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2009 COADE User Conference

Conference Program

September 28–30, 2009

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 2009 COADE
 User Conference

Drawing from the success of the 2008 CADWorx User Conference, the **2009 COADE User Conference (CUC2009)** covers the full range of COADE products. COADE is recognized as a technology leader worldwide in oil & gas, petrochemicals, wastewater treatment, laser scanning and electric power.

Why Should You Attend?

- ★ Over 60 Sessions **Taught by Expert Users and Top Instructors**
- ★ **Beginner and Advanced** Classes / Computer Labs for All Skill Levels
- ★ Learn Industry **Best Practices** Plus **Time-saving Tips & Tricks**
- ★ **Network** with Your Peers and Talk One-on-one with Industry Leaders
- ★ **Preview the Latest Technologies** in the CUC2009 Exhibit Hall
- ★ Get your **Questions Answered** at the Tech Support Lab

Today's volatile times challenge us all to learn how to **optimize the resources** we have available and locate those that we need to do our jobs better. CUC2009 brings together the leading experts in plant creation who will share their knowledge and expertise to **help you operate at peak performance** and utilize your resources for workflow efficiency and faster, greater payback to your organization.

CUC2009 Exhibit Hall: the Newest Products, the Latest Technologies & the Best Solutions

The 2009 exhibit hall will feature select COADE partners showcasing the most up-to-date plant design and engineering products and services. This is your opportunity to see the latest technology and **identify targeted solutions to meet your needs and maximize your ROI.**



Don't miss this year's most comprehensive learning opportunity.

Interested in Exhibiting? Please contact Neil Bock • (+1) 508-870-9787 • nbock@coade.com

Register Online Today! ★ www.coadeuserconference.com/2009

The Drivers of SuccessSM Competition

The Drivers of Success competition gives you the chance to win great prizes and let others know how COADE software has helped you become more productive.

First-place prizewinners will receive an all-inclusive trip (including flights, hotel and conference fee) to this year's 2009 COADE User Conference and up to ten runner-up entries will receive prizes of Apple iPod Nanos. Every submission will receive a valuable token of our appreciation for taking the time to tell us their story.

Top Prizes in Each Product Category

- 3 CADWorx first-place winners
- 2 CAESAR II first-place winners
- 2 PV Elite first-place winners
- 1 TANK first-place winner
- 1 PV Fabricator first-place winner
- 1 CADWorx Design Review first-place winner

Deadline for entry submission is August 1, 2009.

Submission Guidelines

Submissions can be based on projects from any industry as long as you have used COADE's solutions in the successful project completion. If you use any of the COADE solutions and like the results, we want to know! You can enter up to three projects. Entering is easy—fill out the Drivers of Success registration form online or contact your local COADE Global Network Partner (CGNP) to make your submission. All submissions will be reviewed by our judges and approved for entry. The online entry form can be found on the event website at www.coadeuserconference.com/2009.

Golf Tournament

Woodforest Golf Club ★ Sunday, Sept. 27, 2009

The CUC2009 Golf Tournament tees off with a 1:00 pm shotgun start at the Woodforest Golf Club. Carved through the majestic pines and towering oaks of Northwest Houston, Woodforest Golf Club is a classic design for golfers of all skill levels. The format is a four-player team scramble and prizes include longest drive, closest-to-the-pin and hole-in-one. An awards reception will immediately follow the tournament. Make your reservations early in order to "make the cut" as space is limited.

Registration Fee: \$159.00 (USD) per golfer

Tournament details and registration info can be found at www.coadeuserconference.com/2009.

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Keynote Speakers

Tom Van Laan

President, COADE, Inc.



