AIChE The Global Home of Chemical Engineers

Baton Rouge Newsletter

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The *AIChE Baton Rouge Newsletter* is published monthly, from September to June, by the AIChE Baton Rouge Section, 110 Chemical Engineering, LSU, Baton Rouge, LA 70803. It is distributed free of charge to members of the Baton Rouge Section of the American Institute of Chemical Engineers.

Membership Fee: $15.00/yr.

April Meeting

Date: Thursday, April 19, 2018

Place: **Process Pumps and Equipment**, 36558 Highway 30, Geismar, LA

Topic: *All you would like to know about pumps*

Speaker: **Kyle Dugas**, PPE

Agenda: 5:30 – Registration and Social
6:00 – Dinner and Speaker

Menu: PPE will provide the food. .

Cost: Free

RESERVATIONS

Please make your reservation with chapter secretary, Chelsea Bourdon, **by 5:00 PM on Tuesday, April 17** at CBourdon@Hargrove-EPC.com

No reservations required. Bring a friend.

Professional Engineering Certification

The subject of this meeting is an acceptable activity for continuing Professional Development as defined by LAPELS and is **approved for one (1) PDH unit.**

The Baton Rouge AIChE chapter is NOT responsible for individual record keeping of PDH credits. Certificates must be obtained at the meeting by the individual.

Other Upcoming 2018 Events / Speakers

Th. April 12 5:30-7:30 PM. Networking Happy Hour with financial planning presentation by Compass Capital Management, Bengal Tap Room, 421 3rd St, co-hosted by LSU Student Chapter.
Fr. May 18 Seminar on Combustion Technology and Ethics, Oak Lodge, 8 PDHs.

If you or your colleague(s) would like to give a technical presentation at an upcoming chapter meeting for 2 professional development hours (PDHs), please contact Chapter Chair, Donna Bryant, at Donna.Bryant@Syngenta.com to schedule a meeting date and time.

March Meeting Topic

Process Pumps and Equipment, better known as PPE, is a company that focuses on pumps and their auxiliary equipment. Founded in 2004, their mission is to provide technical expertise on the repair and optimization of pumps in the Gulf South. They have a large pump inventory and experienced staff to help with "bad actor" pumps and normal maintenance.

At the AIChE meeting, Kyle Dugas will be showing the internals of a wide variety of pumps, demonstrating how a variety of pumps physically work using a water and bead plastic tank system, and walking attendees through how to best troubleshoot pumps. In addition to focusing on how the physical pump works, Kyle will also be reviewing how to read pumps sheets for both centrifugal and positive displacement pumps. This session will be for the new and experienced engineer since it will focus on some basic chemical engineering skills and showcase some new considerations when working with pumps.

For more information check http://ppe-corp.com.

Recap of the March Meeting



At the March meeting **John Laurence Busch** treated us to a most entertaining and informative talk on the building of the first steamship in history. The first steamboat was developed by Fulton and Livingston to travel the Hudson and East rivers circa 1806, but the first steamship, the Savannah, was the brainchild of Captain Moses Rogers who developed it to cross the Atlantic Ocean (1818-1819). Rogers used three different contractors to build the different parts of the ship and the engine, each contractor considered the best in the parts they were assigned. He used live oak for the hull because it is the densest wood, and copper to sheath the wood because it is easy to clean. He used hemp and flax instead of cotton for the sails (sails were necessary in case the engine failed). Cast iron was used for the steam cylinder, but wrought iron for the moving parts of the drive train, because it contains less impurities and can be shaped into smooth parts. Cheap wood, pine, was used for fuel, and low-pressure steam (30-40 psig) was used to insure the safety of the passengers. Iron was used for the boiler instead of copper because of its lower cost, and, although it had to be replaced every two to three years, the new boiler would take advantage of more advanced technology that at the time was advancing rapidly. The use of salt water to produce the steam caused the boiler to corrode rapidly. You can get more details from Busch's book, *Steam Coffin*, and at his website steamcoffin.com. The envious mariners in New York gave the nickname to the ship.

Deadline for Dinner Meeting Flood Victims Exemptions

Since the 2016 flood the Section has granted flood victims exemptions from paying the cost of the monthly dinner meetings. The Executive Committee voted to end the exemptions after June 30, 2018.

