

# Rhodia Gains Process Improvements while Protecting Existing Investments with DeltaV System Integration

## RESULTS

- Reduced engineering, implementation cost
- Reduced maintenance cost
- Improved configuration, calibration and diagnosis
- Higher-than-estimated return on investment
- Continuous process performance improvement



## APPLICATION

The plant produces primarily Sodium Tripolyphosphate (STPP), a compound used in detergent manufacturing.

## CUSTOMER

Rhodia, a Rhone-Poulenc plant located in Huelva, Spain

## CHALLENGE

Rhodia had been facing a very dynamic and competitive market, with variable demand and frequent changes in product specifications, but requiring higher quality at lower prices.

To maintain and improve its market position, the Rhodia plant had to increase its production capacity and flexibility in order to manufacture different product types in a more efficient way.

Complete replacement of the existing system was not possible within the available budget, and investing in the existing DCS that would probably become obsolete in the not-so-long-term was also not a prudent option.

## SOLUTION

Mr. Manuel Gallardo and his assistants Juan Manuel Berrio and Manuel Camero, from the Rhodia maintenance department, took up the challenge.

The project included, among other things, a series of advanced control strategies that demanded the use of a latest-generation control system. The new system should also serve as the platform for the future. The objective became, therefore, to maintain certain parts of the plant



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under the control of the existing system while at the same time integrating all the information into the new one and unifying the entire operation in the consoles of the latter.

In this way, a gradual migration to the new system was possible so that the hardware could be replaced in the future as funds became available. After evaluating different alternatives, Rhodia selected the DeltaV™ digital automation system from Emerson Process Management. The DeltaV system met all Rhodia's requirements, providing an optimal scalable structure for a progressive expansion plan.

The open architecture based on standards such as OPC (Ole for Process Control) allowed the old system to be integrated under the DeltaV system, so exchanging information in both directions was possible. The existing operating consoles were then removed, making operation from the modern DeltaV consoles possible under a familiar Windows-like environment.

### **Added Value**

The unique capacity of the DeltaV system was also taken into consideration so as to take advantage of the intelligence of the field instrumentation, passing the flow of information to the plant network. This provides the project with a high added value so that the ROI (return on total investment) became higher than originally estimated. It was therefore decided to use AMS (Asset Management Solutions) software to manage "on-line" the smart field instrumentation configuration, calibration and diagnosis "without leaving the chair."

On the other hand, the integration of all the information in the DeltaV system allows the use of its powerful tools for its management and storage, being all the information available not only through the system consoles, but from any PC on the plant network.

The operators now understand their process better, thanks to the easy and immediate access to all trends, through which they can confirm, and sometimes discover, inter-dependences between the different variables.

Production personnel can easily access the information through the plant network in order to prepare analysis and reports based in universal applications, such as Microsoft Excel.

It is in this way that material and energy balances are now calculated, allowing a continuous performance improvement.

### **It Is So Easy**

Perhaps the greatest challenge that Rhodia assumed was the development of the project by themselves.



The decision was triggered by the facilities in the DeltaV software: an integrated graphic configuration environment based on a Windows-like interface with on-line help, auto-documentation and plug-and-play technology.

Rhodia personnel attended one of the DeltaV training courses in Madrid and, with just the occasional support of the Emerson Spain engineering department, have developed the entire project, from the design of the cabinets to hardware assembly and software configuration.

In this way, Rhodia has saved on services and invested in their own personnel who have become true DeltaV experts within their own maintenance department.

Any changes, expansions or problems can now be resolved in the first instance by the Rhodia experts!

### Conclusion

All the above confirms not only the easy and powerful nature of the DeltaV system, but also the qualification and professionalism of staff within the Rhodia maintenance department.

The technological differentiation of the DeltaV system provides the project with a high added value and allows a gradual implementation that keeps pace with the availability of resources at all times and integrates the existing systems to protect the investment that Rhodia had already made.

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