



Internal Combustion Engine Division Newsletter

Tony Siegel, Editor

Summer 2000

Chair's Message



Terry Ullman

I've been involved with various ASME activities for a number of years, and now I have the honor and the responsibility to chair the ICE Division. As chair, I hope to continue to conduct the business

of the Division in a professional manner, to enhance the benefits of participation in Division activities, and to keep up the admirable professional standing of the Division. Fortunately, the chair can rely on guidance from an excellent executive committee, secretary and treasurer, as well as 140 Associates with vast experience in both technical and administrative matters, along with various ASME International staff.

Division Activities center on coordinating two technical conferences annually, for which the technical committees work with their contacts in industry, government, and academia to create high quality technical programs. Administrative committees work to ensure meeting facilities, publicity, and support activities are in place for the conferences. Division Associates are encouraged to identify and nominate individuals for honors and awards for notable achievements in advancing the art, science, and practice of mechanical engineering in the field of internal combustion engines.

(continued on page 2)

Fall 2000 Conference to Play in Peoria

The ICED Fall 2000 Conference will be hosted by Caterpillar Inc. and held at the Holiday Inn Brandywine in Peoria, IL on September 24-27. The Holiday Inn Brandywine is located in the heart of Peoria, minutes from downtown and adjacent to the Northwoods Mall, Peoria's largest shopping center. It is conveniently located just off I-74 at the War Memorial Drive exit. This 250 room Holidome recently tied for first place as the best Business Services Hotel among nearly 1400 Holiday Inns worldwide.

The conference will include a full technical program addressing key issues in reciprocating engine research, development, and operation. Session topics include: new large-bore engine designs; natural gas engines; in-cylinder flow and combustion - measurements and modeling; engine emissions; optical measurements of engine combustion; direct injection sprays and combustion; alternative fuels; engine controls and applications; and lubrication and friction. The technical program will begin on Monday morning with a special keynote presentation, "Combustion in Gas Fueled Compression-Ignition Engines," by Professor G.A. Karim.

In addition to the technical program, a variety of entertaining activities are planned.

(continued on page 2)

Table of Contents

Chair's Message	1
Fall 2000 Conference to Play in Peoria	1
The NGML: A Turbocharged Research Facility	2
Neil Blythe is New Member of Executive Committee	3
Back to School for the 1999 Fall Conference	3
Honda Lectures Hit the Mark.....	4
1999 Honda Lecture	4
2000 Honda Lecture	4
Pischinger Gets Honda Medal.....	4
Locomotive Panel Discusses USA and Canada	4
Philly is Site of Spring 2001 Conference.....	5
Future Conferences	5
San Antonio Welcomes 2000 STC.....	5
ASME and CIMAC Work Together	6
Awards Presented at the 1999 Fall Technical Conference	7
New ICED Associates	7
Call for Papers.....	8
Internal Combustion Engine Division.....	8

Fall 2000 Conference

(continued from page 1)

On Monday evening attendees will be bused to Haberdasher's Dinner Theater, on Peoria's refurbished riverfront. Haberdasher's is a unique and rustic theater, once the warehouse Al Capone used to store bootleg gambling and liquor supplies. Haberdasher's presents first-rate comedies/musicals, directed and performed by professionals, many of whom have had national theatrical experience. The buffet dinner will be catered by Jumer's, a local hotel/restaurant, noted in the Peoria area for fine food.

On Tuesday evening our group will be bused to Gateway Center on the Illinois River for an ICED Awards Banquet and unique entertainment. The Gateway Center is a spacious new building constructed to host banquets, weddings and formal occasions. The 2nd floor setting provides a scenic view of the riverfront. An elegant local restaurant will cater a sit-down dinner consisting of 3 entree choices (beef, chicken and vegetarian dishes). Following the awards program, Royce Elliot will provide entertainment. Royce is a native Peorian, whose clean, but side-splitting humor pokes more fun at himself than anyone else. Royce has "made it big" nationally, having been on a number of TV programs and performing regularly in Las Vegas.

One of the highlights of the Conference will be a tour of Caterpillar's facilities on Wednesday morning. The tour will start at the Mossville, IL engine plant. Following a tour of this highly-automated facility, in which many of America's highway truck engines are produced, we will be bused to Caterpillar's Sales Demonstration facility for an interesting and entertaining program featuring a wide variety of Caterpillar vehicles in action.

Spouses/Guests of conference attendees will enjoy a variety of history, scenery and shopping. On Monday, they will be bused on a scenic tour to Bishop Hill, an historic Swedish settlement about 35 miles from Peoria. In addition to history and historical buildings, Bishop Hill features a wide variety of shops and restaurants for the group to enjoy. On Tuesday, the spouse/guest program involves a tour of various historical and scenic sites of Peoria, led by a former Peoria City Councilwoman and current President of The Peoria Historical Society. This tour includes restored buildings along Peoria's riverfront, backstage at the Civic Center, historical statues, modern downtown buildings, the Bradley University campus, lunch at Caterpillar's world headquarters, historical mansions on "the bluff", a scenic view from the tower overlooking Grandview Drive, houses and views along Grandview Drive, and afternoon tea at elegant Peoria Country Club.

