Improved decision-making

Vigier Ciment in Reuchenette, Switzerland, recently added an ABB Ability™ Knowledge Manager to improve its use of process, quality, maintenance and environmental data in production decisions.

■ *by ABB and Vigier Ciment SA, Switzerland*

Vigier Ciment SA, part of the Vicat Group, has been producing Portland cement at its Reuchenette plant in Switzerland since 1891. The plant's 0.9Mta output is used in civil engineering and other major construction projects.

The cement producer recently took a further step towards digitalisation by acquiring ABB's Ability™ Knowledge Manager, which integrates process, quality, maintenance and environmental data for unified productivity decisions. Vigier Ciment awarded the contract to ABB in December 2016. ABB started the first phase of the project in spring 2017.

Scope of delivery

The contract's scope of delivery included ABB Ability Knowledge Manager software, related hardware, commissioning, training and other services. Part of the ABB Ability™ MineOptimize solution set, Knowledge Manager is a digital information management application that helps end users make the right decisions based on consolidated and transparent information at plant and corporate levels. It accesses integrated automation and ERP systems to provide consistent and validated information for these decisions.

ABB Ability Knowledge Manager collects data from different sources in the plant, transforms it into meaningful key performance indicators (KPIs) and makes this information available across the customer's organisation to facilitate process improvements.

The solution also helps the customer's team make production decisions more quickly, identify weak process areas and opportunities for improvement as well as control the environmental impact of plant processes.

Operational optimisation

Commissioning of the new system at Vigier Ciment was finalised out in January

Digitalisation will help Vigier Ciment, Switzerland, improve its production efficiency

2018. While some challenges emerged, ABB and Vigier Ciment were able to solve these. "It is important to have the right architecture to create a high-performance tool that supplies the information required by the staff," says Kim Tran, quality and environment performance manager at Ciment Vigier SA.

To create such an efficient system that meets the needs of all users, a cross-department project team, led by a project leader who is able to build a full picture of the data system, is a key requirement. A clear and integrated architecture of all processes must be defined before the project starts.

"The installation of ABB Ability Knowledge Manager and digitalisation of our plant data is really helping us to optimise our short-term production processes and long-term operations," said Ms Tran. "The system give us a better view into our production process, as well as faster and easier access to our data. The instantaneous reports, trends and the data collection tools help us to carry out studies and take decisions. This new tool already leads to real process improvements."

The unified and single reporting system of the Knowledge Manager has improved

the visibility of the company's processes as Vigier Ciment now has simultaneous access to production, environmental and quality data in real time. The transparent access to centralised data has improved communication between the departments and helped the plant's decision makers to make results-oriented decisions, enabling them to resolve various issues through statistical reports, according to the cement producer. Moreover, the easy and fast data extraction means analysis of unusual events happens in a few hours rather than days.

In terms of research carried out to improve operational performance, the plant has conducted studies into the optimisation of production planning and the increase of cement stock capacity. Further subjects include the root cause analysis of lower cement grinding output, mass and energy balances as well as an analysis of gas emissions in relation to raw material chemical analysis.

In summary, ABB's Ability Knowledge Manager incorporates latest-generation digital capabilities and technology to provide the cement and mining sector with the ability to easily view, analyse and act upon critical process data. ■