PETROLEUM DIVISION

Dedicated to the Industry

The Petroleum Division (PD) of ASME was founded in 1924 to serve mechanical engineers choosing a career in the oil & gas industry. As a member division of IPTI, the division plans and delivers conferences, events and continuing education for mechanical engineers working primarily in the upstream industry. We have a number of long-standing conferences that we deliver or co-sponsor each year, including the Offshore Technology Conference (OTC), and several networking/fundraising events such as our OTC Golf Tournament, the ASME/University of Houston Crawfish Boil and our Sporting Clays Tournament. We strive to keep our members current with the latest developments in our industry by organizing specialty events such as this year’s Subsea Integrity Management Forum and participating in the two new OTC events, the Arctic Technology Conference and OTC Brasil. Additionally, our Continuing Education short courses feature the industry’s leading professionals and experts focusing on cutting-edge technology.
In addition to educating our current members and keeping them informed of the latest developments in oil & gas industry-based mechanical engineering, the PD is proud of the programs we offer that support both ME students and Early Career engineers. It is this effort that drives our continuing efforts and growth.

Each year, our award-winning Collegiate Council program invites approximately a dozen ME majors from North America to a pair of industry-focused weekends. This exclusive group is provided with the opportunity to plan and complete a project that expands their knowledge of the oil & gas industry. Both weekend sessions include site visits and shop tours. The program culminates with presentation of their project results to industry leaders. The Collegiate Council is one of the most coveted ASME programs open to students. Many of our student members have secured future employment through their participation in the program.

We’re also extremely proud of the PD’s scholarship program. This year, our scholarship and charitable giving to students and Universities will total approximately $200,000. If you are a high school, college or graduate student focused on Mechanical Engineering in the energy sector, you’ll find a scholarship application on our website at www.asme-ipti.org.

The resurgence of our Early Career programs, designed to support the needs of our recent graduates, promises to be equally successful. These include industry networking opportunities and seminars that facilitate the education and broadening of their general understanding of the oil & gas industry.

**Deadline for 2012 - 2013 scholarship application – June 15, 2012**

**Deadline for 2012 - 2013 Collegiate Council application – August 15, 2012**

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**Student Program Information**

Currently, ASME has several student programs sponsored solely by our golf tournament, sporting clay tournament and team pistol shoot events.

**Scholarships:** At ASME-IPTI’s Petroleum Division, we believe that outstanding engineering begins with a solid educational foundation. We awarded $68,000 in scholarships this year to promote student interest in engineering in the industry and to help students reach their academic goals.

**Student Intern:** The student intern attends PD Executive Committee Board meetings and chairs the Collegiate Council meetings for a year. As the head of the Collegiate Council, the intern also serves as the liaison between the Collegiate Council and the IPTI staff.

**Collegiate Council:** The Collegiate Council is an integral part of ASME-IPTI’s planning for the future. This assembly of students, representing their respective North American universities, provides the ASME-IPTI with feedback as to the needs of students interested in pursuing careers in the oil & gas industry. The Council’s award-winning benefit to the industry has earned wide-ranging recognition.

**Other Activities/Benefits:** ASME also sponsors a variety of other educational and fun-filled activities designed to support life-long learning and to provide students with the competitive advantages they need for successful careers. These include regional student conferences (hosted by a different school each year) in which students discuss various industry topics, as well as participate in design, technical and writing competitions.
Collegiate Council’s “Mr. Charlie” Platform nomination wins recognition as a Historical Mechanical Engineering Landmark.

Based on nominations prepared by the Collegiate Council of the IPTI’s Petroleum Division and “Mr. Charlie” Platform museum director, Virgil Allen, ASME’s History and Heritage committee recently recognized the famous platform as a Historical Mechanical Engineering Landmark. Future issues will fully describe this award and the future for “Mr. Charlie” Platform, one of the industry’s earliest transportable, submersible drilling platforms.

The Offshore Technology Conference: An Industry Mega-Event

Founded in 1969, the Offshore Technology Conference is the world’s premier event for presenting new technology, equipment and services supporting the development of offshore resources in the fields of drilling, exploration, production and environmental protection. OTC is held annually at Reliant Center in Houston, ranks among the largest 200 trade shows held annually in the United States, and is among the 10 largest meetings in terms of attendance (50,000+). More than 2,000 companies participate in the exhibition and attendees include representatives from more than 110 countries.

