




 **LFS 400**

 Warehouse Management by E+P

Bossard AG:

Highest Quality Fastening

Products for Industry



EHRHARDT + PARTNER

Software Systems
for Warehouse Logistics

Successful Reorganization of Warehouse Procedures at Bossard AG

It is Bossard's business policy to trade solely in fastening products of the highest quality and standard. In order to maximize customer loyalty and readiness to deliver and to attend to the customers' needs, the entire logistics was revised and the LFS 400 Warehouse Management System from Ehrhardt + Partner installed.

Setting Goals

Bossard AG in Strasbourg is an enterprise of the Bossard Group, based in Zug (Switzerland). The Bossard Group supplies industrial operations with fastening products such as screws, nuts and threads.



Identification of Goods and Putaway Preparation

In Strasbourg, Bossard deals with approx. 500 orders a day and has approx. 2000 customers in France. In order to manage the quantity of work faster and more effectively, warehouse procedures had to be reorganized. The external warehouses in Rennes, Paris and Grenoble were simultaneously involved in the reorganization.

It was also the intention that in the course of this project, the prerequisites for the ISO-9002 Certification be fulfilled, as well as the requirements of the product liability laws and that a order sequencing and content control be put into operation.

For the material flow process, barcode labels and on-line radio data terminals were to be introduced. There were only 4 months available to have everything finished and running.

Goods Receipt

When goods are delivered, they are identified and controlled. The goods are repacked and a barcode label attached containing all information required for an accurate putaway:

- Stock location with exact bin location coordinates

- Receipt references, such as batch and goods receipt number
- Purchase order number
- Item-number
- Supplier number
- Quantity of packages

As soon as the incoming delivery has been booked, the current inventory in the system is available. All stages in material flow, from receipt through to the transfer to the bin location, are dealt with in detail in the warehouse management system.

The barcode is read by an on-line radio data terminal scanner and information from the data base about the destination bin location is displayed on the on-line terminal display.

All racks/bin locations also have a barcode. The bin location address on the putaway box must match the assigned bin location. If it does, the stock is booked to the bin location. This guarantees 100% accuracy during putaway.

Disposition and Optimization of Customer Orders

In the early morning, all waiting and deliverable orders are transmitted from the order system to the warehouse system order pool. This checks if all quantities and particularly the required packing quantities are available in the warehouse.

Packing quantities which are available but not suitable are recorded by the system in a list so that the corresponding delivery positions of a repacking job in confectioning can be portioned off according to the customers' needs. At the same time, the system generates rearrangement orders for the quantities required and to be repacked.

For positions which are ready to deliver, the system gives the total weight of the order. If the total weight is less than an adjustable weight parameter, a pick/pack order with all positions required for each order is formed.

If the order is heavier than this adjusted weight amount, the system divides the customer order into several picking orders or generates a picking order for the pallet stock location.

The LFS 400 supports a Double Box Supplying System.

The customer receives two boxes filled with goods and each marked with a barcode. When one of the boxes is empty, it is sent to Bossard.

There, the barcode of the empty box is scanned. The warehouse system automatically generates the customer and pick/pack order and also sees to it that in dispatch, the required dispatch papers are generated by data technology and can be retrieved.

After pick/pack, the box is refilled and sent back to the customer. During this time, the goods from the second box can be used up.

Urgent orders which have to be delivered immediately are placed at the top of the priority list and are immediately processed by the next available pick/packer.

Pick/Pack

The execution of picking orders also takes place via the on-line radio data terminal. The pick/pack orders are sorted in the system respective of shipping type, or priority. In the Sigopick, the pick/packer is equipped with pick/pack containers and in other stock locations, with an empty pick/pack pallet and preprinted barcodes. The pick/packer confirms the next order displayed for pick/pack. The system then asks that one of the container labels to be stuck on the pick/pack container or the pallet is scanned.

The system then takes the pick/packer by the best route to the first bin location in his aisle. Here, he also has to scan the pre-given bin location barcode as a control. He does not receive any information about the required item or quantity until after the barcode is confirmed to match that in the data base.

After taking the goods, a display of the current bin location inventory comes up on his terminal to be controlled. If the quantity in the bin has meanwhile fallen so low, that the stock can be counted without difficulty, the correct inventory must be confirmed or adjusted to match the value counted. Thus, a permanent cycle count is carried out for each bin location, system-controlled and at minimal cost. When all items are pick/packed, the pick/packer places the box on a conveyor belt and enters a picking aisle in the dispatch area under the destina-

tion address. At the same time, he enters this address in code on the box to be transported automatically into the dispatch area.

Dispatch

When the pick/pack box enters the shipping area, the barcode label is scanned and the system displays if the box is the first and only pick for an order. If this is the case, the operator is then required to see to it that the box arrives in the packing area.

However, if the box is the first of many, the operator has to enter a consolidation location. The union of box number and consolidation location is effect-



ed by on-line radio data terminal and barcode scanner. All further boxes for this order which enter the dispatch area, are directed in order to this consolidation location. When the last box reaches the location, the operator receives a message on his RF-Terminal display informing him that the order is now complete and ready for packing.

Order Consolidation and Packaging

Packing Location Dialog/Shipping Sequence

In the packing location, one of the ready boxes is scanned by a terminal with a connecting scanner. Through a dialog, the operator can then allocate the box to a packing unit. When the packing order is complete, the system generates a list of package deliveries for each mode of transport, (forwarding agent/post/parcel service), which is confirmed by the person collecting the consignments. At the same time, the package data can be transmitted electronically to the collector to be used for the dispatch sequence.

Order and package data can be transmitted at the same time to the respective customer. When the packages reach the customer, the barcode on a single package can be scanned at goods receipt to gain access to all items in the package. The customer can then book the goods receipt quickly and accurately.

Smooth Conversion at Bossard AG



The warehouse contains 22,000 different items, stored in approx. 40,000 shelf partitions and 4,000 pallet locations. The Sigopick Warehouse consists of 3 aisles installed with rack operating devices, both man-operated and on rollers. In the pallet location, two fork lift trucks with retractable masts are in operation, which are also responsible for replenishing the Sigopick Warehouse. In Strasbourg, 500 orders with approx. 1,200 positions are processed daily. In Paris, Rennes and Grenoble, a further 200 orders with approx. 1,000 positions are processed.

The LFS 400 software, which runs on the IBM system AS/400, is characterized by its reliability and, due to its modular construction, by its adaptability.

A radio data unit with two aeriels transmits the data to the 13 mobile on-line terminals. At the terminals, the barcodes can be read using a scanner, and the different operator masks are quickly and easily accessible.

At the beginning of October, the company Ehrhardt + Partner, specialists in warehouse management since 1987, won the contract for the Bossard AG project. The system had to be installed and the staff trained by the end of the year. This was carried out quickly and competently by the staff at Ehrhardt + Partner. The taking over of warehouse operations in the Bossard Group subsidiaries in France was also tied up in the Strasbourg warehouse conversion. The subsidiaries, situated in Paris, Rennes and Grenoble, are all linked on-line to the central system in Strasbourg.

LFS 400 modules employed:



Warehouse Management by E+P

- Basic Module
- RF-Terminals
- Training on Merchandise Management System Titan
- Quality Control
- Packing Location Dialog
- Level Zero Cycle Counting



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