



Project Overview

- Market Segment(s): *Food & Beverage*
- Application: *Fresh Dairy Product*
- Country: *Indonesia*
- Year of Order: *2007*

Business Contacts

- Gustian RISMAYA – *CAEC Indonesia Manager*
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Contact to go further

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Solution breakdown

Main products & systems:

- Process Control: Modicon Premium PLC
- Integration with SCADA and MES Software (Global Screen Intra)
- Ethernet and ASI+ Networks
- ELAU Controller for Packaging
- OPC Drivers (OFS)
- Altivar Speed Drives

Danone – Cikarang Factory (2) Schneider Electric Process Control helps Danone’s “Dream” come true

● Key customer benefit:

Plant CAPEX reduced by over **75%**

CUSTOMER ENVIRONMENT / PROJECT CONTEXT

● Customer profile:

Danone is the global leader in dairy products and ranks number 2 in bottled waters.

Danone wants to address the 2 thirds of the world's population earning less than €2 per day to provide them affordable products. The "Dream" project was hatched in accordance with the Danone "Affordable" strategy concept and its key requirements: to build "affordable" factories and provide "affordable" long life products, easier to produce and with good nutritional content.

● Customer objective and constraints:

Danone Dairy in Asia was tasked to build the **Pilot Affordable Yogurt factory** in Cikarang. Our customer quickly realized that some decisions had to be taken to meet the criteria as defined in the Affordable Strategy:

- Revisiting factory engineering and processes, and
- Choosing the most cost effective equipment (CAPEX had to be 25% of a European factory).

Danone actually expected a factory based on the “affordable” concept, but still well balanced with modernity and efficiency.

SOLUTION IMPLEMENTATION

● Implementation methodology (main phases):

- Concept & Basic Design: Schneider Electric was involved in the process flow chart design and functional analysis.
- Detailed hardware design to prepare electrical files for cabinet assembly and for site installation
- Application software development and module testing
- Electrical and pneumatic cabinet assembly
- Software Factory Acceptance Test (FAT) with Danone representatives: checking, evaluation and validation of all automation sequences (including process and CIP sequences)
- Electrical and Automation cabinet FAT with the buyer
- Site installation supervision
- Commissioning at Cikarang Factory:
 - Complete I/O and field tests
 - Cold Functional tests: Interlocks, process steps, sequences, operator interface & MES
 - Application functional tests
- Successful trial products run in the end of 2007
- Plant fine-tuning and commissioning finalization

● Duration:

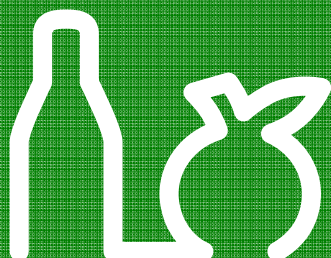
The Cikarang factory has been completed within **8 months**, from basic design to commissioning.

● Solution overview:

Schneider Electric offered Danone a **complete system** to control the whole production line, from raw materials reception to the final products.

Schneider Electric solution manages the main processes (more details in the “additional information” part):

- Reception
- Pre-pasteurizer
- Mixing
- Pasteurizer
- Inoculation
- Cooling
- Storage
- Filling Machines
- CIP (Cleaning In Place)



For further information about Schneider Electric Solutions, please visit our website www.schneider-electric.com

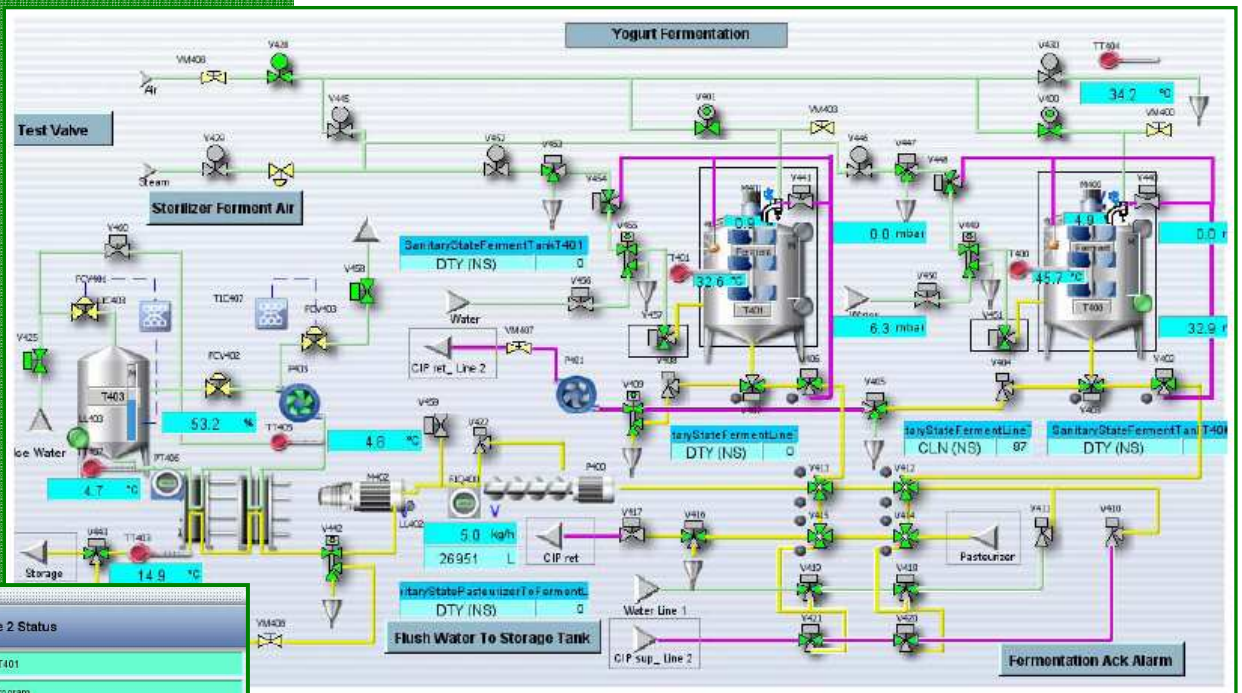
Success Story



ADDITIONAL INFORMATION

● Yoghurt Process Flow:

- **Reception:** Process that handles the fresh milk.
 - **Pre-Pasteurizer:** Thermal treatment of the fresh milk (pre-pasteurization at 75 Celsius degree) to preserve the milk one day.
 - **Mixing:** Introduction of other ingredients through the blender.
 - **Pasteurizer:** Second thermal treatment to kill the bad bacteria and make sure the milk is healthy.
 - **Inoculation:** 8-9 hours process to change milk into yoghurt with the introduction of bacteria and other components.
 - **Cooling:** Process that cool down the yoghurt to a specific temperature (depending on the recipe)
 - **Storage:** Temporary storage before the yoghurt goes to the filling machines
 - **Filling Machines:** Injection of additional flavor and filling into cup or bottle.
- **CIP (Cleaning In place):** Cleaning of the tanks and pipes



SCADA System – Yoghurt Fermentation Process



Schneider Electric has the perfect know-how of fresh dairy application from top to bottom.

We can design efficient solutions that suit the best to your needs

