

MATERIAL GUIDANCE SYSTEM OPTIMIZES SAP® INTRALOGISTICS

REFERENCE REPORT

SMS group GmbH, specialized in plant construction and mechanical engineering, has optimized internal logistics at the Hilchenbach site by means of a SAP®-integrated Material Guidance System, thereby minimizing the need of forklifts and the search effort.

“

The optimized transport control

has enabled us to increase the security of supply and we can now locate any material at any time, so we have achieved the main objective of the project.”

Steffen Rosenthal
Project Management
SMS group GmbH



Thinking in big dimensions. What this means is impressively demonstrated by SMS group GmbH, which specializes in plant and mechanical engineering. The gigantic facilities at the Hilchenbach site, rich in tradition, cover an area of 120,000 square meters.

The area would be large enough to accommodate 34 football clubs in parallel. Instead, around 2,200 employees design and manufacture metallurgical and rolling mill technology from steel parts weighing up to 400 tons, which is exported all over the world. The associated multi-stage material flow processes run over several halls, production and storage areas.



TWO MAN-YEARS OF SEARCH TIME ELIMINATED

The materials required for the individual orders are temporarily stored in different areas on the plant premises.

“It was like a big black box to us because there was no central control and information system for the internal transports of factory premises,” explains Steffen Rosenthal, an industrial engineer who is responsible for technical project management at SMS group GmbH.

Against this backdrop, long search times have repeatedly occurred in the past, adding up to two man-years per year. Reason enough for SMS group GmbH to optimize the traceability of the material and the transparency of its own intralogistics.

“We needed a central control system for the approximately 3,000 internal transports per week,” says Rosenthal. The intralogistics team at the Hilchenbach site has twelve forklifts and 39 trailers with payloads of 15 to 120 tons at its disposal for the movement of goods between incoming and

outgoing goods. One of the main requirements for the system in question was that it could be integrated into the SAP® ERP system used at SMS group GmbH. “The avoidance of interfaces within the data flow is one of our basic principles,” emphasizes Marc-Oliver Greb.

The graduate engineer works at SMS group GmbH in the IT department and, together with Steffen Rosenthal, was responsible for the introduction of the Material Guidance System - TLS for short.

In addition to SAP®, this had to be integrated into the production planning and control software (FPS) developed by SMS group GmbH, to guarantee real consistency across all areas of production. “The number of suppliers for such a solution was very manageable, so that we came into contact with Flexus AG from Würzburg very quickly,” recalls Rosenthal.

ORDER PICKING IS INTEGRATED

Together with the SAP® specialists from Flexus, SMS group GmbH was able to complete the specifications as early as March 2014. The following implementation took only three months, in which, besides the software, 80 scanners, 12 Advantech-DLoG forklift terminals of type DLTV8310 as well as 35 PC stations were installed.

The wireless hand-held scanners are distributed among the forklift trucks, the PC stations and various workstations in the high-bay warehouse. “After all, the solution includes not only the actual transports, but also the contents of the small parts containers transported, which are picked in the high-bay warehouse,” explains IT expert Greb. The 35 PC stations are distributed over the entire storage and production area.

The computers and scanners, housed in robust cabinets, are used to request trailers as needed, to create transport orders and to “create” containers. Each transport order is automatically transmitted to one of the available vehicles and displayed with start and destination addresses on the Advantech-DLoG forklift terminal.

If necessary, the driver is also informed of the location of a suitable trailer. Each unit towed is provided with a barcode label, which is scanned by the driver when the truck is docked. In this way, the use and utilization of the special trailers can also be tracked and analyzed without interruption. At the point of loading, the driver additionally scans the goods taken over, which are now provided with a uniform

accompanying label. "Since 2014, every component and every container has had a precisely defined label that, in addition to a barcode, contains the most important data in plain text," explains IT project manager Greb.

The roughly 140 defined transfer zones, which are also equipped with a barcode, are also new. Each internal transport always leads to one of these zones, the number of which is constantly increasing. "At the end of the day, the material should be as close as possible to the location," explains Rosenthal.

After implementation, the test phase began in July, which was successfully completed after six weeks. The training of the 500 employees was already started in June, so that the deadline could be met.

The Flexus and the SMS group GmbH developed a training concept that was target group-oriented learning content to the various "role owners" such as order pickers, forklift drivers, shippers or the newly implemented control station.

FORKLIFT FLEET REDUCED



All processes in the control station are displayed in tabular form, graphically prepared and centrally monitored. In addition to manual intervention in the transport worklist, all individual parts can be located and traced using the material and WBS numbers.

"We can now locate any material at any time and have thus achieved one of the project's main goals," points out Rosenthal. In addition, targeted evaluations of the efficiency of the processes can now be created. This makes it possible to check whether the individual trailers and load carriers have been emptied within the required two-hour period. The first result of these calculations was not long in coming: after just a few weeks the forklift truck fleet could be reduced from twelve to 11 units.



Together with the minimized search times, this alone should make it possible to achieve the goal of reducing operating costs by 10 to 15 percent. In any case, the expected annual savings potential was achieved at the Hilchenbach site.

It is to no surprise then that Flexus has already been commissioned with further major project steps. The Material Guidance System is also going to be introduced in the middle of 2016 at the location Mönchengladbach.

BACKGROUND SMS GROUP

SMS group GmbH offers metallurgical and rolling mill technology from a single source. The range includes plants, machinery, services and process know-how used worldwide in the steel, aluminum and non-ferrous metal industries.

The SMS group offers a complete service portfolio. This includes the entire spectrum from planning, development, financing, design and installation to automation and training. Tailor-made, turnkey complete systems are realized as well as extensions and modernization. The SMS group is part of SMS Holding GmbH, a group of internationally active companies operating in plant and mechanical engineering for the steel and non-ferrous metal industry.

MATERIAL GUIDANCE SYSTEM FOR SAP®

BACKGROUND

FLEXUS AG BACKGROUND

Flexus AG, based in Würzburg, specializes in optimizing intralogistics processes through innovative software products and consulting know-how. The SAP partner with mobility competence offers a holistic approach based on the analysis of potentials as well as the conception and implementation of measures that improve material flow. Many years of experience in mobile data entry and the implementation of forklift/transport guidance systems have set the basis for it. For this purpose, SAP add-ons by Flexus are used. Through direct integration with SAP® ERP, these solutions are particularly advantageous

SOFTWARE BACKGROUND

Flexus AG, an SAP partner, offers solutions for networked SAP® intralogistics. With these solutions, the interaction of people, processes and technologies within the company is improved. This ensures efficient processes and concrete business benefits in the spirit of industry 4.0. The applications include the FLX-TLS Material Guidance System for SAP® for simple and transparent control of all available resources required for material flow in a company. These include the optimization of forklifts, tigger trains, high-rack storages, employees with mobile terminal devices and company-internal truck traffic. The solution ensures cross-divisional control and tracking of the material flow and reduces empty runs to a minimum. A number of modules and extensions make it possible to match your requirements perfectly.

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