

BOILER AND PRESSURE VESSEL INSPECTOR'S IN-SERVICE COMMISSION COURSE



BOILER AND PRESSURE VESSEL INSPECTOR'S IN-SERVICE COMMISSION COURSE



Ivy Tech Community College Wabash Valley, in cooperation with the State of Indiana's Boiler and Pressure Vessel Division, is offering a special training course for persons interested in acquiring eligibility for securing certification from the National Board of Boiler and Pressure Vessel Inspectors as a commissioned inspector, owner-user inspector or jurisdictional competency recognition.

The course is designed for the understanding of ASME code standards, inspection concepts and preparation to sit for the National Board Examination. Persons not possessing all of the requisite experience (See National Board of Boiler and Pressure Vessel Inspectors "Rules for Commissioned Inspectors," www.nationalboard.org/SiteDocuments/Commissioned%20Inspectors/NB-263.pdf and "Body of Knowledge" www.nationalboard.org/SiteDocuments/Commissioned%20Inspectors/NB-331I.pdf), or who are not employed by a recognized inspection agency at the time they sit for the exam, may attend the class and sit for the examination, but not anticipate receiving a commission until they have gained the required experience or have been employed by a recognized inspection agency. They must, however, be a high school graduate (or the equivalent) and possess a working knowledge of algebra, particularly transposition of formulas and order of operations.

Also, it is our strong recommendation that at least a minimum of three years of field/inspection experience and pre-course study is necessary for persons considering participation in the course. We have developed a guide for this purpose. This guide should be ordered prior to attending the course. (See "Supplemental Course Materials" for details.) This course is timed to end as close as possible to the National Board Examination which is held on the same day (first Wednesday of the months of March, June, September and December) throughout the United States and in the provinces of Canada. It is the responsibility of each person to make arrangements for the exam through their respective jurisdictional Chief Boiler Inspector. Alternatively, the National Board has partnered with Applied Measurement Professionals (AMP) to administer a computer-based examination. For more information, please visit AMP's website at www.goamp.com. This must be done at least 30 days before exam dates. Ivy Tech Community College of Indiana does not administer or determine eligibility for the National Board Exam.

COURSE OUTLINE

(100+ contact hours/10 CEU)

- Explanation of ASME Codes and the Sections applicable to the inspection concept
- Background information of National Board and Inspection functions
- Discussions and understanding of various designs and types of boilers
- Explanation of various types of welds, dimensions and NDE practices
- Discussion of flange, firebox and various types of steel construction
- Study and review of typical boiler inspector examinations and solution discussions
- Practical review and application of mathematics required for board exam
- Remainder of schedule devoted to simulation of actual National Board Examination conditions with evaluation in order to build student confidence in a test setting



PARTICIPANT'S QUALIFICATIONS

Each participant should demonstrate an aptitude for understanding the ASME Codes technical content and practical applications and the ability to solve mathematical problems as required by the industry. In order to qualify as a National Board Commissioned Inspector and sit for the National Board Exam, an applicant must have, as a minimum, a high school education (12 years or equivalent) and must meet the following criteria (5 points total):

EDUCATION (1 CREDIT MINIMUM, 4 CREDITS MAXIMUM)	CREDIT POINTS
--	----------------------

a) Technical Training in Boiler and Pressure Vessel Inspection (1 pt. maximum) Includes the following:	1
---	----------

- Continuing Education: Having completed and received a passing grade in a training course in at least one of the following (or related) subjects: quality assurance, engineering, fabrication methods, nondestructive examination or inspection. The training course(s) may be a correspondence course or conducted in a classroom.
- Code Courses: Completion of a course on knowledge, understanding and general structure of the National Board Inspection Code (N.B.I.C.) or other codes or related standards, as applicable.
- National Board Conducted Courses: Completion of a course on procedures and techniques of auditing, and/or basic inspection methods.

