

11ER NAHRUNGSMITTEL GMBH FRASTANZ/AUSTRIA





THE CUSTOMER

11er Nahrungsmittel GmbH has specialized in the production and the marketing of frozen potato products.

Each year, around 80,000 t of raw potatoes are processed into a dazzling selection of quality products such as french fries, croquette potatoes and sliced fried potatoes at the site in Frastanz in the border triangle Austria-Germany-Switzerland.

With 220 employees in the headquarters and with an export share of approx. 70%, 11er Nahrungsmittel GmbH is represented throughout the whole of Europe.



One of 290 deep-frozen products of 11er: breaded pomes Williams – pear-shaped croquette potatoes.

SIGNIFICANTLY INCREASED AVAILABILITY IMPROVES THE EFFICIENCY BY 20%

RETROFIT BY LTW

THE INITIAL SITUATION

In 1991, 11er Nahrungsmittel GmbH put up their third frozen storage warehouse and simultaneously their first fully automated high-bay warehouse.

The general contractor was a specialist supplier for potato processing companies. Various sub-contractors supplied the individual components: three aisle switching storage and retrieval machines, materials handling technology, an overhead trolley conveyor, the software.

Despite the quality of the individual components 11er is faced with interface problems, frequent disturbances, system breakdowns and unclear responsibilities of suppliers.



Walter Fitz, project director of 11er: "LTW planned the retrofit to the smallest detail. We powered up the plant and it worked. A project just like it was straight out of a picture book!"

THE PROJECT

At mid-year 2004 the logistics team of 11er contacted the LTW customer service and asked them to take over the maintenance of the complete external installation.

Already during the first common on-site inspection of both parties concerned, a fundamental updating concept was discussed.

After more than one decade of operation, the technical system had become obsolete, spare parts were difficult to procure.

Storage and retrieval machines, rail system, conveyors and controller had to be adapted to the state of the art, the warehouse management system had to be replaced by a new software with an open and lean interface to the customer-provided ERP of 11er.



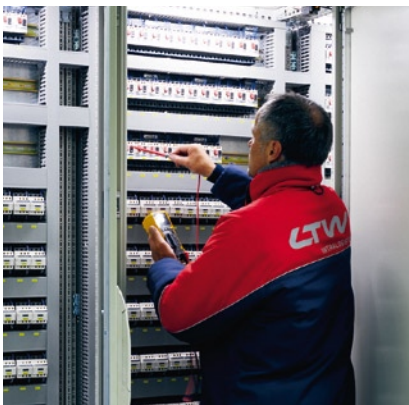
As from 2007, the new and quicker double transfer carriage eliminates a bottleneck in the conveyor technology and, due to a preventive maintenance, runs since then without any problems.

The initial suppliers also filed a tender. Though the Retrofit package of LTW was slightly higher, the projected additional benefits were able to convince the customer.

Moreover, LTW was able to give a detailed analysis on the spot. Martin Oswald, warehouse manager remembers “an expert of LTW, who documented every centimeter of cable prior to the installation of the plant. We had only a very short-termed time period for the retrofitting and we were compelled to avoid any surprise.”

The plant was installed at the end of 2004/beginning of 2005 and the necessary work took less than three weeks. The plant was at a standstill during this period, except, of course, the refrigerating plant. A temperature of minus 28° centigrade was highly demanding on the team as well as on the tools, especially for work requiring fine motor skills. Each time after boring and cutting machines were used, they had to be brought immediately into the warmer pre-zone.

The day after Epiphany that had been scheduled as a reserve day was not



Any work aiming at an accurate order in all the switch cabinets and cable ducts perfectly justifies as this will be of great avail for any maintenance work and troubleshooting.



Twelve hours shift at -28° C. The three automated storage and retrieval machines are converted in the service area at the end of the switching aisle.

needed for work, the connection between the LTW warehouse management system and the customer-provided ERP of 11er worked at first go.

Martin Oswald about the timely start of operation: “Not a single pallet was delivered late.”

THE CONCLUSION

Walter Fitz, IT officer with 11er remembers that “in the past, we often had to restart the warehouse management system several times a day and we had to adjust the stock manually. But since the Retrofit, troubles happen so rarely, that our employees almost forget how to proceed in such a case.”

The criterion of availability by itself causes an increase of the handling capacity by 15% – with unchanged speeds of the drive and hoist motors.

This increase led to a bottleneck at the interface between warehouse and pre-zone. In 2007, LTW was able to eliminate this inconvenience by installing a new double transfer carriage thus increasing the plant performance by another 5%.



OUTLINE OF THE PROJECT



GENERAL CONDITIONS

HIGH-BAY WAREHOUSE

- ▶ Year of construction: 1991
- ▶ Frozen storage warehouse (– 28° C)
- ▶ Galvanized steel rack
- ▶ L x W x H: approx. 70 x 57 x 20 m
- ▶ 12 rack lanes, 1 switching aisle
- ▶ Approx. 8,700 pallet spaces
- ▶ Maximum payload: 1,000 kg

STORAGE AND RETRIEVAL MACHINES (SRM)

- ▶ 3 fully automated aisle switching SRMs
- ▶ Cabin affixed to the lifting carriage
- ▶ Load handling device: telescopic fork

MATERIALS HANDLING TECHNOLOGY

- ▶ Pre-zone with storage and retrieval lanes for lift truck operation (+5 °C)
- ▶ Production area connected to the high-bay warehouse by overhead trolley conveyor

LTW RETROFIT 2005

STORAGE AND RETRIEVAL MACHINES (SRM)

- ▶ Switch cabinet with S7 control system
- ▶ Three phase driving and hoisting drive
- ▶ Path measurement during hoisting by bar code
- ▶ Absolute encoder for telescopic fork
- ▶ WLAN

SOFTWARE

- ▶ LTW warehouse management system
- ▶ Interface to the customer's ERP system
- ▶ Anti-collision control

MATERIALS HANDLING TECHNOLOGY

- ▶ Replacement of S5 by S7 controller
- ▶ Operating units
- ▶ Bar code scanners
- ▶ New/Additional photoelectric barriers

LTW RETROFIT 2007

MATERIALS HANDLING TECHNOLOGY

- ▶ Installation of the double transfer carriage in the high-bay warehouse
- ▶ New rail system with conductor line and bar code path measurement