The Petroleum Division of ASME is one of 12 industry organizations and societies that work cooperatively to develop the technical program each year. Our OTC subcommittee, co-chaired by Jean-Francois Saint-Marcoux and Doreen Chin, reviews more than 1,000 abstracts and final papers chosen for presentation each year. Each year, the Petroleum Division reviews and selects submissions for the Arthur Lubinski Best Paper Award. We are pleased to present on the following page the abstract of the 2011 Lubinski paper from OTC focusing on a Brazilian project, “Field Validation and Learning of Parque das Conchas (BC-10) Subsea Processing System and Flow Assurance Design.”

The newest OTC event, OTC Brasil, is planned for October 4-6, 2011 in Rio de Janeiro. Similar to OTC in Houston, this is a multi-society effort to bring the world’s leading offshore experts together in a learning and sharing environment. We hope to see you there.
Field Validation and Learning of the Parque das Conchas (BC-10) Subsea Processing System and Flow Assurance Design

C. Deuel, Y. D. Chin /Shell Intl E&P J. Harris, J. Germanese, /Shell Brasil E&P and N. Seunsom /Shell Intl E&P
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This paper was prepared for presentation at the Offshore Technology Conference held in Houston, Texas, USA, 2–5 May 2011.

This paper was selected for presentation by an OTC program committee following review of information contained in an abstract submitted by the authors. Contents of the paper have not been reviewed by the Offshore Technology Conference and are subject to correction by the authors. The material does not necessarily reflect any position of the Offshore Technology Conference, its officers or members. Electronic reproduction, distribution, or storage of any part of this paper without the written consent of the Offshore Technology Conference is prohibited. Permission to reproduce in print is restricted to an abstract of not more than 300 words; illustrations may not be copied. The abstract must contain conspicuous acknowledgment of OTC copyright.

Abstract
Parque das Conchas (BC-10) is a deepwater development offshore Brazil. A novel Caisson / Electrical Submersible Pump (ESP) subsea separator (gas/liquid) and pumping system to enhance production and maximize recovery has been utilized as part of the development of two of the fields (Ostra and Abalone). A third field, Argonauta B-West, utilizes multiphase boosting with a modified Caisson/ESP (C-ESP) system to operate with a single, non-separated multiphase outlet. These novel designs have significantly impacted system and flow assurance engineering such as separator level control, hydrate mitigation, system operability and chemical injection. The fields have been successfully started up with production through the subsea processing system since late 2009.

This paper outlines the performance of the subsea processing and production system from the perspective of flow assurance, and presents comparisons of the actual operating performance to design expectations. Learnings from key factors that strongly impact the production system operability and operational strategies are discussed, including the achieved separation efficiency of the caisson, the impact of defoamer performance on caisson operation and the importance of the hot oil circulation system.

Read the complete paper at: www.asme-ipti.org/lubinski/

6th Annual International Offshore Pipeline Forum and Short Courses

October 17 – 20, 2011, Houston, Texas

This annual ASME-IPTI forum addresses the increasing challenges faced by the oil & gas industry in offshore pipeline design, construction, installation and maintenance.

Forum sessions and papers focus on new methods and technologies, best practices, lessons learned, as well as the latest regulatory requirements from local, state and federal bureaus. An exhibition and continuing education courses are also featured. The forum serves to transfer knowledge to the next generation of people and projects.

Forum attendance is recommended for oil & gas company executives, managers, engineers and contractors as the event features multiple opportunities to meet industry leaders, exchange ideas and network.

For more information please visit the forum website: www.asme-ipti.org/iopf
**Forum on SURF Integrity Management**

**November 14-16, 2011 Houston, TX**

Presented by SUT and ASME-IPTI

This event brings together the diverse disciplines of subsea integrity, and reliability and inspection technology in a collaborative lessons-sharing environment. The subject of Subsea Integrity Management (IM) is one of increasing interest in the offshore industry and an area of significant technology development in recent years. As leading non-profit industry organizations, SUT and ASME-IPTI are addressing the current challenges facing our members in SURF IM.