Thomas J. Van Laan, PE, is the president of COADE, Inc. With COADE since 1989, he has been extensively involved in the development of products such as CAESAR II, the world's leading pipe stress program, and CADWorx, COADE's suite of AutoCAD-

based plant and piping design software. With 28 years of engineering and software experience, Mr. Van Laan is considered to be an expert in the fields of pipe stress analysis and design, having taught over 75 training courses worldwide and having co-authored the engineering text *Piping and Pipe Support Systems: Design and Engineering*. Mr. Van Laan holds degrees in civil engineering, computer science and business administration from the Massachusetts Institute of Technology, New York Institute of Technology and Pace University, and is a licensed Professional Engineer in three states.

Mike Rayburn

The World's Funniest Guitar Virtuoso



Mike Rayburn is an award-winning speaker and entertainer with a truly unique presentation. Known as the World's Funniest Guitar Virtuoso, Mike uses his astounding guitar creations, uproarious songs and presentation skills to encourage,

challenge and inspire his audiences to step beyond their perceived limitations. Mike Rayburn draws from a wealth of life experiences as an adventurer, comedian, published songwriter, author, philanthropist and father, to deliver a keynote presentation which is completely energizing and entertaining. Featured in *Newsweek*, *USA Today*, *Billboard*, *Gig*, and on the nationally acclaimed and syndicated *Bob and Tom* radio show, Mike Rayburn has received standing ovations at all three of his Carnegie Hall performances.

Preliminary Conference Sessions

With three days of interactive sessions and discussion groups, you will gain valuable insight into how **COADE software can maximize your design process**—improving your workflow efficiency, increasing your capabilities and giving you faster, greater payback.

CADWorx® Plant Design Suite

2010 CADWorx Steel Professional Plus

LAB • *COADE, Inc.*

CADWorx Steel Professional Plus is a new offering from COADE to enhance the design and production of structural steel models and drawings. In this session you will see this new program and how it integrates with CADWorx Plant Professional. You will also learn how easy it is to generate 2D stick drawings of your steel models.

Advanced CADWorx P&ID

LAB • *David Wolfe, ECAD, Inc.*

CADWorx P&ID is a very powerful tool used to generate P&ID's. In this session you will learn how to take advantage of this power by using the database features of CADWorx P&ID. You will also learn how to make existing legacy P&ID's intelligent and how to transfer P&ID drawings and data between projects, allowing you to develop standards and reuse CADWorx P&ID drawings on new projects. You will see how to use dynamic blocks in your P&ID's.

Advanced Modeling Techniques

LAB • *Mike Jukic, AMEC BDR*

Using CADWorx Plant you can model any type of piping project you desire. Sometimes you need to look at alternative ways to develop your models using different tools and techniques inside CADWorx. In this session you will learn how to use some of these tools and techniques to enhance your productivity.

Basic Equipment Modeling

LAB • *Josh Sampson, Mustang Engineering*

CADWorx Equipment is the tool used for quick pump, vessel and heat exchanger layout. Create your equipment in detail then XREF them into your models. Keep up with the changes by modifying a previously modeled piece of equipment.

CADWorx Design Review 2010

LECTURE • *Stephen Hollinger, R & D Consulting*

CADWorx Design Review was introduced in 2008 and since then has been developed to handle any project review needs. This year, COADE has added CADWorx Design Create and CADWorx Design Viewer to the tool set of CADWorx Design Review. These two new tools allow for quick publishing and viewing of models by anyone. In this session you will learn how to use these new tools and what has been added to CADWorx Design Review to enhance your productivity.

CADWorx IP

LECTURE • *Robert Riley, Golden Gate CAD*

CADWorx IP has been around for quite some time. This amazing tool allows you to publish your P&ID files into web-enabled pages to be viewed by anyone with a web browser. All data is stored in each of the pages and can be reviewed by the user. In this session you will learn how to use the power of CADWorx IP.

CADWorx 2010 - ISOGEN

LECTURE • *John McWilliams, Mustang Engineering*

I-Configure is replacing Project Manager as the user interface for CADWorx Plant Professional 2010. This session will guide you through the improved user interface so you can optimize your ISOGEN output.

