

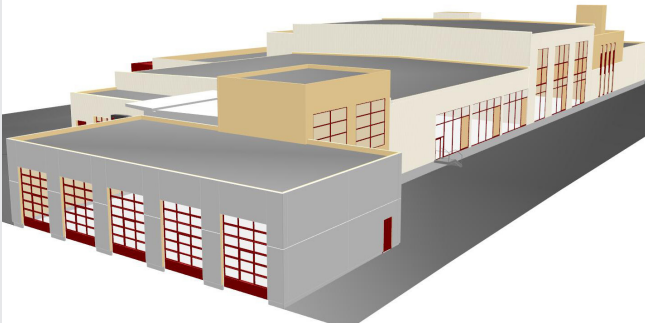


Linauer & Wagner „Backstuben“ BackwarenproduktionsgmbH

Scope of Project	Production planning, recipe management, batch traceability, silo control plant switch cabinet construction, cabling
Particularities	Continuous production planning, control, traceability and quality assurance
Plant Location	Lichtenwörth / Austria
Client	Linauer & Wagner „Backstuben“ BackwarenproduktionsgmbH

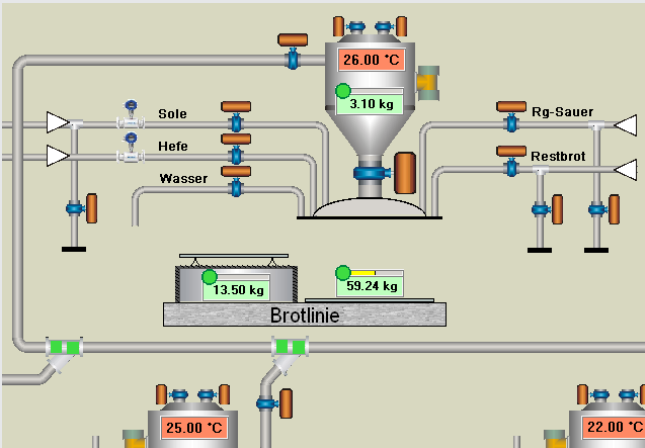
KEY FACTS

aX Software	automationX, redundant aXbatch aXproduction
aX Hardware	1 aXPBC Profibus counter
aX Server	1 redundant server pair 1 SQL server
aX Client	3 operator stations mixer 4 operator stations quality assurance 1 operator stations operations scheduling
I/O's	digital: 270 analog: 30
Interfaces	ERP system Comback Cooling system Kneader Diosna
Field	1 frequency converter 20 weighing machines 10 motor 30 valves 4 switch cabinets



OUR PARTNER

Linauer & Wagner “Backstuben” BackwarenproduktionsgmbH produces high-quality bakery products. The products can be purchased by the consumer via various distribution channels. The company Linauer operates its own branches in the vicinity of the company location in Lichtenwörth. Restaurant and catering businesses are directly supplied with the viands. Households, cafes and restaurants are supplied with semi-baked, deep-frozen products, partially to be baked-off.



THE CHALLENGE

The company Linauer relocated its production site from Wr. Neustadt to a new place of operation in Lichtenwörth. The objective of the Linauer team was to find a partner for the following tasks:

- ▶ Control equipment of the silo plant
- ▶ Recipe management system
- ▶ Planning software
- ▶ Traceability of the production process

THE SOLUTION

Production planning

The ERP system forwards the orders via an interface to the production management system aXproduction. The methods engineer schedules the orders depending on the dispatch time and releases them for production. Following this step, the orders are displayed at the mixing station. The baker has only to process the orders in the sequence specified. For the schedule, the automationX system not only considers the production output of the mixing plant, but also the respective output of the subsequent production machines. Thus, shortages can be detected in short-term production planning. For long-term planning, the production management system aXproduction is fed with projected planning data. The system provides utilisation rates of individual machines as well as the required personnel and material input. This information is useful for medium-term personnel, raw materials and investment planning.

Production control

The production control includes the recipe management as well as the control of all the processes up to packaging. In the so-called recipe, the subsequent processes like kneading, resting and production are integrated as well. In these individual processes, requirements for personnel, materials and raw materials are deposited.

Kneader interface

After mixing, the dough is further processed in kneaders. At the mixing station, the baker is prompted to enter the kneading bowl number. Thus, the automationX system knows which batch is located in which kneading bowl. Once the baker transferred the kneading bowl to the kneader, he/she enters its number at the terminal. Via a software interface, the required program is automatically transmitted to the kneader control subsequently. All the baker finally has to do is to press the start button, the rest runs automatically.

Dough resting

The dough resting time is specified in the automationX system. The countdown is triggered automatically after the end of the kneading process and displayed at the terminal. After the time is expired, the dough is ready for further processing. The baker confirms the start of further processing at a terminal and the actual resting time will be stored.

Final processing

From one dough batch, various products can be produced. The products allocated to one batch are displayed on a terminal with processing instructions and a photo. After the start of further processing, the employee is also prompted to enter quality parameters.

RFID technology for baking racks

Placed on trays, the pieces of dough are passed through the subsequent production process on baking racks. These racks are clearly marked with an RFID chip. The baker scans the attached RFID code and specifies the number of trays via the mobile terminal after loading.

Material flow tracing of the baking racks

Subsequently, the baking rack passes through further work systems in the production process like the proofer, the oven or shock cooling. The employee "links" the baking rack with the respective work system using the mobile terminal. This is achieved by scanning the RFID chip at the baking rack and the RFID chip at the work system. Thus, traceability is guaranteed.

Historic database

Any data recorded during the production process is saved for the respective batches in a SQL database in a targeted manner. aXproduction offers a variety of possibilities for analysis. In case of irregularities occurring with products delivered, the production process can be traced back even to the supplier of the raw material.

