

# POWER

*Power Division Newsletter*

*Spring 1998*

*Michael J. Casper, Editor*

## Chair's Message

As we head toward the year 2000, the world as we know it is continually changing at a rapid pace. We, on the technology side, have seen the fuss over today's computer software reading the year as 1900 instead of as 2000. Much of the concern seems to be due to either thinking that the turn of the century was so far in the future; or to just plain poor planning. As leaders of the ASME Power Division, we are planning for the future and want to provide for your mechanical engineering needs. Your executive committee includes dedicated volunteers who are interested in understanding YOUR needs. Please contact any one of us whenever we may help you (see page 8).

As I mentioned in our last newsletter, we are making significant changes to the traditional approach of the Power Division. I'd like to reinforce several key thoughts we are pursuing in the upcoming year.

1. Our technical conference, the International Joint Power Generation Conference & Exposition (IJPGC) has long been known for its quality. To better serve our members, we're moving it from the traditional fall time slot to a date in late summer. This should allow more individuals to attend by avoiding the outage season. Perhaps



*Andy Donaldson, Power Division Chair*

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**More IJPGC  
 details  
 are inside...**  
 .....

- you'd like to combine this year's conference in Baltimore, MD and future conferences with a family vacation. Note that Washington DC is only a short drive away.
2. We've added joint participation by the Power Division to other conferences to present more timely dissemination of technical information to our members who may not be able to attend the IJPGC.
  3. Due to exceptional interest, we've begun presenting a Power Division tutorial on Cogeneration and Independent Power Fundamentals at other conferences to broaden the knowledge base of our members and encourage others to join the Division.
  4. We've begun holding joint conferences with other international power organizations. In 1998, TECHNISCHE VEREINIGUNG DER GROSSKRAFTWERKS BETREIBER E.V. of Germany will be participating

at the IJPGC. In 1999 the International Conference on Power Engineering (ICOPE) will be combined with the IJPGC in July in the San Francisco, CA Bay Area. ICOPE is held biannually and is organized by the Japanese and Chinese Mechanical Engineering Societies. This combined conference will be an excellent opportunity to participate in an exchange of technical information and meet power engineers from the Pacific Rim.

5. We've begun a theme rotation for the IJPGC every four years to emphasize various regions of the world. We plan to cover:
  - Europe (through our on going relationship with TECHNISCHE VEREINIGUNG DER GROSSKRAFTWERKS-BETREIBER E.V. of Germany) in 1998;
  - Asia (with ICOPE) in 1999;
  - South America; and,
  - North America.

Your Power Division Executive Committee members are excited about the next millennium and all the opportunities that will present themselves. Please contact us to let us know your needs, thoughts, ideas and plans so that we can continue to provide excellent service to you, our members, and our industry.

*Andy Donaldson,  
 Power Division Chair*

## 1999 ASME IJPGC in San Francisco

The 1999 ASME International Joint Power Generation Conference and Exposition (IJPGC) will be held in the San Francisco, CA Bay Area.

The Conference's Joint Sponsor's Committee has just announced that the Hyatt Regency Burlingame Hotel is the site for the 1999 IJPGC. The conference will be held July 25-28.

The conference is sponsored by the ASME's Fuels and Combustion Technologies; Power; and Nuclear Engineering Divisions. The Environmental Engineering and Management Divisions also participate in this conference.

In 1999, the International Conference of Power Engineers (ICOPE), which includes the Japan Mechanical Engineering Society, the Chinese Society of Power Engineering, and representation from Korea, Philippines, and other Pacific Rim participants, will hold their conference at the 1999 IJPGC, resulting in a combined conference. These organizations expect to be sponsoring about 25 sessions and over 100 papers. This combined conference will offer a unique opportunity to participate in a truly "world class" exchange of technical information and meet power engineers from the Pacific Rim.

In addition to a fine technical program, the conference also features an exposition of power related products.