**Continuing Education – The IM & Reliability for Subsea Systems: Full Life Cycle–Design to Decommissioning**

This course will discuss and address current IM challenges. Reliability and IM Risk tools and processes will be presented. All stakeholders’ roles will be discussed and students will be involved in an interactive workshop involving real work IM & reliability challenges. Course attendees should be experienced subsea professionals involved in operations or projects from design to decommissioning.

For more information on the forum, exhibition and continuing education please visit the website: www.asme-ipti.org/surfm

**ASME-IPTI Annual Awards Dinner**

**November 8, 2011, Houston, TX**

The International Petroleum Technology Institute of ASME is hosting the 16th Annual Awards Dinner on Tuesday, November 8, 2011, at The Hilton of the Americas in downtown Houston. The proceeds for this dinner benefit the society’s student programs.

The Rhodes Petroleum Industry Leadership Award, named for former ASME International president and PD chair, Allen R. Rhodes, was established by the PD as an award for significant contribution to the petroleum industry demonstrated through management and motivational skills, entrepreneurship, innovative methods and outstanding leadership within the corporate structure, and in the industry as a whole.

The Rhodes Petroleum Industry Leadership Award will be presented to Susan Cunningham, Senior Vice President of Exploration at Noble Energy and the Chair of the Offshore Technology Conference (OTC) 2010-2011.

Susan Cunningham
Senior Vice President, Exploration
Noble Energy, Inc.

Susan Cunningham has been responsible for exploration worldwide for Noble Energy since April 2001. Previously, she served as Texaco’s vice president of core worldwide exploration from April 2000 to March 2001, and was employed by Statoil from 1997 through 1999 where she advanced from exploration manager for deepwater Gulf of Mexico to vice president. In 1999, she assumed responsibility for Statoil’s West Africa exploration efforts.

She began her career in 1980 in Calgary as a geologist at Amoco Canada, and moved to Amoco’s International Region in Houston in 1981 where she held various exploration and development positions until 1994, including general manager – Denmark, based in Copenhagen. She later became exploration manager deepwater Gulf of Mexico in 1995 until 1997.

Active in the industry and the community, Susan served as chairman of the Offshore Technology Conference (OTC) in 2010 and 2011, representing the American Association of Petroleum Geologists (AAPG). She was elected to the board of Cliffs Natural Resources, an iron ore and metallurgical coal mining company in 2005. She also has served on the boards of the Houston Area Women’s Center and the Houston Geology Society. In 2011, Susan was selected to serve on the AAPG Advisory Board. Susan earned a bachelor’s degree in geology and physical geography from McMaster University in Ontario, Canada. She also has completed a management program through Rice University’s Office of Executive Development.

For information on the Awards Dinner, please visit www.asme-ipti.org
ASME-IPTI Annual Awards Dinner (Cont.)

November 8, 2011, Houston, TX

The Shell Parque das Conchas project will be presented the Project Excellence Award. The award recognizes excellence in engineering, project management and acknowledges innovative projects. It highlights the importance of professional engineering and project management in achieving high performance in projects.

Established in 2011, the Outstanding Faculty Advisor Award will go to Dr. Jeff Hanson of Texas Tech University. His dedication to his students and support of their burgeoning engineering careers has made a difference in a great number of young lives. We are extremely pleased to present him with this inaugural award.

Other awards scheduled to be presented are the Silver Patent Award, the Ross Kastor Educator’s Award and the Keith Thayer Early Career Award.

4th Annual Fun Team Pistol Shoot

January 20, 2012, Conroe, TX

This event, which benefits the PD’s student scholarships and programs, is designed to improve your shooting skills in less than a day while enjoying the company of customers, friends and associates.

The Way to Predict the Future is to Create It.

Please help us with your support of these programs through committee involvement, donations of raffle prizes or sponsorships. The proceeds of this tournament will benefit the society’s student programs.