A leader takes people where they want to go. A great leader takes people where they don't necessarily want to go, but ought to be. ***--Rosalynn Carter***

From the Chapter Chair's Pen

One of the great things about being a part of the Baton Rouge AIChE Chapter is being able to attend sessions that introduce you to chemical engineering operations in the area with plant tours (ex: BASF and Cane Lane Distillery), expand your knowledge on engineering principles (ex: steam systems and process safety topics), and help you apply base knowledge to new principles (learn how steam was used in a cross Atlantic steamship and what new discoveries are happening at LIGO).

Over the last couple of months, we have been focusing on a few basic topics that all engineers should know and keep in their back pocket: steam systems and using carbon in adsorption systems. We will be continuing on this focus in April as we have a hands-on presentation by Process Pumps & Equipment (PPE) about pumps on Thursday, April 19th starting at 5:30 pm. PPE will show a wide variety of pumps that have been cut in pieces to reveal their internals, demonstrate how different types of pumps work, and teach how to read a pump curve. The meeting will take place at PPE's shop off of Hwy 30 and will include a dinner provided by PPE. I encourage all of you, whether your time out of school is not even a year or you are retired, come on out and check out PPE's pump training demonstration. Bring a friend since it will be fun. The meeting should be pumping with all kinds of information!

If you have any topics or tours that you would like to see featured at one of monthly meetings, please don't hesitate to contact me. I am starting to work on presentations we will see in the fall.

See you at the April meeting!

Donna Bryant, 2018 Chair

150 years

BASF

We create chemistry

2018 Section Contacts

Officers

Chair:	Donna Bryant, Donna.Bryant@Syngenta.com
Vice Chair:	Vishal Vora, VVVora@Gmail.com
Secretary:	Chelsea Bourdon, CBourdon@Hargrove-EPC.com
Treasurer:	Jimmy Orr, Jimmy.Orr@Jacobs.com

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Awards:	Dal Dalferes, Joseph.Dalferes@jacobs.com
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Sponsorship:	Stephen Reilly, Stephen.Reilly@emerson.com

Why Should You Join the Local AIChE Chapter?

1. It is a welcoming presence to new chemical engineers in the area.
2. It provides a neutral ground mentorship toward career directions and other life topics.
3. It facilities a better understanding of local, state, and federal policies related to our professions.
4. It offers a smooth transition for graduating chemical engineers from LSU, ULL, and other nearby universities who start working in the area.

AIChE Baton Rouge Spring / 2018 Seminar

Combustion Technology Seminar
+ Engineering Ethics

MORNING SESSION: Thermal Oxidation Technologies / NOx Minimization / Flameless Thermal Oxidation Technologies / Bio Oxidation

Topic Description

Design Fundamentals for Oxidation Technologies
An overview of common oxidation technologies, the input/output information required to select the correct oxidation technology for the application and the typical design parameters used to properly design and engineer an oxidation system. The presentation will cover the basic fundamentals and associated steps required to develop a compliant system.

Multi-Stage Thermal Oxidizer – NOx minimization
General overview of the need to reduce NOx emissions, NOx formation mechanisms and how to minimize NOx formation within the combustion process with primary focus on Multi-Stage Thermal Oxidation. Basic description of the technology, its functionality and how it effectively reduces NOx emissions.

Flameless Thermal Oxidation – An Innovative Technology
An overview of the technology, design parameters, functional characteristics and the performance values. A high removal efficiency, 99.9999% DRE and very low NOx emission levels, < 1ppmv.

Bio-Oxidation Technology for the treatment of Industrial Air
Basic technological overview, functionality, and general operational parameters needed to successfully treat air borne VOC's biologically.

AFTERNOON SESSION: New Flare Compliance Regulations for Refineries / Flare Monitoring Technologies / Engineering Ethics

Topic Description

Flare Compliance Regulations – Overview of New Flare Compliance Regulations for Refineries
A Consultant's Presentation: Your refinery only has until January 30, 2019, to bring your flares into compliance with new § 63.670 "Requirements for Flare Control

Flare Monitoring Systems

There was no instrument that could directly monitor flare performance and provide feedback to optimize flare operations. A new technology has been developed to answer this challenge. The new technology is called "Video Imaging Spectral Radiometry" (VISR). VISR monitors flare combustion efficiency directly, remotely, autonomously, and continuously. It also monitors smoke in the flare flame. With both combustion efficiency and smoke level information, operator can achieve "incipient smoke point" operation, which has the highest combustion efficiency without smoke, and have lowest energy consumption and emissions. VISR can be integrated into flare instrumentation to achieve close loop control.

