2001 ASME Boiler and Pressure Vessel Code

Section I  Rules for construction of power boilers

Section II  Materials and Specifications

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Section III  Rules for construction of nuclear power plant components

Subsection NCA: General requirements for Division 1 and Division 2

Division 1  Steel components (vessel, storage tanks, pumps, piping systems, valves, core support structures, and supports for use at NPP)

Subsection NB: Class 1 components (within the primary pressure boundary)
Subsection NC: Class 2 components
Subsection ND: Class 3 components
Subsection NE: Class MC components
Subsection NF: Supports
Subsection NG: Core support structures
Subsection NH: Class 1 components in elevated temperature service

Division 2  Concrete reactor vessels and concrete containment vessels
Division 3  Spent fuel storage canisters and spent fuel transportation containment vessels and their construction

Section IV: Guidelines for care of power boilers

Section IV: Rules for construction of pressure vessels

Division 1  Steel components (vessel, storage tanks, pumps, piping systems, valves, core support structures, and supports for use at NPP)
Division 2  Alternative rules
Division 3  Alternative rules for construction of high pressure vessels

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1 limited to new constructions
2 not published yet
How to go around the ASME code:

- Subsection NH contains four most-commonly used materials: 304SS, 316SS, 21/4Cr-1Mo, and alloy 800H.
- Division 1 also contains rules for supports, core supports, valves, etc. (not depicted on the diagram)
Specifications for welding rods, electrodes, and filler metals

Part A (II-A)

Part B (II-B)

Part C (II-C)

Part D (II-D)

Subpart 1
Stress tables

Subpart 2
Physical properties tables

Subpart 3
Components under external pressure

Ferrous

Non-ferrous

Table 1
Maximum Allowable Stress Values S
Section I; Section III, Class 2 and 3; Section VIII, Division 1

Table 2
Design Stress Intensity Values Sm
Section III, Class 1; Section VIII, Division 2

Tables 3 and 4 provide bolting information

Tables U and Y provide Tensile Strength and Yield Strength values

Thermal expansion
Thermal conductivity
Thermal diffusivity
Moduli of elasticity
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