

# G709 Seminar on Advanced Generator Reliability Improvements & Troubleshooting

## 17 INDUSTRY EXPERTS, WALK-IN CLINICS & CASE STUDIES, COVERING GENERATOR STATORS, ROTORS & AUXILIARIES

Each year National Electric Coil and HPC Technical Services join forces to put together a week-long, comprehensive advanced generator seminar. This 4.5 day course was developed to bring plant managers, engineering managers, maintenance managers, operators and technical staff up to date on skills needed to better troubleshoot generator problems, including those encountered during operation, and those encountered during maintenance outages.

Doing more with less money and fewer personnel is the growing challenge for power plant management. So when performance and efficiency fall off or when an alarm or trip happens, knowledge is the key to minimizing machine damage, budget trauma and unscheduled down time.

## OPPORTUNITY TO LEARN FROM HIGHLY EXPERIENCED PROBLEM SOLVERS

Attendees will have access to the most up-to-date and practical information they will need to develop their own programs of “best practices” for technical problem-solving and long-term reliability of their generator assets.

Each of the 17 technical presenters has more than 20 years experience in the industry and brings both hands-on knowledge and technical problem-solving skills to topics ranging from machine design, stator and rotor maintenance issues; effective

asset management and best practices, and the understanding of machine failure modes.

Each day of the seminar provides extensive opportunities for both learning and discussions:

### Day 1

- Secrets of Generator Design & Construction
- Understanding Generator Performance Curves & Winding Diagrams
- Protecting Your Generator - Relay Protection Demystified!
- Generator Troubleshooting & Problem Solving Case History Discussions

### Day 2

- Generator Troubleshooting & Problem Solving Case History Discussions
- Visual Inspection & Testing Techniques to Identify Stator Winding Problems
- Diagnosing Stator Winding PD Issues
- Identifying and Reducing High Stator End Winding Vibration
- Understanding Bump Testing & Improving Winding Dynamics
- Walk - In Clinic Q & A

### Day 3

- Emergency Response to Generator Failures
- Generator Vibration Diagnostics & Rotor Thermal Sensitivity Problems
- Detecting Rotor Shorted Turns - Troubleshooting Issues with your flux probe
- Understanding Rotor Cycling and Fatigue to Prevent Failures
- Solving Generator Bushing Issues
- Generator Core Meltdown Case Histories - What Can We Learn?



### Day 4

- Why is There Oil in My Generator & What Should I Do About It?
- Stator Cooling Water Chemistry Problems & Solutions
- Responding to Water Cooled Stator Winding Leaks
- Putting Together a Sound Preventive Maintenance Program
- Fast Gas Purging — Addressing Hydrogen Gas Dryer Reliability issues
- Preventing Stator Core Failures
- Generator Troubleshooting & Problem Solving Case History Discussions

### Day 5 (half day)

- The IGTC - Your Resource for Any Generator Question
- Documentation Methods to Improve Your Troubleshooting Efforts
- The Most Common Generator Failures & How They Can Be Prevented
- Root Cause Analysis Methods and Techniques

**WHEN:** AUGUST 7-11, 2017  
**WHERE:** LIDO BEACH RESORT,  
SARASOTA, FLORIDA  
**COST:** \$2895 PER PERSON;  
ALSO SPECIAL PRICING  
OPPORTUNITIES FOR  
GROUP REGISTRATIONS

See back of page for list of presenters with brief bios and how to register.

## How to Register

There are two ways to register, online or by phone. For the course description, fee information and online registration, click <http://tinyurl.com/jmbshx2>. If you would like to know more about discounts and group rates, including the \$250 *Spotlight of the Month* discount, please call HPC Technical Services at +1 (941) 747-7733 ext. 110.

A URL for online booking will be available when the hotel block is opened early-Summer 2017.

## Our Presenters

(Some yet to be confirmed for 2017)

**Howard Moudy** has been with NEC for 14 years and is currently the Director of Operations, Howard has over 35 years of experience focused on large high voltage rotating electric machines with an emphasis on coil manufacturing.



