

Cray Valley

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“We have achieved the rapid and straight-forward migration of the automation infrastructure with the complete support of the Wonderware team and the System Integrator, granting us the possibility of augmenting the installation based on the future needs of production”.

Xavier Pujol,
Head of Engineering, Cray Valley

Control and Monitoring of the Resin Production with Prospects for Strategic Management of the Plant

by Wonderware Spain

Goals

- Update the control and monitoring system of 3 alkyd resin production reactors.

Challenges

- The deployment of both the hardware and the software of the new control architecture had to be fast and seamless so as not to effect plant production;
- The semiautomatic production infrastructure required delicate designing of the command objects to ensure the correct running of the plant.

Solutions and Products

- Wonderware System Platform.

Results

- Access to production data has been improved, as well as plant and control hardware connectivity and integrated alerts and alarms management;
- The project leaves the possibility of future expansion for new analysis functionalities open; even the incorporation of energy efficiency technology.

Mollet del Valles (Barcelona), Spain - Cray Valley, member of the Total energy multinational, is global leader in resin and coating additives, composite and adhesive resin production. The products they manufacture are used by a multitude of sectors including construction, industrial chemical paint, varnishes and adhesives such as automobile and naval industries.

In Spain, Cray Valley owns production plants in Sant Celoni (Barcelona), Miranda de Ebro (Burgos) y Mollet del Vallès (Barcelona). The latter, in which around 70 professionals work, specializes in alkyd resin, acrylic and emulsion production and offers the national and international market around 20,000 tons a year.

New Production Challenges, New Technology

After a long productive history, the heads of engineering in the Mollet plant decide to update the production control and monitoring system of part of the plant's structure, specifically the part manufacturing the alkyd resins.

According to Xavier Pujol, Head of Plant Engineering at the plant in Mollet del Valles, the decision to start this process was based on the urgency to replace the existing technological architecture: *"the reactors had very old PLC control systems with a SCADA which had no available technical support, hardware replacements or software updates as the manufacturer no longer exists"*.

The challenge lay in providing the plant with a control system capable of ensuring total visibility throughout the production process and at the same time, speedily implemented. *"The competitiveness of our market was forcing us to replace the control system quickly with minimum down-time. In order not to sacrifice levels of production, the margin for installing new devices and launching software- tests included- had to be as brief as possible"*, emphasizes Pujol.

Wonderware was the chosen solution to replace the old control infrastructure as apart from ensuring guarantees for production monitoring and easy deployment, it is a market standard that can be adapted to any plant hardware structure.

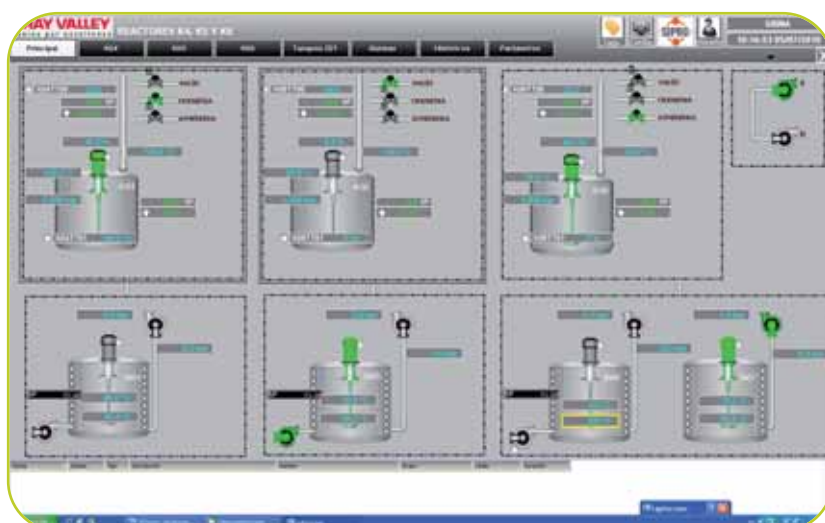
Xavier Pujol explains, *"Wonderware technology is not linked to any particular hardware and offers us the possibility of choosing the technology provider most suited for each project thanks to their wide range of integrators"*.

A Control Project with Prospects for Growth

From the start, the project was developed taking into consideration future expansion to which the automation and control structure could be subject to depending on new production settings introduced. *"We decided on a basic license for this project; Wonderware System Platform Dual Node, as it provided the reliability we were looking for in the production line and also the possibility of augmenting the automation to eventually integrate Wonderware into the whole plant"*, explains Xavier Pujol of Cray Valley.

The alkyd resin batch manufacturing production process reactors are the hub of the Wonderware technology deployment. Just as Albert Linares of Sipro Engineering, the System Integrator implicated in the project, explains *"it was of vital importance to guarantee the ease of use of the different equipment and the clarity of data presented when sending the information"*.

This is why the implementation took into consideration technical specifications for a complete control of the different devices from the PLCs to directly from System Platform. As Linares explains, *"DCS type object commands were configured- like a direct start-up motor, frequency*



Information Access Display for reactors K4, K5 and K6 of the the Mollet del Vallès plant alkyd resin production process.

The Cray Valley Engineering Department adds that, having an integrated management and historic structure with multi-point accessibility, has allowed them to consolidate a completely reliable alkyd resin production.

Following on from Sipro's comments, they also admit that the advantages regarding maintenance and future improvements of the new technology infrastructure are numerous: *"Now we have a system serviceable by various integrators, depending on the specific needs of the moment, with the possibility of managing productive elements via objects. Right now it is possible to automate new manufacturing processes with similar characteristics very easily, by simply adding options which are integrated into the completed developments"*.

Amongst the new projects, according to Pujol, will be the addition of modules for batch control through Wonderware InBatch software.

But not everything is about control; now the benefits of the visibility of the plant information that Wonderware technology offers, have been confirmed, Cray Valley is now considering even more strategic developments such as connecting the production information to the ERP or improving the Mollet del Valles factory profitability: *"As concerns the resin production, the key control variables are determined by the process' temperature and pressure. Now the control, in this aspect, is assured, our main interest is in beginning to focus the control architecture towards energy consumption management"*, explains Xavier Pujol.