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