Engineering Ethics

A Presentation on Engineering Ethics

Combustion Technology Seminar
+ Engineering Ethics

Friday, May 18, 2018
8:00AM – 5:00PM

Location: Oak Lodge Reception & Conference Center
2834 S. Sherwood Forest Blvd. Suite E-1 Baton Rouge, Louisiana 70816, (225) 291-6257

Earn 8 PDH's! Enrollment is Limited! Sign-Up Early!

REGISTRATION FORM

NEW! Register online at www.aiche-br.org and pay by credit card using PayPal, or mail this completed form with payment to the address below.

NAME: _____

MAILING ADDRESS: _____

CITY: _____ **STATE:** _____ **ZIP:** _____

COMPANY: _____

EMAIL: _____ **PHONE:**_____

TECHNICAL/PROFESSIONAL SOCIETY MEMBERSHIP*: (must indicate)_____

COST:
(Please check appropriate box)

- ☐ $85/person for Tech/Prof Society Members* prior to 13-May-18
- ☐ $95/person for non-Tech/Prof Society Members prior to 13-May-18
- ☐ $110/person for all after 13-May-18

MAIL COMPLETED REGISTRATION FORM TO:
Armand Melikyan (Seminar Coordinator), P.O. Box 84787, Baton Rouge, LA 70884
Email: **armand_melikyan@hotmail.com** **Phone:** (225) 773-0468
(Please include check if that is your payment option)

Check or cash only, no credit cards on event day

Walk-ins welcome space permitting.

*The AIChE supports membership in Professional and Technical Societies (see list below)

Refund Policy: Advance registration is 100% refundable with notice at least 12 days prior to the date of the seminar. Notice received between 09-May-2018 and 17-May-2018 is 50% refundable. No refunds on day of the seminar. Cancellation: AIChE reserves the right to cancel this seminar if low attendance is projected. A full refund will be sent in this event.

EVENT: Combustion Technology Seminar (7 PDHs);
+ Engineering Ethics (1 PDH)

DATE: May 18th, 2018

PROPOSED AGENDA:

7:30 A - 8:00 A Breakfast

8:00 A –11:30 A Thermal Oxidizers (PCC Combustion /ONYX)

11:30 A – 12:30 P Lunch (provided by AIChE)

12:30 P – 1:30 P New Flare Compliance Regulations for Refineries (Providence)

1:30 P – 4:00 P Flare Monitoring Systems (Providence)

4:00 P – 5:00 P Engineering Ethics (Jacobs)

Presenters:

Mr. Scott Burge, Vice President Sales/Application Engineering
Process Combustion Corporation – Oxidation Technologies
Email: sburge@pcc-group.com | Phone: (412) 655-0955 | www.pcc-group.com
Scott has been with PCC for 29 years working in the areas of Project Management, application engineering and sales. He has worked on the advancement of the combustion technologies to include air heaters, thermal oxidation and regenerative technologies.

Mr. Nick Disanti, Product Manager, Flameless Oxidation
Process Combustion Corporation – Oxidation Technologies
Email: ndisanti@pcc-group.com | Phone: (412) 655-0955 | www.pcc-group.com
Nick holds a B.S. Degree in Chemical Engineering from the University of Pittsburgh with a Master's in Business Administration from Penn State. He has significant experience in combustion application engineering and has been instrumental in the optimization and commercialization of PCC's Flameless Thermal Oxidizer technology.

Mr. Michael Foggia, Business Development/Marketing Manager
Process Combustion Corporation – Oxidation Technologies
Email: mfoggia@pcc-group.com | Phone: (503)799-2372 | www.pcc-group.com
Mike has 30 years of experience in the technical marketing and business development functions associated with air pollution control equipment. The past 10 years have been focused on thermal and biological technologies.

