

Case Study

Indonesian cement plant ensures continued production with upgrades to Symphony Plus Control System



ABB provides integrated products, services and solutions to help customers in the cement industry optimize their power and productivity resulting in increased availability and lower investment costs

Since 2015, an Indonesian cement producer has worked with ABB automation specialists to engineer and commission their plant's automation system. With its local certified resources and process knowledge, ABB has been a key support for this customer in maintaining their production and expansion plans and growing successfully in a smooth manner.

ABB provides software management and extended software lifecycle support services through the Automation Sentinel subscription program, which allows the plant managers to actively monitor their control system versions and software lifecycle costs. The plant's management team works closely with ABB to plan control system evolution strategies that will help to secure control system functionality in the future, while protecting their automation investment. In 2013, the agreement for the Human Machine Interface (HMI) upgrade for the control system on one of the cement lines was won by an ABB competitor. But that system had many performance issues.

Managers were concerned that the ABB Bailey control system was obsolete and was no longer supported by ABB. The ABB Indonesia team, supported by ABB experts in Singapore, visited the plant and clarified ABB's commitment to provide upgrade paths for the Bailey control system to the newer ABB Symphony Plus control system. In addition to explaining these evolution services, the ABB team also demonstrated how ABB Advanced Services powered by ServicePort can improve and sustain equipment and process performance. An ABB Harmony Performance Service sample report was presented to demonstrate this capability, and the management team was

Indonesian cement producer secured process control continuity and availability assisted by the ABB Automation Sentinel Lifecycle Management Program.

pleased to see how ABB continues to support the ABB Bailey control system.

Remote-enabled advanced services was a requirement for the new tender, and only ABB could provide these types of services through the secure, remote-enabled ABB ServicePort Service Delivery Platform. With this approach to protect the customer's investment, and the remote-enabled support available through ABB Advanced Services powered by ServicePort, ABB won the control system upgrade opportunity.

Additionally, the plant managers selected ABB's Harmony Performance Fingerprint to identify system issues that could cause hardware failure, and as a result interrupt production. The Fingerprint is a cost-effective, non-invasive advanced service that provides diagnostics, key findings and recommendations. The Fingerprint audit benchmarks control system performance and parameters, and compares them to peak operating conditions. This comparison quickly pinpoints issues, helping to improve system reliability, availability and performance. The value of these diagnostic audits is they can detect potential system vulnerabilities long before they happen, rather than having to make repairs because of a crisis. After identifying optimum system operation, ABB creates an improvement plan in a detailed Harmony Performance Fingerprint report. The report is prioritized, with recommendations that deliver the greatest benefits first and practical recommendations to improve performance and increase efficiency.



Customer's collaboration with ABB resulted in numerous benefits

In 2014, the management team budgeted an upgrade/replacement of the ABB Bailey control system for its finishing line. ABB worked with the customer to establish a step-by-step upgrade path for the ABB Bailey control system over a three-year period, and the cement producer used their budget to upgrade a few of the old ABB Conductor NT Human Machine Interface (HMI) to ABB Symphony Plus for two production lines. ABB upgraded the plant in a stepwise approach, to ensure minimum disruption of operation at the plant. The upgraded system now includes ABB Symphony Plus Operations that captures plant data using upgraded input/output (I/O) modules, the Windows-based HMI system, including an engineering workstation, and an ABB controller. ABB was responsible for the complete system design, engineering, project management, testing and supervision of installation and commissioning of the Symphony Plus Control System.

The ABB automation team, which is specialized and certified in mineral applications, built a trusting relationship with the cement producer team. This resulted in the successful migration of the ABB Bailey Conductor NT HMI to ABB's Symphony Plus Control System.

Benefits:

- ✓ Continuous, long-term support for critical assets
- ✓ Cost-effective timely commissioning
- ✓ Smooth transition in minimal shutdown window
- ✓ Guaranteed local response to customer needs
- ✓ Technical support via local capabilities
- ✓ Lower system software lifecycle costs and risks

The migration to the new ABB Symphony Plus Control System has helped to achieve the plant's goal of reduced unplanned downtime and increased process availability. The stepwise evolution of the control system clearly shows the value of ABB's lifecycle service approach and strong understanding of the customer's needs. Upon final completion, the cement producer now has a highly flexible and efficient control system with increased plant reliability and stability, which contributes to an improvement in overall plant operation.

ABB's Minerals business unit is represented in the following countries: Australia, Brazil, Canada, Chile, China, Indonesia, Estonia, Germany, Greece, India, Indonesia, Latvia, Lithuania, Malaysia, Mexico, Norway, Oman, Peru, Poland, Saudi Arabia, South Africa, Spain, Sweden, Switzerland, Thailand, USA and Vietnam.

Below: Cement and glass makers require integrated process control systems to monitor plant-wide efficiency and productivity. The plant's process control system has been configured in such a way that the entire site can be operated from the central control room. All of these components exchange information with the remote control center where operators monitor and take action when needed. Sophisticated control systems provide the information required to support the operator supervising the cement plant and tracing faults during troubleshooting. It is collected in the plant control system and displayed on the control monitors like the example below which highlights the existing automation architecture at the plant.

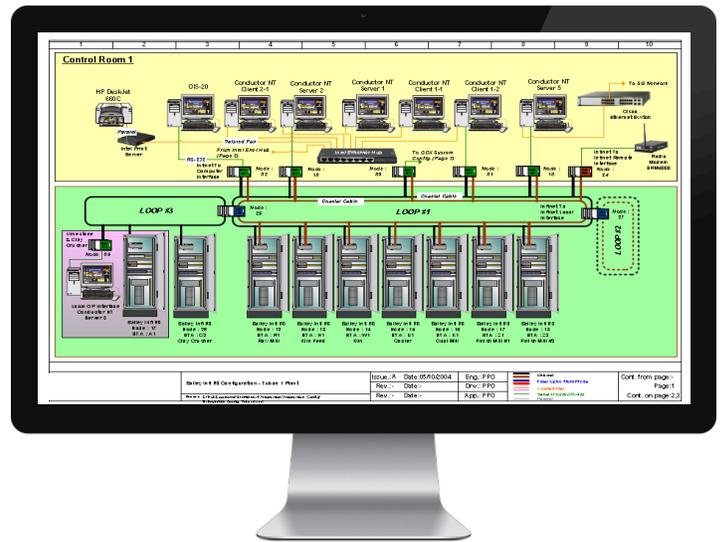


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