The Fall 2000 Conference is definitely in the "don't miss" category.

Bernie Richards

Chair's Message

(continued from page 1)

Although sometimes confused with the ASME membership grade of associate, ICE Division "Associates" are the active body that drives the Division. And ICE is the Division that about 3,000 ASME members have indicated is their primary Division of interest.

Working to develop technical conferences, Associates come together under circumstances different from their typical work relationships. In aggregate, participation in authoring a technical paper or encouraging others to do so, presenting a paper or making general announcements, organizing a technical session or coordinating activities with a conference hotel, budgeting time and resources, and gaining exposure to other engineers with different technical specialties and different management levels are all excellent means of professional development.

As chair of ICE Division, I welcome this opportunity to thank all the Associates who have volunteered their time and talents to make the Division a success and to invite the rest of you to participate. Attend a conference, volunteer to review a technical paper, identify worthy engineering talent for recognition, build your experience base beyond your own technical specialty. If you can participate — do so! If you feel you can't — encourage or guide someone else to participate. It's in your best interest to continue to pursue professional development for yourself and your staff.

Terry L. Ullman

The NGML: A Turbocharged Research Facility

Goal: Minimize Pollutant Emissions and Capital Outlay while Maximizing Engine Efficiency and Reliability.

A sticky programming problem? Well, yes. But more to the point, this is what natural gas pipeline companies face at each compressor station operating with a reciprocating engine system. These systems need to run efficiently, reliably, and with low emissions in order to stay competitive with state-of-the-art systems. And with more than 10,000 large-bore reciprocating engines currently used in the natural gas transmission industry, "replace" is not a cost-effective option.



NGML Turbocharger Test Stand

Researchers at Kansas State University's National Gas Machinery Laboratory (NGML) continue to help transform these once called "antiquated" units into efficient, cleaner-burning reliable systems through cutting-edge studies on re-engineering the turbocharger and improving the integration of the turbocharger/engine match.

"Within a year we will have completed six industry-funded studies that will directly impact the knowledge base we have on turbocharger operation and design," said Kirby Chapman, director of the NGML. "These studies will give the industry a better understanding of turbocharger design, the effects of heat transfer throughout the system, and a standardized method of performance measurement for field use," he continued.

The NGML is also dedicated to transferring this knowledge to industry representatives so the work can be implemented in the field. Through numerous short courses held each year, engineers from pipeline companies and aftermarket companies learn the ins and outs of topics such as turbocharger performance, economic-based maintenance decision making, and engine air-flow management. Key to most of these short courses is the time the engineers spend at the Turbocharger Test and Research Facility (TTRF) where they gain hands-on experience testing turbochargers, developing performance maps, and understanding case studies.

The TTRF allows researchers to test all turbochargers used in the natural gas transmission industry in a controlled environment. The test stand has an open-loop design where the exhaust gas and compressed air from the turbocharger are kept separate. This allows for independent manipulation of the turbocharger compressor and the turbine. Researchers can measure vibrations and other maintenance parameters at various operating speeds and generate data to develop a full performance map.

"By testing turbochargers after an overhaul, we know that the unit is ready for field use and is operating at OEM specifications," explained Traci Brentano, the NGML's laboratory operations manager.

(continued on page 3)

The NGML: A Turbocharged Research Facility

(continued from page 2)

Testing also allows researchers to collect controlled data on turbocharger performance, which can then be used to improve designs. Brentano said that all too often, pipeline companies only have field data available which is nearly impossible to use for research due to different operating conditions. "Controlled research at the NGML allows us to acquire the data we need to validate numerical models that have been developed to optimize the turbocharged engine system. In the end, we can perfect a design before it is placed in the field and take the guesswork out of the process," she continued.

The TTRF was built by funds provided by Pipeline Research Council *International*, the Gas Research Institute, Kansas State University, the State of Kansas, and numerous industrial sponsors. ANR Pipeline of Detroit, Michigan, was the first pipeline company to step up with a significant contribution to the Laboratory. "We saw the importance of additional work in this area and believed that K-State had the expertise and commitment to make this dream a reality. We also felt that by taking a leadership role, other companies would follow our example. Only by working together are we going to get the answers we need to keep these systems competitive," said Curt Pedersen, ANR's manager of field services.

A good example of the NGML's capabilities is the Elliott L-40 upgrade project that was funded by PRCL. The goal of this project was to examine the plausibility of re-aeroing an Elliott L-40 as an alternative to replacement. Researchers believed that they could determine a new design operating point that would incorporate knowledge from emissions guidelines, engine components, auxiliary systems, and the turbocharger itself.

The Elliott L-40 is a popular turbocharger that the gas pipeline industry uses with large-bore four-stroke engines such as the 410 KVG, 412 KVS, 510 KVG, and 512 KVS. Typically, these turbochargers are overhauled and installed with more efficient and cleaner burning controls and combustion systems. However, this is an expensive process and the benefits of the overhaul were not fully quantified.