This arrangement provides a unique opportunity to meet and discuss new product applications. The exposition offers an opportunity for some of the Bay Area manufacturers to be present and display their capabilities to this international contingent of power engineers.

The local San Francisco Bay Area ASME sections have been asked to work together and support this conference by sponsoring the traditional Sunday evening opening reception, assisting with registration and conference administration, planning spousal events, and helping to plan the opening plenary session. Other optional activities include planning a site facilities tour and conducting an educator's seminar. With the high concentration of engineers with an interest in power generation in the Bay Area, there is also an opportunity for the local section to organize a panel session or paper presentation. The IJPGC enjoys a reputation for publishing high quality contemporary papers on a number of power generation related topics.

Watch for further announcements on this conference and look for information on the ASME Web Site ([www.asme.org](http://www.asme.org)). The Technical Program Chair of the conference is **Scott Penfield** 423-842-8078, E-mail: [penfield@ti-sd.com](mailto:penfield@ti-sd.com).

## Call for Papers .....

Please submit 150 to 300 word abstracts to the appropriate contact by November 16, 1998. Include each author's name, address, telephone number, e-mail, and fax number. Official acceptance will be issued before January 30, 1999.

## Steam Turbine and Related Auxiliaries Committee

The ASME Power Division Steam Turbine and Related Auxiliaries Committee would like to extend a Call for Papers for the July 1999 IJPGC to be held in San Francisco. Please submit abstracts related to turbine, generator and auxiliary design improvements, failure analyses, etc. to:

**Bill Moore**, *Chair*,  
ASME Steam Turbine and Related Auxiliaries Committee  
National Electric Coil  
800 King Ave.  
Columbus, OH 43212  
614-488-1151 (Voice)  
[wmoorenc@aol.com](mailto:wmoorenc@aol.com)

## RAM Committee

The Reliability, Availability, and Maintainability (RAM) Committee of the ASME Power Division is requesting technical paper abstracts for the 1999 IJPGC. Suggested topics for the conference are as follows, but all RAM topics will be considered:

- Availability of Various Facilities;
- Availability Evaluation; and,
- Reliability and Maintainability.

Please submit abstracts for consideration to:

**Steven Hartman**  
GE Power Systems  
1 River Road  
Schenectady, NY 12345  
518-385-2559 (Voice)  
518-385-5793 (Fax)

## Power Division Announces Support for ASME Foundation – Goal is \$100K in 5 Years

The Power Division executive committee recently adopted a contribution matching program in support of the ASME Foundation. For the next 5 years, each contribution by Power Division members will be matched dollar for dollar up to a maximum of \$10,000 per year. Think of the potential - \$100,000 for the foundation!

The ASME New York staff will track all contributions made by members who designate number 19 (Power) as one of their divisions of interest. Funds to support the match will be supplied by the Power Division's custodial fund. Over the years, profits from conferences, short courses, and investments have been held in reserve in the fund for future programs that best benefit our members. The ASME Foundation is such a program. Through the Foundation, grants will be made to divisions and other society units for the development of innovative programs that require funding above the Society's normal ability. I invite you to make YOUR 1998 contribution as soon as possible to the Foundation so that we can match it this year. And don't forget, each year at renewal time, please be generous in your gift. It's tax deductible and leveraged!

**Jeff Schroeter**, Vice Chair



# CALL FOR PAPERS

## Heat Exchanger Committee

The ASME Power Division Heat Exchanger Committee is developing plans for technical sessions that would include papers covering a wide range of topics for presentation. Among the topics for consideration are:

- New and innovative heat exchanger designs;
- Case histories;
- Materials and fabrication;
- Heat transfer performance studies;
- Corrosion and fouling concerns, and remedial measures;
- Computer programs and use of commercial codes for heat exchanger design and monitoring;
- Inspection techniques and methods;
- Service water system exchanges;
- New or unique developments in condensers and heat exchangers; and,
- Designs to enhance cooling tower performances.

