

# SIEMENS CHOOSES OPENpredictor™ FOR INDUSTRIAL DRIVE APPLICATIONS

POWER



**The Mechanical Drives Division of Siemens, market and technology leader in industrial drive systems, liaises with Roving Dynamics to maximize their customers' plant availability. The company now introduces a new, advanced, predictive condition monitoring solution with embedded OPENpredictor™ technology for gear systems used in the cement, mineral and other industries.**

High reliability, quality and long service life are characteristics of Siemens' widely diversified range of universal, application and customer specific drive systems, proven in over 100,000 applications worldwide for over 100 years. A comprehensive

service program includes maintenance, repair, spare part management as well as machine monitoring.

"A reliable, centralised and predictive condition monitoring solution is key to our long term service agreements, and to ensure maximum plant availability for our customers," says Cengiz Yalcin, Head of Service International at Siemens Mechanical Drives. "And an exact drive diagnosis is a prerequisite for condition-oriented maintenance. Using the latest measuring technique based on Roving Dynamics' automated fault diagnostics and prediction software, we can exactly assess the extent of damage and schedule inspection and repair. Our knowledge and

experience enable us to make a reliable analysis of the measured values down to the last detail. The measurements are taken online while the drive systems are running – under production conditions."

#### **OPENpredictor™ embedded in Siemens hardware solution**

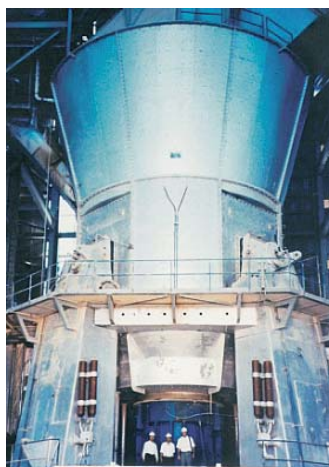
Roving Dynamics' advanced OPENpredictor™ signal processing software and patented AutoDiagnosis™ with automated fault identification and prediction of lead time to inspection have been adapted to fulfil the needs of Siemens' industrial drive applications and embedded into a strong Siemens hardware platform.

#### **Cement & minerals production**

"We are first introducing condition monitoring to our customers in the cement and minerals mining industries, where we have a strong market position and our largest customer base," says Cengiz Yalcin. "It is our goal that every vertical Siemens cement mill gearbox above a certain size shall be equipped with a condition monitoring system as a standard."

#### **Monitoring can prevent significant downtime costs**

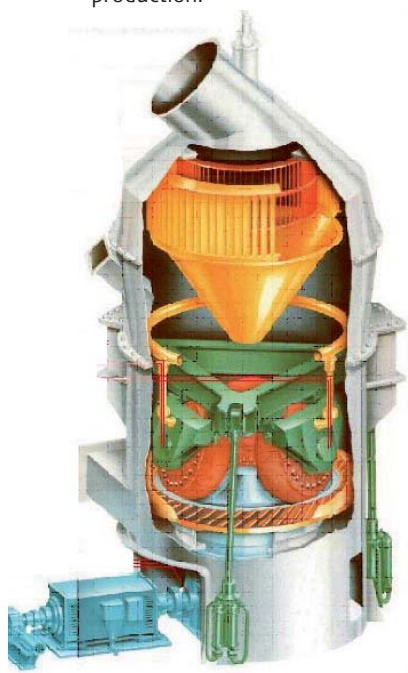
In cement production the gearbox, couplings, motors and generators of the highly production critical vertical mill drives are going to be monitored. For minerals mining



Vertical mill with bevel planetary gear unit

it makes most sense to monitor gearbox systems of the central crunching system, which is the heart of the plant and highly critical for plant availability.

"Availability is crucial for our customers," Mr. Yalcin emphasizes. "One day's downtime at an average size cement plant can easily amount to EUR 250,000 in lost production."



Example of vertical drive system

Siemens also intends to offer the new monitoring solution for drive systems for other applications like e.g. plastics & rubber, food and other process industries.

#### Telediagnosics for new & existing gear units

As a valued partner of equipment manufacturers as well as end-users, Siemens Mechanical Drives introduces the advanced monitoring solution for new drive systems as well as for retrofit to already installed gear units.

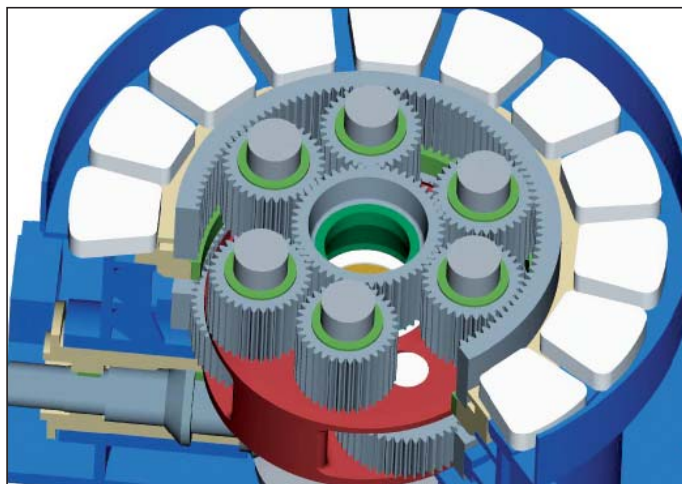
"In today's insecure business environment we see that cement and mineral producers tend to increase production capacity by modernizing, upgrading and squeezing as much as possible out of existing plants instead of building new ones," says Mr. Yalcin. "Efforts to extend the life time and efficiency of older machines call for reliable, predictive online monitoring, and competent diagnostics skills to prevent failure and ensure plant availability. Our new monitoring solution and remote monitoring service, Telediagnosics, provide this."

#### OPENpredictor™ now for several Siemens solutions

"Siemens Mechanical Drives is the second unit within Siemens to select Rovsing Dynamics and our OPENpredictor™ technology for advanced condition monitoring solutions," says Rovsing Dynamics' CEO Thea Larsen. "Last year Winergy partnered with us for the



Condition monitoring can be installed in new gear units as well as drive systems already in operation on cement, mineral, plastics, food and other process industries.



development of their Predictive Condition Diagnostics solution for wind turbines."

Although there are similarities between gearboxes for wind turbines and cement mills, an advanced monitoring technology like OPENpredictor™ has to take several application specific parameters into account. Examples include different speed and load conditions. These are crucial when classifying online

measurements according to operational conditions, one of OPENpredictor's unique features, which ensure reliable warning and predictions.