

Automated under considerable time pressure: New brewmaxx control system for Nicaraguan brewery

Minimum downtime - maximum efficiency. Professionalism is still the key element for a successful partnership, as cooperation between Compañía Cervecer de Nicaragua and the ProLeiT Group once again demonstrates.

A little-noticed feature of globalisation is that, besides goods and technologies, knowledge and skills are also exchanged and “stored”: Qualifications increase on a global scale, too. The example of Compañía Cervecer de Nicaragua shows that this does not simply apply to emerging nations. With a workforce of roughly 1,500 people, the company is the only industrial brewery in Nicaragua that meets European standards in terms of technology and has highly qualified local employees at its disposal. Otherwise, says Christian Schlotter, Head of ProLeiT Iberia, “this type of rapid and smooth installation of a new control system would not have been possible.” However, somewhat surprisingly, the pace of globalisation still varies greatly. According to Christian Schlotter, the project at the Nicaraguan brewery also involved applying various technologies (the brewhouse is from Ziemann with cutting-edge technologies from Steinecker and GEA, the fermenting / storage cellar and the filtration system are from Ziemann, Filtrix and Krones, and the previously used system solution is from Siemens), disciplined in-house organisation as well as correspondingly thorough and excellently structured operation of the entire plant.

In contrast, the brewery control system had become rather outdated. In the main plant areas, the control system was based on antiquated Braumat versions, partially still using SIMATIC S5 controllers, was predominantly operated via isolated solutions with CPUs featuring different performance levels and, last but not least, suffered from unsatisfactory interaction between the existing systems. The necessary conversion was finally triggered by the planned expansion of the fermenting cellar with new tanks and a new stack CIP system. The decisive contact between representatives of the brewery in Managua and ProLeiT came about during a local symposium in May 2015. It then took just a few months from the initial presentation of the “brewmaxx” solution, submitting a quote and clarifying technical details to final order confirmation and implementation through ProLeiT AG in cooperation with its Spanish subsidiary in Seville in February 2016. The operators of the Compañía Cervecer brewery were inspired by the concept of a completely

new engineering system supplied by ProLeiT. Especially as the new process control system offers an array of functions for optimising existing processes significantly. Christian Schlotter: “Finally, we were able to convince the plant operator that the application of a current brewmaxx version pays off in the long run, as it opens up a completely new range of functions and enhances the quality and efficiency of the processes as a whole.”

According to Schlotter, the company’s vast experience in brewery solutions was also a great help: “In the brewing sector alone, the ProLeiT Group implements roughly 50 projects worldwide each year. This know-how is also reflected in the performance and functionality of our software solution that meets the precise demands and needs of our customers and can be used immediately after respective hardware adjustments.”

Thanks to brewery-specific applications, e.g. equipment modules or the rule-based routing management system, it is possible to use processes, e.g. fermentation tank management, path control or lauter tun control, without complex programming in the respective application area: “Needless to say, even better results are achieved when working alongside specialists

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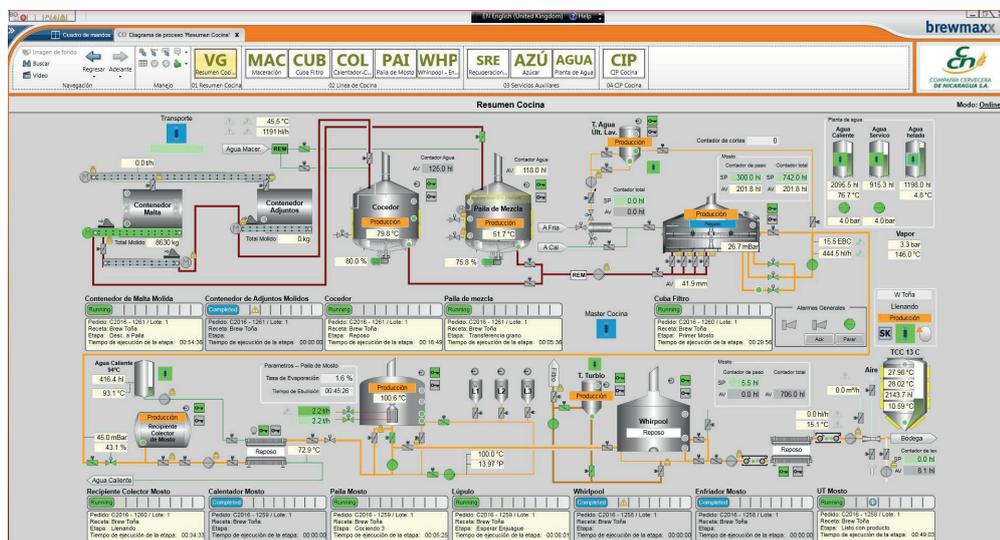
BRAUWELT®

