



## Plumbing Design & Handbook Classes



2008-2009

Anyone involved in the Plumbing Industry would benefit from attending these very informative classes. Knowledgeable and industry-wise presenters teach and interact with attendees in a relaxed and friendly atmosphere. Classes take place at one of the premier training centers in southeastern Michigan, the Metropolitan Detroit Plumbing Industry Training Center in Troy, Michigan. Jointly sponsored by the American Society of Sanitary Engineering - Michigan Chapter (ASSE) and the Eastern Michigan Chapter of the American Society of Plumbing Engineers (ASPE), the programs are designed to give a well rounded learning experience. Classes are open to anyone interested. Dinner cost is \$15 per person (*at the door*) to non ASPE and ASSE members. Checks made payable to ASPE-EMC are accepted. ASPE Plumbing Design Handbook Reviews are being conducted simultaneously on a monthly basis by Joseph Hernandez, CIPE/CPD, for basic classes and Ron George, CIPE/CPD, for advanced classes. Registration is required. Contact ASPE VP Technical Ed Hawley at (248) 656-8253 or e-mail to [ehawley2382@wideopenwest.com](mailto:ehawley2382@wideopenwest.com) to confirm your attendance by the Friday prior to class day. Visit our web site at [www.aspe.org/Eastern\\_Michigan](http://www.aspe.org/Eastern_Michigan) (*URL is case sensitive*) for easy registration and a map to the school. Dinner takes place from 5:30 - 6:00 pm. PLEASE NOTE: Topics, times and places are subject to change, depending on the availability of the presenter or unpredictable circumstances. Check our web site for the most up-to-date information.



Plumbing Industry Training Center  
1911 Ring Drive, Troy, MI 48083

## PROGRAMS

### September 9, 2008 - *NOTE: 2nd Tuesday*

**Handbook Basic:** Site Utility Estimating - 3:30 - 5:30 PM  
**Handbook Adv:** Seismic Design for Hospitals - 3:30 - 5:30 PM  
**Design Class:** Seismic Plumbing Systems - 6:00 - 8:30 PM  
**Presenter:** Werner Stebner, PE

Whether an act of God, such as an earthquake or an explosion, the catastrophe is sure to bring on an investigation as to why the piping systems failed and where does the liability lie. Mr. Stebner focuses on model building codes, seismic standards and material specifications for the isolation of vibrations that can cause the failure of non structural components such as HVAC systems and other piping systems. Werner's presentation is enlightening and professional, he provides a 48 page detailed handout used as a reference and answers questions throughout the presentation.

### October 21, 2008

**Handbook Basic:** Sanitary Drain & Waste Systems & Code - 3:30 - 5:30 PM  
**Handbook Adv:** Water Treatment - 3:30 - 5:30 PM  
**Design Class:** Geothermal Piping Systems & Methods - 6:00 - 8:30 PM  
**Presenter:** Alan L. Fordeck, External Quality Manager, WaterFurnace International, Inc.

This will be an introduction into the concept of geothermal and how it works. It will include information on the three types of loop systems (vertical, horizontal and pond). Piping materials, anti-freeze solutions and equipment will be covered. He will also discuss water-to-water equipment and its application to radiant heat.

### November 18, 2008

**Handbook Basic:** Storm & Roof Drainage & Code - 3:30 - 5:30 PM  
**Handbook Adv:** Corrosion in Piping Systems - 3:30 - 5:30 PM  
**Design Class:** Theory of Radiant Piping & Plumbing Design - 6:00 - 8:30 PM  
**Presenter:** Brad Rutherford

This presentation builds a foundation as to why 'radiant' and links the engineering chain of events of today's heating design with people and events of the past.

\* Certified in Plumbing Design through the American Society of Plumbing Engineers. Visit [www.aspe.org](http://www.aspe.org) for complete details.