Please send abstracts to one of the following organizers:

### Dr. M. Padmanabhan

Vice President  
Alden Research Laboratory, Inc.  
30 Shrewsbury Street  
Holden, MA 01520  
508-829-6000 (Voice)  
508-829-5939 (Fax)  
padu@aldenlab.com

Or

### William Card

Stone & Webster Engineering Corp.  
245 Summer Street  
Boston, MA 02210  
617-589-2772 (Voice)  
617-589-2088 (Fax)  
billcard@stoneweb.com

**IJPGC – ICOPE-99**  
INTERNATIONAL JOINT POWER GENERATION CONFERENCE AND EXPOSITION  
INTERNATIONAL CONFERENCE OF POWER ENGINEERS

## JULY 25-28, 1999 – SAN FRANCISCO, CALIFORNIA

IJPGC – ICOPE-99 is co-sponsored by the American Society of Mechanical Engineers (ASME) Power; Nuclear; and Fuels and Combustion Technologies Technical Divisions, the Japan Mechanical Engineering Society, and the China Society of Power Engineering.

HERE'S A GREAT OPPORTUNITY to meet colleagues and to exchange technical information of special interest to you. This conference focuses on recent experiences and future trends in the global power industry and includes the following:

**Future generation and technology concepts - Recent and planned generation projects - Independent power production - New industrial and institutional trends - New and innovative power systems and related equipment - New management and institutional concepts - New utility operation and maintenance concepts - Government regulations/relations - Education and research**

WE ARE LOOKING FOR PRESENTATIONS for sessions in the following areas:  
**Cogeneration/combined cycle - Fossil fuel generation (coal and natural gas) - Nuclear fuel generation - Hydro generation - Steam generators (fossil) - Turbines (hydro, steam, gas) - Heat exchangers and condensers - Environmental controls (FGD systems, particulates, NO<sub>x</sub>, etc.) - Systems and power generating facilities - Reliability, availability, and life extension - Utility and/or industrial operations - Control systems**

To present a paper at IJPGC – ICOPE-99, contact the appropriate division's technical program coordinator listed below. The coordinator will direct you to the appropriate technical committee chair who will then contact you directly. Please send either a draft technical paper, or abstract to one of the following coordinators:

**All abstracts are due by Monday, November 16, 1998.**

### POWER DIVISION

John A. Legler  
Arkwright Mutual Insurance Co.  
19103 Homeway Avenue  
Cleveland, OH 44135  
Fax: 216-362-6427  
john\_legler@arkwright.com

### NUCLEAR DIVISION

Joseph Veilleux  
North Atlantic Energy  
Services of Northeast Utilities  
PO Box 300 (M/C 01-62)  
Seabrook, NH 03874  
Fax: 603-374-9521  
veillej@naesco.com

### INTERNATIONAL

#### GAS TURBINE INSTITUTE

Ronald Natole  
Natole Turbine Enterprises  
PO Box 1167  
La Porte, TX 77572  
Fax: 281-470-9676

### INDUSTRIAL OPERATIONS TECHNICAL COMMITTEE

Albert Clary  
738 Summer Sound Road  
Piney Flats, TN 37686  
Fax: 423-229-2472  
atclary@eastman.com

### ENVIRONMENTAL ENGINEERING DIVISION

Anupam Sanyal  
Int'l Env'tl & Energy Cnsitnts  
PO Box 7374  
Oakbrook Terrace, IL 60181  
Fax: 630-495-5930  
asany1934@aol.com

### ICOPE (Japan)

Torushige Fujii  
Kobe University  
Dept. of Mechanical Engineering  
1-1 Rokkodai, Nade, Kobe 657, Japan  
Fax: 81-78-803-1108  
fujii@mech.kobe-u.ac.jp

### FUELS AND COMBUSTION TECHNOLOGIES DIVISION

Ashwani Gupta  
University of Maryland  
Dept. of Mechanical Engineering  
College Park, MD 74078  
Fax: 301-314-9477  
akgupta@eng.umd.edu

