GLOBAL Gas Turbine News

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ATLANTA, GEORGIA USA • ASME INTERNATIONAL GAS TURBINE INSTITUTE

IN THIS ISSUE...

Register Today for the 2007 Gas Turbine Users Symposium

Practical Solutions · Best Practices · Networking

Cutting edge topics that address a wide range of user interests and issues are included in the plans for the 2007 Gas Turbine Users Symposium (GTUS).

Several IGTI committees, including Oil & Gas, Manufacturing Materials & Metallurgy, Industrial & Cogeneration, Marine, and Electric Power have partnered with the GTUS Steering Committee to develop sessions for this year's program, according to Patrick Cambell, GTUS chair.

In panels, discussion groups and roundtables, user concerns and issues will be tackled in three tracks:

- *Equipment & Products*
- *Engine Management*
- *Maintenance & Repair*

The tentative list of sessions currently includes:

- *GT Product Upgrades & Updates*
- *Aeroderivatives & Light Industrial Engines*
- *New Alternate Source Parts*
- *Aging Fleet Experience*
- *Integrating Gas Turbine Engine Health Management with Maintenance & Logistics Processes*
- *Marine Fleet Management*
- *Gas Turbine Airfoil Repair Strategies for Reduced Life Cycle Costs*
- *Inlet Cooling*
- *Gas/Fuel Quality Concerns/Considerations*

A roundtable for all attendees on Emerging Solutions & Applications is scheduled to conclude the week's activities.

Registration for GTUS automatically includes admission to the Power-Gen International exposition. To register or for more information, please visit: www.asmeconferences.org/gtus07. ✲

GTUS GAS TURBINE USERS SYMPOSIUM

JOIN US FOR GTUS 2007

December 11-13, 2007

Ernest N. Morial Convention Center

New Orleans, Louisiana

www.asmeconferences.org/gtus07

Co-located with Power-Gen International

IGTI TO PRESENT A GAS TURBINE TRACK AT TURBOMACHINERY SYMPOSIUM

Houston, Texas

September 10-13, 2007

http://turbolab.tamu.edu

VIEW FROM THE CHAIR

Kenneth Hall, Chair, IGTI Board of Directors

Kenneth Hall
Chair
IGTI Board of Directors

A few years ago, the IGTI Board of Directors instituted the "Council of Chairs," a council of the IGTI Technical Committee Chairs and Vice Chairs. The purpose of the Council is to provide feedback to the Board of Directors and Staff of IGTI, to discuss what is on the minds of the technical committee members, and most importantly, to make recommendations to improve an already great organization. At the Montreal meeting in May of 2007, the message from the Council was loud and clear: improve the Conference Web Tool! You may recall that for ASME Turbo Expo 2003, we made the switch from a paper-based paper review system to a web-based review system. The paper-based system was slow, relying on "snail mail" and fax machines to communicate the review status of a given paper to staff and organizers. The process was expensive and cumbersome, requiring hundreds of hours of IGTI staff time. The change to a web-based review tool has enabled us to shorten the review time, move the review deadlines closer to the date of the conference, reduce costs, and continue to improve and grow the largest and best conference of its kind to record sizes. At ASME Turbo Expo 2007 in Montreal, we had a North American record of 760 papers presented – up 30 percent from 586 just four years prior. The switch to the Web Tool has been by any measure a great success.

But with growth has come growing pains. The ASME Web Tool, in its current incarnation, is designed for conferences that give papers only a single review for the conference only. ASME Turbo Expo is unique among ASME conferences in that technical papers submitted to our conference may appear at both the congress, and also in one of two prestigious ASME Journals – *The Journal of Turbomachinery*, or the *Journal of Engineering for Gas Turbines and Power*. Furthermore, to ensure the highest quality technical papers, many of the papers submitted may undergo two or even three reviews. The current Web Tool is not particularly well suited for multiple reviews of papers, a process we are committed to because it ensures our papers are of the highest quality.

Based on your input, ASME Publishing and IT have agreed to upgrade the Web Tool over a two-year period to meet IGTI's needs. Proposed improvements for 2008 would allow multiple cycles of paper review and revision. In this upgrade, reviewers should see the most recent version of a paper as it is revised and be able to enter a corresponding revised review.

For ASME Turbo Expo 2009, ASME Publishing and IT propose to implement a further upgrade of the Web Tool that incorporates a comprehensive multi-cycle paper submission/review/revision process.

ASME and IGTI are committed to providing their volunteers with the tools they need to continue to organize the largest and best conference of its sort in the world. Thank you to the thousands of volunteer reviewers and session organizers who make Turbo Expo a success. ✻

CALENDAR OF EVENTS

SEPTEMBER 10-13, 2007
36th Turbomachinery Symposium
George R. Brown Convention Center, **Houston, Texas USA**
Featuring a gas turbine track presented by IGTI.
Details at http://turbolab.tamu.edu.

OCTOBER 15-17, 2007
10th International Lubrication Engineering in Theory and Practice Conference
House of the Czech Union of Scientific & Technical Societies Novotného lávka 5, Prague 1, Conference Room No. 217
Prague, Czech Republic
Organized by the Czech Mechanical Engineering Society section of Lubrication Engineering, the objective of the conference is to provide an opportunity to exchange high quality, recent information on development, design and research in the field of lubrication engineering, lubricants and constructional materials.