## December 16, 2008

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**Handbook Basic:** Natural Gas & Propane Systems - 3:30 - 5:30 PM  
**Handbook Adv:** Piping Installations & Piping Accessories - 3:30 - 5:30 PM  
**Design Class:** Applied Hydronic Radiant Heating & Cooling Systems - 6:00 - 8:30 PM  
**Presenter:** Rudi Tillmann, ProRadiant Product Manager, Viega

Presenting hydronic radiant heating and cooling as an energy efficient and comfortable technology as an alternative to solely air-based heating and cooling systems. Design overview and features/benefits of radiant heating and cooling systems. Performances and limitations of water-based radiant heating and cooling systems. Targeted applications.

## January 20, 2009

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**Handbook Basic:** Piping Components - Valving & Control / Jointing - 3:30 - 5:30 PM  
**Handbook Adv:** Green Plumbing - 3:30 - 5:30 PM  
**Design Class:** Radiant Controls - 6:00 - 8:30 PM  
**Presenter:** Rob Buyze

Control strategies for heating and cooling incorporating both air and water systems: (1) We will be covering outdoor temperature reset with indoor feedback to maximize efficiency; (2) Water temperature controls covering both variable speed injection systems; 3 and 4 way mixing valves; (3) Network control systems to include cooling groups, zone synchronization, shared schedules and scenes; (4) Snowmelt control systems including both manual and automatic snow/ice detection

## February 17, 2009 - *NOTE: Joint Meeting with Detroit ASHRAE & the Eastern Michigan Radiant Panel Assoc.*

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**Handbook Basic:** Domestic Hot Water & Hot Water Recirculation & Code - 3:30 - 5:30 PM  
**Handbook Adv:** Gasoline, Diesel & Fuel Oil Piping & Dispensing Systems - 3:30 - 5:30 PM  
**Design Class:** Solar Today "What's New Under the Sun" - 6:00 - 8:30 PM  
**Presenter:** Bob Rohr, Training & Education Manager, Caleffi NA

Join Bob "hot rod" Rohr from Caleffi as we explore new solar and hydronic products. See some clever and unique products and learn how to integrate solar into your hydronic mix. Join the Caleffi Team as we explore design and piping concepts for solar thermal. We will go over various software design products to determine solar fraction for your specific area. We will then go into piping, storage and control options for DHW and hydronic heating applications. Learn to determine what system design will fit the project best both from a design and budget standpoint.

## March 24, 2009 - *NOTE: 4th Tuesday*

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**Handbook Basic:** Compressed Air - 3:30 - 5:30 PM  
**Handbook Adv:** Steam & Condensate Systems - 3:30 - 5:30 PM  
**Design Class:** When Design & Construction Meets Classroom Safety - 6:00 - 8:30 PM  
**Presenter:** Phil A. Parker

Differentiating between "Safety - Prevention" and "Emergency - Response" and how to better incorporate both in order to enhance laboratory safety for our nation's students.

## April 21, 2009 - *NOTE: This meeting will take place at the National Sanitation Foundation in Ann Arbor, MI*

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**Handbook Basic:** No meeting at NSF; check the web site for an alternate date and time.

**Handbook Adv:** Public Swimming Pools & Decorative Fountains - 4:00 - 6:00 PM  
A discussion on pools system design with discussions on pool equipment, filtering methods, surge tanks, pumping and nozzle designs for decorative fountains.  
**Dinner** - 6:00 - 6:30 PM

**Program:** Backflow Prevention & Laboratory Cross Connection Control- 6:30 - 8:30 PM

**Presenter:** Paul Bladdick

Paul will talk about the importance of the thorough surveys of laboratory facilities for cross connections, including what to look for, where to look and the proper ways to correct them, based on the degree of the hazards posed. This will take place on site in an NSF laboratory. Check our web site for a map to NSF International in Ann Arbor, MI.