**Harold Parker** has more than 40 years experience in the Power Generation and related industries. He is an experienced engineer and technical trainer who started his career at GE. He later formed HPC Technical Services and serves as its president and lead trainer.



**Wayne Hartmann** is VP, Protection and Smart Grid for Beckwith Electric. He has been active in the IEEE as a Senior Member serving as a Main Committee Member of the IEEE Power System Relaying Committee for 25 years, chairing numerous technical sub-committees.



**Russ Chetwynd** began his career at Alstom in 1976 as a commissioning engineer. He later joined SCE serving as a component maintenance engineer at San Onofre for 29 years, involved with major outage management for both turbines and generators. He is now a Service Manager at NEC.



**Mike Davis** is an electrical engineer with 45 years' experience in rotating equipment, centred on the repair, redesign and maintenance of electrical rotating plant. He has also been involved in developing and setting up maintenance and reliability programs for electrical asset end-users.



**Blake Lloyd, PE** is an electrical engineer with extensive experience in instrumentation and product development. A cofounder of IRIS Power LP, he was formerly at Ontario Hydro, researching advanced measurement, testing, and diagnostic monitoring techniques for rotating machines and insulation systems. Mr. Lloyd is an IEEE Fellow.



**André Tétreault** joined VibroSysM in 1997 installing and commissioning of vibration and various other generator monitoring systems. He has been head of the Tests & Diagnostics Division since 2010. He is a member of IEEE and a member of CIGRÉ.



**Stephen Parker** is HPC's Managing Director, supporting their entire instructional staff. He helps to ensure HPC's standards of quality are met for the benefit of clients. He also manages HPC's Learning-Doc development and the running of the HPC's daily operations. He holds a BA degree from Michigan State University.



**Mark Crittenden** currently serves as NEC's Director of Product Line Development. He brings a wide range of expertise to the job, with experience in both new generator manufacturing, quality management, LTSAs and a full range of aftermarket services.



**Ron Rubrecht** is a mechanical engineer with over 35 years of hands-on experience with a wide range of diagnostics, testing and maintenance of turbines and generators. He is President and founder of Turbine Diagnostic Services, Inc., (TDS).



**David Albright** is the president of Generatortech, Inc. He helped start Generatortech in 1989 and developed the instrumentation and software that are used to record and analyze flux probe waveforms for shorted turn detection.



**Jamie Clark** began his career at GE in 1997 as designer of generator auxiliary systems. He joined E-One in 2000, then returned to GE in 2007 to work as the technical leader for generator accessory systems' new product team. He later joined AGT and has served as Sales Manager since 2012.



**Thomas Cunningham, PE** is a Fellow Engineer for ElectroMechanical Engineering Associates (EME). He has 27 years of motor and generator experience in power generation and extensive expertise in generator impact testing.



**Dr. Thomas Bauer**, a materials scientist, began his career at Siemens specializing in chemistry-related transformer issues. He joined Alstom to work on issues related to the cleaning of water-cooled windings. In 2014, he co-founded SvoBaTech, Inc. an independent service provider for stator cooling water systems.



**John McPhearson** began his power industry career at AEP as a senior performance engineer. He later worked for Lectrodryer for 12 years, then purchased the company. During his tenure as CEO, the company has developed close technological relationships with all major OEMs.



**Mike Hicks** is an expert in the protection of high value hazards. He has performed walkdowns on over 200 power plants in North America and he can offer useful wisdom from the planning stages, to installation and start-up, operations and maintenance and upgrade phases. Mr. Hicks is Western Regional Manager for E-One.



**Jane Hutt** is the Webmaster of the International Generator Technical Forum (IGTC) and was part of the original team that developed the forum site. She has over 27 years working in the A/E sectors; the last 20 years at NEC in marketing, media and communications.



## REGISTRATION ASSISTANCE

**Yolaine Parker** is the Administrative and Customer Service Manager for HPC Technical Services. She is the major contact for HPC customers for course and seminar registration information. She is also the Financial Officer of the company. For assistance with registering for this or other HPC conferences, please call her at +1 (941) 747-7733 ext.110.



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