

AIChE Baton Rouge Spring / 2020 Seminar

An Overview of Process Controls & Fired Heaters Seminar **+ Engineering Ethics**

May 8th, 2020

MORNING SESSION: Process Controls

Topic Description

The morning session is a presentation designed for engineers who are either new to or unfamiliar with control and safety systems. All automated functions consist of three basic elements: Sensors, logic solvers, and final elements. This is the first of a three-part series that will take a closer look at the components of automated functions. Part 1 concentrates on logic solvers, which can be mechanical, electrical, or electronic devices. The focus is on discrete actions based on predetermined conditions, which includes interlocks, permissives and safety instrumented functions.

AFTERNOON SESSION: Burner Design / Fired-Heater Design

Topic Description

The afternoon session is a presentation on burner design and configuration for the different fired-heater types including natural draft; mechanical draft with preheat; and mechanical draft without preheat, etc. Burner design considerations are discussed for proper heat flux distribution. Optimization of burner count, orientation, layout and size are provided from a burner manufacturer's perspective. A discussion of flame characteristics will be provided including flame pattern, flame shape, flame length, and flame radiation boundary. An applied approach of radiation theory to practical burner design is explained. The presentation concludes with the latest on CFD modeling. Various system configurations and applications will also be discussed in detail.

The latter part of the afternoon session will include latest on fired-heater design including reformers and furnaces. Fired-heater design considerations will be presented for maximum capacity and efficiency including firebox geometries, forced draft convection, and induced draft convection alternatives. Retrofit and revamp of existing furnaces and reformers is included with successful modification examples already implemented. Proper burner air supply and fuel supply distribution design alternatives are discussed. An overall heat balance on a furnace is presented. An overall heat balance on a reformer is presented. Various system configurations and applications will also be discussed in detail.

Topic Description

Engineering Ethics

Presenters:

Karen Morten, P.E., C+A SIS Technical Consultant, Hargrove & Associates

Chris Parker, Applications Engineer, Zeeco, Inc.

Rasik Patel, Vice President, Process Technology, Primoris Onquest

Engineering Ethics Presenter: TBD

An Overview of Process Controls & Fired Heaters Seminar
+ Engineering Ethics

Friday, May 8, 2020
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: \$85/person for Tech/Prof Society Members* prior to 3-May-20
(Please check appropriate box) \$95/person for non-Tech/Prof Society Members prior to 3-May-20
 \$110/person for all after 3-May-20

MAIL COMPLETED REGISTRATION FORM TO: Armand Melikyan (Seminar Coordinator)
(Please include check if that is your payment option) P.O. Box 84787
Check or cash only, no credit cards on event day Baton Rouge, LA 70884
Walk-ins welcome space permitting. Email: armand_melikyan@hotmail.com
Phone: (225) 773-0468

*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 28-April-2020 and 7-May-2020 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: An Overview of Process Controls & Fired Heaters Seminar (7 PDHs)
+ Engineering Ethics (1 PDH)**

DATE: May 8th, 2020

PROPOSED AGENDA:

7:30 A - 8:00 A Breakfast

8:00 A –11:30 A Process Controls

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

12:30 P – 2:00 P Burner Design

2:00 P – 4:00 P Fired-Heater Design: Furnaces + Reformers

4:00 P – 5:00 P Engineering Ethics

Presenters:

Karen Morten, P.E. – C+A SIS Technical Consultant

Hargrove & Associates, 4333 American Way, , Baton Rouge, Louisiana, United States, 708016
(225) 937-3657; kmorton@hargrove-epc.com

Karen has worked as an engineer with process safety and control systems projects in South Louisiana's petrochemical industry since 1995. She is a licensed professional engineer. She also has functional safety engineering certification from TÜV Rheinland. Karen works at Hargrove Controls + Automation in Baton Rouge as a C+A SIS Technical Consultant, where she concentrates on process safety and burner management system projects. A member of ISA and IEEE, Karen co-authored ASSP's reference guide Applied Mathematics for Safety Engineers.

Chris Parker – Applications Engineer

Zeeco, Inc.; 22151 East 91st Street, Broken Arrow, Oklahoma USA 74014
918-893-835; chris_parker@zeeco.com,

Chris obtained his Bachelor's Degree in Mechanical Engineering with a minor in Petroleum Engineering from Oklahoma State University. He has been involved with the combustion industry as an employee of Zeeco for approximately nine years. During his time at Zeeco, Chris has worked as a Test Facility Engineer in Zeeco's Research and Test Facility for two and a half years before moving into Applications Engineering in the Process Burners Division. In his previous role within Zeeco, Chris, as a Test Facility Engineer, orchestrated the testing and development of various combustion equipment. This role included developing new products and testing existing equipment that would be used by the refining and petrochemical industries. As an applications engineer in the process burner division, Chris determines the initial design, cost estimation, and commercial negotiation for burners used in process heaters.