## Technical Committee News

### What's New!

#### Hydro Power Committee

The ASME Hydro Power Committee's next meeting will be Monday July 27, 1998; 1:00 PM to 6:00 PM in Reno, NV as part of HYDROVISION. The Hydro Power Committee will also be hosting a one day seminar on Hydro modernization the day before HYDROVISION begins. The subjects covered will be turbine upgrades, control systems, and O&M. There will be NO FEE for ASME committee members. If you would like more information on HYDROVISION, the Hydro Power Committee, or Hydro modernization please contact:

**James Kerr**

U.S. Army Corps of Engineers  
Hydroelectric Design Center  
P.O. Box 2870 • Portland, OR 97208  
503-808-4253 (Voice)  
503-808-4252 (Fax)  
james.d.kerr@usace.army.mil

Also note that the U.S. Army Corps of Engineers has its transient analysis program, WHAMO, available for public use. Information on the WHAMO program can be obtained from:

**Vicki Van Blaricum**

U.S. Army of Corps of Engineers  
217-373-6771 (Voice)  
E-mail: v-vanblaricum@cecr.army.mil

#### Industrial Operations Committee

The ASME Industrial Operations Committee will be co-sponsoring an Industrial Energy Operations Forum with the Council of Industrial Boiler Owners in late July in Philadelphia, PA. The forum will consist of four sessions covering the following topics - Energy Efficiency and Optimization, Performance Benchmarking, Maintenance and Reliability, and Operator Training and Control Systems. The format of the forum will be unique, consisting of an introduction by each session leader, followed by two case studies in each subject area, and closing with a roundtable discussion with the audience. The afternoon of the last day will consist of a visit to the Trigen Cogeneration Facility in Philadelphia. More information will be sent to each Power Division member as soon as it is available or can be requested from **Al Clary**, Chair, at 423-229-5855; or E-mail at [atclary@eastman.com](mailto:atclary@eastman.com).

#### International Relations Committee

As usual, the International Relations Committee has been very active. The chair of the committee, **George Saxon, Jr.**, and the secretary, **Sastry Munukutla**, attended the International Conference on Power Engineering (ICOPE '97) in Tokyo, Japan in July 1997.

A panel session, "Challenges Related to International Issues on Power Generation," was presented at the 1997 IJPGC in Denver, CO. The panelists included **Robert Smock**, publisher, PennWell Publishing; **Richard Putnam**, technical director, Conco Consulting Group; **Noboyuki Kan**, executive, Tohoku Electric Power Company; and **William Stenzel**, manager, SEPRIL Services. The moderators were **George Saxon, Jr.** and **Sastry Munukutla**.

It is proposed to hold another panel session with the same title at the upcoming IJPGC in Baltimore, MD in August, 1998. It is also proposed to include panelists from India, China, and Germany. For more information on future activities, please contact **George Saxon, Jr.** at 800-345-3476; or **Sastry Munukutla** at 931-372-3628; or E-mail at [ssm7526@tntech.edu](mailto:ssm7526@tntech.edu).

#### Reliability, Availability, Maintainability (RAM) Committee

The ASME Power Division Reliability, Availability, and Maintainability (RAM) committee continues its mission to promote the need and importance of RAM in the business of power generation. The RAM committee fulfills this mission by coordinating the presentation of paper and panel sessions at the International Joint Power Generation Conference & Exposition (IJPGC), holding committee meetings to discuss our activities, and representing ASME and the Power Division to other organizations and conferences.

Recently at the IJPGC in Denver, CO in November, 1997, the RAM committee sponsored the following sessions:

- A panel discussion providing viewpoints on "Sustaining Reliability of Power Generating Performance in a Competitive Power Market." The panelists represented industry experts with perspectives on plant ownership, financial considerations, insurance concerns, operations and maintenance implications, manufacturer's practices, and environmental issues. A lively question and answer session followed brief presentations by each panelist.
- A paper session focused on various topics ranging from risk and asset management of power generation equipment to optimizing the interval for steam turbine inspections.