NOVEMBER 4-7, 2007
2007 Middle East Mechanical Expo Conference & Exhibition
Gulf International Convention Center, Gulf Hotel
Manama, Kingdom of Bahrain
This Expo offers a unique opportunity for the Middle East region mechanical engineering professionals to share and exchange experiences and to explore the latest products and most recent technologies.

DECEMBER 2-7, 2007
9th International Gas Turbine Congress, Tokyo
Keio Plaza Hotel Tokyo, **Tokyo, Japan**
Organized by the Gas Turbine Society of Japan (GTSJ), this conference will bring together people from academia, industries, and government to share the latest information available on new development in the field of gas turbines, turbochargers, and their applications.

DECEMBER 11-13, 2007
ASME Gas Turbine Users Symposium 2007 Co-located with Power-Gen International
New Orleans, Louisiana USA
Intended for gas turbine users/operators, knowledge providers, OEMs, project developers, third-party providers and others in the gas turbine community, GTUS 2007 will offer ideas and practical solutions for gas turbine operating challenges.

FEBRUARY 17-22, 2008
The Twelfth International Symposium on Transport Phenomena & Dynamics of Rotating Machinery (ISROMAC-12)
Sheraton Moana Surfrider Hotel, **Honolulu, Hawaii USA**
This conference deals with all aspects of transport phenomena and dynamics in rotating machinery, including research, design, manufacturing, and operation. It provides a forum for presentation of new and innovative technologies as well as free exchange of ideas among the world leaders in rotating machinery.

APRIL 22-24, 2008
The Independent Power & Energy Europe 2008 (incorporating On-Site Power) Exhibition
National Exhibition Centre, **Birmingham, UK**
The event brings leading independent power and energy companies together under one roof, providing the ideal showcase and platform to network and display new technologies and products for all aspects of these growing markets.

JUNE 9-13, 2008
ASME Turbo Expo 2008
Estrel Berlin Hotel & Convention Center
Berlin, Germany
5-Day Technical Congress and 3-Day Exposition.

JUNE 8-12, 2009
ASME Turbo Expo 2009
Orlando World Marriott Resort and Convention Center
Orlando, Florida USA
IGTI's flagship event comprises a major gas turbine conference and exhibition. All activities for the 2009 event will be held at this luxurious all-inclusive resort.

IGTI Welcomes New Board Members

With the tenure of Harold Simmons and Roger Harker ending, two new individuals, ***Dr. Klaus Brun*** *and* ***Dr. Sigmar Wittig****, have joined the IGTI Board.*

Dr. Brun

Dr. Klaus Brun, Incoming Member, currently manages the Rotating Machinery and the Flow Measurement Groups at Southwest Research Institute. He graduated from the University of Virginia with a PhD in Mechanical & Aerospace Engineering. His research interests are in the areas of turbomachinery aero-thermal fluid dynamics, process system analysis, energy management, advanced thermodynamic cycles, instrumentation and measurement, and combustion technology. Dr. Brun is the inventor of the Single Wheel Radial Flow Gas Turbine, the Semi-Active Plate Valve, and co-inventor of the Planetary Gear Mounted Auxiliary Power Turbine. He has authored over 50 papers on turbomachinery (and related topics), and is the former Chairman of IGTI's Oil & Gas Applications technical committee.

Dr. Wittig

Dr. Sigmar Wittig, Member-at-Large, is former Chairman of the Executive Board of the German Aerospace Centre (DLR). He received his PhD in mechanical engineering from the University of Aachen. After nine years in the United States, he worked for more than 25 years as professor and head of the institute for thermal turbomachinery at the University of Karlsruhe. In 2004, he served as Executive Conference Chair for Turbo Expo. He recently completed a two-year term as chair of the European Space Agency Council.

In addition, **Dr. Lee Langston**, Emeritus Professor of Engineering at the University of Connecticut, will serve another two-year term as IGTI Treasurer. ✲

Aircraft Engine Technology Award – Call for Nominations

Nominations are being solicited for the Aircraft Engine Technology Award for presentation at ASME Turbo Expo 2008, June 9-13, 2008, in Berlin, Germany. The award is for sustained personal creative contributions to aircraft gas turbine engine technology in the areas of aircraft engine design and/or research and development performed in an industrial, academic or research laboratory environment in one of the following fields:

Combustion & Fuels • Controls • Diagnostics • Heat Transfer • Integration
Manufacturing Materials & Metallurgy • Structures & Dynamics • Turbomachinery

The award will include the opportunity to deliver a lecture on the work for which the award is being bestowed at the Turbo Expo Technical Congress in June 2008. The recipient of the award will desirably, but not necessarily, be a member of ASME. The award will be made to a single individual.

Nominating letters should be sent by October 31 to:

Ruben Del Rosario – Chair, Aircraft Engine Technology Award Committee
NASA John H. Glenn Research Center
12000 Brookpark Road, Mail Stop 3-8, Cleveland, OH 44135, USA
Phone: 216-433-5679 • Fax: 216-433-5749 • Email: ruben.delrosario@nasa.gov

- Nominating letters should contain all information on the nominee's relevant qualifications.
- A minimum of two supporting letters from individuals other than the nominator must accompany the nominating letter. Supporting letters should reflect peer recognition of the nominee's breadth of experience with various aspects of aircraft engine technology. ✲

TURBO EXPO
Gas Turbine Technical Congress & Exposition
Presented by the International Gas Turbine Institute

ASME Turbo Expo 2007 A Success – High Attendance

Almost 3,000 gas turbine professionals representing 54 countries from around the world convened in Montreal this past May for ASME Turbo Expo 2007. With one in every 95 people living in the Montreal area working in the aerospace field, the conference, featuring 760 technical papers and nearly 130 exhibiting companies, leveraged a strong local market for gas turbine professionals.

