



NBIC Repair and Alterations

HSB, a Munich Re company, is a technology-driven company built on a foundation of specialty insurance, engineering and technology, all working together to drive innovation in a modern world.

Course Description: This training program provides a basic introductory overview of the National Board Inspection Code (NBIC) and its requirements for performing repairs and alterations of ASME Code pressure retaining items.

Topics Covered

Organizational Structure of the National Board of Boiler and Pressure Vessel Inspectors

- Membership
- Purpose
- Authority
- Objectives
- Activities

Organization of the NBIC Document

- Structure

Publication Schedule

Part 1 - Installations

Part 2 - Inspection

Part 3 - Repairs and Alterations

- Administrative Requirements
 - Accreditation
 - R Stamp Organizations
 - Owner-User Accreditation
- Repair Organizations
 - Application Process
 - Prerequisites
 - Code Books
 - QC Manual
 - Scope of Work
 - Inspection Contract
- Accreditation
- Review Audits

Authorized Inspection Agency

NB Commissioned Inspector

- Qualification for Application
- Commissioning Examination
- Certificate of Competency
- Endorsements
- Revocation of Commission

Repairs and Alterations

- Developing a Repair/Alteration Strategy
- Understanding the Present Condition
 - Identification
 - Data Report
 - Code of Construction
 - Type of Construction
 - Special Service Conditions
 - Physical Condition
 - NDE Required
 - Heat Treatment
 - Scope of Actions

Section VIII, Division 2 or 3 Work

- User Design Specification
- Repair Plan
- Engineer Certification

Understanding the Operating Environment

- Reasons for Failure/Alteration
- Corrective Actions Required

Establishing the Final Objective

- Applicable Construction Code
- Design Requirements
- Fabrication/Repair Techniques
 - Scope of Work
 - Routine or Regular Repair
 - Alterations
 - De-Rating
- Materials Selection
- Replacement Parts
- Welding Procedure Selection
- Required NDE or Alternatives
- Required PWHT
- PWHT Alternatives
- Suggested Repair Methods
 - Flush Patches
 - Window Patches

Select Course of Action and Proceed

- Perform the Design Verifications
- Repair of Pressure-Retaining Items without Complete Removal of Defects
- Obtain Materials or Parts
- Obtain Inspector Concurrence
- Select WPS
- Conduct Fabrication
- Re-rating Objects Using Higher Allowable Stress Values
- Pressure Testing
- Final Stamping
- Prepare R Forms

R Form Distribution and Record Retention

Jurisdictional Considerations

Part 3 Supplements

For more information, contact GetInfo@hsb.com