

ANTEA CEMENT SH. A.: Reliable condition monitoring

Antea Cement now has a complete overview of its cement production – thanks to the condition monitoring system from Siemens

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Customer:
Antea Cement SH. A.

Customer location:
Fushe Kruje, Albanien

Implementation period:
October 2011 to April 2012

Scope of service:

- Supply and commissioning of a condition monitoring system for the raw meal and cement mill

The challenge:

Avoiding non-steady-state conditions

The Titan Group is a Greek producer of cement and building materials with a history of continuous success lasting more than 100 years. Antea Cement, built by the Group in Albania, is one of the world's most technologically advanced cement plants with an annual production volume of approximately 1.5 million metric tons. Despite its advanced technology, the plant can enter into a non-steady state if various parameters interact in unfavorable ways. When this happens, the rollers move up and down without proper control and thus produce overloads or underloads and torque peaks at the gear units. This can cause serious damage to the drive train and the entire system. To minimize the risk of such malfunctions, Antea Cement received support from Siemens, which manufactured the mill motors, gear units and clutches.

The plan was for the two companies to jointly design a monitoring solution which would enable the plant to operate continuously and minimize the danger of unscheduled downtimes.





Three Loesche vertical mills process clinker and raw meal in the Antea Cement plant. In two of them, the drive train has been monitored by a condition monitoring system from Siemens since 2012.

The solution:
**Conditioning monitoring
from the motor manufacturer**

Antea Cement commissioned Siemens to install a drive train condition monitoring system for a KMPP vertical mill gear unit and the associated motor. A large number of sensors provides the operator with important process information during continuous monitoring of torque, motor speed and temperature. This information helps optimize mill operation and also provides early detection of imminent overload and underload peaks. The managers in Albania are entirely enthusiastic about this solution. "We were completely won over by the condition monitoring system. As a result, we immediately ordered another one for a second vertical mill."

The result:
Improved productivity and reliability

Antea Cement's new condition monitoring system works flawlessly and detects possible problems early on. For example, it allows damage to motor bearings to be repaired before it spreads to other machine components. The collected data travels over a secure Internet connection to a central monitoring system, which sends status reports as well as recommended action, among other things, to the customer and notifies Siemens experts directly if needed. Since the motors, gear units, clutch and monitoring system all come from a single source, Antea Cement benefits from Siemens extensive system expertise and numerous service benefits. All in all, continuous monitoring in the Albanian plant leads to

continuous production which needs to be interrupted only for scheduled maintenance – very much pleasing the cement works operators. "Our improved productivity will very quickly offset the cost of the retrofit."

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