Executive Conference Chair Hany Moustapha receives an award of appreciation from IGTI Board Chair Tony Strazisar & Chair of Conferences Reza Abhari.

Local industry support, under the leadership of Dr. Hany Moustapha of Pratt & Whitney Canada, played a major role in the record-setting success of this year's event, according to Judy Osborn, IGTI's Manager of Conferences & Expositions. "It is proactive participation and partnership with local gas turbine companies, such as we saw in Canada, which results in an enhanced, dynamic experience at an event that is already recognized as the premier gas turbine technology conference," Osborn said.

Keynote Speakers (L to R): Charles Soothill, David Wisler, and John Saabas.

In addition to local support, organizations, publications, and companies from around the globe partnered with IGTI to contribute to the success of Turbo Expo, including 20 sponsors, four participating organizations and 12 supporting publications.

Just about every aspect of gas turbine technology was covered in 217 sessions organized by the dedicated members of IGTI's 17 technical committees. Osborn praised the volunteer professionals who tirelessly serve as organizers, reviewers and co-chairs to bring the best in technical research, development and application to their colleagues. "We are also gratified that leading experts from across the globe continue to select Turbo Expo in which to publish and present their landmark work," she said.

Jeff Mackwood of NRCC receives a plaque for Best Large Display for the Bell 412 helicopter.

Wendy Orman of Calnetix receives a plaque for Best Small Display.

More than 1,600 attended the opening luncheon that also featured the annual awards presentations and the keynote session. During the keynote, three speakers examined the need to recruit and train the next generation of engineers to meet the demands of technology programs either in place today or planned for the near future. The keynote speakers were John Saabas, Executive Vice President at Pratt & Whitney Canada; Charles Soothill, Vice President of Technology at Alstom Power, and David C. Wisler, Manager of University Programs at GE Aircraft Engines.

Exposition visitors particularly enjoyed the Advanced Systems Research Bell 412 helicopter provided by the National Research Council Canada (NRCC) and voted it the Best Large Display in the annual People's Choice Award. Congratulations also go to Calnetix for being voted the Best Small Display.

Many delegates also participated in post-event facility tours offered by NRCC, Pratt & Whitney Canada, Rolls-Royce Canada, Bell Helicopter Textron Canada, and Bombardier.

THANK YOU
Turbo Expo 2007 Sponsors

- Pratt & Whitney Power Systems
- National Research Council Canada
- GE Aviation
- CD-adapco
- Rolls Royce Canada Limited
- ANSYS
- Bell Helicopter Textron Canada Limited
- Bombardier Aerospace
- Concordia Institute of Aerospace Design & Innovation
- Mecos Traxler AG
- NUMECA International
- Ministry of Economic Development, Innovation & Export Trade
- Raymor Industries Inc.
- Parker Hannifin
- Calnetix
- Sulzer Metco US Inc.
- Faro Technologies, Inc.
- Sermatech International
- Olympus Industrial Systems Group

ASME Turbo Expo 2008 Set for Berlin, Germany

TURBO EXPO
Gas Turbine Technical Congress & Exposition
Presented by the International Gas Turbine Institute

Connect and reconnect with your gas turbine colleagues from around the world at TURBO EXPO, ASME's premier gas turbine technical congress and exposition, from June 9-13, 2008, in Berlin, Germany, at the Estrel Berlin Hotel and Convention Center. With five restaurants, two bars, a beer garden and a daily live "Stars in Concert" show, the Estrel is Europe's largest convention, entertainment and hotel complex.

Turbo Expo 2008 highlights include:

- A FIVE-day Technical Congress, organized to meet the needs of growing participation
- A three-day, premium exhibition of gas turbine products and services supported by leading companies in the industry
- A dynamic keynote session featuring prominent industry leaders
- A value-packed registration package that includes proceedings, access to all activities and abundant networking opportunities, including receptions and daily lunches
- In-depth pre-conference short courses providing fundamental study on selected subjects

Berlin is Germany's capital and largest city, and the second most populous city in the European Union, making it one of the most influential centers in European politics, culture and science. And, of course, Berlin is a center for many companies and individuals involved in the gas turbine industry.

Leadership

Leading the organization of Turbo Expo 2008 are Conference Chair Dr. Knox T. Millsaps, Jr., and Technical Program Chair Dr. Thomas Sattelmayer.

Dr. Millsaps is a professor and director of the Marine Propulsion Lab of the Department of Mechanical Engineering at the Naval Postgraduate School in Monterey, CA. He teaches and conducts research in the area of power and propulsion. Millsaps received his PhD from the Massachusetts Institute of Technology and has more than 20 years of engineering experience. He is a former Chair of IGTI's Marine Technical Committee.

Dr. Sattelmayer is a professor and chair of thermodynamics at the Technical University of Munich. He received his Ph.D. from the University of Karlsruhe and has more than 30 years of engineering experience. He is a former Chair of IGTI's Combustion & Fuels Committee.