For more information about the shoot please visit www.asme-ipti.org/pistol-shoot

2012 Gas-Lift Workshop

February 6-10, 2012, Houston, TX

The Technical Workshop will focus on field reviews, new technology, offshore, deepwater, subsea and regulations. The API and ISO will hold their meeting on the last day of the workshop. Sponsorships and exhibit booths are currently available. Continuing Education Courses will include:

- Gas-lift Design
- Gas-lift Troubleshooting
- Gas-lift Automation
- Full Field Automation

ASME India Oil & Gas Pipeline Conference

February 3 – 5, 2011, Goa, India

To meet the needs for networking, international cooperation and international best practices, ASME-IPTI proudly presented the 3rd ASME India Oil & Gas Pipeline Conference in February 2011. A sellout audience of 200 participated for two and a half days in the beautiful resort town of Goa.

This unique and exclusive event is developed by dedicated ASME Members in India in cooperation with ASME Pipeline Systems Division members globally. Designed by engineers for engineers, the conference provides a forum for the transfer of global best practices and standards while securing India’s position as a leader in pipeline technology.

Planning for the 2013 conference is now underway. The call for papers will soon be issued.

For current information, please visit the conference webpage at www.asme-ipti.org/pipeline-division/india/

Pipeline Engineer Continuing Education

Professional development courses offered by PSD focus on a wide variety of topics covering the full pipeline life-cycle including:

- Feasibility • Design • Construction • Operations
- Maintenance • Rehabilitation • Decommissioning

World-renowned industry experts cover these important issues, all relevant to the future of pipeline engineering.

Upcoming Training:

- **October 31-November 4, 2011** - Southern California – (Pipeline Design, Construction, and Assessment; Integrity Management; and In-Line Inspection)
- **March 2012** - Tulsa, Oklahoma – (Topics TBD)

For more information, please visit asme-ipti.org and click on Continuing Education.

2012 International Pipeline Conference

September 24-28, 2012
Calgary, Alberta, Canada

Planning for the 2012 IPC event is underway with a call for papers now issued. Technical Tracks have been developed to enhance the opportunities for attendees to discuss the topic areas of their choice with industry leaders.

Topic areas include, but are not limited to:

- Design & Construction
- Environmental Issues
- Facilities Integrity
- GIS/Database Development
- Materials & Joining
- Operations & Maintenance
- Pipeline Automation & Measurement
- Pipeline Integrity Management
- Pipelining in Northern and Offshore Environments
- Production Pipelines
- Project Management
- Risk & Reliability
- Standards & Regulations
- Strain-Based Design

For more information, please visit www.internationalpipelineconference.com
The 30th International Conference on Ocean, Offshore and Arctic Engineering (OMAE 2011) was successfully organized in Rotterdam, The Netherlands, Europe’s largest port and the base of a large number of world-renowned offshore companies. The opportunity to view actual offshore structures during the conference made it a unique experience for the 1,125 attendees who also participated in 208 technical sessions during 23 technical symposia. More than 800 papers were presented during this year’s event.

For 30 years the OMAE has been the ideal forum for researchers, engineers, managers, technicians and students from scientific and industrial communities all over the world. At OMAE, they can meet and present their progress in technology and scientific support, exchange ideas and experiences while promoting technological progress and its application in industry, and promote international cooperation in ocean, offshore and arctic engineering.

Please look for further information and the call for papers on the conference website. www.omae2012.com

Each year, the Ocean, Offshore and Arctic Engineering Division (OOAE) of the IPTI hosts a specialty forum at the International Conference on Ocean, Offshore and Arctic Engineering (OMAE). This specialty forum is designed for students who may or may not be familiar with the industry and also for those who have already specialized in the area. Highlights of the forum include presentations of the various required technologies such as geosciences, mechanical/structural engineering and project management among others, types of job opportunities and possible career paths, as well as site tours. Networking and team building events not only educate but make Outreach a fun experience.

The Outreach for Engineers Forum just completed its fifth annual event at OMAE in Rotterdam, The Netherlands. Twenty student participants from 15 different countries received sponsorship to attend both the forum and the OMAE conference. Apply today for the 2012 Outreach program at OMAE in Rio de Janeiro.

You can find further information on the conference website www.omae2012.com

30th OMAE in Rotterdam: The Offshore Experience!

Upcoming OMAEs

2012 – Rio de Janeiro, Brazil
2013 – Nantes, France
2014 – San Francisco, CA, USA
2015 – St. John’s, Newfoundland

Is your city interested in hosting OMAE in 2016?

