AGENDA*

*subject to change

Sunday, October 13, 2019

12:00 PM - 5:00 PM  Registration & Information Desk  
Hyatt Regency Atlanta; International Tower Lobby

Monday, October 14, 2019

7:00 AM – 6:00 PM  Registration & Information Desk  
Hyatt Regency Atlanta; International Tower Lobby

7:00 AM – 8:00 AM  Breakfast  
Hyatt Regency Atlanta; Embassy Hall

8:00 AM – 8:10 AM  Welcome Remarks  
Doble Engineering Company

8:10 AM – 8:30 AM  Opening Keynote

8:30 AM – 10:00 AM  Circuit Breaker Fundamentals  
Doble Engineering Company

The fundamentals of circuit breaker testing will be discussed – including test planning and preparation, best practices for setup and testing, some common issues encountered, and key points of test result analysis. Selected lessons learned over years of field experience will be included throughout the presentation, and using several case studies.

10:00 AM – 10:15 AM  Break

10:15 AM – 10:45 AM  Circuit Breaker Specifications

10:45 AM – 11:15 AM  Transformer Design & Manufacturing

11:15 AM – 11:45 AM  Transformer Acceptance Testing

11:45 AM – 12:15 PM  Application of Circuit Breakers on the Electrical Grid

11:15 AM – 12:00 PM  To be announced

* Subject to change.
12:15 PM - 1:00 PM  Lunch
Hyatt Regency Atlanta; Embassy Hall

1:00 PM – 5:30 PM  Southern States Facility Tour (registration required)

Don’t miss this opportunity to participate in Southern States' interactive manufacturer tour including learning stations about the difference between circuit switches, CapSwitchers®, and RLSwitchers® plus best practices for installation of various Southern States products.

HITACHI
Inspire the Next

Hands-on experiences with:

- Maintenance for SF₆ Live tank circuit switches, CapSwitchers®, RLSwitchers®
- Adjustment of disconnect switch mounted interrupters (LLS® I and II)
- Adjustment of HSW high speed whip
- Maintenance and adjustment of disconnect switch motor operators (VM-1)
- Maintenance and adjustment of group operated disconnect switch (EV2)

Note: The tour is available only to seminar students and pre-registration is required. Final attendance is subject to approval by tour host.

5:30 PM – 8:30 PM  Atlanta Motor Speedway – All are welcome to attend

Travel to nearby Atlanta Motor Speedway for a fun night sponsored by Southern States and Doble Engineering Company. This networking event includes dinner, drinks, a behind-the-scenes look at the speedway and the opportunity to actually race on in your own pace car.

Tuesday, October 15, 2019

7:00 AM – 6:00 PM  Registration & Information Desk
Hyatt Regency Atlanta; International Tower Lobby

6:30 AM – 8:00 AM  Breakfast
Hyatt Regency Atlanta; Embassy Hall

8:00 AM – 1:30 PM  Day at Hitachi Factory
Join Hitachi for a full day featuring interactive learning opportunities and a chance to meet with knowledgeable representatives of the transmission and distribution industry including several suppliers related to breakers. The day culminates with a great Southern BBQ lunch and music.

* Subject to change.
Note: The tour is available only to seminar students and pre-registration is required. Final attendance is subject to approval by tour host. For safety reasons, shorts, high-heels and open-toed shoes are not allowed for this tour and photography and filming are prohibited.

1:30 PM – 2:15 PM  **Circuit Breaker Installation & Commissioning Process**  
Mike Wolf, Senior Engineer – Client Services  
Doble Engineering Company

New substation equipment is being installed and placed into service across the industry at an impressive rate when compared to the recent past. To ensure safe and reliable service for the equipment’s life, commissioning tests should be performed to verify the functionality of new equipment. Throughout this systematic process, documentation is vital to establishing expectations, monitoring progress, and capturing results.

