Year 2009 | Issue 6

ISA Baton Rouge

February - 2009

Newsletter

TRUE Combustion Control Using TDL Technology

(TDL = Tunable Diode Laser) - DON'T MISS THIS ONE!

February 19th

11:30am to 12:30 pm (Registration begins @ 11:00am)

Location: - Holiday Inn Gonzales

1500 HWY 30
Gonzales, LA 70737

If you want to pay at the meeting—RSVP to— **isareservations@hotmail.com**
If you want to pay online—visit the February Event page at the ISA Site link below

Please see our website:
http://www.isa.org/~bator/index.html

President's Message

Fellow ISA Baton Rouge Section Members & Guests:

Well, here we are already addressing the second month of the year. Before you know it, we'll be looking at 2010. My how time flies, when you're having fun.

Our January meeting was a huge success. If you missed Amit Ajmeri's talk on Asset Management – you missed a good one! His presentation is available for download from the ISA Baton Rouge website - http://www.isa.org/~bator/January_meeting.html

The upcoming ***February luncheon*** offers the same promise of a very successful meeting. Rodney Clark will be delivering a talk on the TDL (Tuneable Diode Laser) for TRUE Combustion Control. His talks are always well received so make your reservation early – isareservations@hotmail.com The Feburary luncheon will be held at Holiday Inn Gonzales.

Remember our upcoming ONE Day Technical Seminar is being held on THURSDAY, March 19th at the Marriott in Baton Rouge. Hosted by the Fieldbus Foundation, this too will be a great sharing of information. This event will have limited seating so plan your calendar now. Look for more information on this event soon.

April will play host to TWO events:

April 9th will be a dinner meeting co-hosted with the FDT/DTM Group – Location to be determined
April 16th will be the Annual ISA Baton Rouge/New Orleans Expo held at Lamar Dixon Center

If you intend to pay at the February meeting, please RSVP via ISAReservations@hotmail.com.

You can pay for your lunch and make your RSVP at the same time by taking advantage of PayPal at the ISA Baton Rouge site as well - http://www.isa.org/~bator/ (visit the events page for February)

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Upcoming ISA Events…

February 2009

All ISA Baton Rouge events can now be pre-paid by using PayPal. On each event page, there will be an appropriate PayPal button for that event. Using PayPal automatically RSVP's for you and creates your receipt.
http://www.isa.org/~bator/meeting.html

ATTENTION MEMBERS!
Please see our new website
http://www.isa.org/~bator/index.html

2009 ISA Baton Rouge Calendar

February 19th
TRUE Combustion Control Using TDL (Tunable Diode Laser Technology)

March 19th
FieldBus Technology Seminar (Full Day)
Marriott Hotel (College Drive exit)

April 9th
Monthly Presentation (Dinner)
Concepts of FDT/DTM Technology

April 16th
ISA BR/NO Expo 2009 - Lamar Dixon Expo Center

May 21st
Annual Section Banquet and Awards Dinner
Ralph & Kacoo's on Bluebonnet

Silver Sponsors

February 2009

INFRASTRUCTURE: Safety and Diagnostics Emerge as Temperature Sensor Issues

January 2009 (p.12) Written by C. Kenna Amos

Two important emerging issues he sees are safety and diagnostics. “As process manufacturers become increasingly safety- and best-practice conscious, they are requiring certification for transmitters connected to their Safety Instrumented Systems.” This trend is catching on across all of the hydrocarbon industries to drive risk reduction, improve error detection and improve plant safety, adds Karthikeyan Seetharaman, global product marketing manager for temperature field solutions, Honeywell Process Solutions (http://hpsweb.honeywell.com), a Phoenix-based supplier

While third-party certified pressure transmitters are now entering the market, most, if not all temperature transmitters are proven-in-use rather than certified, Cupo explains. But end-users increasingly want Certified Safety Temperature transmitters, he observes. That implies extensive firmware testing and failure analysis conducted by a competent and independent third party, such as Cologne, Germany-headquartered TUV Rheinland (www.tuv.com), he adds.

End-users also expect temperature transmitters to possess more meaningful and relevant diagnostics. The most beneficial alert end-users to a potential failure, Cupo says. “The earlier the diagnostic is able to trigger prior to catastrophic failure, the more valuable it becomes.” For example, a temperature transmitter with a “robust” predictive diagnostic suite can have implications with respect to extending plant up-time and redundancy requirements, he suggests.

Another trend in temperature measurement for process-manufacturing monitoring applications involves wireless technology, Seetharaman observes. The biggest drivers of this “clear emerging choice” are ease of installation, need for improved safety and elimination of wiring, he says. Wireless avoids previous limitations caused by wires, enabling end-users “to select the temperature measurement location purely based on process requirements,” he observes.

Noting that thermocouples are “a preferred temperature sensor” for most industrial process manufacturers, Seetharaman says that those sensors “traditionally service a wide range of temperature applications, from low to extremely high temperatures, depending upon the range selected. They are well suited for and are typically the first choice for higher temperature applications.”

To substantially extend the life of thermocouples in ultra-harsh applications, such as coal gasifiers, the Rosemount Division of Emerson Process Management (www.emersonprocess.com/Rosemount) developed a high-temperature thermocouple enclosed by a gas-tight sapphire protection tube. This exotic-sounding technology is a “game changer,” because of its five-fold increase in the sensor’s life, declares Tom Wallace, global marketing manager for Powers PlantWeb, with Emerson, in Chanhassen, Minn.