CADWorx NG

LECTURE • *Joseph Dixon, COADE, Inc.*

The Next Generation of CADWorx Plant is in full development. This session will demonstrate the new functionality of this highly anticipated release.

CADWorx P&ID 2010

LECTURE • *Gary Mellinger, Mellinger and Associates*

Each new release of CADWorx comes with new features and enhancements. This course will demonstrate these new features and help you take advantage of them in your daily work efforts. Come see the new tools that are available in CADWorx P&ID 2010.

CADWorx P&ID Tools

LECTURE • *Robert Riley, Golden Gate CAD*

CADWorx P&ID Pro comes with several tools to help you develop your required drawings more efficiently. In this session you will learn how to use CADWorx Datasheets, CADWorx Loops, and CADWorx IP. Each of these tools has a specific requirement that they help fulfill.

CADWorx Plant 2010

LECTURE • *Rhett Rathbone, Merpro Americas*

Many new enhancements have been added to CADWorx Plant 2010. In this session you will see these enhancements in action and learn how to use them in your design projects.

CADWorx: The Right Tool

LECTURE • *COADE, Inc.*

CADWorx is the number one selling plant design tool on the market today. In this session you will learn how the CADWorx suite of products can benefit your company and how CADWorx is right for any size project.

Creating Specifications and Data Files

LAB • *Carol Orgar, Ecodyne LTD*

CADWorx specifications and design data are the easiest to build and maintain. This session will teach you how to build and maintain your company standards and how to add to the data files used by CADWorx.

Introduction to CADWorx P&ID

LAB • *David Wolfe, ECAD, Inc.*

Good design starts with a good P&ID. All good designers know how important P&ID's are to the overall project and most have experienced frustration with poor P&ID design. This session will demonstrate CADWorx P&ID and how this integrated design tool can help you with your design projects and eliminate some of these frustrations. You will see how CADWorx P&ID will link your work with CADWorx Plant so the data from a good P&ID can be directly used in your modeling designs.



"All in all, I think CUC2008 was one of the best conferences I have ever attended. The instructors were very well versed with CADWorx and eager to help attendees."

*L. Wade Foehrenbach,
Technical Supervisor,
Stantec Consulting Services, Inc.*



**Visit www.coadeuserconference.com/2009
for the latest session updates**

CADWorx® (cont.)

ISOGEN Customization

LECTURE • *Steve Lozano, Nicholas Consulting Group, Inc.*
ISOGEN is the tool to produce isometric drawings inside CADWorx. To meet your company standards customizing ISOGEN is a requirement. In this session you will learn how to customize ISOGEN to meet these standards.

ISOGEN Optimization

LAB • *Matt Breeden, ICM Inc.*
ISOGEN is very powerful and this session will demonstrate some of this power. Learn how to use user shapes and SKEY's to get what you want in your drawings. Learn how to use the symbol editor to create custom symbols and assign your own SKEY's to have ISOGEN use them automatically and to develop detail sketches.

ISOGEN Setup

LECTURE • *Rod Abbott, Wardrop Engineering, Inc.*
The final deliverable of any project is drawings. Isometrics are the primary drawings produced and ISOGEN is the tool CADWorx uses to generate these drawings. With the power of ISOGEN comes the complexity of the setup. This session will teach you how to setup ISOGEN using the new iConfig tools added to CADWorx 2010.

Model Organization

LECTURE • *Bruce Parsons, Gas Liquids Engineering Ltd.*
Large and small models require careful planning to make their development and use efficient. Many times, models are used for different purposes—from overall plant layouts to equipment details to subsystem drawings. This can be very complex if a good model organization is not developed and followed. In this session you will see one way of developing a good model organization plan and begin to see ways you can implement a good design for your organization.

