

EQUATE PETROCHEMICAL CASE STUDY

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—Sreekumar Gopinathan, Maintenance Scheduler, EQUATE



EQUATE Petrochemical Company was founded in 1996 as a joint venture between Dow Chemical and Petro Chemical Industries. Located in Kuwait and supplying markets in Asia, the Middle East, Africa and Europe, EQUATE is one of the world's largest producers of polyethylene and ethylene glycol for value-added plastics and chemicals.

CHALLENGE

Efficiently maintaining EQUATE's state-of-the-art facilities is an important aspect of its business and requires regular daily maintenance and periodic plant shutdowns and turnarounds, both planned and unplanned. Daily maintenance at EQUATE consists of 20 to 30 new work orders per day plus an active backlog of more than 900 work orders, comprised of 4,000 to 6,000 activities, at any given time. In addition, the company schedules plant shutdowns every two years and major plant turnarounds every eight years. These major turnarounds take approximately 16 months to plan, 30 days to execute and involve well over 1 million man hours completing 2,400 jobs and more than 30,000 activities. A turnaround of this magnitude costs EQUATE tens of millions of dollars to complete.

EQUATE uses SAP to manage all materials, maintenance work planning, financial reporting, costing and budgeting, and Primavera P3e for scheduling and resource leveling, schedule compliance reporting and job backlog management.

In order to complete these tasks, EQUATE used a series of complicated, manual processes to move data between SAP and Primavera. Errors and delays associated with these processes impacted the accuracy of equipment and order history, causing inconsistencies between the systems and inefficient maintenance practices. Equate also struggled with getting accurate, timely confirmation of progress data into SAP.

As a result, EQUATE needed a better and more efficient method to synchronize its systems and improve maintenance operations.

SOLUTION

In June 2005, the company began working with Impress Software to integrate the two systems and streamline routine maintenance activities. Impress for EPM is a packaged integration application that enabled EQUATE to speed integration through the use of out-of-the-box best practices. With the systems now integrated, planning for all maintenance activities occurs in SAP and Impress for EPM synchronizes with P3e for scheduling and leveling. Additionally, enabled by

Industry:

Petrochemical

Goal:

Improve resource and material utilization and overall project performance for daily maintenance and plant shutdowns and turnarounds.

Challenge:

A complicated manual process to create maintenance schedules caused a large work order backlog and inconsistencies in SAP and Primavera data. SAP lacked detailed maintenance and equipment history records for shutdown activities.

Solution:

Impress for EPM

Results:

- Improved visibility into project management and financials enabled a 30 day, multi-million dollar turnaround to be completed on time and on budget.
- Reduced shutdown and turnaround planning time by 25%.
- Facilitated more efficient materials planning and utilization.
- Eliminated manual data entry, including work order confirmations, saving 5,000 man-hours per year.



the Impress synchronization, Equate uses Primavera to capture progress information, automatically generating the appropriate work order confirmations in SAP.

Following the successful integration of SAP and Primavera for planning and regular maintenance, EQUATE began using the system to plan a plant turnaround in August 2005. The turnaround was executed in March 2006 and as a result of the integration, EQUATE improved productivity by eliminating time-consuming, low-value activities and reducing set-up time. It also improved decision making by assuring that the entire organization had real-time visibility into maintenance performance from both systems. The integration ensured the accuracy and completeness of historical maintenance data and for the first time a complete record of the turnaround existed in SAP.

By effectively integrating the two systems, EQUATE leveraged the best features of both SAP and Primavera to ensure that turnaround activities remained on-time and on-budget. "EQUATE works hard to maintain its status as a low cost, preferred supplier through the use of best business practices and standards, which is why it is important to maximize productivity at our facilities," said Sreekumar Gopinathan, maintenance scheduler for EQUATE. "Daily maintenance and plant turnarounds are an essential part of operating efficiently and the Impress solution has given us tight control of project planning and accounting to stay on-time, on-budget, and improve overall efficiency."

RESULTS

By automating the entry of progress information into SAP, EQUATE reduced the planning effort for shutdown and turnaround activities by 25%. With the elimination of manual entries, EQUATE also saves an estimated 15% annually on planning and scheduling costs for routine daily maintenance and maintains detailed, and accurate maintenance history in SAP.

Improved visibility into the project management and financials enables EQUATE to operate more efficiently in regards to materials planning and utilization and complete large scale projects on time and on budget.

FOR MORE INFORMATION:

US/AP

Impress Software
460 Totten Pond Road
Suite 200
Waltham, MA 02451-USA
Phone: +1 (781) 419 5600

EMEA

Impress Software
Rotenburger Straße 21
30659 Hannover-Germany
Phone: +49 (0) 5 11/61 0 71 0

www.impress.com