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.

October Joint Meeting with NOLA—Tour of Almatis Refinery

Date: Thursday, October 19, 2017

Place: Almatis Refinery, Burnside. Exit I-10 at LA 22, turn South, go about 4 miles and turn left to the refinery access road (see map on page 2).

Topic: Tour of Almatis Alumina Refinery

Tour guides: John Rockwell, Chemist, & **Rudi Azimullah**, Senior Process Engineer

Agenda: 5:30 PM -- Dinner
6:00 PM – Tour (estimated 75 minutes)

Menu: Jambalaya dinner.

Cost: $5 Per person

RESERVATIONS

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

Reservations required. Tour limit: 30.

Professional Engineering Certification

Theubject 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 2017 Events / Speakers

TBA 4th Annual AIChE Young Professionals Trivia Night.
Nov 10 Seminar, 8:00-4:30. SCADA/DCS/PLCs/Separation Technology/Ethics, Oak Lodge Center, 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, Clark Snyder, at WClarkSnyder@hotmail.com to schedule a meeting date and time.

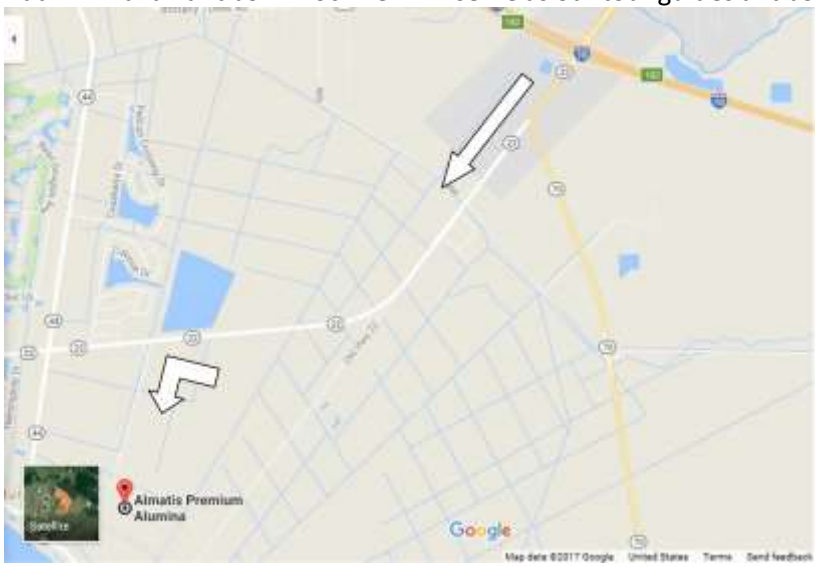
October Tour of Almatis Alumina Refinery

Almatis Inc. purchased in 2013 the Ormet Corp.'s 540,000 mt/year Burnside alumina refinery in Louisiana for $39.5 million, a strategic move that provides Almatis with its own feedstock to produce premium alumina products. Though the Burnside refinery was established as a smelter grade alumina producer, it has proven its capability to produce high-quality feedstocks needed to fulfill Almatis' premium alumina standards. In addition to the internal supply, Almatis now will also serve the specialty alumina and hydrate markets with designed products directly from the refinery.

Almatis is a subsidiary of Germany's Almatis GmbH, a specialty alumina company. Swiss commodities trader Trafigura ships 32,000 mt of sandy calcined metallurgical grade alumina from the St. James Terminal on the Mississippi River.

The October meeting consists of a walking tour of the refinery that will include the rod mills/digestion process, decantation, press filtration and vacuum flash, precipitation and classification, washing and calcination, and hydration, followed by a presentation of the overview of the refinery.

Rudi Azimullah and John Rockwell will serve as our tour guides and John will conduct the overview of the refinery.



Fourth Annual AIChE Young Professionals Trivia Night

Testing of your trivia knowledge in the realms of chemistry, chemical engineering and more. Enjoy a pleasant night in the company of other chemical engineers. Location and date to be announced.

No diet can remove all the fat from your body because the brain is entirely fat. Without a brain you might look good, but all you could do is run for public office.

--Covert Bailey

From the Chapter Chair's Pen

For as long as I have been a part of the Baton Rouge AIChE local section, I can say without a doubt that I have met some of the most dedicated and selfless chemical engineers. It has made me proud serve alongside amazing colleagues and to be part of a profession and part of an organization that promotes the profession. We all get along and work well together. We have welcomed everyone to meetings and have rarely ever broached divisive topics except maybe climate change. We have various backgrounds and beliefs, different values in some areas but one common mission…the furtherance and promotion of the profession for those who are currently a part of it and those that will one day become a part of it.

