

Evaluation of Catalysts for Production of Alkyl-amines

Industry: Chemical
Product: SCADA
FAST/TOOLS and STARDOM

Introduction

Many catalysts are used in the production of Alkyl-amines. Since some of these catalysts are recycled and reused, it is important that the plant measures and controls them to improve profitability and efficiency.

Application

Implementation of a Pilot Plant for the evaluation and selection of catalysts aimed to the improvement of the production of Alkyl-amines.

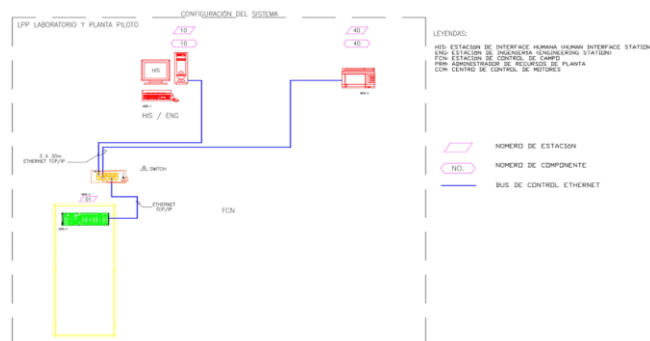
The Customer required a Control System that fit his goal of using this Pilot Plant to improve its product. For this application in particular, the FAST/TOOLS SCADA host and STARDOM FCN control system were selected due to the vital importance of achieving this goal: monitoring the behavior and controlling all the variables in the process during the tests to be carried out, having a friendly visualization and operation environment. It was also requested to keep a strict record of the various behaviors experimented during the process, as well as to have the capacity and availability to grow for future projects.

During the Factory Acceptance Tests, the PETRAMIN representative showed himself very satisfied with both hardware and software and at the end of it he expressed his contentment and recognized the capacity and reliability of Yokogawa's STARDOM System which, together with the FAST/TOOLS SCADA, provided what he expected: total control of the process with easy visualization and monitoring of all variables involved.

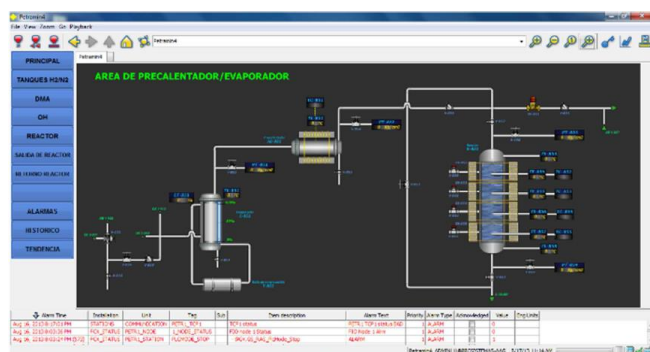
The Site Acceptance Tests were executed at the development and improvement department of the petrochemical plant located in Irapuato, where the customer and the integrator engineers verified, following the SAT protocol, that the STARDOM system and the FAST/TOOLS SCADA host showed the same performance as seen during the Factory Acceptance Tests. The result was the same: a customer satisfied with the capacity and the reliability of the system now connected to the instruments in the process.

Solution

Pilot Plant Control through FAST/TOOLS SCADA Host Operator Interface and STARDOM FCN System with the availability to grow.



