



IAGT 2010 FALL COURSE

Sheraton, Hamilton Ontario

Contact us for more
information:

www.iagtcommittee.com

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Oct. 21st & 22nd, 2010



Our Mission

The Industrial Application of Gas Turbines (IAGT) Committee, formed in 1973 under the sponsorship of the National Research Council of Canada, is a Technical Advisory Group to Canadian Industry and Government. The group provides a forum for the exchange and dissemination of ideas and the communication of new developments related to the industrial application of gas turbines.

[Click here to register for the conference](#)

Earlybird Fee:

\$650.00

Regular registration fee (after July 15, 2010)

\$750.00

Accommodations

A block of rooms has been reserved until sold out at the Course venue: Sheraton Hamilton Hotel, 116 King Street West. Hamilton, ON L8P 4V3, Canada, Phone: (905) 529-5515

[Click here to book your room](#)

Presently under the sponsorship of the Canadian Gas Association and the National Research Council, the IAGT Committee's specific functions relate to the organization of a biennial technical symposium for the presentation of technical papers and discussion panels covering all aspects of industrial gas turbine operation as well as providing a forum for reviewing directives, guidelines, codes and practices, as issued by Regulatory Agencies, which impact directly on the application of gas turbines.

Thursday October 21st

Applications and Advancements of Gas Turbines

7:30 - 8:30 am (South & West Foyer)

Registration and Coffee

8:30 am - 8:45 am (Ballroom South/West)

Opening Remarks and Welcome

8:45 - 9:45 am (Ballroom South/West)

Session #1 - Introduction to Gas Turbines, Cogeneration and Combined Cycle Application

An introduction to aero-derivative and heavy-duty industrial gas turbines and their application into small, medium and large-scale cogeneration and combined-cycle projects.

Jim Noordermeer, P.Eng.

Gryphon International Engineering Services Inc.

9:45 - 10:00 am (South & West Foyer)

Refreshments

10:00 - 11:00 am (Ballroom South/West)

Session #2 - Gas Turbine Designs & Systems Applications (a Canadian Perspective)

A review of gas turbine selection and system designs for different applications in Canada from the 1950's to present day. Examples provided of advantages and disadvantages of differing turbine and system designs for various applications. A sample of interesting "lessons learned" will be presented.

Lawrence Kaempffer, Siemens Energy

Manfred Klein, National Research Council

11:00 am to Noon (Ballroom South/West)

Session #3 - Advancements in Gas Turbine Repair Technology Resulting from Gas Turbine Design Evolution

This session will examine how the advancements in gas turbine designs have impacted the repair process. To facilitate the explanation of these advancements, the repair process of a number of early gas turbine blade designs will be compared to the repair process of current aero derivative and "F Class" industrial turbine blades. The role of advanced coatings, cooling schemes, materials and geometries on developments in repair processes will be presented.

Scott Hastie, Liburdi Turbine Services

Noon - 1:00 pm (South & West Foyer)

Lunch

1:00 - 2:00 pm (Ballroom South/West)

Session #4 - Cogeneration Case Study: Cornell University - Combined Heat & Power Project

An outline of the recently-completed Cornell University 30 MW cogeneration project will be provided including the project development, challenges and execution method; the project scope, cost and schedule.

Aaron Bolhous, P.Eng.

Gryphon International Engineering Services Inc.

2:00 - 2:30 pm

Tour Briefings

3:00 pm (hotel lobby)

Depart for Tours - preregistration required for one of the tours.

Liburdi Turbine Services

This tour will be of the repair facilities of Liburdi Turbine Services. The tour will follow through the shop showing the equipment and processes that are used to repair aero derivative and gas turbine components.

Siemens Energy

This tour will be of the Siemens facility. Items of interest will be manufacturing of turbine discs from forgings, assembly of GT rotors, balancing of machines, complete gas turbines in assembly, viewed from above, prior to rail shipment out of plant.

5:00 pm tentative

Return to Hotel - Delegates Free Evening

Friday October 22nd

Fuels, Emissions and Life Cycle Considerations

7:30 - 8:30 am (South & West Foyer)

Registration and Coffee

8:30 - 8:45 am (Ballroom South/West)

Recap of Day One and Opening Remarks for Day Two

8:45 - 9:45 am (Ballroom South/West)

Session #5 - Fuel Flexibility

Effects on Gas Turbine Operation

Traditional fossil fuels are being supplemented by alternative fuels obtained either from crude sources such as coal, tar sands and shale oil or from renewable sources like biomass. Changes in the type of fuel influence the performance and operability limits of the gas turbine along with changes to emissions and long term durability. This training session will address the effects of using synthetic gas fuel along with other gaseous fuels rich in hydrogen contents with respect to two aspects of gas turbine operation - performance and durability.

Wajid Chishty, National Research Council

9:45 - 10:00 am (South & West Foyer)

Refreshments

10:00 - 11:00 am (Ballroom South/West)

Session 6 - Gas Turbine Emissions and Regulatory Developments

This session will focus on a technical description of combustion emissions and their prevention, along with gas turbine system efficiency considerations. This session will also provide an overview of existing and proposed rules for air pollution and greenhouse gases from gas turbine systems in North America, including ongoing Clean Energy policy developments and research activities.

Martine Gagne, Rolls-Royce Canada

Manfred Klein, National Research Council

11:00 am to noon (Ballroom South/West)

Session #7 - Emission Reduction Case Study

This case study will focus on actual gas turbine combined cycle/cogeneration applications utilizing emission reduction technologies such as Selective Catalytic Reduction Catalysts (SCR) and Carbon Monoxide Catalysts (CO) to control NOx and CO emissions from gas turbines. Areas of concern such as capital cost, cycle complexity, efficiency, storage/handling of chemicals, ammonia slip and corrosion will all be considered.

Christian Kaufmann, Innovative Steam Technologies

Noon - 1:00 pm (South & West Foyer)

Lunch

1:00 - 2:00 pm (Ballroom South/West)

Session #8 - Life Cycle Cost Analysis

This training session will focus on typical life cycles of gas turbines as utilized for industrial applications. Specifically, it will focus on the capital investment requirements, ongoing maintenance costs (scheduled site and overhaul shop milestones), as well as fuel consumption. The study primarily will focus on Rolls-Royce and Solar mechanical drive packages, but would be applicable to other makers' equipment.

Jeff Falkiner, Union Gas

David Stek, Union Gas

2:30 - 3:00 pm

Wrap Up and Closing Remarks

3:00 pm

Adjourn