

Glucose and Starch Plant – Turn Key Basis Electrical and Automation System

Sigma Process Technology is an EPC company mainly serving for Food Industry has chosen Pacpro as their automation and electrical solution provider. Pacpro scope of supply for the newly established glucose and starch production plant included turn key basis electrical and automation systems, field electromechanical installation works as well as Design and Project Management.

Automation system is based on PCS7 based DCS system with ET200SP I/Os (DI:1200, DO:600, AI:512, AO:256), ProfiNet network, software licenses and IT supply. Besides automation system, Low Voltage Switchgears, Main Distribution Panels, MCC panels, VFD & Soft Starter package (80 units) also included in the Pacpro scope of supply.

Customer Requirements

The customer requested a reliable, proven, state-of-the-art solution for the factory established from the green field.

It was also requested that the process control system should be open for future capacity increases and new digital technologies as well as third party enterprise software platforms.

Solution Design

As the “Design and Project Management” are also under the responsibility of Pacpro, the design and implementation of the project was successfully completed in accordance with the planned schedule.

Pacpro Project Management responsibility were including and not limited with followings;

Process Flow Diagram (PFDs) development

Piping and Instrumentation Drawings (P&IDs)

Operational and Functional Process Descriptions

Design and deployment of DCS system (PCS7)

Utilizing standard Process Libraries

Electrical Distribution and LVS/MCC Panel Projects

Detailed Cable Layout and Cross Section Calculations

Programming, Commissioning and Start up

Customer Benefits

The customer's primary expectations are to reach sustainable production capacity, availability, minimum downtime and quality targets in their production with a reliable system based on the latest technology as well as open for future developments and 3rd party platforms like enterprise software, laboratory systems etc.

In addition to having a process control system enables to integrate different systems (PCS7 DCS system, field instruments, VFD/Soft Starters, LVS Panels, MCCs with Simocode units, Enterprise Software, third party controllers for waste water treatment systems, some machinery with dedicated controllers etc) smoothly, remote monitoring of the factory via PCS7 Web Servers and flexible digital reporting tools also provide significant benefits for the customer.

Technology / Application

- PCS7 Process Control System
- Withdrawable MCC with Simocode
- Industrial Communications (ProfiNet, ProfiBus, HART)
- SCALANCE Managable Switches
- Sinamics AC Drives / VFD Units

Partner Industry Focus

Food and Agriculture Industry Solutions

Starch, Glucose and Fructose production

Glucose Refinery

Starch Dewatering

Wet Mill

CSL Evaporation

Benefits Arguments

Integrated Architecture Based on Simatic PCS Process Control & DCS System

Production Targets

Quality Targets

Flexible production

Availibility

Customer Information

Please Contact Pacpro