During the project, the Elliott L-40 was first overhauled to bring it to OEM standards. The unit was tested at the TTRF and a performance map was created. The overhaul company then upgraded the unit with a new nozzle ring and turbine blades before another performance map was created.

Results indicated the installation of the new turbine blades and nozzle ring shifted the design operating point of the tur-

bocharger to lower flow rates due to the increased restriction of the turbocharger turbine. This overhaul method could be a good alternative to replacement, but more studies are needed to confirm this conclusion. However, the savings per unit are impressive since a new unit costs from \$50,000 to \$70,000 and an upgrade with testing costs approximately \$15,000 to \$20,000.

Because of forward-thinking sponsors who assisted in building the Lab and through studies like this, the NGML will continue to generate cutting-edge research results. These efforts will help keep turbocharged large-bore reciprocating engine systems a competitor in today's efficient and cleaner-burning energy marketplace. The significant financial contribution and guidance of the Gas Research Institute in the development of the NGML are gratefully acknowledged and sincerely appreciated.

Traci Brentano

Neil Blythe is New Member of Executive Committee



Neil Blythe

Your ICE Division is run by a dedicated Executive Committee. Each year they select a New Member to join their ranks. The one so selected will serve in a variety of positions over the next 6 years, climbing through increasing levels of responsibility until becoming ICED Chair and then Past Chair before retiring from office. The process relies upon adding a talented, dedicated individual to the Committee each year. This year, Neil X. Blythe has been chosen as the New Member.

Neil graduated from the United States Merchant Marine Academy in 1980 with a Bachelor of Science degree in Marine Engineering. After sailing for a year as an Assistant Engineer with various shipping lines, he joined Fairbanks Morse Engine Division as a Project Engineer in the Product Engineering department. He served in this capacity until 1987 when he accepted a position in the Field Service department as Supervisor of Large Engines and Field Service Engineering. In 1991 Neil transferred to the Research and Development department where he directed development activities for the Opposed Piston (OP) engine, including spark, diesel and dual fuel product lines. In 1997 he was promoted to Manager of Research and Development and in 1998 he accepted

additional responsibilities for the Engine Design department. Blythe currently holds the position of Manager, Engine Design/Research and Development, responsible for the design and development of all FMED engines including Pielstick, OP, Alco and MAN product lines.

Back To School for the 1999 Fall Conference

Over 190 participants attended the 1999 FTC hosted by the University of Michigan. The three-day conference, held at the Crown Plaza Hotel in Ann Arbor, opened with a Soichiro Honda Lecture. Dr. Thomas W. Asmus, who has worked on practically all aspects of automotive engine research during his 26 years with Daimler Chrysler, was chosen by the ICED to present the lecture, and receive an ASME honorarium and plaque. Dr. Asmus gave an informative lecture on "A Manufacturer's Perspective on IC Engine Technology at Century's End," and his paper is available at www.asme.org/divisions/ice, under "ICE Technology Links." Following the lecture, 40 technical papers were presented on topics that included high speed direct injected diesel engines, engine controls, in-cylinder flow and combustion, new engine designs, lubrication, direct injection sprays, emissions, and alternative fuels.

A panel discussion on "Marine Emissions Regulations" was held in which the "Marine Engine Manufacturing Industry Perspective on Emission Regulations" was given along with an overview of "International Exhaust Emission Controls, MARPOL Annex VI" and the "EPA MARPOL Voluntary Compliance Program" was outlined. "Emissions from Ships: Current and Emerging Engineering, Science and Policy Issues" was presented and "Fuel and Lubricant Implications" of proposed regulations were examined. All the panelists gave excellent and informative presentations, and all were well received by the audience. Their presentations can also be found under "ICE Technology Links" within www.asme.org/divisions/ice.

Spouses/guests enjoyed a tour of the magnificent estate of Edsel and Eleanor Ford, which includes a 60-room mansion that beautifully captures the life-style enjoyed by this prominent automotive family. After lunch, the group visited the Henry Ford Museum and Greenfield Village, which contains unique exhibits that help visitors experience America's traditions of ingenuity, resourcefulness, and innovation. A scenic bus tour of Ann

(continued on page 4)

Back To School

(continued from page 3)

Arbor included a visit to the University of Michigan campus and lunch at the Gandy Dancer, located in the historic setting of the 1886 Michigan Central Railroad Station.

All the attendees were able to socialize during the breaks, lunches, and evening events. One evening featured dinner at Geonetti's "Hole in the Wall" dinner theater in downtown Northville. The next evening, the attendees and honored guests assembled for the Division Honors and Awards Banquet to recognize those who have contributed to the art and science of the internal combustion engine and to the success of the Division.

Among the recipients, Dr. Serge Gratch received the ASME-ICE Award and David B. Aldag received the Richard S. Woodbury Award.

Keeping with tradition, all the conference participants and their guests were invited to tour the Automotive Research Center (ARC) at the University of Michigan, our host. In addition, the group toured related engine and manufacturing research facilities including the GM Satellite Research Laboratory. An overview of engine and automotive research being conducted at the ARC was given, along with a demonstration of progress made in computational modeling of engine processes and systems. The group also toured the laboratory to view setups and talk with students involved in numerous facets of engine performance and emissions research for SI, CIDI, and GDI engines. The breadth of engine research being conducted was impressive and very informative.