b) Technical Curriculum Includes the following:	2
--	----------

- A diploma from an accredited technical school
- Power Engineering Certificate
- Second Class Power Engineer's Certificate (Canada)
- Accredited Trade Certificate in such skills as: boilermaker, mechanic, steamfitter, machinist, millwright or welder
- Evidence of completion of a military or merchant marine training course in the area of marine or stationary boilers or pressure vessels

c) College/University Includes the following:	3
--	----------

- Associate degree in science, mathematics or engineering
- Bachelor's degree in science, mathematics, or engineering
- First (1st) Class Power Engineer's Certificate (Canada)

EXPERIENCE (1 CREDIT MINIMUM, 4 CREDITS MAXIMUM)	CREDIT POINTS/EACH FULL YEAR OF EXPERIENCE
---	---

Credits as shown for each full year's technical experience associated with boiler and pressure vessels in the categories listed below.

- | | |
|---|----------|
| a) Engineering, design or design registration in Canada | 1 |
| b) Manufacturing, including fabrication methods or processes in either shop or field | 1 |
| c) Responsible charge in the operation of boilers exceeding 50,000 lbs. of steam per hour total capacity | 1 |
| d) Perform repair, alteration or maintenance of boiler or pressure vessels | 1 |
| e) Quality control systems related to boiler or pressure vessel manufacturing repair or alteration in either shop or field | 1 |
| f) Inspection of boilers or pressure vessels either in-service or during construction including either shop or field | 1 |
| g) An NDE Level II examiner of boilers and pressure vessels | 1 |

REQUIRED COURSE MATERIAL

Participants are required to obtain and bring to the course the following up-to-date ASME Code Books which may be purchased from:

Mail: ASME
P.O. Box 2300
Fairfield, New Jersey 07007-2300
Phone: US & Canada: 800-843-2763
Mexico: 001-800-843-2763
Outside North America: 973-882-1170
Fax: 973-882-1717
Email: infocentral@asme.org
Web Site: www.asme.org



- **Section I** - Rules for Construction of Power Boilers
- **Section IV** - Rules for Construction of Heating Boilers
- **Section V** - Nondestructive Examination
- **Section VIII** - Rules for Construction of Pressure Vessels Division I
- **Section IX** - Welding & Brazing Qualifications
- **ASME/ANSI** - B31.1 - Power Piping

Participants are also required to obtain and bring to the course the National Board Inspection Code (NBIC) book and the NB-410 Boiler/Feedwater Guidelines which may be purchased from:

The National Board of Boiler & Pressure Vessel Inspectors
1055 Crupper Avenue
Columbus, OH 43229
Phone: 614-888-8320
www.nationalboard.org

SUPPLEMENTAL COURSE MATERIAL

PRE-COURSE STUDY GUIDE: AVAILABLE FROM IVY TECH COMMUNITY COLLEGE

Part 1- For many individuals wanting to become a commissioned Boiler and Pressure Vessel inspector and sit for the National Board exam, the uncertainty of what to expect on the exam and what material might be covered in a preparatory course can make preparation for either somewhat difficult. Ivy Tech Community College of Indiana has developed this guide to give a good overview of general concepts needed to be successful in the preparatory class for taking the National Board exam.

It is intended to emphasize the importance of being familiar with the ASME codes (I, IV, V, VIII [Div. I], IX, ANSI B31.1, and N.B.I.C. Book) and the practical application of the industry. The actual course content is more in-depth and very intense. Also, it is very important that the participant have sufficient mathematical competencies. Understanding basic algebra and being able to work with the transformation of formulas and order of operations is important. We do not want to discourage your participation in our course, but we do want you to be fully aware of the aspects of the course so that all parties will benefit. If the materials in the Pre-Course Study Guide should present problems, we suggest you discuss it with your company and supervisor, or call this office for further guidance as to attending the course.

Part 2 - This section of the guide focuses on math concepts, order of operation and transposition of formulas which are the major math areas needed for the passing of this exam.