Rasik Patel – Vice President, Process Technology, Primoris Onquest

180 East Arrow Hwy., San Dimas, California, United States, 91773
909-451-0504; rpatel@prim.com

Rasik is the Vice President of Process Technology with Primoris OnQuest located in the San Dimas, CA. He has 36 years of experience in the design of direct fired process heaters, coker heaters, steam methane reformers and pyrolysis furnaces for the refining and petrochemical industries. He is an active member in the heat transfer sub-group of the API task force working on Fired Heater standards. He holds a Master of Science degree in Chemical Engineering from the Imperial College of Science & Technology, University of London, England

TBD – To Be Determined

(The Presenter on Engineering Ethics is forthcoming)

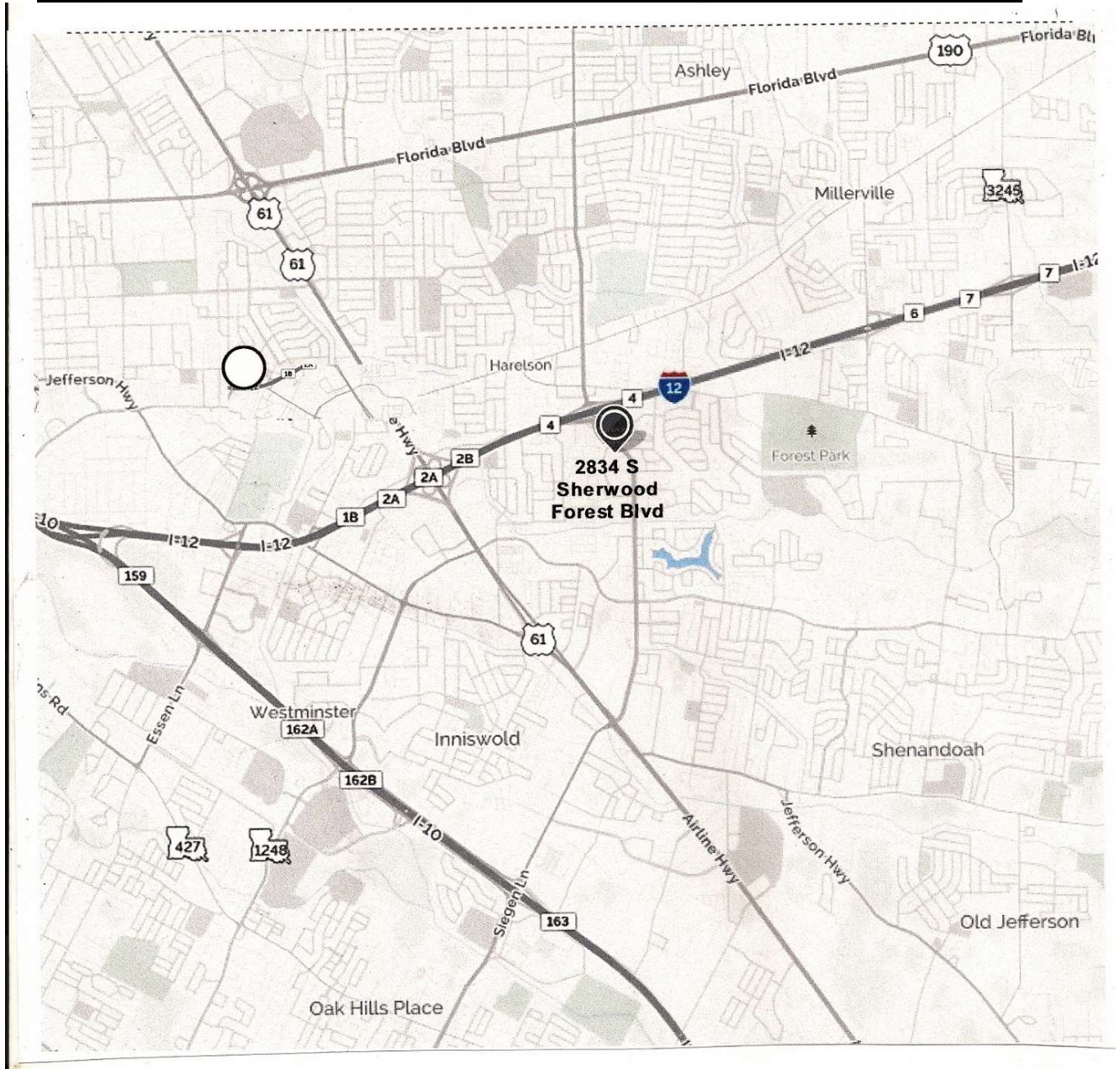
The morning session will be an overview of Process Control. The afternoon session will be an overview of the latest on Fired-Heater Burner Design and then Fired-Heater Design with practical applications. The seminar concludes with a presentation on Engineering Ethics (1 PDH).