Technical Congress

The deadline to submit an abstract for the Turbo Expo 2008 five-day Technical Congress is approaching! Authors should submit their abstracts by September 10, 2007. Full-length draft papers must be submitted by November 12, 2007. For a complete publication schedule, visit: http://asmeconferences.org/TE08/PublicationSchedule.cfm

Exposition

The original exposition space for 2008 sold out before the close of Turbo Expo 2007 so the show floor has been expanded to accommodate space requests. Initial space requests are being reallocated, and new space requests are being accepted, to be assigned on a first-come, first-served basis.

A variety of sponsorships are also available. Sponsors receive recognition:

- On the official Show Web site
- In the Advance and Final Programs
- On signage posted during the Show
- In announcements made during the Show

For more details or to sign up, contact IGTI at +1-404-847-0072 x1646 or via e-mail at igtiexpo@asme.org. Sponsorships will be assigned on a first-come, first-served basis.

For more information on Turbo Expo 2008, visit www.turboexpo.org. We look forward to seeing you in Berlin! ✲

Short-Courses to be Offered Prior to Turbo Expo

IGTI has tentatively scheduled several short courses to be held on Sunday, June 8, the day before Turbo Expo 2008 opens.

"Gas Turbine Repair & Metallurgy" will be taught by Lloyd Cooke, Manager of Operations for Liburdi Turbine Services, Paul Lowden, Principal Engineer for Liburdi Turbine Services and Warren Miglietti, Principal Engineer for General Electric Corporation. The course is for operations and maintenance personnel who require an understanding of basic gas turbine metallurgy and repair technology in order to conduct business with repair shops and make repair vs. replacement parts decisions.

"Basic Gas Turbine Engine Technology Review and Exam, Newly Revised Third Edition", will be taught by Dr. Klaus Brun, Manager of the Rotating Machinery and the Flow Measurement Groups at Southwest Research Institute, and Rainer Kurz, Manager of Systems Analysis for Solar Turbines Incorporated. The program will be divided into two, 2-hour review components and a 4-hour examination. Participants will be required to have studied the material in-depth before attending the program. The morning sessions will allow for a cursory review of the material addressing specific participant questions. The afternoon session will consist of a 4-hour timed exam. Passing the exam will demonstrate competency of basic gas turbine technology concepts and individuals can add this achievement to their resumes. The Basic Gas Turbine exam fee is included as part of the cost for the short course.

The registration fee to attend a pre-conference short course is $500 and will include lunch, refreshment breaks and course materials. ✲

INDUSTRY NEWS

Alstom Wins a Turnkey Contract Worth More Than 300 Million Euros to Build a Gas-Fired Power Plant in Algeria

Alstom has just signed a turnkey contract with the Algerian state-owned gas and electricity company, SONELGAZ (Société de l'Electricité et du Gaz), worth 310 million euros to build an open cycle gas-fired power plant in Relizane (western Algeria).

Alstom will supply a full turnkey simple cycle power plant integrating in-house core plant components. Under the terms of this contract, Alstom will initially supply two GT13E2 gas turbines,* which are currently the most efficient gas turbine in its class, as well as two air cooled turbo-generators. Alstom is also in the final stage of negotiating the supply of a third GT13E2 gas turbine along with a third air cooled turbo-generator.

This new fast-track contract is part of Algeria's emergency program which aims to rapidly increase the country's power generating capacity as demand is booming. Power demand has been increasing at a rate of approximately 5% each year, fuelled by industrial development, significant investment in infrastructures and a growing population.

With this new agreement, Alstom reinforces its partnership with SONELGAZ, following Alstom's construction in 2003 of a turnkey power plant located in F'Kirina (east of Algiers).

Philippe Joubert, President of Alstom Power Systems, declared on this occasion: "We are honoured that SONELGAZ renewed its confidence in Alstom for the construction of a new gas fired plant after the successful completion of the F'Kirina project. This highlights Alstom's reputation and capability to meet soaring power demand with its environmental friendly technology".

**To date, there are 96 Alstom GT13E2 units in commercial operation worldwide and the fleet has recorded over 3.6 million firing hours.*

Israeli Air Force Awards Pratt & Whitney Materials Management Agreement

Pratt & Whitney, a United Technologies Corp. (NYSE: UTX) company, and the Government of Israel - Ministry of Defense on behalf of the Israeli Air Force (IAF), signed an agreement for a Materials Management Program (MMP) to support the IAF's F100-PW-229 powered F-15 and F-16 front line fighters as part of the just-in-time contract between the parties. This marks the first Pratt & Whitney MMP agreement with the Israeli Air Force.

"We are excited about the opportunity to expand our relationship with the Israeli Air Force, which spans more than 60 years," said Tom Farmer, Pratt & Whitney Military Engines president. "Under the MMP we will be managing all parts inventory and logistics for IAF, including new spare parts, used- serviceable material and part repair."

Pratt & Whitney's military aftermarket services business offers customized maintenance, material, and fleet management programs that ensure readiness. Pratt & Whitney is the world's only OEMRO(TM) business that blends the capabilities of our Original Equipment Manufacturer (OEM) with the flexibility of our Maintenance, Repair & Overhaul (MRO), providing valuable innovative solutions for our products and competitors' products.

Pratt & Whitney military engines include the F100 that powers the F-16 and F-15, the F135 for the F-35 Lightning II; F119 for the F-22 Raptor; F117 for the C-17 Globemaster III; J52 for the EA-6B Prowler; TF33 powering AWACS, Joint STARS, B-52, and KC-135 aircraft; TF30 for the F-111; PT6 for T-6A and UH-1N aircraft; and JT15 for the T-1A trainer.

