

Emerson's PlantWeb® Architecture Enables Akzo to Reduce Maintenance Costs and Unscheduled Shutdowns



RESULTS

- 10-20% reduction in maintenance costs
- Unplanned shutdowns reduced by 10%
- Quality improved – almost zero wastage



APPLICATION

The manufacturing plant uses gum rosins tapped from pine trees to make resins for printing inks and label coatings. The resins are also used in soaps, detergents and fragrances, and also for rubber production. Between 25,000 to 30,000 barrels of resin products are produced annually.

CUSTOMER

Akzo Nobel Ink and Adhesive Resins bv is an Akzo Nobel company division located in Maastricht, The Netherlands. The company has locations in Asia Pacific, North American and South America.

CHALLENGE

In a competitive market Akzo Nobel IAR bv needed to increase quality and throughput. Modern manufacturing methods require greater flexibility and control of the process and the ability to view and rapidly adjust parameters such as temperature, pressure, flow and the position of control valves. Control needs to be from a central point, removing the need to walk around the plant checking instruments.

Batch variability was also an issue, reprocessing adds considerably to the cost and rejected product is a total loss. There are often trends in a production process, which if identified in time, could be corrected before the process falls outside acceptable limits.

“AMS predictive maintenance software has dramatically reduced the time required to identify and rectify a wide range of faults. Efficiencies have improved and unplanned shutdowns have been reduced by 10%.”

Peter Montforts,
Senior Process Engineer

SOLUTION

Process control is now based on PlantWeb® digital plant architecture including a DeltaV™ digital automation system with AMS™ Suite: Intelligent Device Manager software. Field automation equipment includes El-O-Matic® actuators, Micro Motion® Coriolis mass flowmeters, Rosemount® pressure and temperature transmitters, and Fisher® FIELDVUE® digital valve controllers.

The remote diagnostic and calibration capability of today's smart field instrumentation coupled with AMS Device Manager enables maintenance technicians to readily obtain information on the condition of field equipment. With this knowledge they are able to repair or replace equipment as signs of degradation appear, thus eliminating or reducing time-consuming routine preventive maintenance.

Troubleshooting of suspected process problems is also streamlined. For example, after two control valves were identified as the root cause of a recent process problem, the AMS Device Manager was used to recalibrate the valves from a central location without the need for a technician go into the field. Previously, these types of faults would have required hours to diagnose and correct, but the problem was solved in only a few minutes using the AMS Device Manager.

Should a problem occur outside of normal working hours, the engineer on-call can diagnose the problem remotely thanks to the dial in access to remote diagnostic tools. This has allowed the 24 hour shift maintenance coverage to be reduced to dayshift coverage only.

Since the installation of PlantWeb at the Maastricht site, unplanned shutdowns have been reduced by 10 percent through closer monitoring of the processes. Condition and deviation alarms now warn operating personnel of potential problems before they become serious, and corrective action can be taken in plenty of time to prevent a shutdown.



“We have been able to achieve a 10 to 20% saving in maintenance costs by reducing the 24 hour maintenance coverage to dayshift only. The night shifts are covered by on-call engineers with any problems being resolved using the remote diagnostic tools.”

John Kusters,
Engineer

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