



The ASME South Texas Section Plant Engineering and Maintenance Technical Chapter

2012 ASME Pressure Vessel Seminar Series

January 31 – March 6, 2012, Tuesday Evenings, 5:30pm – 8:30pm (Dinner Included)

13610 Westland East Blvd., Houston, TX 77041

The ASME Boiler & Pressure Vessel Codes are the most widely used pressure design codes used in the world. These Codes continue to impact design methods used in a variety of industries including those associated with high pressure high temperature (HPHT) designs for oilfield applications. Stress Engineering Services, Inc. has included seminar content to address many of the current topics impacting engineers including design for high pressure, fracture mechanics, and fatigue as well as detailed discussions on material selection and welding.

Outline of Content for Six Session Seminar

Session #1: History and Overview of the ASME Boiler & Pressure Vessel Codes (January 31)

Instructor: Richard C. Biel, P.E. (Stress Engineering Services, Inc.)

- History of the ASME Pressure Vessel Codes and explanations on Sections of the Code
- Introduction and design philosophy of ASME Boiler & Pressure Vessel Code, Section VIII, Divisions 1, 2, 3
- Background on safety factors and design philosophy
- Discussions on the future of the Code and applications for non-typical pressure vessel designs

Sessions #2 and #3: Material Discussions: Welding, Selection, and Inspection (February 7 and 14)

Instructors: J. Kirk Brownlee, P.E. (Stress Engineering) & Charles L. Ribardo, Jr. Ph.D., P.E. (British Petroleum)

- Selection of materials for different applications and operating environments
- Welding and fabrication
- Non-destructive testing requirements for Section VIII, Divisions 1, 2, and 3 (references to Sections II, V, IX)
- Material requirements for critical applications such as high-pressure and high-temperature environments

Session #4: Overview of Section VIII, Division 1 - Design by Rule (February 21)

Instructor: Donald H. Bredbeck, P.E. (Thermatech, Ltd.)

- Pressure vessel design per the ASME Code
- Design of shells, heads, nozzles, flanges, vessel supports, lifting and tailing lugs
- Design for internal pressure and local stresses in shells and heads
- Available software packages, demonstration

Session #5: Overview of Section VIII, Division 2 - Design by Analysis (February 28)

Instructor: Richard C. Biel, P.E. (Stress Engineering)

- Distinctions from ASME Section VIII, Division 1
- Design by Rule – Part 4 and Design by Analysis – Part 5
- Load and Resistance Factor design, thermal stresses, and shakedown to elastic action
- Finite element methods and examples of design by analysis (in-class example problems)

Session #6: Overview of Section VIII, Division 3 - Design by Service (March 6)

Instructor: Roger D. Cordes, Ph.D., P.E. (Stress Engineering Services, Inc.)

- Distinctions from ASME Section VIII, Divisions 1 and 2
- Philosophy behind high pressure design and thick-wall pressure vessels
- Requirements for design using Division 3
- Non-linear analysis methods and fracture mechanics
- Using the Code as a design method for applications not typically classified as pressure vessels
- Pressure vessel design for oil field applications (API HPHT equipment) using the methodology of Division 3
- Worked example problems using finite element analysis results, fracture mechanics, and fatigue analysis

Fees due at Session #1: \$1,250 per person. Six or more from one company: \$950 each (one check/PO)

Stress Engineering Services, Inc.
Winter 2012 Pressure Vessel Engineering Seminar
Registration Form

Six Tuesday evenings: 5:30 – 8:30 PM (dinner provided) • January 31 – March 6, 2012

Meetings at Stress Engineering Services, Inc. Conference Center at 13610 Westland East Drive,
Houston, TX 77041. Building 2

Name: _____
Company: _____
Address: _____
City, State, Zip: _____
Phone Number: _____
E-mail Address: _____

Do you have any dietary restrictions? We will be serving dinner each evening.

Registration

Email this form to Kathy Smith, kathysmithtx@comcast.net or FAX to (713) 523-6767
Payment in full is due at Session #1 – January 31, 2012