National AIChE is now starting to promote, in my opinion, some social agendas. While I understand that this is reflective of current trends in society among some groups, I hope that it will not detract from our overall mission…the furtherance of our profession. Social divisions should have no place in our section. I must admit, I cannot agree with some of the direction that National AIChE is taking; while, at the same time, I am gracious enough to allow people to be themselves and have their own opinions. With National placing ads on the local section website, I am concerned that divisive issues are now being manufactured that will give some of our members pause.

As to this issue, I will say this. Confident our local section will continue to promote our main mission, I am happy to be part of it and I hope our members will be as well. Some members have concerns, as do I, regarding the direction of the organization at the national level. I encourage you to make your voices heard, if so. I know I will. In the meantime, we continue to welcome everyone to our monthly meetings and will focus on relevant technical topics. In mid-November, I would like to remind everyone that we will hold our Fall seminar and Armand Melikyan has done an amazing job putting it together.

We have an open position and an opportunity to serve. If anyone is interested in taking on the position of Nominations chair, please feel free to contact me.

Clark Snyder, 2017 Chair

Recap of LIGO Facility Tour

Last month, the Baton Rouge chapter took a site tour of the Laser Interferometer Gravitational-Wave Observatory (LIGO) in Livingston Parish. LIGO is a national facility that detects gravitational waves originally predicted by Einstein's General Theory of Relativity. It can sense and measure the minute ripples in space-time caused by passing gravitational waves from cosmic sources such as merging black holes or by supernovae. LIGO has been able to sense 4 of these such events since it was built. The first of these detections was on September 14, 2015. The event measured on this day was the collision of two black holes!

During the tour, we were able to see models of the optics that are used to make these measurements possible, see the concrete tunnels that the two "blind" L-shaped detector arms with vacuum chambers are housed in, and witness the control room where the measurements are actually recorded. Since the optics apart of LIGO are so sensitive, the entire grounds around the facility have meters spaced around to measure frequencies seen above ground by the facility. This is then subtracted from the frequencies seen by the detectors to measure gravitational waves moving across the earth. While the LIGO optic detectors were not operating while we were there, we were able to see the overall frequencies generated around the grounds, as well as frequencies measured by two other LIGO facilities- one located in Hanover, Washington and the other in Italy. There are two more LIGO facilities planned to be built in the world in the upcoming years- one in Japan and the other in India. These additional facilities will help to better pinpoint which ways the gravitational waves are moving across the universe.

Submitted by ***Donna Bryant, Vice Chair***

2017 Section Contacts

Officers

Chair: W. Clark Snyder, WClarkSnyder@hotmail.com
Vice Chair: Donna Bryant, Donna.Bryant@Syngenta.com
Secretary: Chelsea Bourdon, CBourdon@Hargrove-EPC.com
Treasurer: Jimmy Orr, Jimmy.Orr@Jacobs.com

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Noel Ricord LCNoel55@aol.com
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William Buck William.Buck@WinkEngr.com
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Committees

Awards: Dal Dalferes, Joseph.Dalferes@jacobs.com
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Education: Erick Flores, EFlore5@LSU.edu
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Membership: Glenn Bryson, BGBryson@BellSouth.net
Newsletter: Armando Corripio, Corripio@LSU.edu
Nominations: Parul Patel, Parul_Prpatel@yahoo.com
Professional Development: Randy Goodman, Randy.Goodman@LA.gov
Seminars: open
Sponsorship: Stephen Reilly, Stephen.Reilly@Prosys.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 Fall / 2017 Seminar

SCADA/DCS/PLCs &

Separation Technology Seminar

+ Engineering Ethics

This presentation will compare and contrast the DCS vs PLC/SCADA platforms as they relate to operational business objectives and employees' work life balance.

SCADA=Supervisory Control And Data Acquisition

SCADA is a category of software application program for process control, the gathering of data in real time from remote locations in order to control equipment and conditions.

-Latest SCADA Technologies: Allen-Bradley; Honeywell; Matrikon; WinCC.

DCS=Distributed Control System

-General Architecture Diagram; Description of the Elements; Programming & Tuning Control Loops: Main Programming Formats: Function Block, Structured Text, Ladder, Sequential.

-Latest DCS Technologies

PLCs=Programmable Logic Controllers

General architecture Diagram; Description of the elements; Programming & Tuning Control Loops: Main Programming Formats: Function Block, Structured Text, Ladder, Sequential.

-Latest PLC Technologies

Interfacing

Discussion of control system architectures, computers, and interfaces, networked data communications and graphical user interfaces for high-level process supervisory management.