Pipe Supports in CADWorx 2010

LAB • *Mark Bross, Anadarko Petroleum, Inc.*
With the addition of the intelligent support modeler in CADWorx Plant 2010 you are now able to parametrically add the necessary pipe supports and generate a BOM of the support assemblies. In this session you will learn how to use this new and exciting tool and how it will enhance your model production.

Plant Layout - Tips and Tricks

LECTURE • *David Edwards, Alliance Engineering, Inc.*
CADWorx Plant is the tool used to help design piping systems in the plant designer's world. As with any tool, knowing how and when to use it is an important part of any good design. Knowledge of piping systems is another important part of good plant design. In this session you will learn good design practices based on industry standards and years of experience. This session is intended for everyone from those just starting out to seasoned pros.

Sheet Set Manager

LAB • *Mark White, Mustang Engineering*
AutoCAD has a very powerful but little-used tool called Sheet Set Manager (SSM). In this session you will learn how to use SSM and the power it can bring to your organization and your design work.

User Shapes

LAB • *Lee Smith, John Zink Company*
Although CADWorx has an extensive library of components to select from, sometimes you need to show something in your models that is not "off-the-shelf". User shapes allow you to add a custom component with intelligence to the model. In this session you will learn how to build a user shape and how to add the intelligence needed for BOM and ISOGEN generation.

Using fieldPipe with a Total Station

LECTURE • *Brian Michaud, Hunt, Guillot and Associates*
Field verification and data accusation has always been required in piping design, from building a new project to interfacing with existing equipment to verifying dimensional data, as-built generation and even fabrication verification. These tasks are required to complete the projects at hand. CADWorx fieldPipe is the tool to use. In this session you will see how to use CADWorx fieldPipe to gather dimensional data from the field and generate 3D models of the same data all at the same time. Before you leave the field you will have completed a model and if needed, the ISO's from the data collected.

Using fieldPipe with Point Cloud Data

LECTURE • *Billy Therrell, MKEC Engineering Consultants*
Taking point cloud data sets to the next level and producing an intelligent model is the job for CADWorx fieldPipe. Learn how to use this exciting new tool and how your company can benefit from producing intelligent models of your point cloud data.

PV Elite™ Vessel & Exchanger Analysis

ASME Code Section VIII Division 1 Basics

LECTURE • *Ray Delaforce, COADE, Inc.*
In this session the basic rules and methodologies of ASME VIII-1 will be discussed. ASME VIII-1 is the most commonly used design code in the world.

ASME VIII-1 vs. VIII-2

LECTURE • *Urey Miller, Retired*
This session will discuss differences in design requirements between Division 1 and the new Division 2 Code.

Expansion Joint Design

LECTURE • *Chris Hennant, Paulin Research Group*
This intermediate-level session will discuss why expansion joints are needed in exchangers and how they are selected. Life cycle and stress calculations using the older empirical TEMA method and newer FEA methods will be discussed.

Flange Design

LECTURE • *Urey Miller, Retired*
This session will discuss flanges and how to produce an optimum flange design using ASME VIII-1 Code rules.

From Drawing to Design

LAB • *Mandeep Singh, COADE, Inc.*
This session will teach those interested in taking a vessel drawing, and creating a PV Elite model from the drawing and performing the analysis.

Local Stress Analysis

LECTURE • *Chris Hennant, Paulin Research Group*
This intermediate-level session will discuss methods for determining stresses on vessel attachments and nozzles using various methods such as WRC 107/297 and finite element analysis.

PV Elite / CADWorx Equipment Integration

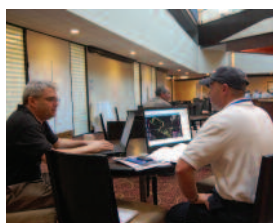
LAB • *Kyle Pope, ECAD, Inc.*
This session will discuss how modeling information is transferred between CADWorx Equipment and PV Elite. Attendees should be able to use AutoCAD.

