

Sustainable solutions through process automation

Plant optimisation in the dairy industry for increased sustainability

Since the 2016 release of the UN Sustainable Development Goals, the focus on corporate sustainability has increased dramatically.

Demands from the dairy industry are ever increasing and sustainability in the solutions from suppliers is a focus-point getting more and more attention in the requirements. Process solutions today are strictly validated against KPI's when it comes to consumption per SKU on water, electricity, chemicals for cleaning etc.

This focus is, by coincidence, happening in the same period as new technologies and smart solutions are merging as part of the Industry 4.0 / Digitalisation wave. These new technologies offer a toolbox to help the efficiency of optimisation, operation and maintenance, all supporting sustainability targets in the solution. Objectives derived from this are e.g.:

- Big data analysis tools for trimming and optimisation of processes
- Data analysis tools for OEE calculations help to improve line efficiency
- Smart sensors and predictive maintenance tools, securing more production uptime
- Smart in-line analytical instruments for optimising on product tolerances
- CIP analysis "auto-tune" tools and applications, securing minimum usage of chemicals, water, cleaning time.
- Smart application software enabling e.g. hibernate functionality in the process equipment.

Au2mate has been involved in numerous projects taking advantage of the new technology and smart tools. Below are a few examples on solutions supporting the sustainability targets in today's process automation systems:

OEE tool from Au2mate

Data analytic / Artificial Intelligence tools (AI)

As part of centralised automation systems today a large amount of data is per default collected in databases holding historical information on everything from sequence behaviour, alarms, process values etc. This vast amount of data can now via new software tools/algorithms be analysed and used for both optimisation and troubleshooting purposes all leading to improvements of processes.

OEE tool

Applying OEE on process and filling line equipment is today almost mandatory in new installations. The OEE tools provide a unique insight on plant performance and utilisation enabling the production management to trim and increase efficiency and production throughput.

At the same time track and trace and material consumption reporting back to the ERP system, saves a lot of manual labour time documenting the same in traditional log sheets.

Smart sensors and actuators

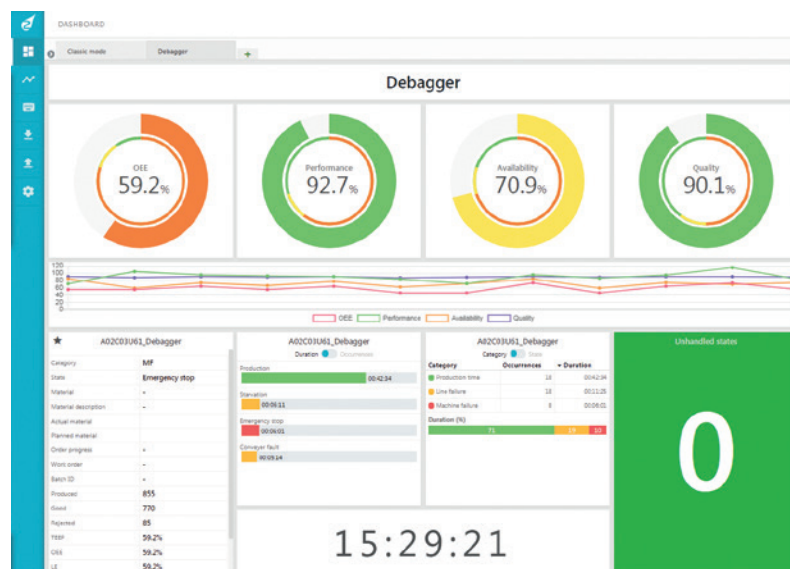
New generation of self-calibrating and self-monitoring sensors allow continuous/-uninterrupted operation i.e. no need for production downtime for calibration purposes and sensor will automatically notify in case of malfunction.

New generation of actuators/valves with build in monitoring and self-diagnostic tools providing pre-warnings in case tolerances on travel time/movement is exceeded.

Proactive partner

Moving forward, Au2mate strive to be a proactive partner in the constant optimisation of the dairies. In case more information on applications or methods mentioned above is desired, please do not hesitate to contact us at www.au2mate.dk or by telephone +45 8720 5050. ●

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AU2MATE SUPPLIES TOTAL DAIRY AUTOMATION SOLUTIONS

Au2mate supplies total dairy automation solutions.

The automation solutions covers all processes and features, from milk intake to filling of the finished product. Systems control comprising: Instrumentation, PLC, SCADA, MES and Industry 4.0.

Productivity, quality and plant uptime is ensured by Au2mate total dairy automation solution including training of the users at Au2mate Academy, as well as a full service package from Au2mate 24/7 hotline service.

Au2mate services the dairy industry from offices in Denmark, Norway, Sweden, Dubai and England.



Au2mate A/S
Fricksvej 11 · 8600 Silkeborg
Denmark
Phone +45 8720 5050
www.au2mate.com