Terry L. Ullman

Honda Lectures Hit the Mark

The Soichiro Honda Lecture has been established as a National Lecture by the ASME to recognize achievement and significant contribution in the field of personal transportation. The Honda lecture is a regular feature at the ICE Division Fall Technical Conferences.

1999 Honda Lecture

The 1999 Soichiro Honda Lecture entitled "A Manufacturer's Perspective on IC Engine Technology at Century's End" was delivered by Dr. Thomas W. Asmus of Daimler-Chrysler Corporation at the ICED 1999 Fall Technical Conference.

A broad summary of automotive engine technology was presented from the perspective of a technology user and a contributor to advanced engine product strategies. Dr. Asmus related challenges faced by the automotive industry in terms of conflicts between different government mandates and customer preferences.

Popular and not-so-popular IC engine research themes and their impacts on the user community were discussed. The speaker considered the processes that lead to technology implementation and reminded the audience that these often involve a blend of scholarly research, marketing, and entrepreneurship.

A vignette was presented to illustrate how insight, based on fundamental engine research, can sometimes yield unanticipated outcomes.

The lecture concluded with remarks on some of the current popular IC engine research and development themes and what they face in terms of broad acceptance.

The lecture in its entirety can be accessed from a link on the ICED Website, <http://www.asme.org/divisions/iced/>, click on ICE Technology Links.

2000 Honda Lecture

The title of the 2000 Honda Lecture is "Combustion in Gas Fueled Compression-Ignition Engines". It will be presented at the 2000 ICED Fall Technical Conference in Peoria, IL by Professor Ghazi A. Karim.

Professor Karim has been actively engaged in combustion engine and fuel research and teaching for many years at the University of Calgary, Canada and earlier at the Imperial College, London. He has published extensively on the subject and authored over 500 papers published internationally. Among his publications are numerous technical and scientific papers describing the results of gas fueled engine research, especially those related to the dual fuel engine.

Madan Goyal

Pischinger Gets Honda Medal

The Soichiro Honda Medal was established to recognize an individual for an outstanding achievement or a series of significant engineering contributions in developing improvements in the field of personal transportation. This medal was established in 1983 in recognition of Soichiro Honda's exemplary achievements in the field of personal transportation.

Dr. Franz Pischinger has been selected to receive the 2000 Soichiro Honda Medal. Dr. Pischinger's career has been devoted to research and development of internal combustion engines. He has combined his distinguished academic accomplishments with commercial application with emphasis on the performance, fuel economy, and emissions of transportation engines. During 29 years as Professor and Director of the Institute of Applied Thermodynamics at the Technical University, Aachen, Germany, he educated more

than 150 doctoral candidates and the University has become recognized as a center of expertise on I.C. engines. He is currently Professor Emeritus from the University. In 1978 Dr. Pischinger founded and became President of the widely renowned engine research and development organization, FEV Motorentchnik. The company has served engine builders in a wide range of R&D capacities and its U.S. branch in Michigan is active in contract work with automotive companies.

In his career to date Dr. Pischinger has authored or co-authored over 150 technical publications and has been awarded 31 patents related to I.C. engines. His work in alternative fuels, NOx catalytic reduction, diesel particulate traps, variable valve timing, and automobile fuel economy is especially pertinent to the field of personal transportation.

Formal presentation of the award is scheduled to take place at the Honors Assembly, Wednesday, November 8, during the ASME International Mechanical Engineering Congress, November 5-10, 2000, at the Walt Disney World Dolphin Hotel in Orlando, Florida.

David Field

Locomotive Panel Discusses USA and Canada

A panel discussion "Complying With EPA Locomotive Exhaust Emission Regulations" was organized during the 2000 Spring Technical Conference of the Internal Combustion Engine Division of ASME, held on April 10-12, 2000 in San Antonio, Texas. The panel members presented information based on their experiences, and discussion ensued. Panel members dealt with such topics as "Locomotive Certification Procedures", "Rebuilding Existing Locomotives - Where Does the Aftermarket Fit In?", "Railroad Expectations from their Suppliers", and "Railroad Fleet Implementation Issues".

A second section of the program was titled "North of the Border — The Canadian Perspective" and focused on the influence of the US regulations on the Canadian railroad industry. Topics in that portion included "Locomotive Emissions Monitoring in Canada", "Emissions: the Perspective of a Locomotive Remanufacturer from Canada", and "Impact of EPA Locomotive Emission Standards on the Canadian Railway Sector".

Presentations from the panel are now available on the ASME Internal Combustion Engine Division web page: <http://www.asme.org/divisions/iced/>, then click on "ICE Technology Links", and the most recent Locomotive Engine Panel.

Steven G. Fritz

Philly is Site of Spring 2001 Conference

The 2001 Spring Technical Conference will be hosted by Ship Systems Engineering Station in Philadelphia, PA from April 29th through May 2nd. The temperature for that time of the year in Philadelphia averages 68°F for the high and 55°F for the low. Spring is a great time of year to be in Philly!