PV Elite / COADE Product Integration

LECTURE • *Scott Mayeux, COADE, Inc.*
This session will illustrate how models can be constructed in PV Elite, CAESAR II, and CADWorx Equipment and be put together as a complete model in CADWorx Plant Professional.

"CUC2008 was a great experience for me, getting to meet so many other extremely talented users and designers was very beneficial. COADE put on a great show and I can't wait until next year."

*Josh Sampson,
Piping Designer,
ICM Inc.*



"I thought CUC2008 was excellent. I attended at my own expense and felt I got more than my money's worth."

*Carol Orgar,
Senior Mechanical Designer,
Ecodyne Limited*



Preliminary Conference Sessions

PV Elite / PV Fabricator Integration

LAB • *Chris Schiller, COADE, Inc.*

This session will outline the features of PV Fabricator and how information from PV Elite is transferred to PV Fabricator. We will discuss the ins and outs of PV Fabricator and how the program can be customized.

PV Elite Basics Lab

LAB • *Scott Mayeux, COADE, Inc.*

This beginner-level session will expose attendees to pressure vessel analysis. PV Elite 2009 will be used to create vertical and horizontal vessels. These vessels will be analyzed and the results will be discussed.

PV Elite Basics Lecture

LECTURE • *Naveed Khan, Fern Computer Consultancy*

In this session, an overview of PV Elite and its various processors will be presented.

PV Elite Tips and Tricks

LAB • *Mandeep Singh, COADE, Inc.*

This session will cover various tips and tricks using PV Elite. Knowing these methods will help analysts create models quickly and efficiently.

Understanding the Basics of Wind Loads and Earthquake Loads

LECTURE • *Scott Mayeux, COADE, Inc.*

This session will provide an overview of how wind and seismic loads are produced and modeled with PV Elite.

Why Do Metals Break?

LECTURE • *Ray Delaforce, COADE, Inc.*

In this session various reasons for metal failure will be presented and discussed.

CAESAR II®

Pipe Flexibility & Stress Analysis

Advanced Tools for the Piping Engineer

LECTURE • *Tony Paulin, Paulin Research Group*

The simple beam bending model utilized in CAESAR II provides an accurate look at piping at the system level. But what if the assumptions of this beam model are violated—for example, if the pipe wall deflects before the beam bends or if there is a branch connection on an elbow? In many cases, these conditions are not explicitly addressed by the codes. The engineer might turn to finite element analysis (FEA) to evaluate these components or conditions. This session will review such FEA tools offered by Paulin Research Group.

Background and Application of Recent Changes to ASME B31.3

LECTURE • *Chuck Becht PhD, Becht Engineering Co. Inc.*

With roots as old as 50 years, the piping codes were built for engineers armed with only a slide rule. Over the last decade, the increased analysis capabilities of today's piping engineer have allowed the code writers to improve and expand the code's analysis requirements. Some of these new requirements need clarification or perhaps explanation. This session, presented by the current B31.3 Chairman, will highlight some of these code updates—weld joint factors, Appendix P, occasional loads, Code Case 181, and others.

Benefits of Time History Analysis Over Other Methods

LAB • *Jim Wilcox, CodeCAD, Inc.*

Time history analysis of dynamic loading offers more accurate results than other methods, often with no "extra" effort. This session will demonstrate some advantages of time history analysis, including how these

results let you observe system response in a way that is not possible with static equivalent or spectral methods. This ability can be critical to fully understanding how a system responds when solving certain types of problems.

Buried Pipe

LAB • *Al Kaye, Altech*

What happens when piping goes underground? How does soil response to pipe strain affect the piping response? How do you introduce this pipe-soil interaction in CAESAR II? This session will answer these and other questions regarding the CAESAR II buried pipe modeler.

ISOGEN Spools with I-Configure in CAESAR II

LAB • *Jack Hollenbeck, Exterran*

Many CAESAR II users recognize the value of standardized ISOGEN drawings that are now available in the program, but many engineers simply use the default drawing settings rather than learn how to customize their drawings to match company standards. This session will provide guidance on creating a backing sheet and manipulating data displayed in these drawings.

