



Latest Trends in Condition Monitoring Solutions for Hydro Turbine Generators

Customer Application Center
GE Florence Learning Center
Via Perfetti Ricasoli, 78
Firenze, Italy

September 29, 2009

Seminar Overview

Join the Optimization and Control Customer Application Center and GE's technical experts for an information-filled Seminar exploring how customers just like You have improved their businesses through better asset management and better process control using solutions from our broad portfolio of products and services.

The emphasis is on practical solutions and applications along with hands-on opportunities to interact with our latest and greatest products, such as the 3rd generation of **3500/46 Monitor** module, **System1 v6.5** Software Platform and its new **HydroX RulePak** designed for comprehensive monitoring and diagnosing of hydro turbine generators faults.

In addition, ample time is provided for You to ask questions and network with Your peers.



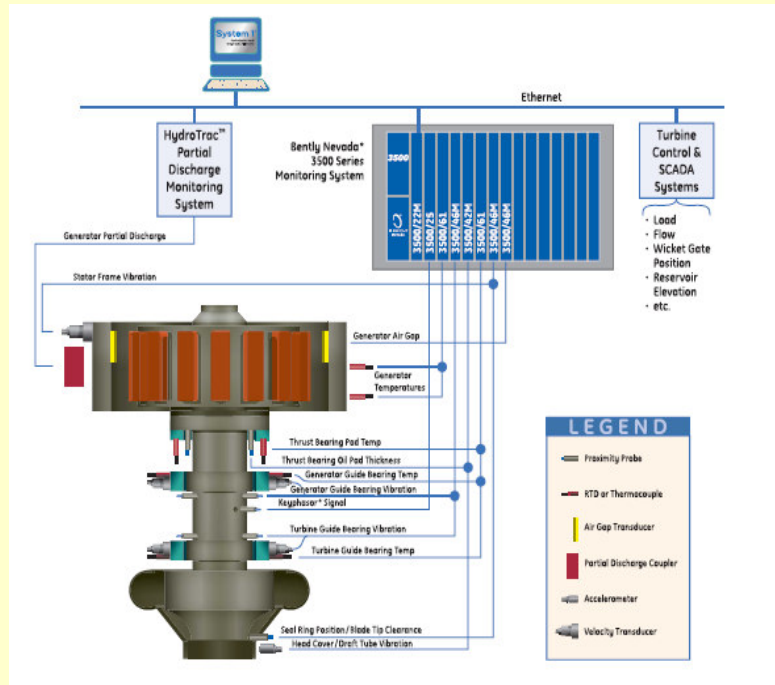
Agenda

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|-------------|--|
| 09:00-09:15 | Registration and Welcome |
| 09:15-09:30 | Introduction and Seminar Overview |
| 09:30-12:30 | Hydro Turbine Generators
Typical Malfunctions, Failure Modes, Process Variables and relevant Measurements
<i>Coffee Break</i>
Condition Management: Monitoring, Protection and Diagnostics |
| 12:30-13:30 | <i>Lunch</i> |
| 13:30-16:30 | Diagnostics – The Fundamental Condition of Predictive Maintenance
Key Events and Diagnostics Analysis - Influence of Process Variables
<i>Coffee Break</i>
Hydro Station Condition Management
Plant Asset Management (PAM) vs. Enterprise Asset Management (EAM) |
| 16:30-17:00 | Q&A and Wrap-Up |

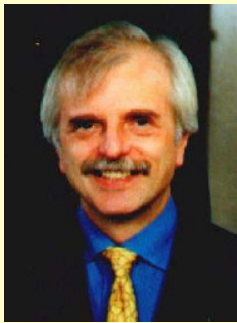
The Case for Monitoring

Optimization of operation and maintenance practices place new stresses on hydro assets, creating a greater need for continuous condition monitoring that can increase plant profitability.

To address this need, GE Energy Optimization and Control team has developed the most comprehensive system we've ever offered: the 3500/46 (3rd generation!) series monitor module, with advanced functionality uniquely tailored for hydro units; it allows connection of many transducers including: new transducers for monitoring generator air gap and end winding vibrations and the best in class low frequency seismic sensor tailored to hydro machinery; new hydro specific capabilities and embedded intelligence in System1 software along with support for partial discharge, ozone and other measurements; and new subject matter experience we've gained over the past several years regarding malfunctions and failure modes on hydro units and the appropriate measurements to detect problems.



Speaker Biography – Ryszard Nowicki



Dr Ryszard Nowicki lives in Poznan, Poland.

He received his B.S and M.S degrees in Mechanical Engineering (1972) and Ph.D. In Technical Sciences (1984) from the Technical University of Poznan. From 1972 – 1993, Dr. Nowicki worked at the Institute of Applied Mechanics, and in 1990 joined Bently Nevada.

Dr. Nowicki has authored or co-authored over 100 technical papers and presented at numerous technical conferences. Since 1995 he has organized the annual Polish National Conference Diagnostic Forum. He also contributed to development and execution of many asset condition monitoring projects in the Power Generation area.

Register Today!

The seminar is offered free-of-charge and includes all participant materials, refreshments and lunch. Although everyone is welcome, space is limited. Please register in advance by contacting:

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We'll reserve you a seat, provide assistance and answer any question you may have about the event. Please note that the seminar will be conducted in **English** language.

OC CAC is located within GE Florence Learning Center (FLC), very close to GE O&G – Nuovo Pignone Headquarters, in the northern area of Florence at 5 min. driving distance from the Airport

