

MATERIAL GUIDANCE SYSTEM OPTIMIZES SAP® SHIPMENT

REFERENCE REPORT

MANN+HUMMEL has installed the order picking and shipment processes with the Flexus Material Guidance System FLX-TLS, which is directly integrated into SAP®, and significantly improved the utilization of resources.



The fact
that Flexus
AG has
a long-

standing expertise in
SAP® intralogistics, and
offers an established
and innovative solution
with the FLX-TLS
Material Guidance
System, convinced us."

Roland Prechler
Management SCM
MANN+HUMMEL Ltd.



One million transport orders in six months: The fleet of forklift trucks at Mann+Hummel in Marklkofen, Lower Bavaria, has a lot to do. Six narrow-aisle forklift trucks and four front-end loader forklifts secure the safety of the entire material flow between incoming and outgoing goods in three shifts.

Each day, around 2,500 pallets are leaving the factory, which corresponds to a volume of 70 truckloads. The volume has increased year by year, resulting in the shipping team reaching its limits in 2014. "We would have had to hire four more employees in the mid-term in order to be prepared for the future," recalls Roland Prechler, who is in charge of the Supply Chain Management (SCM).

LONG WAYS, MANY EMPTY RUNS

As an alternative to hiring new staff, MANN+HUMMEL decided to sustainably increase the efficiency in the shipping zone. The starting point was the storage and retrieval of delivery notes, as well as pre-picking of the high-rack forklifts. The delivery notes were selected individually by the employees and carried from the shipping office one at a time. "This process led to long routes and many empty runs," reports Ilona Hudson, project manager in the logistics department at MANN+HUMMEL. All in all, loading the trucks "with our old system often took too long".



Roland Prechler



Ilona Hudson

Time-consuming rack aisle changes posed a further disadvantage of the previous procedure. On top of this, several narrow-aisle forklifts with different delivery notes had to travel to a certain aisle at the same time, which resulted in long waiting times.

MAXIMUM TRANSPARENCY

For this reason, MANN+HUMMEL was looking for a transport control system that could be integrated into SAP® on a centralized basis.

The aim was to distribute the transport orders to all forklifts via a central pool without paper and to be able to work independently of delivery notes. In November 2014, Roland Prechler and his team started the actual and value stream analysis and evaluated the optimization potential.

Flexus AG and the FLX-TLS Material Guidance System were chosen as the suitable supplier. "We were convinced by the fact that Flexus has a longstanding expertise in SAP® intralogistics and that it offers a well-established and at the same time innovative solution with its transport control system", says Prechler.

Despite many requests for changes and extensions on the part of MANN+HUMMEL, the implementation of the system took only five months, so that the new processes were ready to be launched on March 31, 2015. The additional features required included, for example, a visualization of the current progress of respective orders or a restriction on the delivery notes to be processed simultaneously. Additionally, the transport orders processed during the day can now be displayed by the team and by each individual employee. "This increases motivation, leads to maximum transparency of all orders and is used for logging progress," explains Hudson.



CENTRAL OPTIMIZATION

Due to the multi-stage nature of the transport orders, the total of 32 forklift drivers have a clear division of labor. The narrow-aisle forklifts in the high-rack warehouse take on the storage and retrieval as well as pre-picking, whereby the transport guidance system prevents aisle changes as far as possible. The same applies to the simultaneous navigation of aisles by two narrow-aisle forklifts, which is no longer necessary. The transfer point of the pallets is a defined zone in front of the high-rack warehouse - the so-called apron area. There, the load carriers are taken up by the front-end loader forklifts, which are responsible for pre-loading, loading and unloading the trucks.

PARALLEL PICKING

With the FLX-TLS Material Guidance System, the next transport orders are automatically allocated according to the optimization logic and shown on the forklift terminal display. The most urgent delivery notes are then processed with the highest priority, whereby each delivery note can now be picked by several forklifts in parallel. Furthermore, storage and removals are combined. "This means that interleavings are now possible, and we have reduced the path lengths to a minimum," emphasizes Prechler.