This session reviews the commissioning process for a newly installed 230kV ring-bus, focusing closely on the gas circuit breakers and their associated equipment. The process starts with planning the commissioning activities, then moves into performing the required equipment tests, thoroughly reviewing results, functional testing control schemes, and finally performing in-service testing and post-energization follow-ups.

2:15 PM – 3:00 PM  **Circuit Breaker Inspection & Predictive Maintenance**

3:00 PM – 3:45 PM  **Contact Design & Materials**  
Jozef Levi, Application Engineer  
Doble Engineering Company

4:00 PM – 6:00 PM  **Marketplace**  
Hyatt Regency Atlanta; Grand Hall West  
Seminar students have the opportunity to meet one-on-one with exhibitors to see new products, ask questions and cultivate relationships.

6:00 PM – 8:00 PM  **Industry Expo Opening & Reception**  
Hyatt Regency Atlanta; Grand Hall West

8:00 PM – 10:30 PM  **Casino Night – Hosted by DILO Company & DILO Direct**  
Hyatt Regency Atlanta; Embassy Hall

**Wednesday, October 16, 2019**

7:00 AM – 6:00 PM  **Registration & Information Desk**  
Hyatt Regency Atlanta; International Tower Lobby

* Subject to change.
7:00 AM – 8:00 AM  Breakfast  
Hyatt Regency Atlanta; Embassy Hall

8:00 AM – 8:45 AM  Circuit Breaker Testing Fundamentals  
Doble Engineering Company

8:45 AM – 9:15 AM  Special Testing Methods – Partial Discharge Surveying  
Joe Brown, Technical Application Engineer  
Doble Engineering Company

9:15 AM – 10:00 AM  Specialty Testing Methods – Infrared Thermography  
Ed Kochanek, Eastern Region Sales Director  
FLIR Systems, Inc.

10:00 AM – 10:15 AM  Morning Break

10:15 AM – 10:45 AM  Oil Testing of Circuit Breakers  
Doble Insulating Materials Laboratories  
The condition assessment of Bulk Oil Circuit Breakers (OCBs) can be achieved via laboratory insulating liquid testing. OCBs can fail mechanically, electrically, and from overheating issues. Technical information of each recommended laboratory test, along with case studies will be provided.

10:45 AM – 11:30 AM  Circuit Breaker Asset Management & Replacement Programs  
ADDITIONAL TRAINING

10:45 AM – 11:30 AM  Maintenance & Repair – Lubrication  
Jack Harley, President  
FirstPower Group

Functional operation of many older circuit breakers may be effected by the condition and type of lubricants used in the mechanism and the method of lubricant application. Options for lubricant selection and factors to be considered for different components and environments will be presented. Selection and application factors are based on field observations, laboratory and simulator tests and best practices.

Jack Harley is President of First Power Group LLC, which provides services to transmission substations of electric utilities and large industrial users of electric power. Mr. Harley is active in the IEEE Transformers Committee and IEEE Switchgear Committee and is a member of CIGRE.

* Subject to change.
Jim McLean is the Director of LTC Business for North American Substation Services LLC. He has held key positions in the service, sales and marketing areas for Reinhausen Manufacturing and Waukesha Electric Systems. Mr. McLean has 30 years of experience in the service and support of manufacturing, maintenance and field operations plus 16 years of experience in Field Service Management. He has traveled the United States, Canada, the Caribbean and Europe as a computer programmer specializing in interface and communications. Mr. McLean is a training class developer and instructor for LTC training classes where he has instructed over 120 classes and 950 students across the United States and Canada. He has traveled to Venezuela to lead in a LTC failure analysis. Mr. McLean enjoys working with youth sports and teaching proper techniques for football and basketball. He is the past President, V President and Senior Division V President for Medina Football & Cheerleading League where he led in the activities of 12 youth league football and cheerleading teams. He has been a head basketball coach with the Boys & Girls Club of America in North Carolina. He is an active board member of the local high school athletic booster club. Mr. McLean is originally from North Carolina where he attended both Central Piedmont Community College and Gaston College.