For more information on the RAM Committee, please contact:

**Steven Hartman**  
GE Power Systems  
1 River Road  
Schenectady, NY 12345  
518-385-2559 (Voice)  
518-385-5793 (Fax)

## Technical Committee News

### Call for New Members

Your participation in any of the Power Division's committees will provide many benefits which include: contribution to a professional society; meetings with your peers; organization of conference sessions that address important power industry issues; review of papers for proper content; contribution to technical information exchange based on your company's activities; participation in two major power industry conferences; and other important activities. Please contact any of the individuals listed below if you are interested in becoming a member of that technical committee.

### Heat Exchanger Committee

The ASME Power Division Heat Exchanger Committee invites individuals that are involved with heat exchangers and are interested in participating in the committee to contact: **Jim Mitchell**, Plastocor, P.O. Box 886, McMurray, PA 15317; 724-942-0582 (Voice), 724-942-0583 (Fax).

The Heat Exchanger Committee functions as a technical committee of the Power Division to promote the technology of steam and other power generation in the specialized areas related to balance of plant heat exchange equipment, including: steam surface condensers, coolers, feedwater heaters, moisture separator reheaters, service water heat exchangers and other unfired power plant heat exchangers.

### Industrial Operations Committee

The ASME Industrial Operations Committee is devoted to the sharing of mechanical engineering technology in industrial power and utilities including steam generation, independent power and cogeneration, compressed air, refrigeration, water pumping and treatment, incineration, and wastewater treatment. In particular, we would like to increase participation by mechanical engineers from industrial companies that have significant investments in plant steam and utility systems. We would like to extend an invitation to all interested parties to join our Committee. If you are interested, please contact **Al Clary**, Chair, at 423-229-5855; or E-mail at [atclary@eastman.com](mailto:atclary@eastman.com).

### Steam Generator and Related Auxiliaries Committee

The ASME Power Division Steam Generator Committee extends an invitation to all interested parties to join us in Baltimore, MD at our next Technical Committee meeting on Sunday, August 23 (the afternoon prior to the 1998 IJPGC reception). Currently, the Steam Generator Committee is in urgent need of new members. This provides an opportunity for you to become a lead committee member within a short period of time. Please contact **Bill Stenzel** at 312-269-6520; or E-mail at [WStenzel@SEPRIL.com](mailto:WStenzel@SEPRIL.com) for further details.

### Power Division Technical Committee Chairs

Dale Karg	Heat Exchangers	803-761-8000, x5579	Steve Carpenter	Steam Generators	630-637-1092
Glen Brewer	Hydro Power	425-451-4245	Bill Moore	Steam Turbines	614-488-1151
Al Clary	Industrial Operations	423-229-5855	Salman Haq	Systems & Power	301-417-4366
Steven Hartman	RAM	518-452-7773	Larry Kielasa	Generation Facilities Design	
				Utility Operations	313-235-7312

### Steam Turbine and Related Auxiliaries Committee

The ASME Power Division Steam Turbine and Related Auxiliaries Committee would like to extend an open invitation for new members. The Committee is very active in the Power Industry, and is a leader in helping to advance the state of the art regarding steam turbines, generators, and other related auxiliaries. We are especially seeking individuals from utilities and other power producers. You are invited to our next meeting on Sunday, August 23 in Baltimore, MD (the afternoon prior to the 1998 IJPGC reception). For the time and location please contact:

**Bill Moore**, Chair,  
ASME Steam Turbine and Related Auxiliaries Committee  
National Electric Coil  
800 King Ave.  
Columbus, OH 43212  
614-488-1151 (Voice)  
E-mail: [wmoore nec@aol.com](mailto:wmoore nec@aol.com)