The 14TH International Heat Transfer Conference

The 14th International Heat Transfer Conference (IHTC) will be coming to Washington D.C. from August 7-13 in 2010 and headquartered at the Omni Shoreham Hotel. The conference, overseen by the Assembly for International Heat Transfer Conferences (AIHTC), which represents some 25 professional engineering societies active worldwide in thermal science and engineering, has not been held in the United States since 1986.

The 14th IHTC aims to provide a technical forum that includes keynote lectures, poster sessions, professional development courses, and a live exhibit of heat transfer equipment, services, and publications. In addition to the fundamentals of thermal phenomena and traditional thermal applications, the 14th IHTC is expected to address the emerging domains of thermal transport in nano-materials, bio-systems, Power Generation, MEMS, Microsystems, information systems, energy conversion devices, aerospace and hostile environment systems.

At this time, the Heat Transfer Division would like to invite other divisions within the ASME community to participate more fully in the technical conference. Through co-sponsorship each division will have the opportunity to:

- plan and host 1-2 poster sessions
- invite and host 1-2 keynote speakers
- have a representative on the conference organizing committee
- share in the net profits

Sponsorship may take the form of financial responsibility for the author's continental breakfast, attendee tote bags, opening reception, refreshment breaks, badge lanyards or the printed program.

By broadening the scope of the conference, the HTD hopes to increase attendance and maximize the value to the participants and lower the financial risk to the Society as a whole.

Please contact Avram Bar-Cohen, PhD, Department of Mechanical Engineering, 2181 Glenn Martin Hall, University of Maryland, College Park, MD 20742 Tel: 301-405-3173; Fax (301) 314-9477; e-mail: abc@umd.edu to discuss your involvement with the 14th IHTC today. ✻

INDUSTRY NEWS

Siemens Power Plant to Include Fast-Start Technology

Siemens Power Generation (PG) has been awarded a contract to supply key components for a simple cycle power plant in Elk River, Minnesota, U.S.A. Great River Energy (GRE), the second largest electricity provider in the state, will purchase the equipment. The Elk River plant is unique because of the fast-start capability of the gas turbine, which permits the Elk River plant to deliver approximately 150 MW of power to the grid within 10 minutes. The order volume is US$41 million.

The Siemens PG scope of supply encompasses the SGT6-PAC-5000F gas turbine package. It consists of a SGT6-5000F gas turbine, an air-cooled generator, the exhaust stack and the SPPA-T3000 plant control system. The order includes advanced generation product features, including the dual fuel - Ultra Low NOx (ULN) combustion system, extended outage interval parts components and the 10-minute static fast-start system. The fast-start capability of the SGT6-5000F gas turbine will allow GRE to deliver power to the grid more quickly. It will also lead to overall per start reductions in NOx, CO and VOC emissions.

With a nominal capacity of approximately 200 MW, the plant is designed to provide environmentally friendly, reliable power to respond to the growing power demand of the greater Midwest Independent Transmission System Operator (MISO) region. It is expected to be commissioned in May 2009. Following the contract awards for Pleasant Valley I & II in 2000 and Cambridge I in 2005, Elk River is the fourth order placed by GRE with PG.

"To enhance the value and environmental compatibility of new power generation assets, the U.S. market will require power plants to provide a much higher level of operating flexibility, including lower start-up emissions and fast start-up capabilities, to react to market opportunities. Increased gas prices and resulting nightly and weekend shutdowns are challenges that can be addressed by innovations in our gas turbine product line," said Randy Zwirn, president and CEO of Siemens Power Generation, Inc., and member of the PG Group Executive Management.

GE LM2500 Gas Turbine to Power Polish Navy's Next-Generation Corvette

GE Marine reports that its LM2500 gas turbine will be used to power the Polish Navy's next generation Type 621 corvette, to be named Gawron. The LM2500 gas turbine will be applied in a combined diesel and gas turbine configuration, with two diesel engines.

GE's LM2500 gas turbine currently powers the Polish Navy's Gen. K. Pulawski frigate. "We are delighted that the Polish Navy will once again use our LM2500 gas turbine for this next-generation corvette program," said Brien Bolsinger, GE Marine general manager. "With a history of reliable and efficient operation, the LM2500 is one of the world's most popular gas turbines. We believe the Polish Navy will benefit from GE's continual infusion of state-of-the-art technology enhancements of our LM gas turbine product line."

The gas turbine for the Gawron will be manufactured at GE Marine's Evendale, Ohio facility. The LM2500 will be placed into a propulsion module by Avio of Torino, Italy. Avio, a GE partner, will also design and supply the LM2500 module electronic control system. The new corvette will be built by Poland's Gdynia Shipyard, Warsaw, Poland.

Installation of the gas turbine module is slated for June 2008. ✲

ASME Vice President Receives the 2007 AIAA Air Breathing Propulsion National Award

Dilip Ballal

Dilip Ballal, ASME Vice President for IGTI and Editor of ASME Journal of Engineering for Gas Turbines and Power is the recipient of the 2007 American Institute of Aeronautics and Astronautics (AIAA) Air Breathing Propulsion National Award. This award is presented for sustained meritorious accomplishments in the arts, sciences, and technology of air breathing propulsion systems. Dilip was cited for his outstanding contributions that have greatly advanced the science and art of gas turbine combustor design and advanced jet fuels research for air breathing propulsion systems.