Repair of gas and oil leaks should be regarded as a critical component of an apparatus maintenance program. When a leak is identified and immediate re-gasketing or replacement is not feasible, a temporary solution should be a scheduled to stop the leak. Learn how oil, SF6 and nitrogen leaks can be immediately repaired with minimal outage time and reduced resources - no epoxies or welding. This presentation will explain the repair methodology and benefits. Numerous customer examples will be shown to illustrate the business case and justification.
With the ever growing challenges of federal & local reporting and SF6 emission reduction, a number of alternatives have been presented to the industry in replacement of SF6 gas. However, as the industry continues to review and consider the alternatives, we should not limit our solutions. SF6 continues to be the best alternative to medium and high voltage electrical insulation and arc quenching in GIE. By turning to the existing stockpile of SF6 gas available, we will lower our carbon footprint while meeting the requirements for SF6 gas in new and in-service equipment.

Billy Lao has over 25 years of electrical substation equipment and field service experience. His duties have included new installation, electrical construction, and major & minor maintenance of SF6 gas insulated equipment. Currently the General Manager for DILO Company Inc., Mr. Lao is responsible for DILO’s North America operations for the sales and delivery of SF6 gas handling, analyzer and test equipment and the SF6 Field Services organization known as DILO Direct.

Mr. Lao completed his military service in regular Army and joined the NY National Guard. Upon separation from regular army, he was recruited as a Field Service Technician for GEC ALSTHOM where he eventually became the Director of Service for ALSTOM T&D (now GE Grid) out of Charleroi PA. Prior to working for DILO he was the National Service Manager for SIEMENS Asset Services out of Wendell NC.

2:15 PM – 2:30 PM  **Afternoon Break**

2:30 PM – 3:15 PM  **Step-by-Step Instructions for SF6 Handling during Breaker Maintenance**
Billy Lao, General Manager
DILO Company, Inc. & DILO Direct

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3:15 PM – 4:00 PM  |  Circuit Breaker Failure Investigation Case Studies

4:30 PM – 6:00 PM  |  Marketplace

Hyatt Regency Atlanta; Grand Hall West
Seminar students have the opportunity to meet one-on-one with exhibitors to see new products, ask questions and cultivate relationships.

6:00 PM – 7:30 PM  |  Industry Expo & Reception
Hyatt Regency Atlanta; Grand Hall West

Thursday, October 17, 2019

7:00 AM — 6:00 PM  |  Registration & Information Desk
Hyatt Regency Atlanta; International Tower Lobby

7:00 AM – 9:00 AM  |  Breakfast
Hyatt Regency Atlanta; International Tower Lobby

9:00 AM – 6:00 PM  |  How Things Work – Day of Hands-On Learning & Demonstration

Six of the country’s leading circuit breaker manufacturers will walk attendees through how major apparatuses work, common problems and best practice in small groups. You can view the apparatuses up close, discuss the most common technical call issues and ask the experts questions in small, rotating groups throughout the day.

Important Note:  These demonstrations are not intended to replace, constitute or suffice as official manufacturer training. Attendance at manufacturer demo sessions by representatives of competing manufacturers may be limited.

12:00 PM – 1:00 PM  |  Lunch
Hyatt Regency Atlanta; Embassy Hall

6:00 PM – 8:30 PM  |  Wind Down at White Oak
White Oak Restaurant (just across the street from the Hyatt Regency Atlanta)
Join manufacturer experts and fellow seminar attendees in a casual atmosphere to discuss the day’s highlights, ask questions and enjoy a casual menu, beer and wine.

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Friday, October 18, 2019

6:30 AM – 11:00 AM  Registration & Information Desk
Hyatt Regency Atlanta; International Tower Lobby

6:30 AM – 8:00 AM  Breakfast
Hyatt Regency Atlanta; Embassy Hall

8:00 AM – 9:30 AM  Doble/Vanguard Circuit Breaker Testing Fundamentals
Doble Engineering Company

9:30 AM – 11:00 AM  Vanguard Current Transformer Testing Fundamentals
Doble Engineering Company

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