

One-stop-shop

Paper is not just paper. Given that it also includes nonwovens of the most varied type and use in the manufacturing programme, a product variation emerges which can only be handled by a real specialist with highly developed production know-how and the necessary tools. The company Neu Kaliss Spezialpapier GmbH is such a specialist in highly complex paper and mat production and, as such, was in search of an ERP (Enterprise Resource Planning) System 'on the same level'. It was able to find this at Meinikat Informationssysteme.



Process control system



Reel unwind equipment for round filter production

While it was still filter mattings that were being turned out by the machine for further processing as coffee pads on one day, the following day could see wallpaper mats being manufactured as backing material for wallpaper production. However, the operations at the Neu Kaliss specialist paper company in Mecklenburg-Vorpommern also include support products for laminate floors, known as overlays, as well

as moist crepe papers and nonwovens. On top of this, the most varied paper and mat products are wound onto the main reel, or the drum, of PM 6 (Paper Machine 6) around the clock — a constant 2.25 metres wide and several kilometres long.

A question of the (wire) position

The angle of the wire integrated into the production sequence is one of many special features which also enables the company, located close to the River Elbe between Hamburg, Berlin and Hanover, to meet the most specific demands made on the material to be produced. The oblique wire, also referred to as a hydroformer, on which the suspension of water, cellulose and synthetic materials — depending on the recipe — is dehydrated, allows fibre structures completely different to those possible with endless wires, as used for newsprint, for example. Furthermore, suspensions with very high dilutions can be run, which are necessary for processing the longer synthetic fibres.

Film press for mat production

Apart from flow-through and non-contact infrared drying (instead of simple rollerbased drying), probably the most important difference is made by the film press, an ingenious piece of equipment for applying coatings. To illustrate the difference, paper production is an aqueous process carried out through the dissolution of natural fibrous materials when draining the water from the suspension. This is achieved via the wire movement as well as the subsequent pressing and drying of the suspension. This produces strengthening hydrogen bondings, which are not possible for nonwovens, for example, because — in contrast to paper — they contain additional or exclusively synthetic and, therefore, 'dead' fibres such as polyester, polyamide

or polyethylene. To strengthen the material, it is necessary to add styrene-acrylates or acetates as bonding agents, like adhesives so to speak, to build crossing points between the fibres, then followed by further drying processes.

Initial use of existing resources

"As a former East German enterprise, the Computer support we had before the collapse of the communist system was as good as non-existent", explains Matthias Helm as he outlines the Situation in the late 80s. After being taken over by the Melitta Group in February 1992, an associated company then left Neu Kaliss Spezialpapier large parts of its production plant, including the computer system. "However, this Unix-based system was not specifically geared to the paper industry", recalls Matthias Helm, "so it was really more of a transitional solution and we started looking for a new system straight-away."

Sector solution sought and found

A very specific search was made for a complete solution suited to the roller-producing and processing industry. The decision was taken in October 1992 to purchase PP_mate from Meinikat based on the product being very much geared to the sector, a realistic quotation and extremely positive visits to reference customer. In the course of introducing the software, it was necessary to switch from Unix to the IBM AS/400, which was also installed at the end of December 1992 with the go-ahead for the project. The introduction of PP_mate followed within just five months in close cooperation with the software suppliers. Actual operation finally commenced in May 1993, starting with financial accounting, purchasing and sales, as well as warehousing and stock management. The training programmes ran parallel to the

introduction and were closely aligned to the actual processes performed on site.

In addition to an improved warehouse System with the illustration of items according to PU (package unit) numbers, PP_mate was subsequently expanded to include, in particular, materials management and production planning, as well as needs analysis and the preparation of production orders, with the result that all the core processes are now controlled centrally from one point. Contract management, the statistics module, production regulations, roller bearings, quality control and a warehouse information system have also been incorporated. Only the PM 6 machine control is not included in the spectrum and in the commercial area PP_mate is backed up by external solutions for financial and payroll accounting as well as by a management information system based on MS SQL.

Substantial improvements in process sequences

Measurable success followed rapidly, with the new ERP solution quickly having a positive effect on the efficiency of all processes. Thanks to the general and, in particular, the system-integrated IT-support, the existing workflows manifested themselves from ordering and purchasing to production and warehousing, also including disposition and dispatch. „Even though we cannot record the improvements in tangible figures, the channels have become faster“, is how Matthias Helm sums up the benefit attained. „The information flows between the departments and along the value-added chain have not only speeded up; they are now also more precise — in short: we have improved the efficiency of our administration and order processes.“

Perfect functionality

“Anyone claiming to fully use an ERP system with all the individual functions it can offer has usually spent too much on it“, says Matthias Helm, referring to the modular advantage of PP_mate. “You don’t normally need anywhere near everything that is

offered. It is particularly important for smaller manufacturers like us with transparent requirements to be able to illustrate these precisely in accordance with our needs. The central things that we need all run on our ERP solution.“

Always something new: current projects

Neu Kaliss Spezialpapier is presently in the middle of introducing the high availability solution, PP_mirror. The completely integrated replication of data and programmes onto a stand-by computer linked with this frees the company from harmful backups and other such procedures, such as data mirroring.



Take-off an cutting unit for processing nonwovens

Instead PP_mirror ensures the seamless cushioning of off-times caused by computer, network, software or database-related problems. The complete actual operation can be switched over in the stand-by computer extremely quickly, which is ready for use with the identical PP_mate replacement software as well as 1:1 current data.

Graphic surfaces, already realised in PP_mate in 100% Java native for some time now and therefore not simply overlaid as offered by many others, are, on the other hand, only being introduced slowly. “We are familiar with the numerical faceplates, which have proven their work in ergonomic terms, and only want to switch over where staff wish to do so. Fortunately, the ERP system offers both variants in parallel“, Matthias Helm adds.

Also under consideration is the introduction of commission accounting for field staff.

Credit control could likewise be on the agenda very soon. “The data flows need to be increased for this, however, i.e. not only from PP_mate to financial accounting, but also back again. In the end, our ERP system will then have further functionalities to make our everyday work more efficient and secure“, concludes Matthias Helm.