Mr. Robb Pulaski, President/CEO of ONYX Process Equipment
Email: robb@onyxequipment.com | Phone: (214)415-1979 | ONYX Process Equipment, LLC

With over 30 years of experience in the industrial, refining, chemical, power, paper, and environmental controls industries, Robb has significant knowledge specific to the design and implementation of process solutions needed to address complex emissions projects.

Dr. Yousheng Zeng Ph.D. P.E. serves as Chief Executive Officer of Providence Photonics and a Board Member of Providence Holding Inc.
Dr. Zeng received his Ph.D. degree in Environmental Engineering in 1990 from the University of Illinois at Urbana-Champaign. He is an author/co-author of 21 peer-reviewed journal articles and an inventor/co-inventor of 15 patents or pending patents. He was adjunct professor from 1996 to 2001 at Southern Methodist University teaching graduate level courses on air pollution control. Dr. Zeng served on three committees/panels under the U.S. EPA Science Advisory Board. In recent years, he has been working on Infrared imaging based technologies to detect, measure, and control hydrocarbon emissions.

Mr. Jimmy Orr, P.E. – Jacobs Engineering / AIChE BR Sect Committee Member
Jimmy has 40+ years of experience in the Gulf Coast Chemical Industry. He is currently a Group Leader for Safety Valve validations at Jacob Engineering (Baton Rouge). He is a successful coach & mentor for young engineers. His experience includes Plant Operations, Process Research, Project Management, and detailed Process Design. Jimmy is an expert in the design & management of small in-plant improvement projects. He is a graduate from Univ. of Houston (BSChE 1974) and Texas A&M (MSChE 1978). Jimmy is a licensed Professional Engineer in Louisiana. He is co-author of one US Patent.

The morning session will cover fundamentals and latest technologies on thermal oxidation and NOx minimization and also will include flameless thermal oxidation and bio oxidation. The afternoon session will cover the latest on the new flare compliance regulations for refineries and following will be a presentation on latest flare stack monitoring system technologies. The seminar concludes with a presentation on Engineering Ethics (1 PDH).

Note: Some topics may change without prior notice.
Notice: Full day registration only. Registration fees will not be reduced for half day attendance. Attendance signatures will be required at the beginning of each presentation. PDH (Professional Development Hour) certificates will be issued based upon attendance list signatures, with Hours reflecting actual attendance. Fees will not be reduced or partially refunded for partial attendance.

*****Morning and Afternoon Sessions each to include two or three 10 min. breaks (not shown) *****

(Map to Oak Lodge (2834 S.Sherwood Forest Blvd. Baton Rouge, LA 70816)

“Oak Lodge” is a little bit hard to find

Please Reference the next Map to Find “Oak Lodge” in the Local Area

Local Area Map

Local Professional Societies

- Louisiana Engineering Society (LES)
- Louisiana Society of Professional Surveyors (LSPS)

National Technical Societies

- America Academy of Environmental Engineers (AAEE)
- American Institute of Architects (AIA)
- American Institute of Chemical Engineers (AICHE)
- American Institute of Electrical Engineers (AIEE)
- American Consulting Engineers Council (ACEC)
- American Concrete Institute (ACI)
- American Institute of Steel Construction (AISC)
- American Management Association
- American Iron and Steel Institute
- American Society of Mechanical Engineers (ASME)
- American Plywood Association (APA)
- American Society of Civil Engineers (ASCE)
- American Society of Engineering Education (ASEE)
- American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)
- American Society of Safety Engineers (ASSE)
- American Wood Council (AWC)
- Earthquake Engineering Research Institute (EERI)
- Institute of Transportation Engineers
- Institute of Electrical and Electronics Engineers (IEEE)
- Instrumentation Systems and Automation Society (ISA)
- National Council of Examiners for Engineering and Surveying
- National Design Specification (NDS)
- National Society of Architectural Engineers
- National Society of Professional Engineers (NSPE)
- Society of Petroleum Engineers (SPE)
- Society of Petroleum Evaluation Engineers (SPEE)
- Society of Professional Well Log Analysts (SPWLA)
- Society of Women Engineers (SWE)
- Air & Waste Management Association (A&WMA)