Please visit www.ooae.org for details.

Outreach for Engineers Speciality Forum at OMAE

“It was an unforgettable experience being a member of Outreach program.”

“The Outreach Forum has done a very nice job and I hope there is a chance to attend it again and make some contributions to it one day.”

– Comments from Outreach 2010 attendees
## 2011-2012 IPTI Events

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### ASME-IPTI Short Courses* Globally Available

Get the best training available with ASME-IPTI's career-building short courses taught by world-renowned experts. Topics include the latest technologies on the petroleum, pipeline, ocean, offshore and arctic engineering fields.

#### Engineering Ethics in Action
- March 16, 2011 - Online webinar
- May 26, 2011 - Online webinar
- September 28, 2011 - Classroom (Houston)
- November 3, 2011 - Online webinar
- December 7, 2011 - Classroom (Houston)

#### Flow Assurance
- October 18, 2011 - IOPF 2011 (Houston)

#### Fundamentals of Deepwater Project Development
- June 19, 2011 - OMAE 2011, Rotterdam
- October 17, 2011 - IOPF 2011, Houston

#### Fundamentals of Deepwater Riser Engineering
- June 19, 2011 - OMAE 2011, Rotterdam
- October 18, 2011 - IOPF 2011, Houston

#### Fundamentals of Dynamic Positioning
- June 19, 2011 - OMAE 2011, Rotterdam

#### Fundamentals of Model Testing
- June 18, 2011 - OMAE 2011, Rotterdam

#### Ice Engineering
- June 18, 2011 - OMAE 2011, Rotterdam

#### Pipeline Engineering: Design, Construction & Assessment
- March 7-8, 2011 - Tulsa, OK
- August 22-23, 2011 - Calgary, Alberta, Canada

#### Pipeline Engineering: Design & Construction
- September 19, 2011 - Rio Pipeline Conference, Rio de Janeiro

#### Pipeline Engineering: In-Line Inspection
- March 10, 2011 - Tulsa
- August 25, 2011 - Calgary

#### Pipeline Engineering: Integrity Management
- March 9, 2011 - Tulsa
- September 19, 2011 - Rio Pipeline Conference, Rio de Janeiro

#### Pipeline Engineering: Operations & Maintenance
- September 19, 2011 - Rio Pipeline Conference, Rio de Janeiro

#### Subsea Pipeline Design Overview
- October 17, 2011 - IOPF 2011, Houston

* Courses and dates are subject to change.

In addition to the public courses offered above, classes can be customized to meet your company’s needs. For registration and additional course information, please visit our website at www.asme-ipti.org.

If you have questions, please contact Melanie Diaz at diazm@asme.org or 281-493-3491.

ASME-IPTI
11757 Katy Freeway, Suite 865
Houston, TX 77079
Dear ASME Colleagues,

I am confident that this special section for the International Petroleum Technology Institute has provided you with greater insight into the exciting member-driven, year-round activities of our three divisions. The commitment of our enthusiastic volunteers combined with the diligence of our dedicated staff in Houston guarantees the continued growth and success of our programs in the future as we work to fulfill the missions of ASME and our divisions.

The world’s energy-related industries are growing exponentially to meet rising demand. Mechanical engineers play, and will continue to play, an important role in powering the world for the next century – and our goal is to keep our three divisions at the forefront of the new technologies that promise to make it happen.

We of ASME/IPTI view our charter as a call to action to attract more young people into engineering to replenish our aging workforce. Accordingly, many of our programs provide scholarships, guidance and mentorship for students and young professionals. Our Continuing Education programs are designed to help the engineering workforce stay current with new technologies, procedures and regulations. If you are an ME in the energy industry, chances are good that a number of our public, private and web-based courses will interest you.

If you would like to participate, please visit our website at www.asme-ipti.org to learn more. You’ll find all the course, registration and scholarship information you need, in addition to industry news and announcements.

In future special ASME/IPTI sections in ME magazine, we’ll update you on our continuing programs as well as give you advance notice of our new and exciting worldwide conferences, events and education programs.

We look forward to working with you very soon.

Best regards,

Kenneth J. Bayne
Chair - ASME International Petroleum Technology Institute

First Production - Jubilee FPSO, Offshore Ghana