

LARGE TURBINE GENERATOR AND MOTOR MAINTENANCE COURSE

Hosted by the Hawaiian Electric Company

March 20-22, 2012
Honolulu, HI



SEMINAR OBJECTIVES

The course focuses on large steam and gas turbine driven synchronous generators with cylindrical rotors, rated 11kV and above.

Discussion will concentrate on stators and rotors and will cover:

- Winding design and function
- Most winding degradation and failure modes and mechanisms
- Assessment of winding condition from off-line tests and on-line monitoring
- Range of available repair and replacement options
- General guide in preparation of Stator Winding Specification

The course is presented from an end user perspective, rather than that of a machine designer.

WHO SHOULD ATTEND ?

This course is directed at engineering and maintenance personnel responsible for the purchase, installation, maintenance, testing and repairs of large air-cooled and hydrogen-cooled turbine-generators.



A **QUALITROL** Company

Iris Power LP - Qualitrol

3110 American Drive, Mississauga, Ontario, L4V 1T2 Canada

Phone: (905) 677-4824 Fax: (905) 677-8498

khoward@qualitrolcorp.com

www.irispower.com

AGENDA

March 20-22, 2012

Tuesday, March, 20, 2012

Introduction and Stator Windings

- Introduction
- Stator Winding design and construction including motor design
- Stator Winding failure descriptions

Wednesday, March 21, 2012

Stator Windings and Rotor Windings

- Stator Winding off-line testing and on-line monitoring
- Stator Winding repair processes
- Rotor winding design and failure mechanisms including motor rotor winding

Thursday, March 22, 2012

Rotor Windings, Stator Cores

- Rotor winding testing and monitoring
- Rotor repair processes
- Stator core construction
- Stator core failure mechanisms
- Stator core testing
- Stator core repairs

Please refer to registration form on
page 2

LARGE TURBINE GENERATOR AND MOTOR MAINTENANCE COURSE

Registration Form

To register for the seminar please send completed form with credit card information to fax 905-677-8498 or e-mail to khoward@qualitrolcorp.com. If paying by check please make check payable to Iris Power LP and send to 3110 American Drive, Mississauga, Ontario, L4V 1T2. Please write "Iris Turbo Course" on the check to ensure that it is received by the appropriate department and include a completed registration form with payment.

Name: _____

Company: _____

Address: _____

Postal/Zip: _____

Telephone: _____ Fax: _____

E-mail : _____

Please print e-mail address clearly

Payment made via:(check one box)

US Check

P.O. #

Visa

MasterCard

Card # : _____

Expiration
Date: _____

Card Holder
Name: _____

Signature: _____

REGISTRATION

**Only 10 seats available,
so register now.**

Registration ends March 1, 2012

Registration includes breakfast, lunch and breaks daily. A complete set of notes is also included.

PRICE DOES NOT INCLUDE HOTEL OR TRAVEL EXPENSES.

Confirmation will be issued upon receipt of payment.

COST

\$1395.00 USD

LOCATION/VENUE

American Savings
Bank Building
1001 Bishop Street
ASB Tower, 8th Floor
Honolulu, HI 96813

CANCELLATION POLICY

Cancellation received prior to February 21, 2012 will result in a \$75.00 US processing fee. Withdrawal received up to one week prior to the seminar will be subjected to a charge of \$150.00 US. There will be no refunds a week prior to the seminar. Delegations substitution is permitted.

Course Instructors

Joe Kapler is a Rotating Machines Specialist at Iris Power LP. Before joining Iris Power LP, Joe was Supervising Design Engineer at Ontario Hydro, (currently Ontario Power Generation) for large steam turbine-generators, exciters, electric motors and associated auxiliaries. Joe's unit was responsible for development of purchasing specifications for generators at large fossil and nuclear power plants in Ontario, design reviews during generator manufacturing cycle and generator acceptance testing before delivery and during commissioning. Joe also provided engineering services to station operating staff for failure risk analysis, conducting equipment reliability assessment, equipment repairs and maintenance strategies. Prior to emigrating to Canada, Joe worked as a generator design engineer at Brown Boveri, later part of ABB, in Switzerland. Joe is a Registered Professional Engineer in the Province of Ontario, Canada.

Greg Stone has over 25 years experience in the application and testing of large motor & generator windings. He has authored & co-authored almost 100 technical papers on motor and generator windings & testing, and contributed to the writing of the "Handbook of Electrical Machines," and the "Handbook to Assess the Insulation Condition of Large Rotating Machines." His most recent book is titled "Electrical Insulation for Rotating Machines-Design, Evaluation, Aging, Testing and Repair", which he co-authored with Ian Culbert, Al Boulter and Hussein Dhirani . Dr. Stone is active on many IEEE and IEC working groups developing standards and guides for rotating machines.