



# Comprehensive insulation diagnostics of rotating machines

 1.5 days

 English

 Crot01en

Become familiar with the principles of diagnostics on motors and generators. Get the most out of the test equipment. Learn how to perform practical combined measurements and to identify defects.

## Objectives

- ▶ Knowing the structure of HV generator stators and their typical weak points
- ▶ Understanding the combined measurement method to benefit from combined / more accurate / comprehensive results
- ▶ Performing the measurement method professionally and efficiently
- ▶ Assessing the measurement results to draw conclusions on the insulation for condition-based maintenance planning
- ▶

## Content

- ▶ Summary of most common defects of stator and rotor windings
- ▶ Typical causes for insulation ageing (thermal, mechanical and electrical)
- ▶ Introduction to the design of stator windings
- ▶ Overview of measurement methods for generator diagnostics
- ▶  References to the applicable standards based on a practical approach
- ▶ Becoming familiar with a combined setup for capacitance, dissipation/power factor and partial discharge measurement for time-efficient and comprehensive measurements
- ▶ Utilizing the full scope of the test equipment
- ▶ Assessment of the capacitance and dissipation factor measurement results
- ▶ Recognizing PD patterns and identifying defects in the insulation or winding
- ▶ Analysing case studies of most common defects on stator windings

## Solutions

CPC 100, CP TD12/15, CP CR 600, MPD 600, MPD 800, MPD Suite

## Audience

Technical staff involved in motor/generator diagnostics, service and maintenance at utilities, service companies, generator manufacturers and repair workshops

## Prerequisites

Knowledge of generators and motors, knowledge of Partial Discharge measurement