The Future of Process Automation:

DCS vs PLCs

The network infrastructure of the DCS and the network architecture for plant information are becoming increasingly intertwined.

Today with open technologies, DCS systems are competitively priced with PLCs.

Gas/Liquid/Liquid Separations Technology

- **Define and Discuss Physical Separation Fundamentals**
- **Detail Design Philosophy of Separation (Do's & Don'ts)**
- **Gas/Liquid, Liquid/Liquid, and Gas/Liquid/Liquid Separation Applications and Services: Inlet Separators, KO Drums, 3-Phase Separators, Compressor Suction Scrubbers, Glycol dehydration Towers, etc.**
- **Separator Analysis Steps & tools (Design Philosophy, CFD Analysis, Simators)**
- **No-Weld Designs, Retrofit, and Revamp Solutions (Case Study)**

Latest Physical Separation Technologies and Products:

- **Gas/Liquid Separation**
  - **Wire Mesh and Vane Mist Eliminators,**
  - **Demisting Cyclones (Maxswirl™ Cyclone)**
- **Liquid/Liquid Separation (Coalescing)**
  - **Wire Mesh Coalescers**
  - **Corrugated Plate Colaescers**
  - **Parallel Plate Coalescer**

Latest Chemical Separation Technologies and Products:

- **Mass Transfer Technology Fundamentals (Stages, Theoretical Plates, HETP, Flood %, Foaming or Froth, etc.)**
- **Conventional and High-Performance Trays (Float & Fix Valves, Sieve trays, High Performance SEMV™ Trays)**
- **Structured Packing and Random Towers (similarities and differences)**
- **Feed Inlet Devices; Liquid Distributors; Hold Downs and Packing Supports, etc.**

SCADA/DCS/PLCs & Separation Technology Seminar

+ Engineering Ethics

Friday, Nov 10, 2017
8:00AM – 4:30PM

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: ☐ $85/person for Tech/Prof Society Members* prior to 05-Nov-17 (Please check)

☐ $95/person for non-Tech/Prof Society Members prior to 05-Nov-17

☐ $110/person for all after 05-Nov-17

MAIL COMPLETED REGISTRATION FORM TO:
(Please include check if that is your payment option)
Check or cash only, no credit cards on event day
Walk-ins welcome space permitting.

Jimmy Orr (Treasurer)
1729 Roseneath Dr.
Baton Rouge, LA 70806
Email: **jimmy.orr@Jacobs.com**

Phone: (225) 540-5154

*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 01-Nov-2017 and 09- Nov-2017 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: SCADA/DCS/PLCs & Separation Technology Seminar (7 PDHs);

+ Engineering Ethics (1 PDH)

DATE: Nov 10th, 2017

PROPOSED AGENDA:

7:30 A - 8:00 A Breakfast

8:00 A - 11:30 P

11:30 P -12:00 P Lunch (provided by AIChE)

12:00 P - 4:30 P

Presenters:

August Tassin CAP - Reliability and Process Controls Consultant

John H. Carter Company, Inc.; 14141 Airline Hwy. Building 3, Suite N| Baton Rouge La 70817| U.S.A; Office (225) 755-1706 | Mobile (225) 916-9569; August.Tassin@johnhcarter.com | www.johnhcarter.com

August Tassin – Reliability and Control Systems Consultant at John H. Carter Co. With over 20 years of service in chemicals and oil and gas industries, August has held multiple automation maintenance, design, implementation, and system migration roles. Recently moving from end user to a consulting role, August provides the practical operations and business context to Automation and Reliability decisions.

Babak Rafienia – Applications Process Engineer

AMACS - Process Tower Internals; 14211 Industry St, Houston, TX 77053 USA; Direct: 713-332-0388 | Fax: 713-433-6201; BRafienia@amacs.com | www.amacs.com

Babak Rafienia – Applications Process Engineer and responsible for separation and fractionation design/technology at AMACS-Process Tower Internals for over past 3 years. He has received his B.Sc. and M.Sc. in chemical engineering focusing on gas-liquid and liquid-liquid separation optimization and is acknowledged as ”Individual with Exceptional Ability” in separation technology by United States DHS. Prior to joining AMACS, Babak spent 4 years in oil and gas industry holding positions as Process Engineer, Manufacturing Field Engineer, and Researcher. His focus is to provide solutions in new internal designs, retrofit solutions, and designing of internals for revamp projects for different sectors of the oil & gas industry.

