

SIEMENS

Ingenuity for life

Machinery Protection

Highest safety and availability of your plant assets

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Siemens Machinery Protection, part of the Omnivise Availability suite is the first fully redundant vibration-based monitoring system simultaneously enabling safety and availability of power plant assets.

The task

Protection systems must provide security for the machine and for the environment at reasonable costs and preferably without any loss of availability. All systems currently available

cover the security aspect, but with a negative impact on availability. The reason for this is that they are not fully redundant, meaning that a cable break or module fault must lead to a preventive outage of the machine. The goal here is to eliminate these system-related negative factors and reach the best balance between availability and security.



Modern protection features such as provided by Machinery Protection can reliably prevent this type of damage.

The solution

Machinery Protection is fully redundant, scalable and is thus designed to provide extremely high fault tolerance. Safety levels for the system are extremely high thanks to its three fully implemented redundancy nodes. The innovative concept with integral redundancy at all levels sets new benchmarks. The system can be integrated fully into the I&C and supports operation from the plant DCS.



Machinery Protection combines I/O interfacing modules and machinery protection into one single system. This reduces costs and eliminates fault sources, which could have a negative impact on the availability of power plant assets.

It combines I/O interfacing modules and machinery protection into one single system. The PROFIBUS DP interface is standard and a MODBUS and OPC interface is also available. The technology we implement for Machinery Protection also sets new benchmarks, featuring digitization throughout the system, "voting" within the system (on-board-voting) and short response times.

The main objective of our machinery protection system is to fulfill safety and availability targets without compromise:

- Protection for the machine and for the environment from the consequences of machine failure
- Protection against unnecessary tripping to enable maximum availability

The benefits at a glance

Machinery Protection enables the following:

- Ultra-modern instrumentation and safety engineering
- Maximum availability of power plant assets
- Full operability from control room using SPPA-T3000 control system

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