The Ship Systems Engineering Station, Carderock Division, Naval Surface Warfare Center (SSES-NSWCCD), is the Navy's center for Naval machinery systems research and development, engineering, testing, and logistics support. SSES employs approximately 1,750 civilian engineers, scientists, technicians, and support personnel and has been located at the South Philadelphia Naval Complex for 90 years. SSES is the Navy's repository for hull, mechanical, and electrical (HM&E) technical knowledge and expertise with a cumulative total of 31,000 years of ship systems technical expertise and experience. It is the premier source of HM&E engineering support, including logistics, for the Navy.

The technical personnel and test facilities represent technical capabilities and state of the art facilities found nowhere else in the world. Navy full-scale testing of systems and equipment and the engineering performed at this facility, as well as private party teaming for new acquisition programs, will support the needs of the Navy far into the future. The Wednesday tour of the SSES facilities promises to be fascinating.

The 2001 Spring Technical Conference will be held at the Holiday Inn Independence Mall, in the center of the "Most historic square mile in America". Within easy walking distance of the hotel are Independence Hall, the Liberty Bell, the Betsy Ross House, Penn's Landing, and other historic sites. There is much to see and do before and after the conference.

Several social events are planned during the conference. Sunday evening the conference will start with a cocktail party. There will be complimentary hors d'oeuvres and a cash bar. Afterwards, you will be free to enjoy dinner on your own at any of the fine restaurants in Philadelphia.

The Technical Program will begin Monday with at Keynote Speaker, although that individual has not yet been selected as we go to press with this Newsletter. Technical sessions will span the range from fundamental research to practical in-use applications with presentations expected on engine performance, emissions, diagnostics and modeling, alternative fuels, friction, lubrication and wear, engine systems, and component design. Talks will cover applications in automotive, large-bore, industrial, loco-

otive, and marine engines. A joint technical session is being organized with members of the Japan Society of Mechanical Engineers (JSME).

Monday night dinner will be a killer! Mystery Dinner Theatre is planned at Bistro Romano. This is your chance to play the part, hunt for clues, and solve the crime. Get to know the characters. Even their off-hand comments are full of clues. So when the characters talk amongst themselves, that's the time to be quiet and listen. Get in the spirit of the performance. Who knows? YOU might be the murderer ... or the victim!

On Monday Spouses and Guests of conference registrants can float down the Delaware River with the sounds of Dixieland music playing in the background as they sit back and enjoy what the river has to offer. The lunch cruise is filled with good food, scenic views, and great entertainment. Learn a little about the history of the waterfront and see some of the Navy's retired fleet, all within the comfort of your own Mississippi Paddlewheeler. Upon returning to the dock a trip on a Victorian Style Trolley awaits. Enjoy the views as the past meets the present. Experienced guides will give a colorful narrative on the history that is Philadelphia. Ride through the tree-lined streets of Old City, Society Hill, Chinatown, and Philadelphia's National Park. The tour offers the ability to get on and off the trolley at selected stops all day long. This is a great way to spend a leisurely afternoon having fun and learning a little about one of the oldest cities in the county.

On Tuesday, tours of the Brandywine River Museum and Longwood Gardens are in the works for the Spouses and Guests. The Brandywine River Museum features a variety of artists of the Brandywine School with three floors of exhibits in a converted civil war era gristmill situated on the banks of the Brandywine River. Highlights include the Wyeth Family Gallery, and the Andrew Wyeth Gallery.

At Longwood Gardens, the conservatory houses 4 acres of gardens under glass. There are more than 20 individual gardens featuring the spring exhibit in the East Conservatory, the Orangery, the Mediterranean Garden, Tropical Garden, Silver Garden, Cascade Garden, and many other interesting displays of various plants from around the world. Outdoors you can enjoy 1050 acres which include the Flower Garden Walk, the Idea Garden and the Topiary.

Please mark your calendar now to attend the April 29 thru May 2, 2001 event.

Terence Foldes

Future Conferences

2000 FTC – Peoria, IL - Sept. 24-27
Hosted by Caterpillar, Inc.

2001 STC – Philadelphia, PA - Ap. 29-May 2
Hosted by Naval Surface Warfare Center

2001 FTC – Chicago, IL - Sept. 23-26
Hosted by Argonne National Lab

2002 STC – Rockford, IL - April 15-17
Hosted by Fairbanks Morse

San Antonio Welcomes 2000 STC

The ICED Spring Technical Conference was held from April 9-12, 2000 in San Antonio, Texas, at the historic Menger Hotel, close to the famed Alamo and the Riverwalk. Twelve technical sessions were attended by 162 people. The sessions included two on large-bore engines and one panel-discussion on EPA Locomotive Exhaust Emission Regulations. Others covered such topics as alternative fuels, combustion, emissions, lubrication, wear and materials, direct-injection engines, engine systems, and mechanical design. One technical session on Dimethyl Ether Fuels was jointly organized with the Japan Society of Mechanical Engineers (JSME).