The CAESAR II / CADWorx Interface

LECTURE • *Thomas Van Laan, COADE, Inc.*

The majority of an engineer's time invested in analyzing/qualifying piping systems is spent in building the piping model. In many cases the piping model is based on a designer's piping layout. What if the designer's work could be used as CAESAR II input? Or, what if engineering changes were directly applied to the designer's layout? Such data exchange will greatly reduce both labor and errors. COADE offers such a designer/engineer link between CAESAR II and CADWorx Plant. This session will illustrate this valuable link.

Closing the Loop – Dealing with Bad Assumptions

LECTURE • *Mike Johnson, Reliant Energy*

Many piping engineers never see their analyses in operation—the office environment never sees the real world. Without this feedback, without knowing field tolerance, pipefitter procedures, environmental considerations, and operating upsets, how can the engineer evaluate the overall design? This session will bridge the gap between the computer model and the piping system in operation through the eyes of an engineer tasked with identifying and evaluating piping problems in the field.

Creating an Accurate Fatigue Analysis of Offshore Piping

LECTURE • *Bob Robleto, KBR*

Fatigue design of FPSO's is outside the design guidance of ASME B31 piping standards but not outside its scope. An approach is demonstrated that was recently used for design of an FPSO using B31.3 requirements as well as DNV overall fatigue assessment. The two design philosophies are compatible. This course will show how CAESAR II can accurately evaluate overall fatigue of piping systems restrained by a moving hull of a ship. Also computing the fatigue design of ship structure requires massive amount of displacement input data. This presentation discusses FPSO design and shows how an Excel spreadsheet macro can be used to generate and input displacements into the CAESAR II module through the program's Neutral File.

Transient Hydraulic Analysis for CAESAR II Evaluation

LECTURE • *Trey Walters, Applied Flow Technologies*

Many operational failures in piping are caused by transient hydraulic events such as surge or hammer passing through the system. Several commercial programs are available today to calculate these changing hydraulic loads. This session will review this hydraulic analysis in AFT Impulse, a program that has a data link to CAESAR II. The resulting force-time data from this hydraulic analysis will be merged into CAESAR II dynamic input for a time history analysis.



"CUC2008 was very well organized. It had a first class feel to it. I think there was a good mix of classes. The levels and topics should have given all users some good choices."

*Anthony Horn,
Horn Drafting & CAD Center*



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CAESAR II® (cont.)

Equipment Modeling Strategies

LECTURE • *John Luf, Consultant*

In many instances the final piping design is controlled by the equipment to which the piping is attached. The interaction then, between piping and these “boundary conditions”, is significant. An accurate analysis will depend on the thermal strain introduced by the equipment and the relative stiffness of that equipment. This session will provide guidelines for proper equipment modeling in CAESAR II.

Advanced Expansion Joints

LECTURE • *Dan Edgar, Senior Operations Pathway Div.*

The expansion joint modeler may be unable to properly model some of the more complicated expansion joint assemblies. In these situations the entire expansion joint assembly can be constructed out of individual piping components to accurately predict system response. This advanced session will highlight the important considerations in building these assemblies and provide several examples.

Basic Expansion Joints

LECTURE • *Dan Edgar, Senior Operations Pathway Div.*

Expansion joints accommodate large strain in a relatively small component and can solve many design problems but they have their own important considerations. Stiffness, effective length, and pressure thrust all come into play in modeling these components in a piping system analysis. This basic expansion joint session will define criteria for a simple expansion joint assembly and utilize the CAESAR II expansion joint modeler.

