

DAIRY PLANT AUTOMATION

AU2MATE ACADEMY - A KNOWLEDGE CENTRE FOR DAIRY AUTOMATION

- Live pilot plant
- Automation strategy and education
- Best practise
- Prototyping and thin-slicing
- Customisation
- For management and operators

APPLICATION

Au2mate Academy is a knowledge centre for dairy automation that offers education and training of managers, operators and technicians in dairy automation. The dairy plants become larger and more complex both in terms of processes and applied automation technology, while the requirements for performance are increasing; this including process optimisation, waste, energy consumption, detergents and plant uptime. This means that the requirements for operation and maintenance personnel are increasing in relation to continuous optimisation, and time to diagnosing and performing error correction on the plants and the automation systems.

Au2mate Academy offers dairy specific automation courses.

The training is targeted management, plant operators as well as technical staff and includes: automation concepts, instrumentation, PLC, SCADA and MES, structured according to prevailing industrial standards and best practices, e.g. S88 & S95.

Disciplines, where training can be offered are among other: Operation, hardware, software, instrumentation, OEE, traceability, reporting and documentation. Additionally, Au2mate Academy can offer customised education and training by appointment.

Academy Process Plant



Au2mate Academy plant

The Au2mate Academy is established in modern facilities at our Headquarters in Silkeborg DK and holds a class room and a live pilot process plant consisting of: reception, raw material storage, pasteurisation, buffer tanks and dispatch as well as CIP plant.

The pilot plant is built in mini-scale to run on water. The plant is designed and built in industrial standard with instrumentation, PLC, SCADA & MES in order that theory and practice can be trained in correlation.

OPTIONAL FEATURES

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BASE CONFIGURATION

Au2mate Academy education facility

The process plant includes the following main process units:

- “Road tanker” + reception
- Raw product tanks (2 pcs.) + mixer
- Pasteuriser
- Final product tanks (2 pcs.)
- CIP plant with 4 tanks & 1 line
- Utilities for cold & hot water + compressed air

The process plant will include processes & functions covering:

- Storage & transfer of product
- Heating & cooling of product
- Flow & pressure control
- Mixing & dosing
- Measurement of temperature, flow, pressure, level and conductivity
- CIP of pipes/tanks

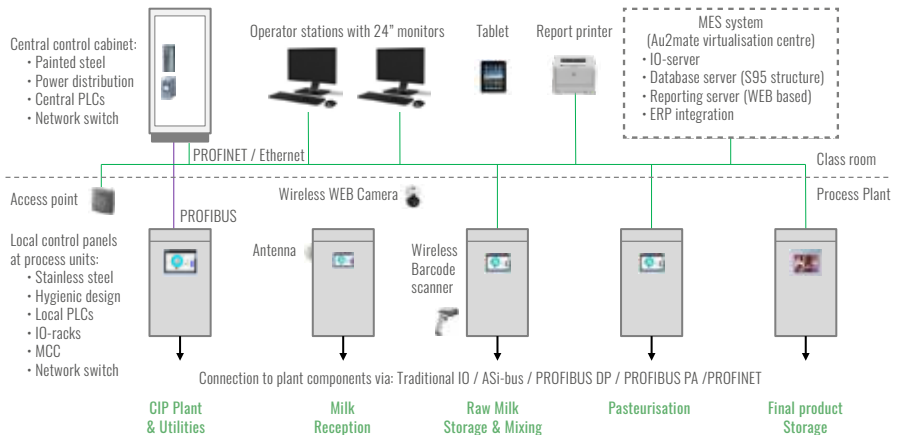
The control system will include primary systems and solutions used in the dairy industry:

- Wonderware Intouch/IAS with virtualised servers
- Siemens S7-400 & 1500 system
- Siemens ET200S & ET200SP I/O
- Siemens & Allen Bradley local HMI panels
- Danfoss, Siemens and Allen Bradley frequency converters
- Allen Bradley CompactLogix system
- Allen Bradley Point I/O
- ASi, PROFINET & PROFIBUS fieldbus
- Safety equipment
- Wireless technology
- SQL database
- ERP integration

ACADEMY PROCESS PLANT



Block diagram unitised Pilot Process Plant



Au2mate Academy Automation Architecture