



Customer
Success
Story

We pioneer motion

Reduced unplanned downtimes thanks to comprehensive monitoring of pumps

One of the largest energy suppliers in the Philippines chose Schaeffler SmartCheck when looking for a condition monitoring solution. This solution enables it to monitor the condition of the seawater pumps on a continuous and simple basis.

Savings on three unplanned downtimes per year: 649,500 euros

Customer Benefits

- Reliable information on the condition of the seawater pumps in real time
- Easy access to data via smartphone with the Schaeffler SmartCheck app
- More efficient planning of maintenance work due to timely fault detection
- Higher plant operational availability and fewer unplanned machine downtimes

Customer	Power company
Sector	Power Transmission
Application	Vertical motors, Vertical pumps
Solution	Condition Monitoring

What our customer does ...



Challenge

The Philippine power producer's biggest concern is downtime at the 300MW coal-fired power plant in Malita Davao del Sur on Mindanao Island. This plant was commissioned in 2008. Millions of households and industries are powered by the plant.

The main problem of the maintenance team are failures of the bearings, which are difficult to access due to their size. There was also no equipment to monitor the health of the bearings. Therefore, failure of these large-sized bearings

can lead to undesirable unplanned downtime. Expensive components of the pump motor can be damaged. This also has an impact on safety.

Until now, the power company has not used any condition monitoring solution for the auxiliary units. Unsatisfied with the constant uncertainty of continuing to operate like this, the maintenance department turned to Schaeffler.



Technical information on the Sea Water Cooling Pumps

Vertical Electric Motor

Fixed Speed	514 rpm
Vertical Motor	1,550 KW

Vertical Centrifugal Pump

Power Transmission	Directly Coupled
Speed	514 rpm
Capacity	18,900 m ³ /hr
Pumping Media	Sea Water

Equipment Subject to Monitoring

1. Motor Bearings
2. Pump Sleeve Guide Bearings
3. Pump Vanes and Impellers

What Schaeffler offers ...



Solution

Schaeffler's experts recommended a holistic condition monitoring solution with the SmartCheck. The monitoring solution consists of vibration sensors, a communication module, and a wireless antenna that sends signals from the SmartChecks installed in the field to the condition monitoring room at the plant. 18 SmartCheck sensors were installed on electric motors and vertical pumps. Schaeffler's SmartVisual software is used to visually monitor the status and alarms of the monitoring system. SmartUtility software is used to manage and analyze the systems. The condition monitoring solution makes retrieving measurement data easy and prevents unplanned downtime. This reduces maintenance work, saves costs and reduces the risk of accidents.

Technical information

Monitoring system

18 Schaeffler SmartChecks

Data exchange

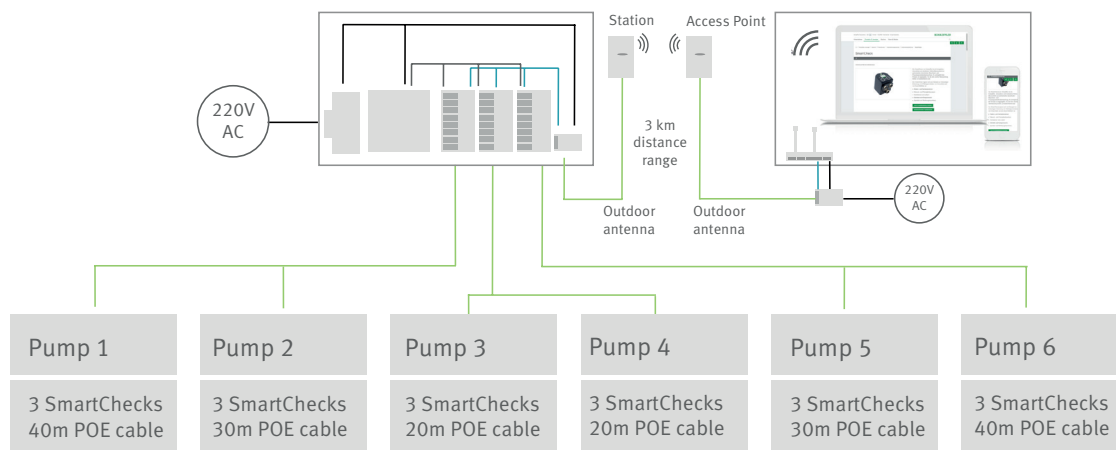
via OPC/UA

Monitored units

Pumps, motors

Monitored parameters

Vibration, temperature, speed



Legend

	Circuit breaker		POE line
	90W 24V Power supply		LAN communication line
	8 ports POE Switch		Power line 220V AC
			Power line 24V DC

What's special

The customer is absolutely satisfied with the solution. There are considerations to equip further plants with condition monitoring solutions.



Workers preparing the SmartCheck installation.



Workers discuss the SmartCheck installation.



Workers configure the communication tool.

What our customer saves ...

The estimated repair cost for one pump component is around EUR 57,000. The one-time initial cost of the SmartCheck online condition monitoring system for six seawater cooling pumps amounts to EUR 34,500. This means that the condition monitoring solution pays for itself after the first failure.

Savings with condition monitoring solution

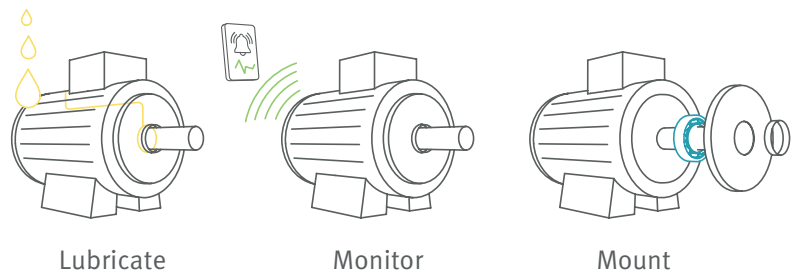
At the first prevented failure	€ 22,500
Each additional failure	€ 57,000

€ 649,500

Savings by preventing 3 pump component failures

SmartCheck is part of the Schaeffler Lifetime Solutions portfolio, which offers a comprehensive range of products, services and solutions for industrial maintenance. It is designed to support maintenance engineers throughout a machine's entire lifetime.

www.schaeffler.de/en/lifetime-solutions



Customer

The power supplier is a subsidiary of a major power company in the Philippines and operates a 300 MW coal-fired power plant in Malita. The plant was founded in 2008 and has a broad portfolio - a mix of coal, natural gas and hydropower plants.

Its total capacity is 2,903 MW, representing 22% of the Luzon grid and 17% of the national grid.

Why Schaeffler?

- Technical know-how
- Friendly and competent customer service
- Fast on-site assistance

Why this solution?

- Precise machine condition data
- Easy handling
- Automated learning mode