SIFs through FEA & Testing – The Realignment Project

LECTURE • *Tony Paulin, Paulin Research Group*

The SIFs we use in analyzing piping components today were developed over 50 years ago and since then they have been subject to inconsistent modifications between codes. A recent ASME contract was “let” to review the literature and add more testing to develop “better” SIFs and realign the various codes’ use of these factors. This session is led by the author of that new work and will review the highlights of this project.

Sizing Spring Supports in CAESAR II

LAB • *William (Bill) Miller, BIS Frucon Engineering, Inc*

CAESAR II can select a spring support for any number of manufacturer’s catalogs. All it requires is the design load and the design travel. But is it the best support for the system? CAESAR II provides many design criteria for these supports. This session will highlight the most useful design parameters and also review a procedure by which these supports can be evaluated and perhaps improved.

Incorporating Structural Steel in Piping Models

LECTURE • *Nimal Jayaratne, Hatch Associates Pty Ltd*

Since most piping analysis focuses on the response to thermal strain, restraints are typically assumed rigid to provide a conservative estimate of loads on these restraints. At times, that conservative assumption leads to more expensive designs. This session will use the structural modeling facility to realistically take advantage of the inherent structural flexibility in piping stress analysis. A simplified CAESAR II model incorporating the structural steel will be presented in this session. The piping system in the example will illustrate the analysis of Flare Bridge piping of an offshore platform.

Load Cases and Load Case Options

LAB • *Arvind Patil, IIT Bombay*

CAESAR II only “recommends” static stress calculations for expansion and sustained stress calculations. This session will provide hands-on how to examples to help you build occasional loads and occasional stresses demonstrating all those other settings in the Load Case Options.

Matching the Model to Field Response – A Turbine Case Study

LECTURE • *Muhsen Sannaa, Aramco*

This session presents a case study of a troublesome (vibration) steam turbine installation. The study follows the evolution of the piping model to fit the field observations and also evaluate possible solutions. Recommendations are provided for building better CAESAR II models and providing useful advice in the field.

Common Modeling and Analysis Mistakes – A Panel Discussion

PANEL • *Muhsen Sannaa, Aramco*

Oftentimes the casual CAESAR II user considers the piping model to be correct because it appears correct—graphically. Proper analysis goes beyond that. Individually, the many rules for a valid analysis are quite simple but in a system analysis, where these many rules are combined, it is not so easy to “get it right”. This session will allow a panel of experienced CAESAR II users to address the audience questions regarding proper modeling and common mistakes.

Addressing Nonlinear Conditions in the Piping Model

LAB • *Nigel Marsh, Peak Engineering*

Translating actual field support conditions into a CAESAR II model introduces the greatest variation in program results. Things become more difficult when those supports respond in a nonlinear fashion. Add to that the lack of industry standards for nonlinear considerations such as support lift off and support friction. A proper analysis requires some basic understanding of how CAESAR II handles these nonlinear conditions. This session will review nonlinear conditions in piping systems (gaps, lift off, friction, etc.) and their influence on load cases and stress evaluation.

Using CAESAR II to Select and Locate Pipe Supports

LECTURE • *Thomas Van Laan, COADE, Inc.*

Designers handle the majority of pipe support placement using general company rules but these rules are, at times, inappropriate or difficult to apply. Using the basics of CAESAR II, the engineer or designer can locate and size supports for any situation. This session will provide background for those general support rules and provide guidance on improving design through analysis.

Qualifying Dynamic Response in New Designs

LECTURE • *Nigel Marsh, Peak Engineering*

Except for seismic requirements there is little dynamic qualification for new piping designs. Most dynamic analysis is driven by forensic engineering rather than design engineering (“what went wrong and how can I fix it”). This lecture will focus on practical approaches to reduce the risk of piping vibration for new designs. This will draw on the presenter’s experience implementing various design methods on many major projects and analysis of piping failures.

What Should be Analyzed?

LECTURE • *Arvind Patil, IIT Bombay*

Often, deciding on the critical line list for analysis is the first step in good design. This session will help you determine what your “critical line list” is and what the code requirements are.



