Course no. 21: 26/10-2020

PRODUCTION OPTIMISATION BY USE OF DIGITAL TWIN TO SIMULATE OPERATIONS

COURSE NO. 21 · PLANT DESIGN AND OPTIMISATION

PROGRAM - SHORT DESCRIPTION · DURATION: 1 DAY - 08:30-16:00

Target audience

The course is targeting production planners, process designers and logistics / supply chain managers looking to expand their range of industry 4.0 tools and thereby increase efficiency in their plants.

Prerequisites

The course has no prerequisites as such, but it is recommended to have a certain insight to or interest in production planning. Some very basic programming skills can also be an advantage, but are not strictly required. The course uses a software package called FlexSim, but modelling experience with the specific tool is not a prerequisite.

Short description

In this course, the attendees will use a FlexSim simulation model to examine and optimise production on the Au2Mate Academy dairy plant.
The model will be able to quantify the effects of
· Production planning changes
· Equipment quantities
· Equipment capacities
· CIP durations
· Etc.
The simulation model will be used as a Digital Twin to validate the production setup.

Random variability is a recurring theme when working with complex productions, such as a dairy. The attendees will learn how the use of a dynamic simulation model can be an advantage compared to static spreadsheet calculations.

Objectives

Upon completion of this course the attendant will be able to:
· Use a simulation model to validate a production on a dairy plant
· Use the simulation model to calculate the optimal equipment quantities or capacities in a number of scenarios
· Use the simulation model to detect potential bottlenecks in the production

Au2mate and NIRAS have developed this training course in order to show the dairy and food industries how they can predict valuable production optimization by use of a Digital Twin.

Instructor:
Christian Wordenskjold Nørregaard, Process Simulation Specialist at NIRAS
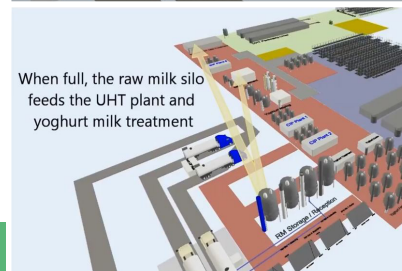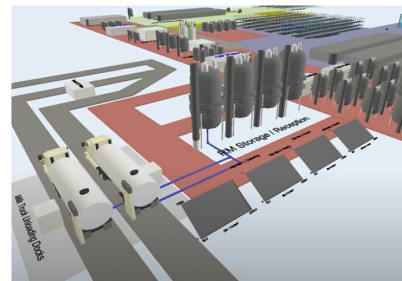
When full, the raw milk silo feeds the UHT plant and yoghurt milk treatment

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