The guide can be purchased in electronic format or paper copy. Shipping and handling charges in the U.S. are included in the price. Copyrighted electronic printing rights are limited to one electronic printing.

Electronic Copy.....\$57.90/copy
Paper Copy.....\$77.90/copy

BOILER OPERATOR'S GUIDE

Individuals new to the Boiler and Pressure Vessel industry may need help in understanding the basics of the industry. This hard-bound book is a good introduction to many of the concepts individuals might need as they proceed towards becoming a credentialed inspector and taking the National Board exam.

Available through an online bookstore.

COURSE LOCATION/LODGING

COURSE LOCATION/LODGING

Ivy Tech Community College of Indiana, Center for Workforce Development (CWD), 1700 E. Industrial Drive, Terre Haute, IN 47802 - Exit Interstate 70 at US Highway 41. Proceed south, approximately 6.5 miles to Harlan Rd. Turn west (right) and proceed to Industrial Drive.



Lodging is the responsibility of the enrollee and not included in the course fee. The following is a partial list of hotels/motels near the Ivy Tech Community College of Indiana, Center for Workforce Development. Please contact these establishments directly for information and current pricing.

**A-Holiday Inn.....	812-543-9406
B-Best Western.....	812-238-1461
C-Knights Inn.....	800-843-5644
D-Drury Inn	800-325-8300
E-Fairfield Inn.....	800-228-2800
F-Comfort Suites.....	812-235-1770
G-Hampton Inn.....	800-426-7866
H-Super "8" Lodge.....	800-800-8000
I-Pear Tree	800-325-8300
J-Econo Lodge.....	800-424-6423
K-Ramada Limited	800-272-6232

** Ask for Kay Newton-Instructors stay at hotel/Hot Breakfast Buffet negotiated price of \$75



1700 E. Industrial Drive, Terre Haute, IN 47802

IvyTech.edu/BoilerTraining | 800-377-4882, ext. 2492

This course qualifies for GI Bill educational benefits and unemployment benefits through Workforce Development.

© 2010 Workforce & Economic Development, a division of Ivy Tech Community College of Indiana.

REGISTRATION FORM

A maximum of sixteen students will be accepted and a minimum of three students will be necessary for the course to run. If fee is to be billed to a third party or company subsidy, a letter of verification will be necessary. Please return this form to the address or fax number below. Be sure to pre-register at least one week before the start of the course.

Rod Dowell

Ivy Tech Community College of Indiana
 1700 E. Industrial Drive
 Terre Haute, IN 47802
 (812) 298-0153 (FAX)
 rdowell3@IvyTech.edu

There will be no refunds after the course begins.

Tuition/Fees

The cost of the two-week course is \$2,995 per enrollee. This fee includes:

- Student Guide - Problems & Questions
- Technical Data Handbook
- Numerous Handouts

First Name _____ Last Name _____

Date of Birth _____ Email Address _____

Home Address _____ City _____ State _____ Zip _____

Home Phone _____ Work Phone _____

Company _____ P.O.# _____

Company Address _____ City _____ State _____ Zip _____

Length of Employment: _____ Education/Degree(s) _____

Employment Experience: (Important, i.e. Maintenance Operation, Design, Installation and Inspection, NDE Techniques, etc.)

_____ # of years: _____

Math courses taken (particularly Algebra) _____ Is it used? Yes or No

Payment: Check or Credit Card* Master Card Visa Discover

2011 COURSE DATES:

Courses begin on Sunday at 1 PM (EST) February 13 – 25, May 15 – 27, August 21 – September 2, November 6 – 18			
Item	Cost	Qty	Enter Amt.
Boiler & Pressure Vessel Course Tuition	\$2,995.00		
Pre-Course Study Guide (\$57.90 Electronic Delivery/\$77.90 Paper Copy)	\$57.90/\$77.90		
Total Fees			

Make checks payable to: **Ivy Tech**

**To ensure a secure payment, an Ivy Tech representative will call you to obtain your credit card information.*