Application Report

SMALL BREWERY IN SWEDEN

Experts in Automation since 1958

WERMLANDS BRYGGHUS

The brewery, established in 2012, has been producing high-quality beer since 2013. It is the first small brewery in the Swedish province of Värmland and the first commercial brewery in since 1957.

From 2017, the brewery has been selling a range of ten beers, including a seasonal Christmas beer and three low-alcohol brews.

Some 1000 hectoliters are brewed annually on the 20hl plant.

Source: http://wermlandsbrygghus.se/

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Our services

The control system of the new brewing house with the malt mill and conveying system is based on state-of-the-art technology. It offers the master brewer high production planning flexibility and an optimal basis for quality assurance.

The recipe management system allows convenient selection, creation, saving and modification of the beer variety formulas. It is possible to intervene directly in the ongoing production process as required by the situation to adjust parameters and to optimize the process. Also such procedures are completely documented in the system in order to ensure optimal traceability.

The Schmid Automation team provided the following services:

- ➢ Creation of the process description in collaboration with the company ROLEC Prozess- und Brautechnik GmbH
- ➢ Programming of the entire software for controlling the brewing house operations
- ➢ Project management of the visualization system
- ➢ Complete electrical engineering and construction of all the electrical switchgear cabinets
- ➢ On-site supervising of the electrical installation work
- ➢ Control cabinet construction for the new user terminal
- ➢ Commissioning on the scheduled date
- ➢ Production mentoring, operator training, fine-tuning
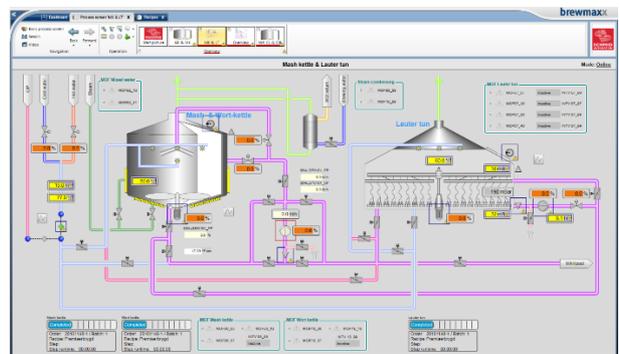
Sudanlage mit Maischepfanne und Läuterbottich
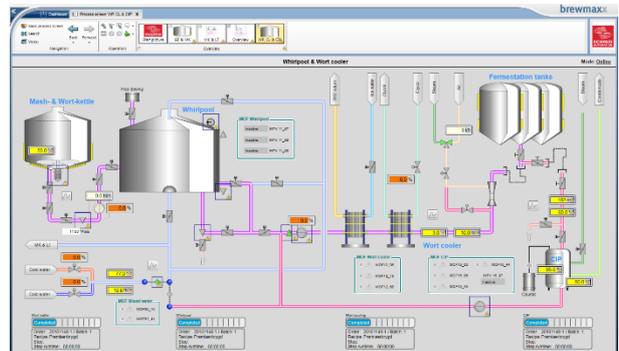
Whirlpool, wort cooler and wort aeration system

Lauter tun

Start:	Friday, February 24, 2017 9:42:12 AM
End:	2/24/2017 5:29:25 PM
Duration:	07:47:13
Start time	2/24/2017 9:42:12 AM

Hazy wort

Step	Start time	Duration	Temperature [°C]	Rake speed [%]	Flow SP [hl/h]	Reg. valve [%]	Pump FP [%]
lauter rest	10:11:19 AM	00:10:00	65.8	5.0	0.0	0.0	0.0
pulsing	10:21:19 AM	00:03:00	65.2	1.0	0.0	50.0	50.0
start wort kettle	10:24:19 AM	00:00:00	65.2	1.0	0.0	50.0	0.0
lautering hazy wort	10:24:19 AM	00:05:00	65.9	1.0	5.0	50.0	50.0

Lautering

| Step	Start time	Duration	Amount [hl]	Rake speed [%]
lautering first wort	10:29:19 AM	00:57:21	7.6	1.0
sparging	11:26:40 AM	00:24:11	4.7	1.0
second sparging	11:50:51 AM	00:45:49	4.8	1.0
third sparging	12:36:40 PM	00:00:17	0.0	1.0
lautering last wort	12:36:57 PM	00:00:17	0.0	1.0

Extract from process log

System configuration

- Control server on PC

- 1 user terminal with built-in monitor in the field

- CPU S7-319-3 / PROFINET ET200SP

- Process control system brewmaxx V9

- Remote maintenance system for complete remote diagnostics and programming

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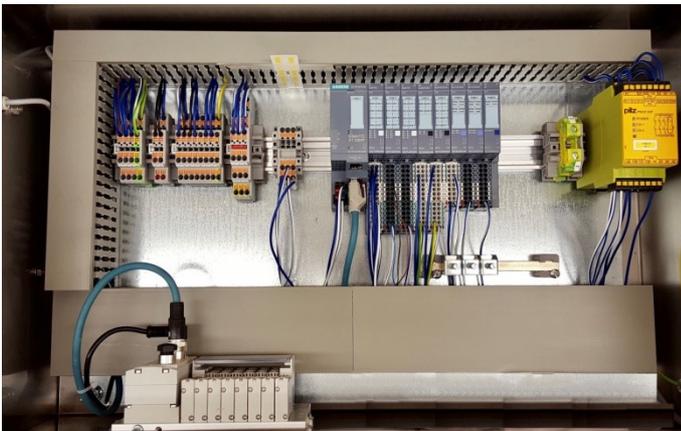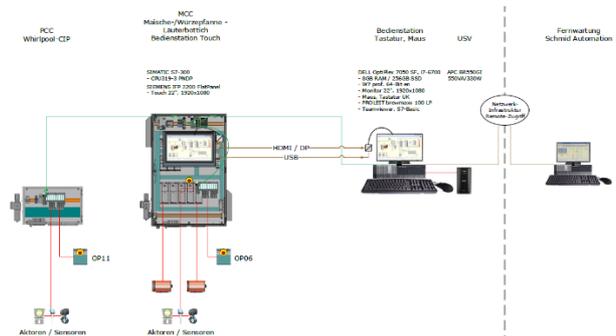
Electrical engineering using ePLAN P8 and switchgear construction to EN 60204-1 / 61439-1