The technical program began with a Keynote Address by Dr. Rodney J. Tabaczynski, Director of Ford Motor Company's Powertrain and Vehicle Research Laboratory, who presented insightful views of powertrain technologies of the future. The Conference concluded on Wednesday with a technical tour of Southwest Research Institute, the local host of the Conference. The tour was attended by 76 conference participants. In addition to the technical sessions, those attending and their guests/spouses also had plenty of opportunity to enjoy the beautiful outdoor activities in San Antonio, including a feast and dinner entertainment at La Villita Village Park with local folk dances, Mexican mariachi serenades, and great Mexican food.

Victor Wong

ASME and CIMAC Work Together

“CIMAC” is an acronym for:

Conseil

International Des

Machines

A

Combustion



Greg Gutoski and CIMAC President Stephen Dexter discuss CIMAC

Which is French for International Council on Combustion Engines. It was organized in 1950 in Paris by members of the war-torn reciprocating engine industry in Europe. Its purpose was to aid in the reconstruction of the European industry, primarily with the infusion of U.S. technical assistance (not monetary). ASME has been the only US link with CIMAC since the very beginning and is the national member organization representing the United States in the CIMAC council.

The members of CIMAC steer the activities and policies of the association and may considerably influence the activities of CIMAC. They put forward and promote items they would like to have dealt with by CIMAC as the premier worldwide organization for combustion engines.

Currently CIMAC activities rely on the following three pillars:

- CIMAC Working Groups
- CIMAC Congresses and CIMAC Days
- CIMAC as a forum to formulate common industry positions on key issues, such as:
 - exhaust emissions regulations
 - noise control
 - fuel quality and treatment
 - lube oil treatment, etc.

The CIMAC internet homepage, www.cimac.com, provides information about all of CIMAC's activities, press releases, Working Groups, etc. Improvements are currently being prepared and will be implemented during the next few months.

An important benefit of CIMAC is that the association joins together all partners of the combustion engine business including IC engine and gas turbine manufacturers, users, scientists and research organizations, component, fuel and lubricant suppliers as well as consultants and classification societies. Such a forum gives each member of CIMAC the possibility to intensify the dialogue with its customers and/or users.

CIMAC Working Groups

Whenever a CIMAC member raises a particular topic, an existing Working Group will be asked to deal with it or a new group will be established upon a decision of the Council to work on that topic. Within such an international group, experts exchange their views and formulate harmonized positions either in the so-called “CIMAC Recommendations” or by publication of articles in international magazines. The recommendations are acknowledged all over the world and accepted by international regulatory, standardization and classification bodies. Since the industry accepts the CIMAC Recommendations as guidelines for its own conduct, it is important for each country to be represented in the working groups in order to have its own position reflected and to participate in the drafting of the recommendations.

CIMAC Congresses and CIMAC Days

At the Congresses and CIMAC Days, technical papers from the gas turbine and IC engine business are presented to an international audience from all industry sections and specialized journalists. These events consequently provide an excellent forum to seek dialogue with the major players in the business, and with customers and/or competitors. During the selection process within the technical paper committees, preference is given to CIMAC members over other applicants. Furthermore, CIMAC members are granted reduced participation fees. The cost of registration at the 1998 CIMAC Conference in Copenhagen was \$1040.00 for non-members and \$890.00 for ASME members, or a savings of \$150.00 (15%). The next Congress will take place in Hamburg from 7 to 10 May 2001. If you are interested in attending, please see the CIMAC website or contact Greg Gutoski, Chair of the CIMAC U.S. National Committee at 608-364-8167.

CIMAC News

The CIMAC Newsletter with its relatively young history of four editions is intended to be the communications medium between CIMAC and its members and provides useful information on the business.

The benefits to the ASME-ICE organization and its members by virtue of our CIMAC involvement include:

- Reduction in registration fees for ASME members for CIMAC conferences & “Days”— about a \$150.00 savings per person.
- ASME-ICE receives worldwide recognition as the CIMAC U.S. member.
- Promotes interest and participation by CIMAC members in ASME-ICE conferences by attendance, paper presentations and dues-paying membership.
- ASME members have access to Working Group (WG) experts who will respond to topics submitted.
- During the selection process within technical paper committees, preference is given to CIMAC/ASME members over other applicants.
- CIMAC Working Groups are instrumental in establishing industry standards and worldwide guidelines. ASME/U.S. industry participation will ensure our “voice” is heard and can influence specification outcomes and emission standards, as an example.

The CIMAC organization is one much like our own ASME-ICED. The topics, opportunities, and benefits for ICED members have been outlined above. Please participate and take advantage of these as much as you can.

Greg Gutoski

The following awards were presented at the 1999 Fall Technical Conference held in Ann Arbor, Michigan.



