



Fundamentals of maintenance and modernization of hydropower generators

To achieve a high availability of hydropower plants, it is helpful to recognize aging effects of generators early and to take action in terms of maintenance or modernization. Participants in this seminar will receive a basic introduction to relevant topics through theoretical approaches and practical examples. After participating,

they will understand the differences between maintenance, modernization and uprating. They will be familiar with frequently occurring aging processes and will know the options that exist for analyses and condition monitoring.

Course content

Introduction

- Hydropower generators as individual products
- What is aging?
- What do maintenance, modernization and uprating mean?

Aging and condition monitoring

- Aging processes and causes
- Lifetime expectation
- Condition monitoring
- Developing implementation strategies

Selected practical examples

- Stator: Frame, laminated core, windings and foundation connection
- Rotor: Poles, rotor rim, hub and shaft
- Additional assemblies:
Cooling and ventilation, bearings and brakes

Advantages

- + Experts with up-to-date specialist knowledge
- + Learning from theory and practice
- + Introduction to the topic
- + Certificate of participation
- + Seminar handout

Trainer

Voith experts with many years of experience in maintaining and modernizing generators.

Target groups

Engineers, maintenance and repair specialists and technical personnel responsible for modernizing and maintaining hydropower generators. Relevant experience in hydropower engineering and a knowledge of the structure of generators are required for this seminar.

Minimum number of participants

5 participants

Participation fee

€900 plus VAT per participant, including documents, beverages and lunch

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