## May 19, 2009

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**Handbook Basic:** Plumbing Estimating - 3:30 - 5:30 PM  
**Handbook Adv:** Irrigation Systems - 3:30 - 5:30 PM  
**Design Class:** Advanced Water Restoration - 6:00 - 8:30 PM  
**Presenter:** Cliff Roe, DymanOx

Henry's Law states; At a constant temperature, the amount of a given gas dissolved in a given type and volume of liquid is directly proportional to the partial pressure of that gas in equilibrium with that liquid. In other words; you cannot dissolve O<sub>2</sub> (oxygen) into H<sub>2</sub>O (water) beyond atmospheric at a given temperature. Cliff will demonstrate and explain in layman's terms that the DynamOx System will inject O<sub>2</sub> into H<sub>2</sub>O in greater amounts possible stated in Henry's Law! The benefits to all of us from this process are immense. This technology is being applied to wastewater, industrial wastewater, agriculture, farming, the military, river reclamation; basically all industries that produce wastewater. This same DynamOx process will eliminate the odors that are common in these environments too. This process is compliant with both the EPA and NOAA.

## SPEAKERS



**Werner Stebner, PE, ME-Grad of Oregon State; Certified International Coatings Inspector; SMACNA Contractor in Montana, Pres-Owner 11 years; HVAC Engineering Manager of 176 Engineers Firm; Key Note Speaker at annual Turkish ASHRAE on Seismic; Lecturer at Egyptian HVAC Meeting in Cairo; VP of Sales, Amber Booth Company, Houston, Texas; Consultant Engineer to Military, Automotive, and various Industrial Companies; Author of various Photographic related books**



**Alan L. Fordeck** received his Bachelor's degree in management from Purdue University in 1974. In the spring of 2001, Al completed his Master's in Business Administration degree from the Indiana Institute of Technology. Alan's work experience consists of five years in partnership with an electrical / mechanical contracting firm. This was followed by seventeen years operating his contracting firm. His last 11 years have been spent at WaterFurnace International; first in the Technical Services department. Following the position of Commercial Sales representative; Al became their Commercial Products Manager, Engineering Manager in charge of testing labs and prototype development then Senior Product Engineer. He presently holds the position of External Quality Manager.



**Brad Rutherford** is the Hydronic Heating Manager for Ferguson Enterprises Inc. (Detroit Region) with 27 years in the plumbing and heating supply industry. He is an RPA Certified Installer and Designer, Uponor Certified Designer, and licensed by the State of Michigan as a Boiler Installer and a Builder. His hobby is studying the history of hydronic heating.



**Rudi Tillmann** is the ProRadiant Product Manager at Viega NA. Rudi has worked for Viega for 7 years, 5 as a product and radiant design engineer and two as their Product Manager. He received his degree in mechanical engineering from the University of Applied Science in Cologne, Germany. During his studies he focused on mechanical hydronic radiant heating and cooling systems. One of Rudi's tasks at Viega is to transfer technology knowledge from Europe to North America and visa versa. Rudi is an active member of the RPA and ASHRAE.



**Rob Buyze**, President of HS/Buy-Van, has been with the company for the last 20 years. Prior to that, he has worked as an electrician and has done laser alignment and training and repair of construction lasers. He is experienced with hydronic heating systems, including Tekmar Controls, Uponor Radiant and Plumbing Systems, Grundfos Pumps, Triangle Tube Boilers, Burnham Boilers and Honeywell Water Products. He's an associate member of ASHRAE, RPA, ACCA, and MPMCA.



**Bob "hot rod" Rohr** has been a plumbing, radiant heat and solar contractor and installer for 30 years. A longtime RPA member, and columnist for PHC News and Mechanical Business magazine. Bob has joined Caleffi North America as manager of Training and Education. Caleffi is a worldwide leader in innovative hydronic solutions and now creating innovation into solar water an space heating.

## SPEAKERS *continued*



**Phil Parker** has been active in the design/build mechanical and plumbing industry in the Dallas-Fort Worth Metroplex for thirty-five years. He has devoted the past ten years to the development of new and innovative industry products. The ISIMET Control System, a safety control device designed for use in instructional science laboratories, responds to many current National and State Codes and Safety requirements including NFPA 45.