SHORTER LEAD TIMES

Thus, after one year of using the solution by Flexus the results are impressive: since its implementation, lead times have been reduced by 7 percent and paths by around 15 percent. "In the past, a narrow-aisle forklift was only able to handle 25 storage and removal operations per hour, but now it is 29," confirms Hudson. Due to better capacity utilization, the overall performance has been increased noticeably using the same number of employees and vehicles.

INTERFACE STILL OPTISPEED

"Flexus AG is an excellent and reliable service partner for the optimization of our SAP® processes," says Prechler. "For this reason, we have already scheduled these experts for various follow-up projects. By the way: MANN+HUMMEL expects a further increase in efficiency due to the semi-automatic control of narrow-aisle trucks introduced in March 2016. These are equipped at the factory with

the semi-automatic forklift OptiSpeed, which is directly integrated into the control system via an interface developed by Flexus. In this way, the devices now drive automatically or semi-automatically to the target storage location, whereby the drive curve in the rack is optimized in longitudinal and vertical direction. In addition, the employee who no longer has to devote his concentration to heading for the storage location is relieved. Another advantage of this further development is the avoidance of wrong picks and deposits.

FINGERTIP PRINTING

But there is more: The new Material Guidance System has not only increased the speed of work significantly but also the quality. This is because, unlike in the past, the outgoing goods pallets can now be labelled directly by the forklift driver when they are removed from storage. For this purpose, a printer was placed in each rack aisle, which can be controlled from the forklift terminal. After picking up the pallet from the high-rack warehouse, a fingertip on the touch screen is all it takes. When the pallet leaves the aisle, the label already waits in the printer and is applied immediately. Until March 2015, retrieval and labeling were still separate, leading to some mix-ups.

Conclusion: At MANN+HUMMEL, the FLX-TLS Material Guidance System by Flexus has significantly improved the processes in outgoing goods on various levels. It is no surprise then that the company will introduce the solution at other locations as well.

BACKGROUND MANN+HUMMEL

MANN+HUMMEL is one of the world's leading experts for filtration solutions and development partner and series supplier to the international automotive and mechanical engineering industry. In 2014, 16,000 employees at more than 60 locations generated a revenue of around €2.8bn worldwide.

The group's products include air filter systems, suction systems, liquid filter systems, cabin air filters and technical plastic parts for the automotive industry as well as filter elements for the maintenance of motor vehicles. For mechanical engineering, process engineering and industrial applications, the product portfolio comprises of industrial filters, membrane filters for water filtration and filter systems.

MATERIAL GUIDANCE SYSTEM FOR SAP®

BACKGROUND

BACKGROUND FLEXUS AG

Flexus AG, based in Würzburg, is specialized in the optimization of intralogistics processes through innovative software products and consulting know-how. The SAP partner with mobility competence offers a holistic approach from the analysis of potentials to the conception and implementation of measures to improve material flow. This is based on many years of experience in mobile data entry and the implementation of forklift and transport control systems. SAP add-ons by Flexus are used for this purpose. Due to direct integration with SAP® ERP, the solutions are particularly advantageous.

BACKGROUND SOFTWARE

Flexus AG, an SAP partner, offers solutions for networked SAP® intralogistics. The solutions improve the interaction of people, processes and technologies within the company. This ensures efficient processes and concrete business benefits in the sense of Industry 4.0. The applications include the FLX-TGS transport and forklift control system for SAP® for simple and transparent control of all existing resources that are required for material flow in a company. This includes the optimization of forklifts, tigger trains, high-rack warehouses, employees with mobile end devices and internal truck traffic. The system ensures a smooth flow of material and reduces empty runs to a minimum. Numerous modules and extensions enable optimal adjustment to your needs.

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