### RAM Committee

Membership for the Reliability, Availability, Maintainability (RAM) Committee has increased this year with the addition of six new members. Anyone interested in becoming a new member of this committee should contact:

**Steven Hartman**  
GE Power Systems  
1 River Road  
Schenectady, NY 12345  
518-385-2559 (Voice)  
518-385-5793 (Fax)

# EPRI'S Tom McCloskey Receives Edison Electric Institute Prime Mover's Award

**Tom McCloskey**, Manager of Turbomachinery for EPRI's Energy Conversion Division, received a 1997 Edison Electric Institute's Prime Mover's Award "for outstanding contributions to Thermal Electric Generating Station Equipment and Practice."

This award was presented at the American Society of Mechanical Engineers (ASME) International Joint Power Generation Conference & Exposition held in Denver, Colorado in November 1997. The Edison Electric Institute's Prime Mover's Award was established in 1954 and is awarded annually.

McCloskey earned this award for the development and implementation of EPRI's Turbine-Generator Outage Interval Extension system. This system, called Turbo-X, provides a means for extending turbine-generator operations between inspections and overhauls. Using key status reports, Turbo-X reflects the on-line health of critical turbine components, performance degradation, and failure probability.

The average major turbine overhaul is performed approximately every five years, and requires about six weeks to complete, resulting in

over 260,000 lost megawatt hours. By extending these outages from five to ten year intervals, a typical plant would eliminate two overhaul periods of five to seven weeks over a 20-year time span, resulting in substantial O&M and replacement power cost savings.

Before joining EPRI in 1980, McCloskey was Project Design Engineer for steam turbines at Westinghouse Electric in Philadelphia. He has over 28 years experience in the design, operation, maintenance, and troubleshooting of steam turbines and related auxiliaries, and holds six patents in mechanical engineering and steam turbine design.

McCloskey is a Fellow of the American Society of Mechanical Engineers, and was the recipient of both the 1995 ASME George Westinghouse Gold Medal, and a previous Edison Electric Institute's Prime Mover's Award.

EPRI, established in 1973 and headquartered in Palo Alto, CA, manages science and technology R&D for the electricity industry. More than 700 utilities are members of EPRI which has an annual budget of some \$500 million. EPRI's website can be found at [www.epri.com](http://www.epri.com).



*Tom McCloskey*

## ASME Energy Committee Testifies

The Department of Energy's fossil energy and energy conservation research efforts should emphasize programs in coal technology, increased efficiency in the industrial and transportation sectors, and reduced emissions of greenhouse gases, a representative for the Energy Committee of ASME's Council on Engineering told the House Interior Appropriations Subcommittee on March 4, 1998.

Bill Stenzel, who testified on behalf of the Energy Committee, said, "Increased research funding is necessary if our nation is to meet the challenges of global climate change outlined in the Kyoto treaty and the newly mandated requirements from the U.S. Environmental Protection Agency for lower emissions of pollutants such as NO<sub>x</sub>, SO<sub>x</sub>, mercury, other hazardous air pollutants, and particulate materials.

Increased funding should also be allocated to basic research which both stimulates the development of innovation technologies and maintains our educational pipeline to ensure the supply of human capital to address our future needs in fossil energy technologies."

## Executive Committee

<b>Chair</b>	<b>Andy Donaldson</b> .....	Parsons Energy & Chemicals .....	610-855-2645
<b>Vice Chair</b>	<b>Jeff Schroeter</b> .....	Panda Energy International .....	972-980-7159
<b>Secretary</b>	<b>Izzy Diaz-Tous</b> .....	Encor-America .....	650-965-3838
<b>Comptroller</b>	<b>Brian King</b> .....	Arkwright Mutual Insurance .....	440-930-2932
<b>Programs</b>	<b>Tom McCloskey</b> .....	EPRI .....	650-855-2655
<b>New Member</b>	<b>Larry Kielasa</b> .....	Detroit Edison .....	313-235-7312