HYDROGENERATOR MAINTENANCE COURSE

September 25-27, 2012
Nashville, Tennessee

Stator winding problems have been identified in over 40% of all hydraulic generators having modern thermoset windings. This coupled with less frequent but equally expensive rotor winding failures means that almost 50% of hydrogenerator failures are caused by deterioration of the rotor and stator windings. Preventing these failures involves a thorough understanding and appreciation of the design, function and interaction of all major component parts that make up a typical machine.

Proper training and education on winding function, specification, testing, monitoring, maintenance and preparing effective repair specifications is the first step in prevention.

SEMINAR OBJECTIVES

The course focuses on hydro-electric generators. Although much of the discussion relates to synchronous machines rated greater than 10MVA and 6.9kV the principles apply equally to generators of all sizes down to 4kV. Discussion will concentrate on stators (frames, windings and laminated cores), rotors (windings, rims and spiders), as well as brackets, bearings and cooling. 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 repair of hydrogenerators.

Please refer to registration form on page 2

IRIS POWER
A QUALITROL Company

Iris Power LP - Qualitrol
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AGENDA

September 25-27, 2012

September 25, 2012

Introduction and Stator Windings

8:30am to 4:30pm

- Introduction
- Component overview
- Stator frames and cores
- Stator winding design and installation

September 26, 2012

Stator Windings and Core

8:30am to 4:30pm

- Stator winding/core failure mechanisms, monitoring and testing
- Stator winding/core repair

September 27, 2012

Stators and Rotors

8:30am to 4:30pm

- Rotor design; rims, spiders, windings, brackets, bearing and cooling
- Rotor failure mechanisms, monitoring and testing
- General question period

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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 Hydro Course" on the check to ensure that it is received by the appropriate department and include a completed registration form with payment.

Name: _____

Title:_____

Company: _____

Address: _____

City & Province/State: _____

Postal/Zip Code: _____

Telephone:_____ Fax: _____

E-mail: _____

Please print email address clearly

Payment made via: (check one box)

□ US Check □ P.O. # _____

□ Visa □ MasterCard

Card #: _____Expiration Date: _____

Card Holder Name: _____

Signature: _____

We do not accept, AMEX, Discover or Diners Club cards at this time.

REGISTRATION
Only 35 seats available, so register now.

Registration ends August 25, 2012

Registration includes breakfast, lunch and breaks daily. A complete set of notes is also included. **PRICE DOES NOT INCLUDE HOTEL ACCOMMODATIONS.** Confirmation will be issued upon receipt of payment.

COST
$1495.00 USD

Send registration to:
Karen Howard
Fax: 905-677-8498
khoward@qualitrolcorp.com
Tel.:905-364-4568

LOCATION/VENUE
TBD

CANCELLATION POLICY

Cancellation received prior to August 25, 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

Earl Goodeve has over 30 years of experience in the maintenance and testing of generator windings. Prior to joining Iris in 1993, Earl worked 25 years for Ontario Hydro the last 14 of which in the Hydraulic Stations Department, a central group responsible for the testing and maintenance of Ontario Hydro's 250 hydro units. He prepared stator and rotor rewind specifications, developed rehabilitation plans, and supervised the work. He was also responsible for retrofitting the PDA partial discharge analysis system to 160 hydrogenerators in a 3-year period, and providing test result interpretation services. Mr.Goodeve has supervised the installation of sensors on rotating machines in utilities and industrial plants throughout the world. He has co-authored over 10 technical papers, and served as Vice-Chair of the Rotating Machines Subsection of the Canadian Electrical Association. He is also a member of the IEEE working group developing technical standards for machine condition monitoring.

Vicki Warren, Senior Product Engineer, Iris Power LP. Ms. Warren is an Electrical Engineer with extensive experience in testing and maintenance of generator windings. Prior to joining Iris in 1996, she worked for the U.S. Army Corps of Engineers for 13 years. While with the Corps she was responsible for the testing and maintenance of hydrogenerator windings, switchgear, transformers, protection and control devices, development of SCADA software, and the installation of local area networks. At Iris, Ms. Warren has been involved in using partial discharge testing to evaluate the condition of insulation systems used in medium to high voltage rotating machines, switchgear and transformers. Additionally, Ms. Warren has worked extensively in the development and design of new products used for condition monitoring of insulation systems, both periodical and continual. Ms. Warren also actively participated in the development of multiple IEEE standards and guides, and was Chair of the IEEE 43-2000 Working Group.