The award was presented on Wednesday, 11 July 2007, at the Awards Luncheon held in conjunction with the 43rd AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit, Duke Energy Convention Center, Cincinnati, Ohio. Dr. Scott Donnelly, President and CEO of GE-Aviation and Honorable Ted Strickland, Ohio Governor presided over the Awards Ceremony.

Dilip Ballal is a past recipient of ASME-IGTI Aircraft Engine Technology Award (2002), AIAA Propellants and Combustion National Award (2000), and AIAA Energy Systems National Award (1993). He is a Life Fellow of both AIAA and ASME. Recently, he served on National Academies study committees on "Air Breathing Propulsion" and "Re-engining Aircraft for Fuel Efficiency Improvements." ✲

PROFESSIONAL DEVELOPMENT

Professional development focuses on timely and accessible learning at an affordable cost. Our "live" virtual seminars (Webinars) have filled the bill for 2007 and continue to do so for 2008. Each program is presented by an expert in their field. Sessions are flexible by connecting participants and presenters remotely without the usual cost of attending a face-to-face event.

Topics included the following:

- Role of Gas Turbines in Industry
- Biomass Fuel Project – University of Iowa
- Balanced Acoustical Design for Gas Fired Power Plants
- Engineering Management Certification International
- Borescope Inspections
- Turbo Expo 2007 Short Course Previews
  - Combustion Instabilities
  - Gas Turbine Repair and Metallurgy
- Root Cause Failure Analysis of Blades and Impellers
- NFPA 70 E Electrical Safety Review
- Rotordynamic Fundamentals – 2-Part Series
- DOE's Look at the Future of Turbine Technology
- Components and Thermodynamic: Concepts of a Gas Turbine
- Performance Characteristics of Industrial Gas Turbines
- Applications for Industrial Gas Turbines

86% of survey respondents confirm this mode of learning is effective and 83% plan to attend future virtual events.

If you missed a live event, you can obtain a list of previously held events by visiting http://igti.asme.org. These Archived Events are available via CD or Download by completing an order form located at http://igti.asme.org/resources/WebinarForm.pdf. Samples of past Webinars are also now available as podcasts via a link on the IGTI Web site.

In addition, if you or your company has a HOT TOPIC our volunteers should know about, contact IGTI's Professional Development Manager, Tim Wiley at wileyt@asme.org.

Curricula Update To Basic Course

IGTI's longstanding Basic Gas Turbine Engine Technology is currently under revision with a projected release in December of 2007. While the entire work is being reviewed, participating Subject Matter Experts (SMEs) plan to include the following new topics:

- Basic Combustion Chemistry
- Single Shaft Versus Two Shaft
- Dry Low Nox Combustion
- Air Emissions
- Power Augmentation Technologies
- Other Gas Turbine Cycles

Once complete, the work will be available in electronic print form via CD and a revised web-based version is expected to be released in January of 2008. ✲

In Memoriam: Brian Rowe and Liviu Librescu

This spring, IGTI was sad to learn of the passing of two members of the gas turbine community, Brian H. Rowe and Liviu Librescu.

Brian Rowe

Rowe, a former Chairman Emeritus of GE Aircraft Engines (GEAE), served as the Executive Conference Chair of ASME Turbo Expo 2005. As Executive Conference Chair, he guided activities in keeping with the conference theme and the title of the keynote address as well as provided advisory input and support for other portions of the conference.

During Rowe's tenure as Chairman of GEAE, he assisted in the certification and design of the GE90, GE's new engine for the B-777. Prior to serving as Chairman, Rowe was President and CEO of GEAE and Senior Vice President of the General Electric Company from 1979 to 1993. He and his team grew the business from $2 billion to $8 billion in sales in that period. The business is recognized as the leader in market share and customer support in large commercial, military, small, marine and industrial engines. During Rowe's presidency, GEAE launched many new products: CFM56-3, CFM56-5A/B/C, F110 for F-16, CF6-80C/E, and the CF34 for business and regional jets. Rowe developed strong technical business relationships with SNECMA of France, IHI of Japan, MTU of Germany, Volvo of Sweden, and GEC (Ruston) of the United Kingdom, in addition to companies in Indonesia, Singapore, and many other countries worldwide.

Liviu Librescu

Librescu, an engineering science and mechanics lecturer at Virginia Tech, was an ASME member and IGTI reviewer. A victim of the horrific shooting rampage at Virginia Tech, numerous news accounts reported that he blocked the door of his classroom with his body to protect those inside. Born in Romania, he survived the Nazi Holocaust and emigrated to Israel in 1978 before moving to Virginia in 1985. An Israeli citizen, he had taught at Virginia Tech for 20 years and was internationally known for his work in aeronautical engineering.

ASME has set up a Virginia Tech Memorial Scholarship Fund. For more information, visit http://foundation.asme.org/Donate/Virginia_Tech_Memorial.cfm or contact Judith Kearney, ASME Foundation Director of Development, at 212.591.7445 or kearneyj@asme.org. ✲

IGTI Honors Individuals for Achievements in the Gas Turbine Industry during Turbo Expo 2007

Each year during Turbo Expo, IGTI hosts an awards program to honor individuals who have made significant contributions to the gas turbine industry. This year the awards program was held in conjunction with the keynote luncheon on Monday, May 14.

