Electrical Insulation Forensics

This half-day seminar covers aspects of root-cause-failure-analysis (RCFA) of electrical insulation systems in electric machines. It will provide participants with a method and examples for approaching system failures utilizing an industry recognized process

Training to Accelerate Experience

Course Outline:

Module 1 – An introduction to the RCFA Process

- Simple 5-Why
- Complex utilizing PROACT methodologies

Module 2 – Tools for forensic investigation

- Pre-failure histories such as: vibration, infrared, insulation to ground, voltage, current, electrical signature analysis, partial discharge
- Additional investigative tools such as: microscope, borescope and other visual and investigative methods

Module 3 –Walk-Through Examples:

- Wind Turbine wedge and insulation failures
- 460 Volt induction machine
- 13.8 kV synchronous machine
- Inverter application

Who Should Attend?

- Engineers and technicians responsible for electrical machinery systems
- Non-engineering employees who want a basic knowledge of RCFA techniques
- Managers responsible for electrical machinery systems
- Reliability & Maintenance engineers

Key Benefits:

- Apply critical thinking to electrical insulation system failures
- Recognize the causes of common insulation system failures
- Understanding operating context in RCFA

Duration and Price:

1/2 Day 4hours
70$

Register now:

On-line:

https://ieee-eic.org/

If you have any questions regarding Short Courses please contact: Inna.Kremza@voith.com

Presenter: Howard W Penrose, Ph.D., CMRP, MotorDoc LLC, Lombard, IL www.motordoc.com

Bio:

Howard Penrose is the president of MotorDoc LLC, a past chair of the Society for Maintenance and Reliability Professionals (SMRP), SMRP government relations energy, smart-grid and infrastructure committee chair, and participates in the American Clean Power Association (formerly AWEA) electric machine and powertrain technical committees. He is a Certified Maintenance and Reliability Professional (CMRP) and a leader in electrical signature analysis for AC/DC electric machines and related machine learning and augmented intelligence continuous monitoring systems for commercial, industrial, utility and wind industries. Dr. Penrose has been involved in the development of bio-medical electric machines, General Motors hybrid vehicle motor-systems, special high-temperature and inverter motor designs, and a variety of electric machinery (motor and generator) design support for John Deere hybrid 644 and 944 tractors including the development of insulation life studies. He has over 35 years of electric machinery repair, design, academia, and consulting including RCFA studies of electrical machinery and electrical insulation systems failure. MotorDoc is a certified Veteran Owned Small Business and provides consulting, field service and design support related to electrical and industrial reliability. www.motordoc.com and www.empathcms.com. Dr. Penrose can be contacted at howard@motordoc.com.