

# Dundalk migrates to brewmaxx

## ProLeiT technology modernises the Great Northern Brewery

**Great Northern Brewery in the Irish town of Dundalk, is now operated by a brewmaxx process control system designed by ProLeiT after a two stage project. Diageo, the owner of the brewery clearly defined the goals, namely to ensure reliable, stable operation of the entire brewery from the brewhouse up to keggling whilst reducing production costs and increasing productivity.**

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Diageo was aware that the reliability of any brewery is put at risk by the old automation systems for which no spare parts were available. A failure of the legacy control technology can result in excessive input to reactive troubleshooting and a high risk of production shutdowns. At the same time, the company desired to replace the isolated control solutions used in a number of areas with a consistent process control system.

### Extensive detailed specifications

The first phase of the modernisation project included all brewery areas from the brewhouse onwards. During this phase, the company first converted to brewmaxx the fermenting and storage cellars and the two line filter cellar. The project also included a large tank farm with numerous pipes and valve nodes, the yeast filtration plant, a program module for pasteurisation control and the bulk tanker filling station.

Due to incomplete descriptions of the existing control technology, Diageo insisted on a complete inventory and precise detailed specifications. Each operating step had to be documented in detail so the first project phase included high preparation and documentation



*The road tanker bay at Dundalk.*

expenditure. The detailed knowledge of the brewing process provided by the ProLeiT automation specialists was a major prerequisite for the creation of such detailed specifications. Many employees are experts in the brewing sector and many of them are graduates from Weihenstephan. They have broad experience in the challenges of brewery automation from the receipt of malt up to the fermenting cellars and filling stations.

Under the concept of single sourcing, Diageo awarded ProLeiT a contract for the complete refurbishment of its automation system. Approximately 80% of the process periphery could be retained. The five existing controllers were replaced by three state-of-the-art Siemens S7 controllers. In addition, the existing fibre optic network required to be extended. ProLeiT was also responsible for the necessary electrical conversions in control cabinets and coordinated all aspects of occupational health and safety measures with the aid of local subcontractors.

### Broad knowledge basis

Based on ProLeiT's broad expertise, comprehensive and time-consuming detailed specifications are usually not required. With Diageo's agreement, detailed specifications and documentation for the migration of the brewhouse process control system was reduced to a slimmed down and efficient minimum. Due to the positive experience in the first phase of the project, Diageo and ProLeiT managers were able to coordinate numerous details in advance and focused on a

working document which provided the basis for project planning.

All further steps were discussed during the course of the project and customised accordingly. In order to involve the operator in the development of its new-generation process control system and allow Diageo to constantly monitor the project progress, the ProLeiT and Diageo specialists held several discussions to provide one another with the necessary engineering feedback. This approach to tackling such complex projects proved to be highly efficient.

The brewery's delivery capability was fully maintained during the installation and commissioning. The Diageo MES system (Manufacturing Execution System) has also been directly connected to the brewmaxx process control system. For further process optimisations, Diageo will rely on the 24-hour service offered by ProLeiT.

The implementation of this multi-stage migration to brewmaxx has again proved that the close cooperation between the brewery and its automation specialist is of primary importance. Smoothly coordinated project management ensures a secure brewery operation during the modernisation process, detailed specification and documentation expenditure is reduced and simplified engineering and commissioning contributes to significant cost reduction. ■



*A typical screen from the brewmaxx system showing the Irish brewing process of bottoming.*

## Migration or replacement?

The goal of any refurbishment should be to eliminate isolated solutions and implement a system-wide automation structure. Is it possible to retain the hardware, and the process periphery in particular and only migrate the software or is it necessary to replace the entire control technology?

brewmaxx provides ideal solutions for both scenarios.

Existing, but obsolete control systems with a structured software concept can be conveniently migrated to brewmaxx using simple conversion tools. Provided that no technological modifications are required, most of the parameter settings can be transferred.

ProLeiT can offer either full migration or a step-by-step migration solution. The strategy pursued must be chosen in order to best maintain the brewery's production availability. In addition, it must be determined whether brewmaxx should be used to combine existing automation systems. Or is it necessary to modify or expand the controllers?

brewmaxx, the open, scalable process control system for breweries, provides efficient and cost-effective solutions for both the migration and the replacement of existing systems with minimum plant shutdowns or production breaks.