Publisher: Brauwelt

Issue: 35/2017

Author: Christian Schlotter

who ensure cooperation at a high professional level. And we were lucky enough to encounter this in Managua. ProLeiT therefore not only took the opportunity to train the member of staff responsible for the process control system how to use the new operating software as part of a two-week course: It was also possible to subsequently incorporate him in the engineering work. Job sharing in the best sense of the word: “Cooperation was very profitable for both companies. Based on the newly acquired knowledge,



Overview image of the brewhouse in brewmaxx V9

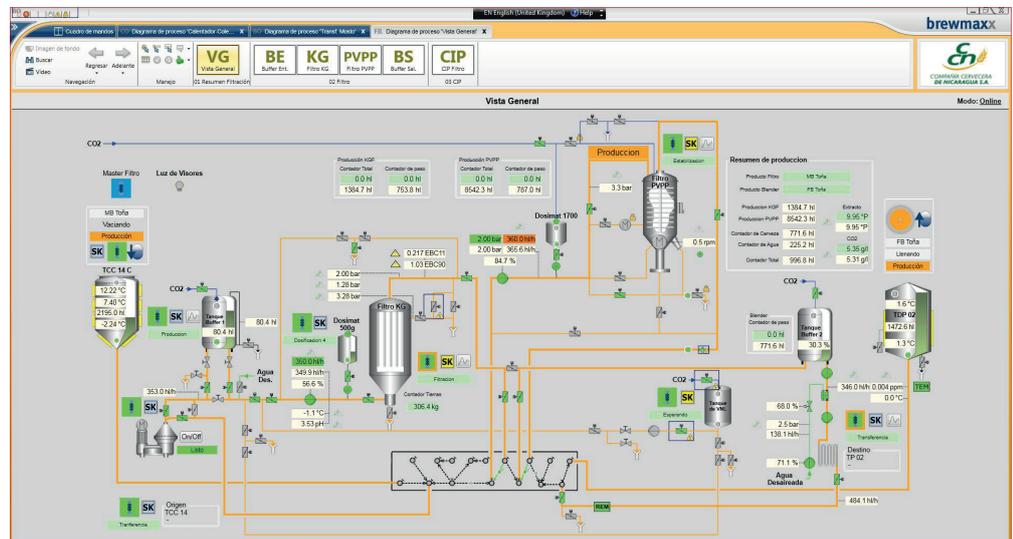
application profile

Compañía Cervecera de Nicaragua S.A.

the upskilled employee was able to control and extend the new system on his own.” Which was also a reason why ProLeiT needed just two employees to commission the new control system.

After preliminary talks in January 2016, the project was divided into several phases. The actual engineering phase took place between March and June 2016. The filtration and the old fermenting and storage cellar were gradually put back into operation as early as July. As the construction of the new fermenting and storage cellar and the installation of the new tanks could not be finished dead on time, the commissioning of the new system in the brewhouse, originally planned for the beginning of 2017, was brought forward a couple of months so that the entire project was eventually wrapped up a couple of weeks ahead of schedule.

A specific brief of the overall project was that the “downtime windows” were only to be opened for the shortest period possible. Although this order was more or less a standard implementation project for ProLeiT, the pressure was nevertheless exceptionally high as the brewing season in Nicaragua, similar to Europe, picks up pace in the second half of the year. The final deadline for upgrading the filtration was thus July 2016; at the same time, the periphery had to be replaced (SIMATIC S5 through S7) during this time window - another process that ran smoothly. Christian Schlotter: “Together with our partners, we were able to install the new periphery and control system over a long weekend.” Meaning: “The system was installed on Friday. We were already able to test it on Monday. And on Tuesday full production was up and running



Overview image of the new filter cellar in brewmaxx V9

again.” Both partners were amazed by each other’s professionalism. “While the customer was surprised about our ability to carry out “open heart surgery” and return the plant straight back to daily business, we were impressed with how the customer had managed to create the ideal preconditions for successful implementation. It could not have run any smoother: The information in the documentation was complete and the required plant maintenance tasks were executed according to specifications; all the signal tests were thus positive. This does not happen very often.”

Rüdiger Adelman, Head of Production at Compañía Cervecera de Nicaragua, is also more than satisfied with the result of the project: “The

key factors for successful implementation of the project within the planned budget and commissioning ahead of schedule were our complete confidence in the know-how and the extensive brewery experience of ProLeiT, the expertise of our own automation engineer and the unbureaucratic and excellent communication between all the partners.”

Summary: By using brewmaxx, Compañía Cervecera de Nicaragua profits from a future-proof control system that supports sustainable growth in the long term. Yet another advantage is the fact that the brewery can now operate and extend the control system independently with its own staff.