

EL502

ASME BPV Code, Section VIII, Division 2: Design & Fabrication of Pressure Vessels - Alternative Rules

Module 1

- Introduction and General Requirements
 - Introduction to ASME Boiler & Pressure Vessel Code
 - Forward
 - Comparison with Division 1
 - Organization of the Code
 - Scope of the Code
 - Responsibilities and Duties

Module 2

- Data Report and Stamping
 - Obtaining and Using Code Stamps
 - Manufacturer's Data Reports
 - Stamping Requirements

Module 3

- Materials Requirements
 - Permitted Materials
 - Additional Materials Requirements
 - Basis for Allowable Stresses
 - Material Properties

Module 4

- Material Toughness Requirements
 - Toughness Requirements for Carbon and Low Alloy Steels
 - Toughness Requirements for High Alloy Materials
 - Toughness Requirements for Other Materials
 - Impact Testing Requirements

Module 5

- Design by Rule Requirements
 - General Design Requirements
 - Design of Welded Joints
 - Scope of Coverage of Design Rules and Comparison with the former Division 2

Module 6

- Design for Internal Pressure
 - Shell Tolerances
 - Cylindrical and Conical Shells
 - Formed Heads
 - Cone-Cylinder Junctions
 - Combined Loadings

Module 7

- Design for External Pressure and Buckling
 - General Rules for Buckling Design
 - Cylindrical and Conical shells
 - Spherical Shells and Formed Heads
 - Combined Loadings

Module 8

- Design Rules for Openings
 - Nozzle Geometry and Attachment Methods
 - Nozzles in Cylindrical and Conical Shells
 - Nozzles in Spherical Shells and Formed Heads
 - Nozzles in Flat Heads
 - Other Requirements for Openings

Module 9

- Design by Analysis Requirements
 - General Analysis Requirements
 - Elastic Stress Analysis Method
 - Limit-Load Analysis
 - Elastic-Plastic Analysis
 - Protection Against Local Failure
 - Protection Against Buckling
 - Protection Against Fatigue Failure

Module 10

- Fabrication Requirements
 - General Fabrication Requirements
 - Welding Requirements
 - Heat Treatment Requirements
 - Specific Requirements for Material Groupings and Various Methods of Construction

Module 11

- Inspection and Examination Requirements
 - General Inspection and Examination Requirements
 - Examination of Welded Joints
 - Examination Methods and Acceptance Criteria

Module 12

- Pressure Testing and Over-Pressure Protection Requirements
 - General testing Requirements
 - Hydrostatic Testing
 - Pneumatic Testing
 - Over-Pressure protection