Questions

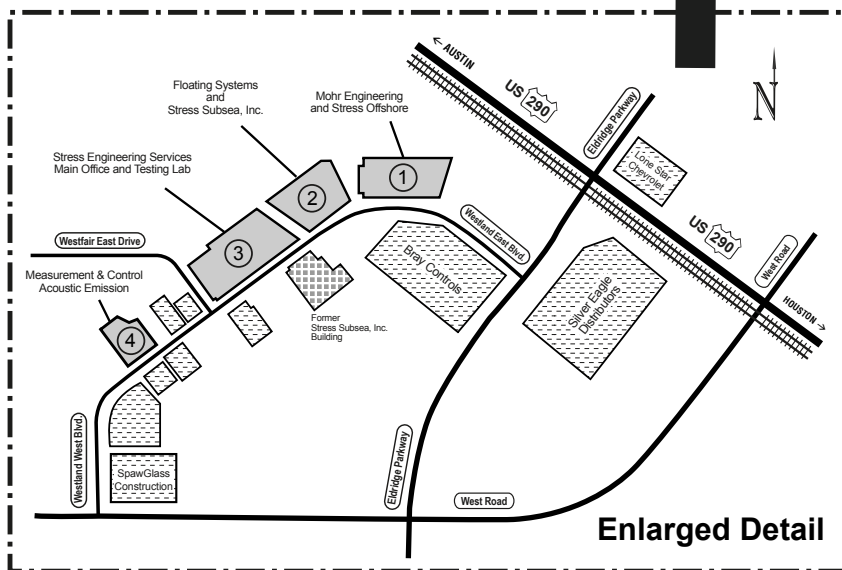
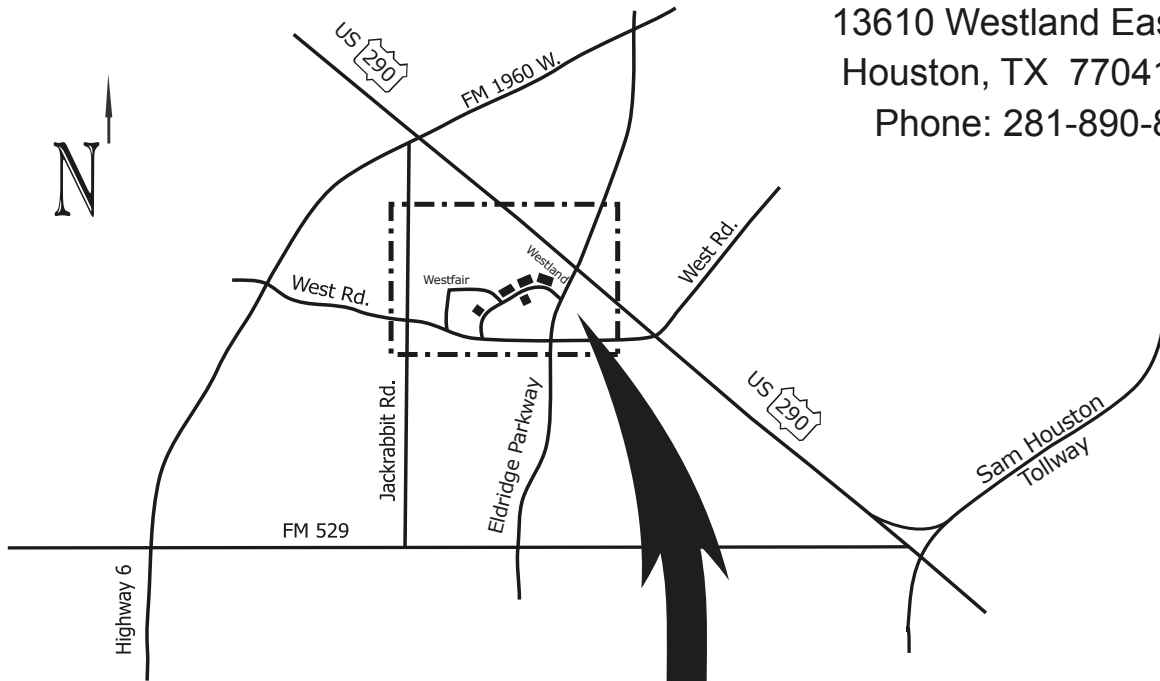
Seminar Content: Roger Cordes, Stress Engineering, roger.cordes@stress.com or 281-890-8441

Registration: Shelley Christian, Stress Engineering, shelley.christian@stress.com or 281-890-8441
Kathy Smith, ASME, kathysmithtx@comcast.net or 713-523-4565

Map & Directions

Stress Engineering Services / Stress Subsea Building 2

13610 Westland East Blvd.
Houston, TX 77041-1205
Phone: 281-890-8441



From Hobby Airport:

1. Travel on I-45 North to 610 Loop West.
2. Exit 610 Loop onto Hwy 290 West.
3. Exit Hwy 290 at Eldridge Pkwy.
4. Turn Left on Eldridge Pkwy.
5. Turn Right on Westland East Blvd.
6. Turn in second driveway on the right.

Total time from Hobby is approx. 45 minutes.

From Bush Intercontinental Airport:

1. Travel on Beltway 8 to Hwy 290 West.
2. Exit onto Hwy 290.
3. Exit at Eldridge Pkwy.
4. Turn Left on Eldridge Pkwy.
5. Turn Right on Westland East Blvd.
6. Turn in second driveway on the right.

Total time from Bush IAH is approx. 30 minutes.

From Downtown Houston:

1. Travel on Interstate 10 to 610 Loop West.
2. Proceed north on 610 Loop for about 1 mile
3. Exit on to Hwy 290 West (left 3 lanes)
4. Exit Hwy 290 at West Rd. / Eldridge Pkwy.
5. Turn Left on Eldridge Pkwy. (second light)
6. Turn Right on Westland East Blvd.
7. Turn in second driveway on the right.