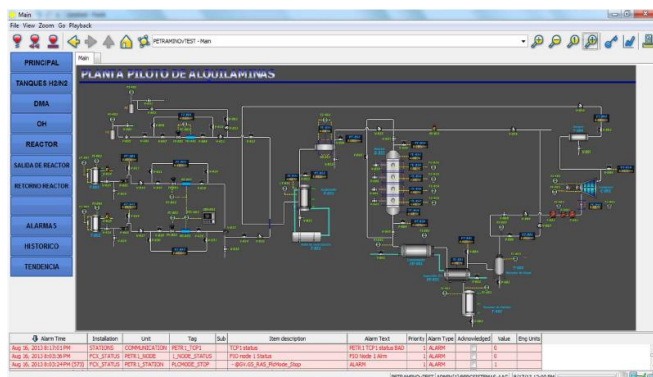
FAST/TOOLS was implemented using its built in historization function to record all process data, alarm management system, and reporting system. Zero Deployment Client feature allowed for flexibility to deploy the operator interface in engineering mode for making system changes or as an operator interface for running catalyst evaluation tests. The reporting capability provided the ability to query process data and alarms to determine precise behavior of catalysts to help select the best candidates.



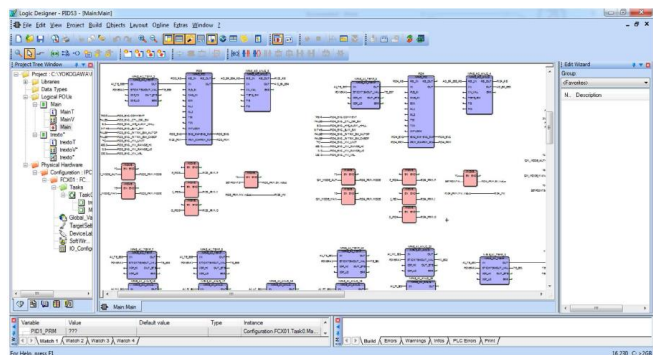
APPLICATION NOTE

vigilantplant.

The clear path to operational excellence

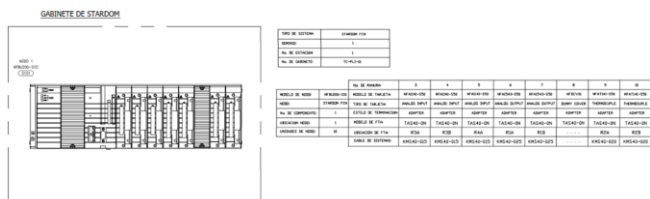


STARDOM allowed for full process control similar to what is expected from a DCS with the lower cost point of a PLC. It also featured tight integration with FAST/TOOLS to allow for rapid screen development and data integrity through data buffering and backfill on network or server outage.



Only ONE STARDOM FCN was required to guarantee total control of the pilot plant, making all the I/O connections through the following modules:

- 3 Analog Input Modules.
- 2 Analog Output Modules.
- 2 Thermocouple Input Modules.



One slot on the STARDOM FCN (including panel space) was left unused for future bus expansion, which could provide up to 25 modules if needed.



Customer Profile

PETRAMIN is a company dedicated to the production of alkyl-amines since 1983. Its production capacity services the international demand and enables them to export its products to many companies around the globe.

PETRAMIN has a strong presence in Europe with the HQ located in Spain. Its main markets are the Foundry Industry for the Automobile Sector and the Pharmaceutical Industry.

Yokogawa Partner Profile

PPC (Power Process Control) is a firm of engineers dedicated to providing the best solutions for Instrumentation, valves and control systems technology in partnership with their manufacturers. PPC offers engineering support, pre and post sales, and is a one stop shop for control and measurement solutions, including FAST/TOOLS SCADA, STARDOM controls, instrumentation, and other Yokogawa products.

PPC executed this application from conception through commissioning and continues to support and expand the system to meet PETRAMIN's needs.

Featured Products

FAST/TOOLS is a full-featured SCADA Host and HMI that includes visualization, alarm management, historization, reporting, mobile interface, and trending. FAST/TOOLS supports scalable robust architectures with up to quad-redundant servers, zero deployment clients, and very large point counts (real deployments over 1 million points on a single server and testing to 16 million points).

STARDOM represents a family of controllers that range from the small DCS-like FCN to the robust FCN-RTU for aggressive operating environments, control, data-logging, web visualization, e-mail, FTP, and various specialty functions like AGA and API MPMS calculations.