



# Summary of Significant Changes in the 2023 ASME Boiler and Pressure Vessel Code

Section I  
Section II  
Section V  
Section IX  
Section XIII



**ASME BPVC.SSC.I.II.V.IX.XIII-2023**

# **Summary of Significant Changes in the 2023 ASME Boiler and Pressure Vessel Code**

---

**Sections I, II, V, IX, and XIII**



**The American Society of  
Mechanical Engineers**

Two Park Avenue • New York, NY • 10016 USA

Date of Issuance: April 28, 2023

ASME does not issue written replies to inquiries concerning this publication.

No part of this document may be reproduced in any form,  
in an electronic retrieval system or otherwise,  
without the prior written permission of the publisher.

The American Society of Mechanical Engineers  
Two Park Avenue, New York, NY 10016-5990

Copyright © 2023 by  
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS  
All rights reserved

# CONTENTS

List of Sections in the ASME Boiler and Pressure Vessel Code .....	iv
Foreword .....	v
Acknowledgments .....	vi
<b>SECTION I</b> .....	<b>1</b>
Introduction .....	1
Significant Changes .....	2
<b>SECTION II</b> .....	<b>5</b>
Introduction .....	5
Part A .....	6
Part B .....	14
Part C .....	16
Part D Customary and Metric .....	19
<b>SECTION V</b> .....	<b>23</b>
Introduction .....	23
Significant Changes .....	24
<b>SECTION IX</b> .....	<b>28</b>
Introduction .....	28
Significant Changes .....	31
<b>SECTION XIII</b> .....	<b>32</b>
Introduction .....	32
Significant Changes .....	33

# LIST OF SECTIONS

## IN THE ASME BOILER AND PRESSURE VESSEL CODE

- I Rules for Construction of Power Boilers
- II Materials
  - Part A — Ferrous Material Specifications
  - Part B — Nonferrous Material Specifications
  - Part C — Specifications for Welding Rods, Electrodes, and Filler Metals
  - Part D — Properties (Customary)
  - Part D — Properties (Metric)
- III Rules for Construction of Nuclear Facility Components
  - Subsection NCA — General Requirements for Division 1 and Division 2
  - Appendices
  - Division 1
    - Subsection NB — Class 1 Components
    - Subsection NCD — Class 2 and Class 3 Components
    - Subsection NE — Class MC Components
    - Subsection NF — Supports
    - Subsection NG — Core Support Structures
  - Division 2 — Code for Concrete Containments
  - Division 3 — Containment Systems for Transportation and Storage of Spent Nuclear Fuel and High-Level Radioactive Material
  - Division 4 — Fusion Energy Devices
  - Division 5 — High Temperature Reactors
- IV Rules for Construction of Heating Boilers
- V Nondestructive Examination
- VI Recommended Rules for the Care and Operation of Heating Boilers
- VII Recommended Guidelines for the Care of Power Boilers
- VIII Rules for Construction of Pressure Vessels
  - Division 1
  - Division 2 — Alternative Rules
  - Division 3 — Alternative Rules for Construction of High Pressure Vessels
- IX Welding, Brazing, and Fusing Qualifications
- X Fiber-Reinforced Plastic Pressure Vessels
- XI Rules for Inservice Inspection of Nuclear Reactor Facility Components
  - Division 1 — Rules for Inspection and Testing of Components of Light-Water-Cooled Plants
  - Division 2 — Requirements for Reliability and Integrity Management (RIM) Programs for Nuclear Reactor Facilities
- XII Rules for Construction and Continued Service of Transport Tanks
- XIII Rules for Overpressure Protection

# FOREWORD

This book is a companion to the 2023 ASME Boiler and Pressure Vessel Code (BPVC). It explains only significant changes to Code requirements that will be published in the 2023 Edition. It covers the following ASME BPVC Sections:

- Section I
- Section II, Parts A, B, C, and D
- Section V
- Section IX
- Section XIII

For each of the above Sections, an Introduction describes the historical background, scope of coverage, and commercial application of that Section. The list of changes follows the Introduction. The “Explanation” for each change provides the reason for the action and the value to the Code user. The sequence of the changes follows the order of the Code requirements.

# ACKNOWLEDGMENTS

This book is the work of the following ASME Standards and Certification (S&C) staff:

- Umberto D'Urso, *S&C Project Engineering Advisor*, Section I
- Colleen E. Rodrigues, *S&C Project Engineering Manager*, Section II, Parts A, B, and D; and Section XIII
- Ray Rahaman, *S&C Project Engineer*, Section II, Part C; and Section IX
- Carlton R. Ramcharran, *S&C Project Engineering Manager*, Section V

ASME Press's *Online Companion Guide to the ASME Boiler and Pressure Vessel Codes: Criteria and Commentary on Select Aspects of the Boiler & Pressure Vessel and Piping Codes* (January 2020) provided source material for the Introduction preceding each list of changes. The complete Guide is available in the ASME Digital Collection at <https://asmedigitalcollection.asme.org/ebooks/pages/onlinecompanionguide>.

ASME gratefully acknowledges the members of the following volunteer committees, who are responsible for development of the ASME Boiler and Pressure Vessel Code Sections noted in this book:

- BPV Committee on Power Boilers (I)
- BPV Committee on Materials (II)
- BPV Committee on Nondestructive Examination (V)
- BPV Committee on Welding, Brazing, and Fusing (IX)
- BPV Committee on Overpressure Protection (XIII)

# SECTION I

## Introduction

Section I covers rules for new construction of power boilers, electric boilers, miniature boilers, high-temperature water boilers, heat recovery steam generators, solar receiver steam generators, certain fired pressure vessels, and liquid phase thermal fluid heaters to be used in stationary service, and includes power boilers used in locomotive, portable, and traction service. The scope of Section I applies to the boiler proper and to the boiler external piping. It also includes pressure vessels in which an organic fluid is vaporized by the application of heat resulting from the combustion of fuel (solid, liquid, or gaseous) or from solar radiation. Superheaters, economizers, and other pressure parts connected directly to the boiler without intervening valves are considered parts of the boiler proper, and their construction falls under Section I rules.

The objective of Section I rules is to provide reasonable protection of life and property, but with a margin for deterioration in service to provide a reasonably long, safe period of usefulness. ASME Code Certification (including data forms and stamping with the ASME Certification Mark and appropriate Designator), along with inspection by the Authorized Inspector, is required for the boiler proper and the boiler external piping.