Dr. John Denton

Dr. John Douglas Denton received the 2007 R. Tom Sawyer Award, which is given to an individual who has made important contributions to advance the purpose of the gas turbine industry and the International Gas Turbine Institute over a substantial period of time. Denton retired from Cambridge University in 2005 but continues to work as a consultant and to develop and use numerical methods.

The 2005 ASME Gas Turbine Award was shared by three individuals, Dr. Ivor J. Day, Christopher Freeman, and Dr. John Williams, for their paper Rain Ingestion in Axial Flow Compressors at Part Speed, GT2005-68582.

Day is a Senior Research Fellow at the University of Cambridge, Whittle Laboratory(UK). His career has been devoted to turbomachinery both in industry and research. Freeman, a private consultant, worked with Rolls-Royce for more than 30 years in engine installation, compressors, fans, special and advanced projects and the design review board. Williams is a research assistant and executive committee member at the Osney Laboratory, University of Oxford (UK), and a college lecturer at University College, Oxford. He is now engaged in experimental and computational research on the cooling of afterburner heatshields and teaches materials and structures.

Dr. Ivor J. Day and Christopher Freeman (not pictured - Dr. John Williams)

Dr. Om P. Sharma

Dr. Om P. Sharma received the Aircraft Engine Technology 2007 Award in recognition of sustained outstanding creative contributions to the development of improved gas turbine compressor and turbine design practice through improved physical understanding and modeling of the aerodynamics, heat transfer, and 3-D unsteady-flow effects. Sharma is Chief Technologist at Pratt & Whitney, East Hartford, CT.

Prior to the awards program and keynote luncheon, Dr. Edward M. Greitzer, H. N. Slater Professor and Deputy Head of the department of Aeronautics and Astronautics at MIT, presented the 2007 Scholar Lecture "Some Aerodynamic Problems of Aircraft Engines: Fifty Years After" to a packed room.

Dr. Edward M. Greitzer

Throughout the conference IGTI also honored more than 90 authors with "Best Paper Awards" for papers presented during Turbo Expo 2006 in Barcelona, Spain. Plaques were given to these individuals at their respective technical committee meetings. ✻

WELCOME–

New Technical Committee Officers

We are pleased to announce the new technical committee officers for July 2007 through June 2009. In addition, the Environmental & Regulatory Affairs Committee has dissolved; its regulatory affairs will be taken over by the Electric Power Committee, and its technical emissions activities will be taken over by the Combustion & Fuels Committee, which has changed its name to the Combustion, Fuels, and Emissions Committee.

AIRCRAFT ENGINE

Rubin Del Rosario
NASA Glenn Research Center
Cleveland, OH USA
Committee Chair

Bill Cousins
Pratt & Whitney
East Hartford, CT USA
Committee Vice Chair

COMBUSTION, FUELS & EMISSIONS

Timothy Snyder
Pratt & Whitney
East Hartford, CT USA
Committee Chair

Timothy C. Lieuwen
Georgia Institute of Technology
Atlanta, GA USA
Committee Vice Chair

CYCLE INNOVATIONS

Anestis Kalfas
Aristotle University of Thessaloniki
Thessaloniki, GREECE
Committee Chair

Loredana Magistri
University of Genova
Genova, ITALY
Committee Vice Chair

INDUSTRIAL & COGENERATION

Mustapha Chaker
Mee Industries, Inc.
Monrovia, CA USA
Committee Chair

Qun Zheng
Harbin Engineering University
Harbin, CHINA
Committee Vice Chair

MARINE

Thomas Roche
NAVSEA Philadelphia
Philadelphia, PA USA
Committee Chair

Tony Wilcoxson
Vericor Power Systems
Alpharetta, GA USA
Committee Vice Chair

MICROTURBINES & SMALL TURBOMACHINERY

David Dewis
Elliott Energy Systems
Stewart, FL USA
Committee Chair

James Kesseli
Brayton Energy, LLC,
Hampton, NH, USA
Committee Vice Chair

OIL & GAS APPLICATIONS

Michele Pinelli
University of Ferrara
Ferrara, ITALY
Committee Chair

Jeff Moore
Southwest Research Institute
San Antonio, TX USA
Committee Vice Chair

TURBOMACHINERY

Aspi Wadia
GE Aircraft Engines
Cincinnati, OH USA
Committee Chair

Zolti S. Spakovszky
Massachusetts Institute of Technology
Cambridge, MA USA
Committee Vice Chair

Thank you to our Outgoing Committee Chairs!

Aircraft Engine, *Milt Davis*
Combustion & Fuels, *Thomas Sattelmayer*
Cycle Innovations, *Alcides Codeceira Neto*
Environmental & Regulatory Affairs, *Peter Carr*
Industrial & Cogeneration, *Antonio Peretto*
Marine, *Morgan Hendry*
Microturbines & Small Turbomachinery, *Michael Bowman*
Oil & Gas Applications, *Klaus Brun*
Turbomachinery, *Howard Hodson*

Re-designation of an ASME Landmark:

First Industrial Gas Turbine Neuchâtel, Switzerland

By Septimus van der Linden

In September 1988, the GT Neuchâtel – the world's first successful electricity-generating gas turbine to go into commercial operation – was honored by ASME as an Historic Mechanical Engineering Landmark. The GT Neuchâtel (built by Brown Boveri Corporation) was installed in 1939 and remained operational until 2002, when damage occurred to the generator and the unit was shut down after 63 years service and 1,908 starts. In 2005, ALSTOM took over the plant from Service Industriels de la Ville de Neuchâtel, and after comprehensive restoration work in 2006, it was reconstructed and put on display in a large glass building at the production facility entrance.

