



2KG TRAINING

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## ASME Code, Section VIII, Division 1: DESIGN AND FABRICATION OF PRESSURE VESSELS

Presenter: Fahim Shadid

### ABOUT THE PRESENTER: FAHIM SHADID



Fahim Shadid, P.E has a BS degree in Mechanical Engineering and MS degree in Engineering Mechanics.

Over the years and with his association with ASME he has attained expert knowledge of the ASME codes Sections VIII Divisions 1 and 2 and Sections II A and D, NBIC, API 510, API 579, PD5500, AS1210, API, AWWA, ASTM, ASCE and ANSI standards.

Fahim did extensive development work to provide in-house tools for the new ASME Section VIII Division 2. This included area replacement, buckling and NDE. He was also asked to review drafts for the re-write as well as proposed revisions. In addition, he prepared the documents for code recertification including the User's design specification. As a professional Engineer, he has certified many ASME Division 2 vessels prior to and after 2007.

**Number of days:** 3

**Cost:** R13 776 excl VAT

**CPD Points:** 3

### AIM OF COURSE

Based on the rules for pressure vessel design and construction, this course is a comprehensive introduction to the requirements of Section VIII, Division 1 including background, organization, design, materials, fabrication, inspection, testing and documentation of pressure vessels. The more commonly used subsections and paragraphs will be covered, and a discussion of individual problems or situations will be included. This course is intended for beginners, as well as experienced vessel designers who would like to update their knowledge of the Code.

Upon completion of this course you will be able

- Understand the background of the Code rules
- Apply the Code rules to more common design and fabrication situations
- Perform calculations for some of the loadings and situations not addresses by the Code

Prepare design specifications, design reports, Data Reports, and other documentation

### SPECIAL FEATURES

An overview of code organization, editions and addenda will be given, and participants will learn how to prepare and submit an inquiry to the Code Committee for Code Interpretation, Code Cases or Code revision. It is suggested (but not required) that you bring the latest Edition of the ASME Code Section VIII, Division 1, Pressure Vessels

### WHO SHOULD ATTEND

- Individuals involved with the purchase, design, fabrication, or inspection of pressure vessels.
- Some degree of technical background will be helpful, but such individuals are not required to have an Engineering degree or previous work experience in the subject matter.

## COURSE OUTLINE

Code rules, scope and jurisdiction

General requirements related to materials and testing

Material toughness and impact testing requirements

Joint categories and joint efficiencies

Welding requirements

Committees, operation and voting procedures

Editions, addenda and interpretations

Design Requirements

Design loadings and allowable stresses

Design criteria and strength theory for Division 1

Formulas for internal pressure and tensile loading

Openings and reinforcement

Hydrostatic and pneumatic testing

Background of the design rules

Example design problems and solutions

- Cylindrical shells and formed heads
- Seismic loading on vertical vessels
- Nozzle reinforcements
- Other special components
- External pressure and stiffening rings
- Reinforced openings and ligament efficiency

Open discussion of design problems

Procedures for external pressure (vacuum) and compressive loads

General requirements related to stamping, reports, testing, PWHT, tolerances, and NDEs

# INSPECTION, REPAIRS, AND ALTERATIONS OF PRESSURE VESSELS

## ABOUT THE PRESENTER: FAHIM SHADID



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**Number of days:** 2

**Cost:** R9 251 excl VAT

**CPD Points:** 2

## This inspection and repair course is run alongside the ASME Section VIII Div 1 course. Delegates may attend either or both courses.

This course is a comprehensive introduction to the requirements of various codes and standards, regarding inspection, repairs and alterations of pressure equipment, and in particular pressure vessels. The requirements of the National Board Inspection Code and the API-510 will be covered in detail. A brief introduction to API-579, Fitness for Service will also be included. Simple flaw evaluation procedures will be evaluated. The activities of ASME's Post Construction Committee will be explained and documents published by this Committee will be discussed.

## WHO SHOULD ATTEND

Individuals from users, manufacturers, repair organizations, inspection agencies and other organizations involved with maintenance and repair of pressure equipment. This course is intended for beginners, as well as experienced personnel wishing to update their knowledge.

## SPECIAL FEATURES

- Learn about the latest developments in the rapidly advancing field of pressure equipment inspection and repairs.
- Receive an overview of the work being performed by API, ASME, and PVRC, in the related areas.

**COURSE OUTLINE**

Introduction to post construction codes

Standards and the interrelation of various documents

Explanation of the responsibilities of the users, manufacturers, repair organizations, regulatory agencies and authorized inspectors

How to obtain National Board stamp

Detailed requirements of the NBIC

Differences between the NBIC and API-510

Examples of repairs and alterations and the documentation requirements for each

An introduction to API-579

Evaluation of corroded areas

Evaluation of pitted areas

Evaluation of misalignments and other geometric flaws

Simple Level 1 evaluation procedures for other flaws

An introduction to the ASME post Construction Committee

Overview of work being performed by API, ASME and PVRC related to post construction issues

Examples demonstrating the application of the rules

Open discussion of specific situations and problems brought up by the attendees

**Registration Form: ASME PRESSURE VESSELS SECTION VIII DIVISION 1**  
**Number of days: 3 Cost: R13 776 excl VAT CPD Points: 3**

**Number of days: 2 INSPECTION, REPAIRS, AND ALTERATIONS OF PRESSURE VESSELS**  
**Cost: R9 251 excl VAT CPD Points: 2**

**How to register for the course:**

1. Complete this registration form and fax it to Phindi Mbedzi: Tel: 011 325 0686 Fax: 011 325 0488 Email: [Phindi@2kg.co.za](mailto:Phindi@2kg.co.za)
2. Acknowledgement will be emailed to you.
3. Final confirmation and details will be faxed or emailed to you approximately 7 days before the commencement of the seminar.

**Cancellation Policy:**

By signing and returning the registration form, the authorizing signatory on behalf of the stated company is subject to the following terms and conditions.

- All cancellations must be received in writing
- Any cancellations received less than 3 working days before the date of the event, the full fee will be payable and no refunds or credit notes will be given.
- If a registered delegate does not cancel and fails to attend the Workshop, this will be treated as a cancellation and no refund or credit note will be issued.

**Delegate information:**

Title: \_\_\_\_\_ Surname: \_\_\_\_\_ Name: \_\_\_\_\_

Full Company name: \_\_\_\_\_ Job Title: \_\_\_\_\_

Postal Address (to which invoice must be sent): \_\_\_\_\_

Code: \_\_\_\_\_ VAT number: \_\_\_\_\_

Tel: ( ) \_\_\_\_\_ fax: ( ) \_\_\_\_\_

Cell: \_\_\_\_\_ Email: \_\_\_\_\_

**Contact/ Accounts information:**

Title: \_\_\_\_\_ Surname: \_\_\_\_\_ Name: \_\_\_\_\_

Tel: ( ) \_\_\_\_\_ fax: ( ) \_\_\_\_\_

Cell: \_\_\_\_\_ Email: \_\_\_\_\_

**Dietary Requirements:** Normal  Vegetarian  Halaal

Please tick the course that you would like to attend:

Johannesburg, CedarWoods of Sandton  
Div 1 (3 days), 6-8 May 2019

Inspection and Repair (2 Days)  
9-10 May 2019

attend both (5days)  
6-10 May 2019

I have read and agreed to all the conditions of registration as stipulated in this brochure.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

For more info and to register contact Phindi Mbedzi on tel: 011 325 0686 or cell: 071 125 6188 and email: [phindi@2kg.co.za](mailto:phindi@2kg.co.za) or visit [www.2kg.co.za](http://www.2kg.co.za)