“I liked the fact that CUC2008 was scheduled in such a way that I could attend all the classes throughout the conference. I really feel I was able to attend everything I needed to. I came away with many new things to share and answers to most of our questions.”

*Brian Shick,
Sr. Application Specialist,
El Paso Corp.*



SPED Professional Piping Design Certification Level I Review and Exam

Preceding this year’s conference, COADE will be offering a special one-day Society of Piping Engineers and Designers PPD Certification Level I Review and Exam taught by Dr. William Beazley, SPED Executive Director. SPED Professional Piping Designer Certification is an internationally accepted piping credential. The course will be presented Sunday. ■ The cost will be an additional \$300 and includes the exam fee. Information regarding SPED PPD Certification can be found on the SPED website at www.spedweb.com. **Call (+1) 832-286-3404 to register today!**



New Venue for 2009

The 2009 COADE User Conference will be held at the **The Woodlands Waterway Marriott Hotel & Convention Center in Houston, Texas**, a state-of-the-art facility offering a distinctive setting in a wooded retreat area with a meandering waterway. It is located just 20 minutes north of George Bush Intercontinental Airport in The Woodlands. At the heart of The Woodlands is its newest and most lively development—The Waterway—featuring entertainment venues, retail shops, and upscale dining.

Spa at The Waterway

Located on-site, this full-service day spa caters to both men and women, featuring an upscale salon, an old fashioned men's barbershop and much more. Please contact the Spa at (+1) 281-296-8866 to make an appointment, as reservations are required.

A Special Conference Rate of \$199/night is available (single and double occupancy) when you register online at the event website: www.coadeuserconference.com/2009.

This rate will expire September 1, 2009. Please make your room reservations early as this block of rooms will be limited and space will sell out quickly.

The Woodlands Waterway Marriott Hotel & Convention Center

1601 Lake Robbins Drive, The Woodlands, Texas 77380 USA

Phone: (+1) 281-367-9797 • Fax: (+1) 281-681-5656 • Web: www.marriott.com

Special Airfare Rates

COADE has partnered with **Continental Airlines** to provide conference attendees discounts of up to 10% off the lowest available published fares at time of ticketing. Attendees living in the United States that reserve their airline ticket online at www.continental.com and insert ZFRYBWNCJ2 in the offer code box will receive an additional discount of 3%. Complete discount details are available at www.coadeuserconference.com/2009.

Or, if you prefer, you can call your travel professional or Continental MeetingWorks at (+1) 800-468-7022 for reservations. Refer to Z Code ZFRY and Agreement Code: BWNCJ2. If you have any questions regarding this program, please contact Dana Toland at (+1) 781-803-3735 or dana.toland@itexgroup.com.

Visa Information

Many travelers to the U.S. will require a visa and should follow the guidelines available on the CUC2009 website at www.coadeuserconference.com/2009. Starting the visa process now will help ensure that you have a visa in time for the 2009 COADE User Conference.

Conference Hotline

If you have any questions, please call the IT Exchange Group at (+1) 781-803-3735.

REGISTRATION

Register by July 1, 2009 and receive \$200 off the regular fee of \$1,195.



Group Plan Rebate Program

Bring the whole team and pay even less!

For those companies sending five or more paying attendees, COADE will rebate those companies 10% of the total registration fees paid after the conference.

CUC2008 Attendees: Alumni Discount Program

All CUC2008 attendees who register by July 1, 2009 will be eligible for the 2008 rate of \$795.

Conference Registration Fee Includes:

- Monday Morning Keynote Sessions
- Participation in all Conference Sessions
Offered Monday, Tuesday, and Wednesday
- Monday, Tuesday, and Wednesday Breakfast
- Monday, Tuesday, and Wednesday Lunch
- Monday and Tuesday Evening Receptions

Please note: all prices shown are United States Dollars (USD).

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