

Adelaide Brighton Cement

50% reduction in plant stoppages and a decrease in cost per tonne of production



THE CHALLENGE

Adelaide Brighton Cement (ABC) is Australia's only national cement supplier and employs over 1,300 staff within Australia. With major sites at Birkenhead, Angaston, Cockburn Cement, Swan Cement and Independent Cement and Lime, it controls a large percentage of the cement and concrete market. There are four major divisions across the ABC business landscape including: cement and Lime; concrete; concrete products; and aggregates and materials

The Angaston site is located in the Barossa Valley in South Australia and has 92 employees who manage the manufacture of lime, cement and clinker. The plant has a manufacturing capacity of 250,000 tonnes but had been restricted in its quota maximization due to outdated technology and processes.

ABC recognized the need to not only upgrade its technology but to improve the quality and efficiency of its manufacturing operations at Angaston.

PLANT PERFORMANCE HISTORY

In 2001, ABC adopted a management style that focused on continual process improvement for its plant and operators. This has led to the development of initiatives such as Six Sigma process improvement teams, standardization teams and operational performance managers.

This attitude to continually improve the operations of ABC Angaston has helped to identify unscheduled system downtime as a significant contributor to an increase in production costs against raw material output.

The Angaston Planning and Plant Performance team gathered downtime data using a number of sources such as Control Room log sheets, Microsoft Access databases, Excel spreadsheets, SPC Control Charts and CitectSCADA reports. This information was then analyzed and reported during weekly performance meetings.

Using Pareto analysis of this data, ABC was able to define the root cause of the top ten plant stoppages. Although this information was carefully collated each week, it was always analyzed some time after the event, which often delayed an immediate response.

THE CHALLENGE

Develop a Downtime reporting system that:

- Is easy-to-use
- Provides access to data remotely
- Enables automatic, real-time collection of stoppage data
- Replaces the multiple downtime reporting systems with one overall system
- Is quick to implement from design to active utilization

THE SOLUTION

Ampla Downtime measures asset utilization, stoppage information and trend data as well as Pareto data, (count and duration) by shift, asset, equipment and cause so that operators have a more detailed picture of what may be causing each stoppage and how easily it can be solved.

THE BENEFITS

As a result of implementing Ampla Downtime, ABC Ltd Angaston reported a 50% reduction in plant stoppages which in turn created increased output from each asset and a decrease in cost per tonne of production.

CaseStudy

Citect
Real-time Intelligence

Ampla has reduced reporting and analysis time to just one hour per month



In addition, the effort required to collect the data was in itself affecting plant performance as the process engineers could spend up to three days per month simply generating reporting data.

ABC needed a more efficient method to measure, in real time, the Overall Equipment Efficiency (OEE) of the Angaston plant taking into account the availability, quality and performance of each asset.

REQUIREMENTS

ABC approached Citect to help develop a Downtime reporting system that:

- Is easy-to-use so that any operator could monitor downtime occurrences during any shift
- Provides access to data remotely as networked computers were not readily available in all areas of the plant
- Enables automatic, real-time collection of stoppage data
- Is able to replace the multiple downtime reporting systems with one overall system
- Is quick to implement from design to active utilization

THE SOLUTION

Citect implemented its customizable Ampla Downtime reporting system that measures asset utilization, stoppage information and trend data. The system also measures Pareto data (count and duration) by shift, asset, equipment and cause so that operators have a more detailed picture of what may be causing each stoppage and how easily it can be solved. In many cases, the operator can resolve the stoppage with minimal disruption to production.

The plant operators enter their interpretation of the situation using customized pick lists, or by entering the cause, during each shift. This data is analyzed by management on a daily

and weekly basis to help identify trends and abnormal occurrences for prioritized action.

The entire development from design to implementation took less than two months with operators able to access the system and report data almost immediately.

RESULTS

As a result of implementing the Ampla Downtime reporting system, ABC Angaston has already reported a 50% reduction in plant stoppages. Kiln Three achieved a 50% reduction in stoppages just one month after implementation. This in turn created increased output from each asset and a decrease in cost per tonne of production.

Ampla has reduced reporting and analysis time from three days to just one hour per month allowing operators to concentrate more time on production and process improvement. The operators are more accountable for reducing plant downtime as the data is received in real time during each shift. The shift data also helps ABC identify areas in which employees may require further supervision or training.

THE FUTURE FOR ABC AND CITECT

With the successful implementation of Ampla Downtime, ABC is looking toward rolling out the whole Ampla Performance suite (Downtime, Production, Metrics) to help improve visibility of plant performance to all stakeholders.

Ampla Performance measures customized Key Performance Indicators such as OEE, and provides tools that help operators to focus improvements on those areas that provide the greatest return on investment. This will enable ABC to make timely and cost-effective plant improvements that can help increase productivity, optimize asset utilization and achieve consistent product quality.

Contact Citect's experienced manufacturing specialists to find out how we can help you improve efficiencies at www.citect.com/ampla

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