

## Transformation in the field of Beverages Logistics

### Software

**Warehouse management and forklift guidance system allows Hassia Mineralquellen to achieve more efficient processes at their depot in Bad Vilbel.**

The spa town of Bad Vilbel to the north of Frankfurt am Main, with a population of around 30.000, is known as the town of springs. As far back as 1864 the innkeeper Johann Philipp Wilhelm Hinkel opened up a spring on his property.

Business bloomed and in 1900 the company was registered in the Commercial Register under the name Hassia-Mineralbrunnen-Sprudel. Eventually, the company was merged with Luisen Brunnen, which had been founded in 1875, resulting in the foundation of Hassia Mineralquellen Bad Vilbel GmbH & Co. in 1982. With 1.250 employees working at a total of seven locations, the Hassia group is one of the biggest suppliers of non-alcoholic beverages in Germany, supplying around 4.200 customers in the beverages wholesale, food retail and gastronomy sectors. Bad Vilbel is the biggest operating location within the Hassia group.

In addition to production facilities, the site also includes a large warehouse area. With a total floor area of over 100.000 m<sup>2</sup>, up to 12.000 palletmovements a day are handled here. Around 30 forklift vehicles with a total of 70 drivers spread over three shifts are available for this task.

In recent years, the demands on logistics within the Hassia group have been growing continually. For example, the variety of products produced and thus the number of different batches has increased. In addition, new legal requirements had been introduced which had to be fulfilled. "EU Regulation 178/2005 meant that we were required to implement batch tracing" explains Alexandra Keitel, Logistics Project Manager at Hassia Mineralquellen.

The company therefore decided in 2005 to optimise the internal logistics

processes and introduce a new warehouse management system and a forklift guidance and navigation system, because previously the processes within the warehouse had only partially been IT-supported. In loading, for example, movement orders were still printed out on paper lists and distributed manually to the forklift drivers. Moreover, in order to facilitate the location of articles by the drivers, the warehouse management was largely based on fixed storage locations.

### Fewer empty runs ...

As warehouse management system, Hassia opted for the "Prisma" software from Ita Vero GmbH, Bad Vilbel. For the forklift guidance and navigation system, the company chose the "G-TRACK" and "G-CONTROL" solutions from Locanis AG, Unterföhring. These rely on the interaction of distance recorders, angle sensors and other sensors mounted on the forklift to determine the position of the vehicles and thus identify the position of the forklift in real time. With the aid of the data and co-ordinates obtained in this way the soft drink specialist receives a three-dimensional warehouse management overview with 3D-visualisation down to the level of individual storage locations and pallets.

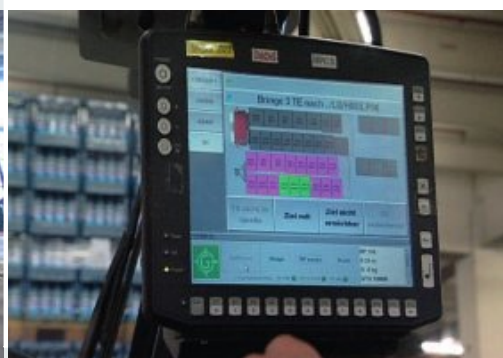
The new systems have been in use for around a year at the Bad Vilbel plant. Since then, the greater part of the warehouse processes have been controlled on a paperless basis. The assignment of movement orders takes place via the full-coverage WLAN network. An intelligent empty-run prevention function ensures that orders are selected taking into account the forklift position and the priorities within the warehouse, reducing empty runs to a minimum. "The forklifts are managed by the forklift guidance system and the movement orders are always assigned to the nearest available forklift", explains Joachim Riegg, Locanis AG's Project Manager. The assignment of orders by the forklift guidance and navigation system

Nowadays, when a truck arrives at Hassia's logistics centre in Bad Vilbel it is automatically assigned to a loading lane and the warehouse management system visualises each truck at its loading bay. Once the employee responsible for the loading lane has confirmed the arrival of the vehicle in the loading bay in the warehouse management system, this generates the corresponding unloading orders. After unloading has been completed, loading takes place. The warehouse management system specifies which articles are to be removed from which storage location and the forklift guidance and navigation system assigns the

the truck. Furthermore, this precise administration of individual storage locations makes it possible to track each individual pallet as far as the truck. G-TRACK also checks whether the load carriers are actually loaded onto the correct truck, ruling out loading errors.

**Further plant locations connected**

"Now we always have an overview of current stocks and know where these are located and which pallet we are moving", says Keitel, satisfied with the new warehouse management and forklift navigation system. "And phasing out fixed storage locations means we can manage the warehouse more efficiently. Also, it would have been difficult to cope with the number of different articles, batches and storage locations with a stock management strategy like FIFO without IT support." Riegg's assessment is also positive: "Hassia have managed to significantly increase the efficiency of the warehouse processes, even though an increase in the range of products handled and a changed order structure has meant a rise in the number of movement orders."



**The new system helps Hassia to reduce the truck turnaround times significantly.**

**Shows the forklift driver which pallet needs to go where: the new forklift guidance system G-TRACK.**

thus reduces the number of empty runs in comparison with the previous process-bound forklift management, allowing Hassia to significantly increase the utilisation and efficiency of the forklift fleet.

**... and shorter turnaround times**

A further advantage involves the reduction in truck turnaround times. "The targets were maximum turnaround times of 45 minutes for solo vehicles and 60 minutes for articulated trucks", says Riegg. "We have achieved these times and also made possible loading times of 15 minutes or less – depending on loading requirements and the size of the load."

movement order to the forklift trucks. If a forklift driver enters the wrong aisle while carrying out a movement order, this is detected by the system. A visualisation opens automatically which displays to the driver the incorrect positioning. Only if the forklift driver picks up from the correct storage location does the forklift guidance and navigation system allow the pallets to be successfully picked up.

Only then is the loading plan of the truck displayed to the forklift driver on their terminal. In addition to the loading bay, this also lets him know the exact position in which the pallets are to be loaded onto

This positive outcome has had consequences: shortly after introduction of the new system in Bad Vilbel the Hassia group decided to implement the solutions at their plants in Lichtenau and Rosbach as well. And following a commissioning phase of only six weeks in each case, the software has been in use here too since the beginning of the year.

JensVerstaen

Locanis AG define themselves as a specialist in and full-size provider of product tracking and process optimisation solutions and, through innovation and competence, have established themselves as a leading provider of solutions in these fields. **G-TRACK®** makes possible continuous tracking of the position of the forklifts and thus also the load carriers. In interaction with **G-CONTROL**, the forklift guidance system from LOCANIS, movement orders are assigned to the forklifts optimally in terms of time and distance. This results, on the one hand, in a reduction in costs through savings in equipment and personnel and also in a considerable increase in efficiency.



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