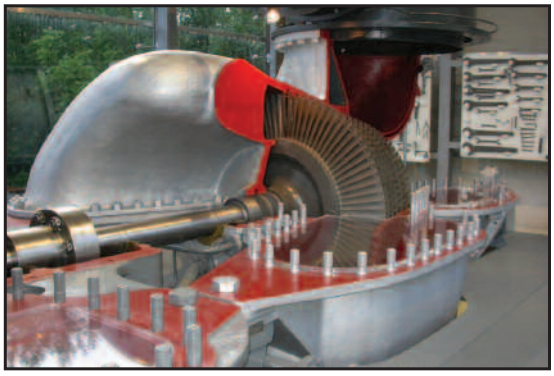
In June 2007, I participated in the redesignation ceremony of GT Neuchâtel at Alstom's Birr factory in Switzerland. The ceremony was attended by 90 special invitees representing industry, local government and academic institutions. Richard Pawliger, P.E of the ASME Historic and Heritage Committee summarized the re-designation:

"Understanding the importance of this machine as an Historic Mechanical Engineering Landmark, Alstom took the bold step and decided to preserve the Neuchâtel Gas Turbine, restore and reconstruct it and put it on public view rather than dispose of it in the dustbin of history. They took steps to carefully move it from its original location and went so far as building this terrific show-space, which will continue to preserve and exhibit this fine example of engineering history. . . . It will stand as a solid example of engineering excellence for the next generation of engineers."

Richard Pawliger, Walter Gränicher, and Septimus van der Linden with new plaque

During the ceremony ALSTOM President Walter Gränicher unveiled a new plaque, and Andreas Kneubuehl, General Manager Special Tasks and project leader for the restoration work, placed the new plaque adjacent to the original one on the unit. In total, 20 apprentices, 16 Junior-Mechanics and the Chief Mechanical lead engineer contributed the restoration work as well as 12 engineers and service personnel from various departments and businesses.

The original engineers of GT Neuchâtel -- Aurel Stodola, Adolf Meyer, Claude Seippel and Hans Pfenninger – are commemorated in a flyer on the ASME Web site at: http://www.asme.org/Communities/History/Landmarks/Neuchatel_Gas_Turbine_1939.cfm. ✻



GT Exhaust Scroll-Note Tool Board

IGTI Sends Letter to Senate Appropriations Committee in Support of Advanced Turbine Research Program

In keeping with our commitment to support the international exchange and development of information relating to all types of gas turbines, turbomachinery and related equipment, the International Gas Turbine Institute recently sent a letter to Byron Dorgan, Chairman of the Senate Appropriations Subcommittee on Energy and Water Development, urging him to support the President's request of $22 million in the Fiscal Year (FY) 2008 DOE Fossil Energy budget for the Advanced Turbine Research program.

In particular, IGTI urged the Subcommittee to support the University Turbine System Research (UTSR) program, which is a critical part of our nation's effort in developing highly-efficient low-emissions power plants using syngas and hydrogen, as envisioned by the FutureGen project.

To read the entire letter, please visit:
http://files.asme.org/asmeorg/NewsPublicPolicy/GovRelations/PositionStatements/12579.pdf

INTERNATIONAL GAS TURBINE INSTITUTE
The AMERICAN SOCIETY of MECHANICAL ENGINEERS
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Middle East Mechanical Expo 2007

The Middle East Mechanical Expo 2007 (MEMEC) will be held November 4 –7, 2007, at the Gulf International Convention Centre, Gulf Hotel, Kingdom of Bahrain. Organized by the ASME Saudi Arabian Section and the Bahrain Society of Engineering, the event is developing as the largest regional conference for mechanical engineering professionals.

These two organizations are uniquely positioned to bring together mechanical engineering professionals from the various disciplines and user companies to establish a forum for the constructive exchange of technology and experiences in gas and petrochemical production. Sponsors include regional oil companies and international equipment manufacturers.

Focusing on "Innovations Toward Operational Excellence," MEMEC is expected to attract mechanical engineering professionals, service providers, users and vendors, not only from the region, but from around the world to participate in both the Technical Conference and the Exhibition. For details, visit the website at http://www.memec-expo.org/. ✻

Catch #22!

You probably know IGTI as the producer of ASME's Turbo Expo. However, IGTI is much more. We provide advocacy, professional development, information and networking opportunities. Basically, we are the society representing gas turbine professionals like you. You belong to the IGTI community by paying dues to ASME and by then selecting "#22- The International Gas Turbine Institute" as your primary (or top five) technical division/area of interest. The money you pay for dues goes directly to fund ASME activities. Historically, although we provide member services, IGTI does not collect dues. However, ASME is now giving you a choice when you renew your membership to pay additional funds to "other" activities. We encourage you to take advantage of this opportunity and voluntarily contribute as much as you can to our efforts to promote you and our industry. Simply write IGTI in that line. We'll earmark those funds, and the Board can allocate them to fund additional activities, such as a possible student scholarship fund. And even if you can't pay extra, by at least selecting #22 as your primary or secondary technical division/area of interest, you strengthen our community and ensure we can assist you in advancing your career.