David B. Aldag, P.E.
RICHARD S.
WOODBURY AWARD



Serg Gratch, Ph.D., P.E.
ASME ICE AWARD



Victor W. Wong, Ph.D., P.E.
ICE DIVISION CITATION



William E. Audette
ICE DIVISION
SPEAKER AWARD



Dan E. Richardson, Ph.D.
ICE DIVISION
SPEAKER AWARD



Saeed Soltani, Ph.D.
ICE DIVISION
SPEAKER AWARD



Carl McClung
ASME RETIRING
CHAIRMAN
CERTIFICATE



Bernard G. Richards
ICE DIVISION
MERITORIOUS SERVICE
AWARD



Raj Sekar
ICE DIVISION
MERITORIOUS SERVICE
AWARD

New ICED Associates

The Associates group of the Internal Combustion Engine Division consists of those members from our division who take active roles in accomplishing our objectives and participating in our programs. Since the publication of the 1999 ICED Newsletter, the following individuals have been elected to the Associates group. Please offer them your congratulations. If you are interested in becoming an Associate, please contact any of the ICED Executive Committee members.

Cariappa (Cary) M. Chenanda
William S. Bederaux-Cayne
Dr. Roger L. Cole
Dr. Lisheng Yang
Dr. Kevin P. Duffy
Kevin M. Moloney
Dr. Emad M. Amin
Dr. Cathy Y. Choi
Ronald J. Duda
Dr. Zoran S. Filipi
Gerald Grosshans
Dr. M. Razi Nalim
Dr. Dan E. Richardson
Thomas (Mac) M. Sine
James M. Vogt
George C. Zitka III

Cummins Engine Company
Cummins Engine Company
Argonne National Laboratory
FEV Engine Technology, Inc.
Caterpillar, Inc.
Caterpillar, Inc.
West Virginia Univ. Inst. of Tech.
Caterpillar, Inc.
AMBAC International
University of Michigan
MAN B & W Diesel AG
Purdue Univ. at Indianapolis
Cummins Engine Company
Dresser-Rand Company
Ricardo, Inc.
Dresser-Rand Company

Columbus, IN
Seymour, IN
Argonne, IL
Auburn Hills, MI
Peoria, IL
Mossville, IL
Montgomery, WV
Peoria, IL
W. Springfield, MA
Ann Arbor, MI
Augsburg, Germany
Indianapolis, IN
Columbus, IN
Painted Post, NY
Chicago, IL
Painted Post, NY

With the addition of the above 16 Associates during the last year, we now have 127 Associates. In addition, there are 12 Senior Associates, which brings the Associates group to a total of 139. Senior Associates are members who have been active in the division and are now retired or otherwise separated from their primary employment.

Bruce Chrisman

CALL FOR PAPERS
INTERNAL COMBUSTION ENGINE DIVISION of the ASME
2001 SPRING and FALL TECHNICAL CONFERENCES

Spring
April 29 - May 2, 2001
Philadelphia, Pennsylvania, USA
Hosted by
U.S. Naval Surface Warfare Center

Fall
September 23-26, 2001
Chicago, Illinois, USA
Hosted by
Argonne National Laboratory

Papers are invited for publication and presentation for topics related to all types of automotive, marine, locomotive, off-highway, and industrial engines. Papers may address any aspect of the design, development or application of compression-ignition (diesel), spark ignition, rotary or reciprocating engines. Light-duty and heavy-duty engines, as well as large-bore I.C. engine systems for power generation and transportation propulsion are welcome.

Anticipated technical sessions span the range from fundamental research to practical in-use applications. Examples of topics include, but are not limited to, combustion, noise and vibration, engine-fuel interactions, in-cylinder emission control and flow processes, exhaust after-treatment, alternative fuels, engine cooling, lubrication, fuel injection and ignition systems, engine design, control and monitoring, engine simulation and diagnostics, advanced engine concepts, component dynamics, wear, and materials.

All accepted papers will be published in Proceedings bound volumes available at the conference and papers will be considered for the Journal of Engineering for Gas Turbines and Power. Exceptional written papers and presentations will be considered for ASME IC Engine Division Conference awards. ASME review and publication policies will apply.

Please submit an abstract of the paper to the Technical Program Chairman and Proceedings Editor: Dr. Victor W. Wong, Sloan Automotive Laboratory, Massachusetts Institute of Technology, Room 31-155, Building 31, 77 Massachusetts Avenue, Cambridge, MA 02139, Phone: (617) 253-5231 Fax: (617) 253-9453, Email: vwong@mit.edu

Important Dates Are:

Spring
September 15, 2000*
November 15, 2000
January 21, 2001

Offer of Paper, One Page Abstract
Draft Manuscript Due for Review
Camera Ready Paper Due

***Contact Dr. Wong if later.**

Fall
March 15, 2001
May 1, 2001
June 20, 2001

TAKE ADVANTAGE OF THIS OPPORTUNITY — PUBLISH, PARTICIPATE AND SHARE

INTERNAL COMBUSTION ENGINE DIVISION

Founded in 1921

Executive Committee
2000 - 2001

Chairman
Terry L. Ullman
Southwest Research Institute
Ph. 210-522-2654 Fx. 210-522-3950
tullman@swri.org

Vice-Chairman, Technical Programs
Dr. Stuart R. Bell
University of Alabama
290 Hardaway Hall, Box 870276
Ph. 205-348-1644 Fx. 205-348-6419
sbell@coe.eng.ua.edu

