard machine (Homag) and hired Compass Software to unify the entire software process in their workshop and program all processes after the wood leaves the warehouse. By taking this step MTT aimed to eliminate problems with the old machine and the coordination of different software programs and customer services.

Compass Software had to develop and/or adapt different modules to realize this special programming, which would encompass the whole workshop. First, it was important to make sure that foreign data and formats from external staircase builders could be imported automatically for tread production. Furthermore, the developers had to program the plate optimization. Up to 8 treads were supposed to fit on one plate. To make this possible communication with the warehouse had to be programmed. It was necessary to set up a dataflow that would communicate which plates were available in the warehouse. The treads then had to be optimized according to the plates in stock and the results of the optimization had to be sent back to the warehouse so that it could deliver the necessary plates. Lastly, Compass had to develop a module for milling the plates on the Homag machine and to cut leftover material. The entire programming was tested internally at Homag during development to ensure that MTT's production process would not be interrupted.

A Smooth and Safe Process

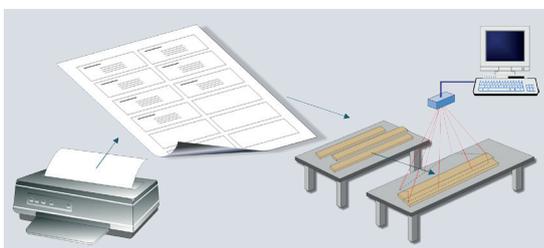
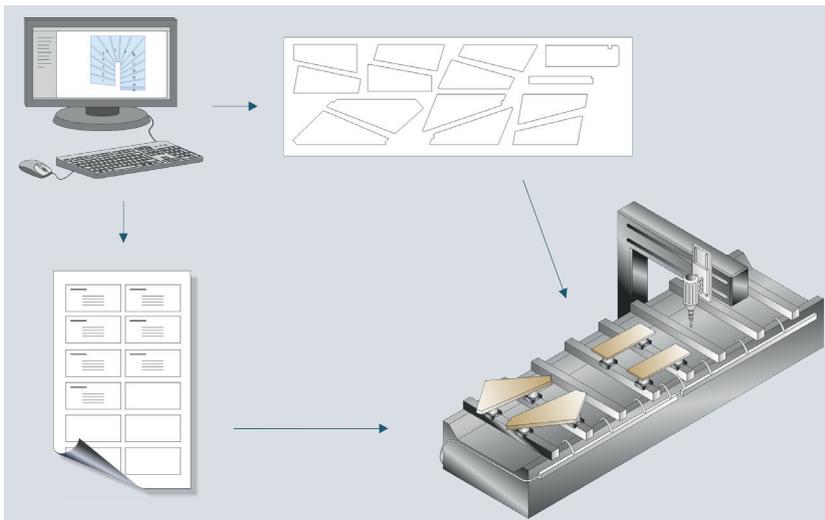
To further avoid a stop in production and to ensure the seamless transition to the new system, Homag and Compass Software technicians worked tirelessly during the turn of the year 2016/2017 to build the new system. The result is a smooth and reliable process: The optimized plates are delivered by the warehouse and the machine automatically pulls the plates onto the table. The treads are cut from the plate and subsequently sent to a plate turner to prepare them for sanding. After sanding, the finished treads can be removed from the machine. A printer produces the respective labels and depicts a control image. The entire line of machines reaches a length of ca. 20 m (66 feet) in the workshop.

„Compass Software was extremely competent and flexible when it came to understanding and resolving our challenges. Their problem-oriented approach and fast drawing of conclusions from tests data on-site, lead us straight to the desired result“, a satisfied Hermann Wank, CEO at MTT, sums up.



Foreign data and formats from external staircase builders can be read in automatically for tread production.

Intelligent plate optimization makes it possible to fit up to 8 treads on one plate.



A printer produces the respective labels and depicts a control image.

Only one Contact Person for the Entire Production Process

After completion of the project, MTT can draw a positive conclusion. All goals have been achieved: There is only one support contact for the entire manufacturing process, the optimization results are similar to production output before the transition and even promise the possibility to save expert staff, which can be utilized for other tasks in the workshop, and process security has been increased. By replacing the outdated machine and utilizing Compass Software for the entire process, MTT is able to ensure a smooth production process for decades to come. Hermann Wank adds: „Due to the fair and correct business procedures, I always felt like I was in good hands with Compass Software. Apart from the quality of their work, I was especially convinced by the pleasant and enjoyable collaboration with them on a personal level!“ And since everything worked so well, MTT is now thinking about investing in another 5-axis machine, which will naturally be implemented with the same software partner.