**Paul Bladdick** has been in the plumbing industry since 1966 and a Master plumber and contractor since 1978. His company, The LPB Co. Inc., has specialized in cross connection control and backflow protection since 1992. Paul is certified to install, repair and test backflow preventers in 14 states. He is qualified as an instructor and proctor for backflow prevention courses. He is the current president of Michigan Backflow Prevention Association and active member of ABPA – National. He is past president of ASSE – Michigan Chapter and currently is a member of all technical backflow technical committees. He writes a regular column for *Plumbing Standards* magazine and has contributed articles for all the major trade magazines. Paul is a regular speaker at the various trade educational seminars including the 2006 ASPE conference in Tampa, Florida.



**Cliff Roe** worked 27 years as a general contractor which included new construction with Walbridge Aldinger and as an operator for underground piping systems at the University of Michigan Hospital in Ann Arbor, MI. In 2002, he started working on a drinking water distribution monitoring system. In 2004, Jim Ridgway, President of DynamOx, brought him in to redesign the DynamOx System, make mechanical design changes to previously failed testing equipment and demonstrate the science behind this new technology would work.

## INSTRUCTORS

### Basic ASPE Handbook Instructor



**Joseph Hernandez** received an Associate in Science of Architecture from Henry Ford Community College in 1977 and Bachelor of Mechanical Engineering from Wayne State University in 1988. He has worked for Harley, Ellis, Piece and Yee, Albert Kahn Associates, Giffels and currently SSOE Inc. At these A/E firms he held the position of Project Engineer and at SSOE Inc. he is a Senior Associate and the Group Leader for the Retail Division

Department. He has been employed by SSOE Inc. for 13 years and started in the Architectural industry in 1971 as an architectural draftsman while in college.

### Advanced ASPE Handbook Instructor

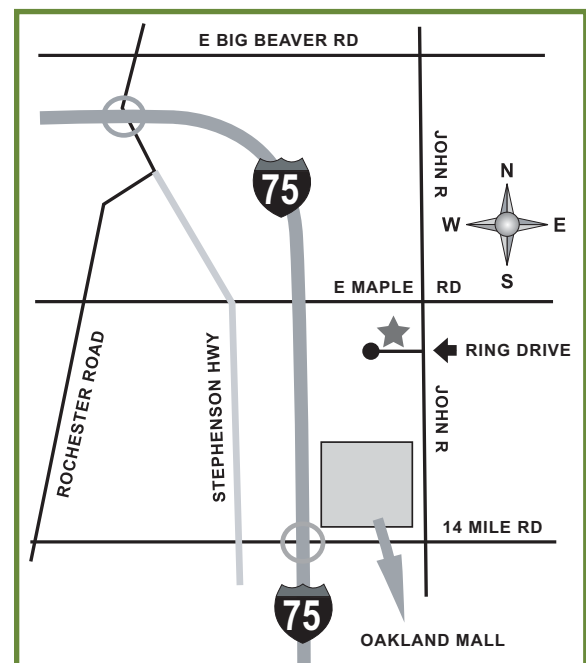


**Ron George** is the president of Ron George Design & Consulting. Ron is very familiar with the Plumbing and Mechanical codes and standards and sits on numerous plumbing & mechanical codes and standards committees. He has 30 years of experience designing Plumbing & Mechanical Systems for several major architectural/engineering and design/construct firms. He has served as an expert witness in many cases and performs forensic investigation all around the United

States. He has designed plumbing & mechanical systems for all building types including airports, stadiums, industrial manufacturing facilities, office buildings, commercial and retail buildings, hospitals, laboratories, prisons, jails, hotels, apartment buildings, military projects, and educational facilities.

## LOCATION

**ALL Programs** take place at the Plumbing Industry Training Center in Troy, MI, unless otherwise stated in the program brochure.



1911 Ring Drive, Troy, MI 48083