More Info: http://www.automationworld.com/primers-5020

Sample CCST Q/A

The following sample questions (not actual exam questions) appear in the Certified Control System Technician (CCST) study guide published by ISA.

1) The time constant (first order lag) in a transmission system is the time necessary (after dead time) following an upset for the response curve to reach of its final value.

A. 100%
B 63.2%
C. 50%
D. 37.8%

Answer) The response of a first order process to an upset is mathematically consistent. When graphing such a system's output, after an upset and after the dead time passes, versus time [gamma(inf)] versus t], the time constant, tau(tau), equals the output at steady state [gamma(inf)] divided by the slope, sigma(sigma), of the graph at the origin. For a first order system, this number is always 63.2.The formula is tau =gamma(inf)/sigma. The answer is B.

2) Load cells and strain gauges measure the amount of material in a tank by measuring:

A. thermal conductivity
B. hydrostatic head
C. ultrasonic frequency
D. weight

Answer) These two instruments directly measure electrical properties, which change in response to the weight pressure, or strain applied to them. The strain gauge measures resistance; the load cell measures voltage. Calibration establishes the relationship between weight and the particular electrical property's change. The answer is D.

3) The length of a straight-run pipe needed to eliminate flow line disturbance is related to:

A. the beta factor
B. the type of flow element
C. the diameter of the pipe
D. both A and C

Answer) This is a tricky question. The correct answer is D. Flowmeters need flow profiles without major disturbances to render an accurate measurement. The beta factor, which most know as the beta ratio, beta ,equals the diameter of the hole or constriction in the flow meter divided by the diameter of the pipe D^sub construction^/D^sub pipe^ Standards-making bodies produce tables that relate beta and straight-run pipe lengths (see Flow Measurement, 2nd Edition, 2001, ON Spitzer, p. 158). As beta increases, the required straight-run pipe lengths increase. Because this question uses beta, there necessarily is a constriction, and thus we presume that the question refers to a conventional head-class meter (orifice plate, nozzle, venturi). One could make a valid case that therefore, answer B is also correct.

Professional Development Hours: Continuing Education Requirements for Registered Professional Engineers

As of January 1, 1999, the State of Louisiana began requiring Licensed Professional Engineers to participate in a continuing education process as a condition for registration renewal. During each biennial registration renewal period, every engineer registrant, including those registered in two or more disciplines, is required to obtain 30 Professional Development Hours (PDH's) in engineering related activities. The local section can help. *Many of our section meetings qualify towards this requirements.*

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Sponsors

Dear Past ISA Baton Rouge Section Sponsors,

In the past, we have offered the following:
(we will still offer these items individually for those that want to write multiple checks throughout the year)
Traditional ways to support the section:

Business Card placed in Newsletter and on website	$150
Shrimp Boil Tickets	$25/ea
One Day Technical Seminar Ticket	$120/ea

This year we are offering new ways to support the section through advertising your company and/or
products and services:

¼ page advertisement in the Monthly Newsletter	$100 each occurrence
½ page advertisement in the Monthly Newsletter	$200 each occurrence
Full page advertisement in the Monthly Newsletter	$300 each occurrence

Corporate Logo on Section Signage displayed at ALL section events $150

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Value Driven Automation

Process Automation – Safety Instrumented Systems (SIS) - System Integration

AE Solutions specializes in the implementation of process automation systems. We are a comprehensive engineering resource for Basic Process Control Systems (BPCS). We also offer expertise in the execution of the Safety Life Cycle (SLC) and critical systems such as Safety Instrumented Systems (SIS), Fire & Gas Systems (FGS), Burner Management Systems (BMS). We have immediate openings for:

CONTROL SYSTEMS ENGINEER

Control Systems Engineer with at least 5 years of experience in Basic Process Control Systems (BPCS) specification, design, configuration and testing including field support, implementation and startup assistance. BS Engineering required. PE registration is a plus.

SENIOR DESIGNER

Control Systems Designer with at least 5 years of experience in design of automation systems including system architecture, control panel, field wiring, instrumentation installation and electrical systems. CAD design proficiency required.

PROCESS SAFETY SPECIALIST

Process Safety Specialists with at least 5 years of experience in the analysis, design, configuration, and testing of safety systems per ANSI/ISA 84.01, IEC 61508 and IEC 61511 including field support, implementation and startup assistance. BS Engineering required. PE registration and/or CFSE certification is a plus.

AE Solutions is a fast growing company with a need for automation talent and is willing to train extremely motivated professionals with control system and process safety experience toward becoming a Certified Functional Safety Expert (CFSE).

We offer a comprehensive benefit package including: medical, dental, and life insurances; a flexible work schedule, both company sponsored time off and optional purchased time off, and multiple bonus programs.

READ-OUT

If you are interested in an ad for newsletter, have an announcement, comment, question or suggestion; please contact us. **Deadline for ads, articles, etc. is noon on the last Friday of the month! Please provide the information to the editor by email to** aparna.subramanian@exxonmobil.com

Positions are currently available in our **Baton Rouge, LA**, Greenville, SC, and Anchorage, AK offices.

Visit www.aesolns.com/employment to learn about us, review our open positions and apply online!

AE Solutions is an Equal Opportunity Employer