



Customer Success Stories

We pioneer motion

Comprehensive Monitoring reduces unplanned downtime

Finnsementti decided to use Schaeffler OPTIME during its search for a condition monitoring solution. This wireless solution allows the cement manufacturer to monitor practically every rotating machine at the plant on a largely automated and permanent basis.

Customer Benefits

- Easy and rapid installation of OPTIME components.
- Easy data-reading, no expert knowledge required.
- Greater security for employees, as access to hard-to-reach machinery is no longer required with the digital service.
- Cost-effective solution for comprehensive and wireless monitoring of units.
- Permits long-term planning of maintenance measures, personnel requirements, and replacement part procurement.
- Unplanned downtime is no longer an issue for monitored machines.

FINNSEMENTTI
A CRH COMPANY

Customer

Finnsementti Oy, Part of the CRH Group

Sector

Zement

Application

Motors, fans, gearboxes, pumps

Solution

Condition Monitoring

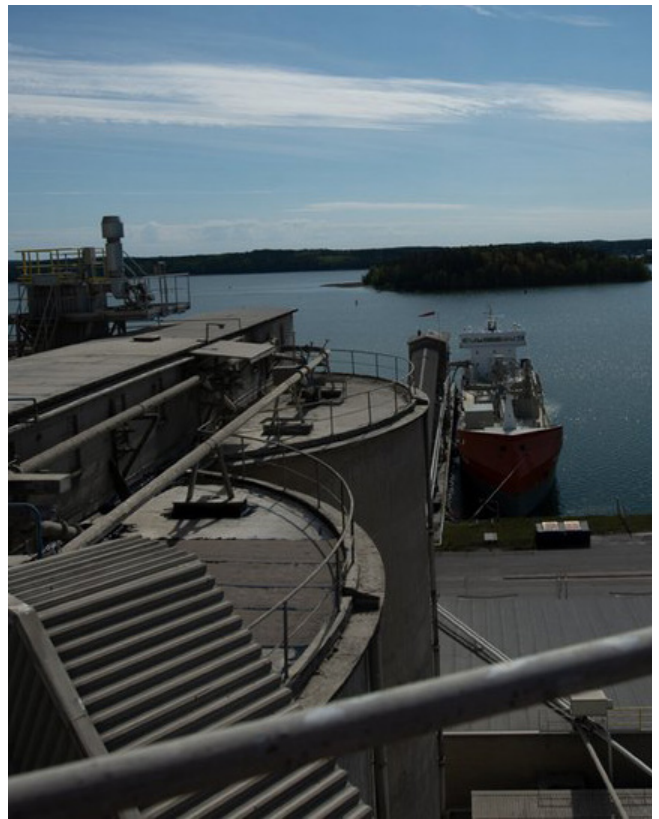
What our customer does ...

Challenge

Finnsementti has been producing cement, concrete, lime, and other raw materials at its plants in Parainen and Lappeenranta for over a hundred years. The Finnish cement manufacturer's main concern is plant downtime. Around 90 machine failures occur on average every year, the majority of which are caused by auxiliary units.

In such cases, production is suspended completely for approximately 1 to 2 hours. The most critical units are motors, gearboxes, pumps, and fans. Finnsementti is also looking for a solution that will provide greater security for personnel. As auxiliary units are generally difficult to access, accidents are inevitable.

Finnsementti has not installed condition monitoring solutions previously for the purpose of monitoring auxiliary units, as these were too expensive and, for the most part, did not work wirelessly. For this reason, Finnsementti decided to seek assistance from Schaeffler.



Cement plant, Finnsementti Oy, Parainen

Technical information on the units

Fixed speed	
Electric motors, gearboxes, combination of support bearings	1400-3000 rpm
Variable speed	
Electric motors, fans, combination of support bearings	600-1000 rpm
Fixed speed	
Electric motors + fan combination	1400-3000 rpm

Customer

Finnsementti is a Finnish cement manufacturer. Around 230 employees work at the cement plant. The main raw material for cement and limestone is obtained from Finnish soil. Finnsementti celebrated its 100th company anniversary in 2014.

What Schaeffler has to offer ...

Solution

Schaeffler experts recommended a comprehensive condition monitoring solution in the form of Schaeffler Optime. The Schaeffler OPTIME solution comprises wireless sensors, a gateway, and digital service. The sensors are responsible for monitoring machines and devices. The gateway receives the data from the sensors and transfers these to the Schaeffler Cloud. The data are analyzed using the digital service and an error diagnosis is created on the basis of algorithms. The customer receives clear statements about the condition of their machines via a mobile app. The installation work, which involved fitting around 150 sensors to motors, fan pumps, and gearboxes, as well as mounting the gateway, was completed in just a few hours. The mobile app allowed hundreds of machines to be monitored directly.



Schaeffler OPTIME wins the Red Dot Award 2021 in two categories

Information on the OPTIME sensor

Vibration bandwidth	OPTIME-3: 2 Hz – 3 kHz OPTIME-5: 2 Hz – 5 kHz
Calculated parameters	7
Sensor commissioning	NFC (Near Field Communication)
Communication	Wirepas Mesh (2.4GHz ISM Band)
Measurement cycle	Parameters: every 4 h Time waveform: every 24 h

What's special

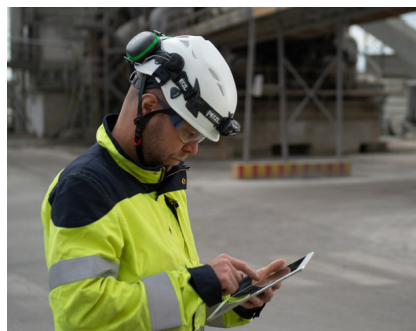
Finnsementti was one of the first customers to use the Schaeffler solution, which can be applied across market sectors. OPTIME has been available on the European market since July 1, 2020. Other regions will follow soon.

7 selected parameters based on Schaeffler know-how

>150 Schaeffler OPTIME sensors are installed around the cement mill.



Schaeffler OPTIME is fitted.



The Schaeffler app is installed.



Employees check the data.

What our customers say ...



OPTIME has reasonable price and easy installation that enable scaling up the monitoring to a large number of machines in a cement mill.

Schaeffler has a broad knowhow of Condition Monitoring and specifically of the machine motion. We appreciate that very much.

Tommy Ranta
Production Director, Finnsementti Oy



With OPTIME our maintenance staff has the transparency over the condition of most of our machines without the need to watch them closely all the time.

Toni Virtanen
Cement Production Manager, Finnsementti Oy