




# Case Study – BIVA-HT Upgrade Ciba Specialty Chemicals, The Netherlands

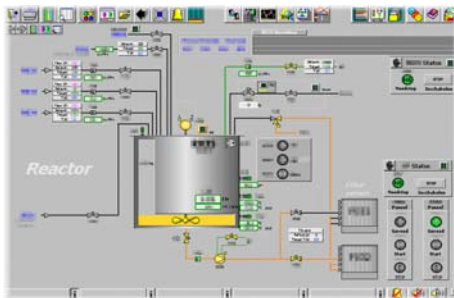


A major control system upgrade for one of Ciba’s multi-unit pigment manufacturing plants in Maastricht proved to be another success for Alba Controls.

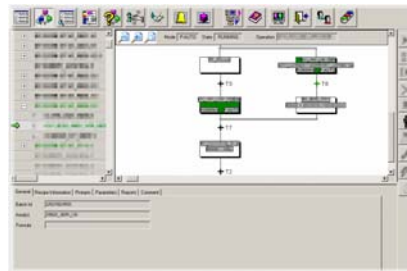
## The Challenge

 This project involved a major automation upgrade to what was a largely manual plant. From a mostly operator-controlled process, it was to change to a recipe-controlled batch design, capable of running for most of the cycle time automatically, with the only interventions being minor manual operations and bulk solids charging.

Ciba chose DeltaV for the control system, which was already beginning to prove itself at other sites within the company. Its flexible S88-based batch system made it the perfect fit, and Ciba had chosen it as the basis for their new control system standard.



The system not only had to be able to cope with existing products, but also to allow continuous development of these recipes and the introduction of new ones as well. This required careful consideration of the plant’s operation to ensure that it was able to meet both current and future requirements.



Another key aspect of the design was that it had to conform to Ciba’s emerging DeltaV control system standard, using established code design and practices.

## The Solution

We leveraged the DeltaV batch philosophy to develop reusable recipe operations, which enabled control of each of the major groups of equipment – equipment modules - in the plant. Modes and values were then supplied to these operations to manipulate the plant in the required

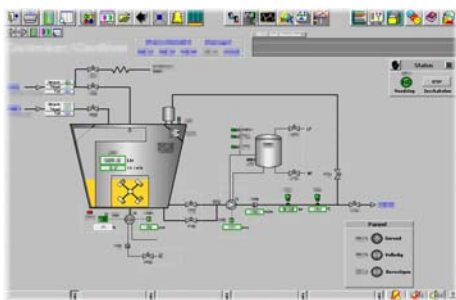


Projects

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way. These operations were then joined together in the required sequence to form the recipe for a product.

The process of development is designed to be carried out by the plant users, that is, the operational staff and the process development chemists. Thanks to close collaboration between Alba and Ciba personnel, responsibility for recipe development was accepted by the people on the plant – who are, after all, the ones who know the plant best and can get the most from it. They quickly grasped the principles and really took ownership, even though they had never worked with a full batch system before. They were able to design their own recipes without our assistance within a few weeks of plant start-up.



### The Bottom Line

The automation solution that Alba supplied to Ciba for this project both conforms to and improves upon the automation standard set out. The flexible batch system and high degree of automation means that the plant is able to make a wider range of products more consistently and easily. The batch and continuous historian systems also allow easier monitoring of the process, allowing capture of flows, temperature, pressures, etc., as well as quantities of material added, time required for different activities and the nature and frequency of any failures occurring. This information is also tied into a main plant PI system, allowing the data to be analysed and trended by anyone in the company with security access, from anywhere in the world.

Our knowledge of process control and our broad experience of applying it to different plants allowed us to provide a powerful, flexible solution that is in line with the client's automation standard guidelines.

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