Schluchseewerk AG

Enhanced safety and availability due to condition monitoring system

siemens-energy.com/cm500

The Plant

The Schluchseewerk AG is one of the biggest operators for pumped storage hydroelectric power stations located in the Southern Black Forest in Baden-Wuerttemberg, Germany. They work towards stabilization of the power grid and a reliable energy supply since 1928.

The Task

Since foundation, Schluchseewerk AG has built and operated pumped storage hydro power plants in the southern Black Forest. They combine skills to deliver electricity in seconds when it is needed, store excess power and rebuild collapsed power grids. To maintain a high-quality standard, Schluchseewerk AG decided to adapt their hardware to the modern VIB3000 vibration monitoring system.

Our Solution

Schluchseewerk AG consists of five sites in total. Every site operates four turbosets consisting of turbine, generator and storage pump and is protected by a VIB3000 system. To secure daily operations on the basis of state-of-the-art technology systems, they decided to exchange their current hardware system. The main objective of the VIB3000 condition monitoring system is to fulfill safety and availability targets by protecting the machine and the environment from the consequences of machine failure.

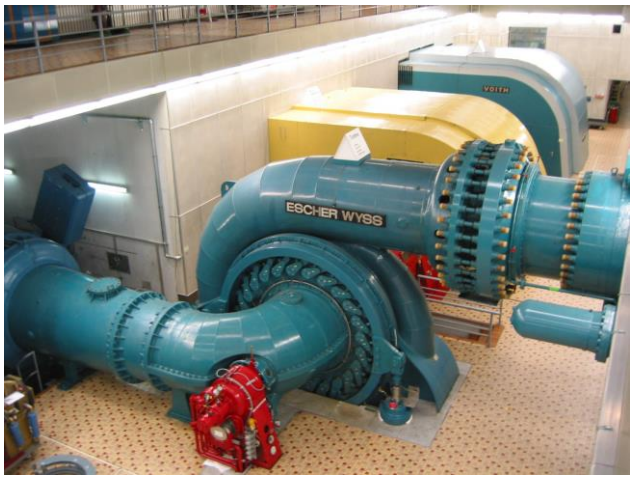
The hardware components of a VIB3000 vibration monitoring system are built modular. In case of "diagnostic monitoring" detected limit violations lead to event-driven data storage and corresponding status logging. This data represent the basis of vibration diagnostic monitoring and subsequent analysis with the CM500 diagnostic software, which detects abnormal machine behavior at the earliest possible time and enables optimized maintenance planning.

It provides information about possible mechanical causes of problems related to the condition of the system. Our customer's wish was to modernize the integrated hardware and replace outdated components with new ones. The vibration diagnostic of all machine sets has been realized by central visualization PCs.

Your Benefits

- Increased availability by using a reliable state of-the-art system
- Increased flexibility due to one platform solution for operation and control of several components
- Modular system set-up and user-friendly handling

Power Plant Wehr, generator (4 x 300 MVA)



Power Plant Säckingen, generator (4 x 118 MVA)

“For many years, the VIB3000 has been used by Schluchseewerk AG as a reliable vibration diagnostic system. The CM500 software allows us to provide effective, user-friendly vibration diagnostics for our machine sets.
The vibration characteristics can be viewed flexibly in any period of time and correlated with the characteristic operating modes of the pumped storage devices depending on a wide variety of process variables.”

Roland Sinsig, Mechanical Engineer, Asset Management, Schluchseewerk AG

Published by

Siemens Energy Global GmbH & Co. KG
Otto-Hahn-Ring 6
81739 Munich, Germany

For more information, please contact
Email: diagnostic-services.energy@siemens-energy.com