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) ***

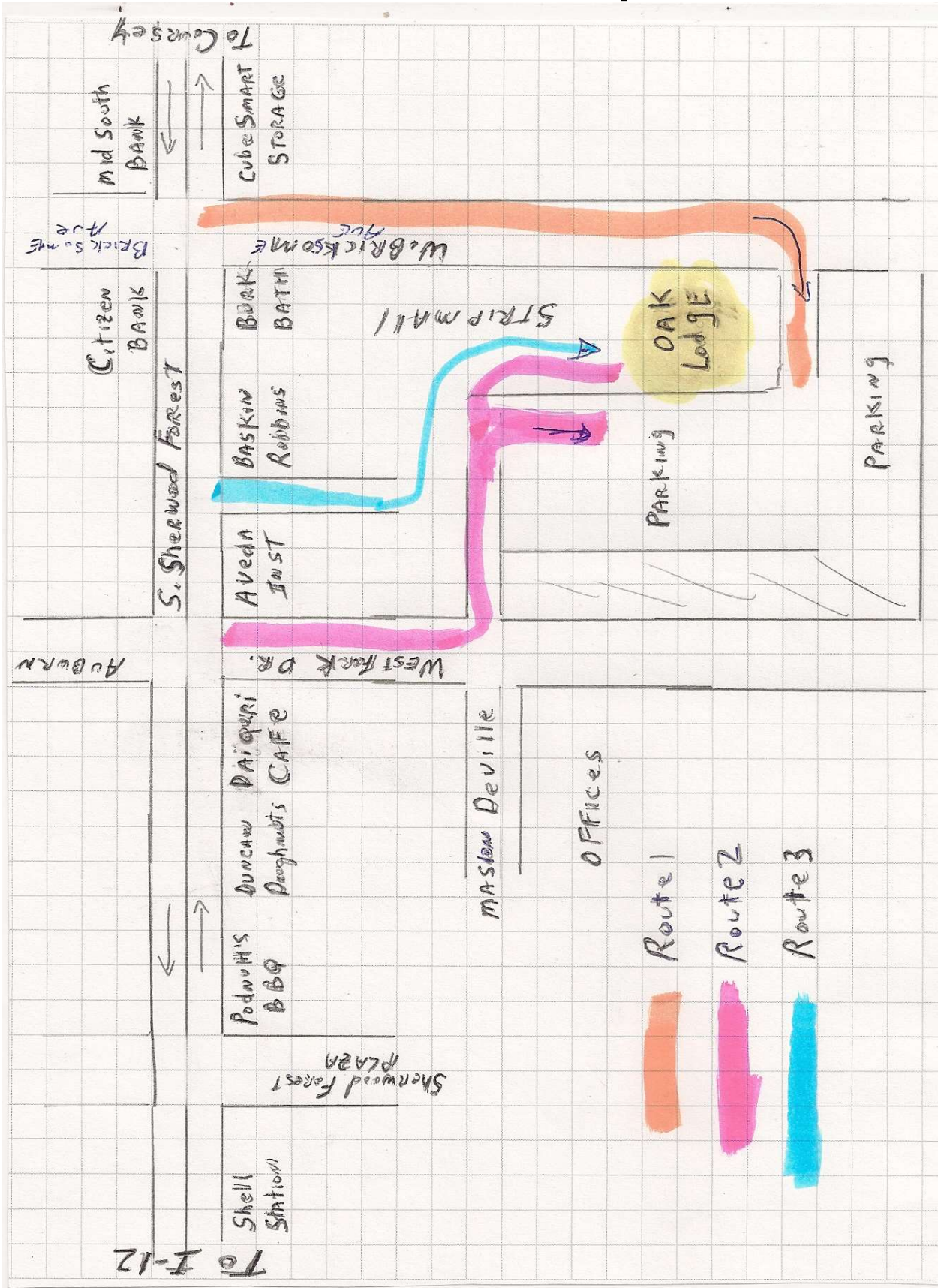
(Map to Oak Lodge (2834 S.Sherwood Forest Blvd. Baton Rouge, LA 70816))



“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 (AWMA)