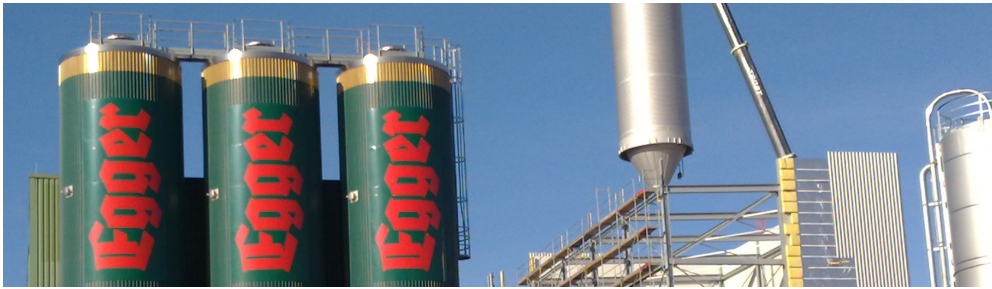


Traceability smoothly combined with output and loss monitoring

Materials management integrated in brewmaxx opens up entirely new optimization options for breweries of any size



Regulations and legal requirements with regard to consistent traceability represent a huge challenge for small to medium size breweries. To tackle these issues, even painstaking manual records are no longer sufficient. ProLeiT has implemented materials management in the brewmaxx process control system in order to carefully record all material flows within a brewery. brewmaxx automatically ensures comprehensive batch traceability. The Report Designer module integrated for the first time in brewmaxx can be used to set up individual logs in a very simple manner in order to display e.g. output or loss information with just a few mouse clicks. This future-oriented package has been used for the first time at Egger. Its fascinating options for the optimization of batch traceability along with processes in breweries of any size are proving its worth at this brewery.

Based in the Lower Austrian town of Unterradlberg, Egger is Austria's second largest private brewery. The origins of this company date back to the year 1675 and are based on the brewery's self-commitment to produce high-quality products – at that time and still today. For this reason, the Egger brewery not only meets the most stringent quality guidelines, but also complies with the Beer Purity Law.

The aim of the comprehensive modernization and extension of the brewery's former annual capacity of 630,000 hectoliters was also to implement future-oriented quality assurance and traceability that provides investment security. During the planning phase, Egger's specialists visited reference plants including the new Tucher brewery. The brewmaxx automation solution implemented at this brewery caught their

attention. Since brewmaxx, of course, also perfectly meets the requirements of small to medium size breweries, Egger decided in favor of the brewmaxx process control system.

During an initial phase, the contract awarded to ProLeiT included the brewing process from the receipt of raw material up to the fermenting and storage cellar. In order to achieve a consistent automation solution for batch tracking throughout the entire brewing process, the contract was expanded. brewmaxx now also automates the filter cellar along with the pressure tanks. In addition, a new can filling line will be equipped with a brewmaxx Line Management System.

Providing the basis for traceability

The fact that brewmaxx is the ideal tool for the automation of brewing processes has also been clearly demonstrated at Egger. But this is not all: Process control technology today provides the basis for higherlevel task definitions which will become ever more important in the future – including batch tracking. The prerequisite for this approach is a consistent data, information and communication structure that extends from the process level, including sensors, instruments, motors and pumps, to the MES level (Manufacturing Execution System), including production data and machine data acquisition, the control center and the system control, and even comprises the higher-level ERP system (Enterprise Resource Planning).

Thanks to the integration of a materials management module in the process control

INFO

Egger

Company:	Privatbrauerei Fritz Egger GmbH & Co. KG
Sector:	Breweries
Location:	Unterradlberg
Country:	Austria

system, ProLeiT has realized this concept through its brewmaxx. On the basis of this worldwide unique integration of materials management into the process control technology, internal material movements are safely and transparently connected to the brewery's process control level. This ensures consistent traceability from the malt silo to the pressure tank and up to bottling. Precisely this approach fulfills the Egger brewery's high quality requirements and keeps its investment future-proof. Legal requirements with regard to traceability are becoming ever more stringent, and these requirements must, of course, also be complied with by small and medium size breweries. Materials management via brewmaxx also



captures all the production steps in the fermenting and storage cellar. Blending during the filling or emptying of the storage tanks causes complex situations that complicate entries in the materials management system, whereby these entries are essential for proper batch tracing. Material postings are performed in an absolutely process-oriented manner throughout all step sequences. Consequently, material postings are always executed on completion of a process. This approach ensures a consistent database with all quality- and process-relevant information required for safe and transparent batch tracking. Thanks to brewmaxx, it is always possible to provide secure evidence as a basis for traceability – also in the fermenting and storage cellar.

A major benefit of brewmaxx is the consistent user interface for

- process parameterization,
- recipe and master data management along with
- movement data for materials management.

By means of so-called order parameters, brewmaxx can be operated so flexibly that individual orders can be modified according to the actual demand without the need to create a new recipe.

Maintaining individuality in process control

The brewmaxx process control system also provides a high degree of individuality for the process sequences. As in many other breweries, individual process steps are also manually initiated at the Egger brewery. In order to ensure that these do not impede batch traceability, brewmaxx provides the option to manually enter non-automatic operating steps of this kind in the materials management system.

brewmaxx therefore also supports traditional approaches. The process does not need to be adapted to the automation system because brewmaxx ensures that even the materials management system adapts to the individual workflows of each brewery. Consistent batch traceability can thus be ensured even if it is technically impossible or not cost-effective to realize full automation.



The brewmaxx materials management combined with the Report Designer provides the basis for reporting with batch tracking, material balances and loss determination.

New reporting system as a highlight

The newly developed Report Designer has been integrated in brewmaxx. This tool enables plant operators to define parameters for the particularly simple and precise customization of reports to their specific needs. Each brewery can conveniently configure the reports required to meet its individual requirements.

To set up a report, the Report Designer visualizes all product, process and order information available in the database – such as the order and batch numbers along with each individual process sequence step including the sequencer, sequence parameters and materials management data concerning incoming and outgoing material. Customized reports can be created by dragging and dropping a field into the Report Editor.

Using this report tool, information can be conveniently accumulated or averaged in order to quickly record which material quantities were consumed for a certain order, which quantities were produced and how long it took. To generate these reports, the system automatically accesses the database and provides a comprehensive image of significant process and quality data represented in a concentrated manner. In addition, it is also possible to generate so-called inventory reports or sum reports for freely selectable periods. For individual silos or raw materials, the initial inventory, inputs and outputs and the current inventory at the end of the reporting period can be visualized in a compact manner. Several orders can also be represented in tabular form.

Weak points in a process or during order management are immediately visualized as deviations from mean values. This fascinating tool provides entirely new options in terms of process and quality analysis.

Each plant operator can selectively and specifically access the process and material data collected and set up a reporting system customized to his specific requirements. This is not all: The tool provides a simple option for the generation of a traceability report. The brewhouse batches which are stored in a certain fermenting tank at a certain time – and the time when a certain quantity of these was transferred from the whirlpool to the fermenting tank – can be visualized across all process stages. For the corresponding whirlpool batch, which sort of hops from which store and which malt silo was involved with which quantities can be represented automatically.

Analysis data and logs can also be handled entirely individually. Corresponding logs can be printed out or saved as PDF files.

brewmaxx is therefore a process control, materials management, process optimization, quality assurance and traceability system at the same time. For breweries of any size, it is a valuable tool that helps them to significantly increase their overall efficiency.