Vice-Chairman, Administration
Steven G. Fritz, PE
Southwest Research Institute
Ph. 210-522-3645 Fx. 210-522-3950
sfritz@swri.org

Assistant Vice-Chmn, Tech. Programs
Dr. Victor W. Wong, PE
Massachusetts Inst. Of Technology
Ph. 617-253-5231 Fx. 617-253-9453
vwong@mit.edu

Assistant Vice-Chmn, Administration
Greg Gutoski
Fairbanks Morse Engine Div.
Ph. 608-364-8167 Fx. 608-364-8233
gutoskig@fairbanksmorse.com

New Member, Technical
Neil X. Blythe
Fairbanks Morse Engine Div.
Ph. 608-364-8017 Fx. 608-364-8233
blythen@fairbanksmorse.com

Secretary
James H. Garrett, PE
Garrett Technical Services
Ph. 210-493-7738 Fx. 210-493-6203
jgarr8907@aol.com

Treasurer
Paul R. Danyluk
Danyluk Technical Services, Inc.
Ph. 814-774-8586 Fx. 814-774-8798
paulmary@erie.net

Past Chairman
Dr. Teoman Uzkan
Electro-Motive Division, GMC
Ph. 708-387-6991 Fx. 708-387-3530
teoman.uzkan@gm.com

Technical Committees and Activities
Advanced Technology
Dr. Rameshwar P. Sharma
Western Michigan University
Kalamazoo, MI 49008-5068
Ph. 313-336-4953 Fx. 313-336-7719

Applications and Operations
Christian Haller
MPR Associates, Inc.
Ph. 703-519-0560 Fx. 703-519-0224
challer@mpra.com

Environment
Malcolm Payne
Engine Systems Development Center
Ph. 514-634-8916 Fx. 514-634-3932
m.payne@netaxis.qc.ca

Fuels & Combustion
Bernard G. Richards
Caterpillar, Inc.
Ph. 309-578-8787 Fx. 309-578-4232
richards_bernierie_g@cat.com

Instrumentation & Controls
Keith Brooks, PE
Altronic, Inc.
Ph. 330-545-9768 Fx. 330-545-9005
sales@altronic.com

International Technical Affairs
Karl J. Springer, PE
Ph. 210-493-7279
AnnKarl@stic.net

Lubrication & Friction
Dr. Dan E. Richardson, MC 50174
Cummins Engine Co., Inc.
Ph. 812-377-4474
Dan.E.Richardson@cummins.com

Engine Design
Jerry Schenkel
Briggs & Stratton Corporation
Ph. 414-256-5187 Fx. 414-259-5682
Schenkel.jerry@basco.com

Quality/Reliability
Joseph R. Barcroft, PE
Dana Corporation
Ph. 616-724-1675 Fx. 616-724-1941
jbarcroft@danavictor.com

Associate Editor, Journal of Engineering for Gas Turbines & Power, and Journal of Engineering for Turbomachinery
Dr. Dennis N. Assanis
University of Michigan
Ph. 734-763-7880 Fx. 734-764-4256
assanis@umich.edu

Administrative Committees and Activities

Group Operating Board Representative
Terry L. Ullmann

Group Operating Board Alternate
Dr. Stuart R. Bell

Newsletter
A. H. (Tony) Siegel
Dynalco Controls
Ph. 970-226-3795 Fx. 970-226-3791
tsiegel@dynalco.com

ICE World Wide Web
Dr. Chris Rutland
University of Wisconsin- Madison
Ph. 608-262-5853 Fx. 608-262-6707
rutland@me.engr.wisc.edu

Paper Presentation Rating
Walter R. Taber, Jr. PE
Ph. 713-782-7832 Fx. 713-784-1910

CIMAC U.S. National Committee
Greg Gutoski, Chair

Membership Development and Member Interest
Harold L. Harris
HIS Emission Reduction Systems
Ph. 281-463-8883 Fx. 281-463-8951

Nominating
Bruce M. Chrisman
Cooper Energy Services
Ph. 937-327-4411 Fx. 937-327-4388
bmchris@cooper-energy-services.com

Honors & Awards
Abnash C. Narula, PE
Wm. W. Nugent & Co.
Ph. 847-674-7782 Fx. 847-674-0379
a.narula@wwnugent.com

Meetings Coordinating
Steven G. Fritz

Publicity
Joseph M. Kane
Diesel & Gas Turbine Publications
Ph. 414-784-9711 Fx. 414-784-8133
jkane@dieselpub.com

Operating Guide & By-Laws
Steven G. Fritz

Government Relations
James Vogt
Ricardo, Inc.
Ph. 630-789-0003x222 Fx. 630-789-0127
jvogt@ricardo-us.com

Lectures
Dr. Madan Goyal
Goyal Technical Services, Inc.
Ph./Fx. 319-277-1185
mgoyal@cfu.net

Long Range Planning
Steven G. Fritz

ASME Staff
John Bendo
Engineering Programs
ASME International
Ph. 212-591-7055 Fx. 212-591-7671
BendoJ@asme.org