Richard Savoie, P.E. – LAPELS Deputy Executive Director

Richard Savoie – Deputy Executive Director for the Louisiana Professional Engineers and Land Surveyor’s Board (LAPELS). He has served in the position since April 2015. He also served one term as a Board Member from 2007 to 2013.

The presentation will cover fundamentals and latest on SCADA/DCS/PLC Control Systems including an overview of the various architectures and interfacing (Foundation FieldBus; MODBUS; TCP/IP). Smart (HART) communication and loop tuning. The presentation will also cover fundamentals on Separation technologies and latest design alternatives for demisters, coalescing elements, tower internals, etc. 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.

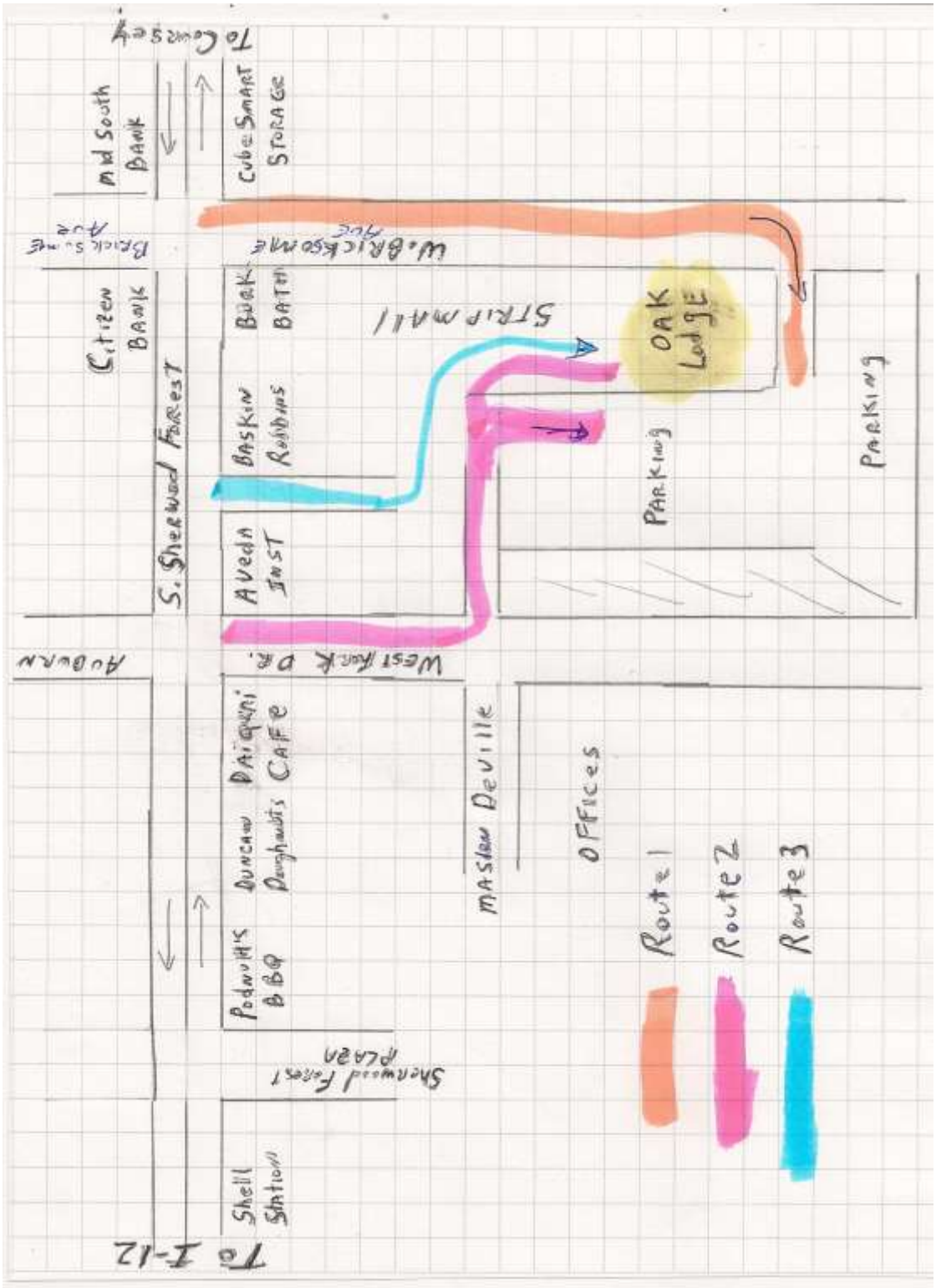
*****Morning and Afternoon Sessions each to include two or three 10 min. breaks (not shown) *****

(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)