ADVANCED PARTIAL DISCHARGE COURSE
Hosted by Sqon AB

Stockholm, Sweden
October 1-2, 2012

Partial discharges (PD) are small electrical sparks that occur as the stator winding insulation deteriorates. By measuring PD, one can plan when to do maintenance or when to rewind a stator.

Seminar Objectives

- to understand the basics of stator winding insulation systems and why they deteriorate
- to understand basic and advanced PD theory
- to interpret the test data collected and relate the data to specific failure mechanisms, to enable you to plan maintenance

Who Should Attend?

The course is designed for engineering and maintenance personnel who either purchase, install, test, maintain and/or repair motors and/or generators. Consultants, manufacturers and repair shop personnel would also benefit from this course. The course is mainly intended for those involved with motors or generators rated 3kV and above, and who have taken an introductory course in PD and had past experience with collecting and analyzing PD data.

AGENDA

October 1, 2012

8:30 a.m. – 4:30 p.m.

- Insulation System Components
- Stator Winding Failure Mechanisms

PD Theory

- Capacitive Model
- Electric Stress Model
- Influence of Space Charge
- PD Characteristics

October 2, 2012

8:30 a.m. – 4:30 p.m.

Interpreting Test Results

Overview of Process

- Data Presentation
- Trend Analysis
- Magnitude Analysis
- Polarity Predominance
- Load Effect
- Temperature Effect
- Non-classic PD pulses
- Multiple Failure Mechanisms
- PD Characteristics of Failure Mechanisms
- Case Studies (using attendee's PD data)

For registration information, please contact

Stefan Kovacs - Sqon AB

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Instructor

Greg Stone, Dielectrics Engineer. Greg has over 30 years of experience in the application and testing of large motor and generator windings. Prior to joining Iris in 1990, he worked at Ontario Hydro for 15 years, where he specialized in testing the machine windings of the company's 200 generators, and hundreds of motors in nuclear, fossil and hydro generating plants. He has authored or co-authored approximately 100 technical papers on motor and generator windings and testing, contributed to the writing of the "Handbook to Assess the Insulation Condition of Large Rotating Machines," an EPRI publication, and authored a chapter on electrical windings for the "Handbook of Electrical Machines," which was published by Dekker in 1995. Greg's most recent work is a book titled, "Electrical Insulation for Rotating Machines - Design, Evaluation, Aging, Testing and Repair," which was co-written with Ian Culbert, Al Boulter and Hussein Dhirani. He is active on many IEEE and IEC working groups developing standards and guides, and is a Fellow of the IEEE.

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