ASME BPVC.IV-2025

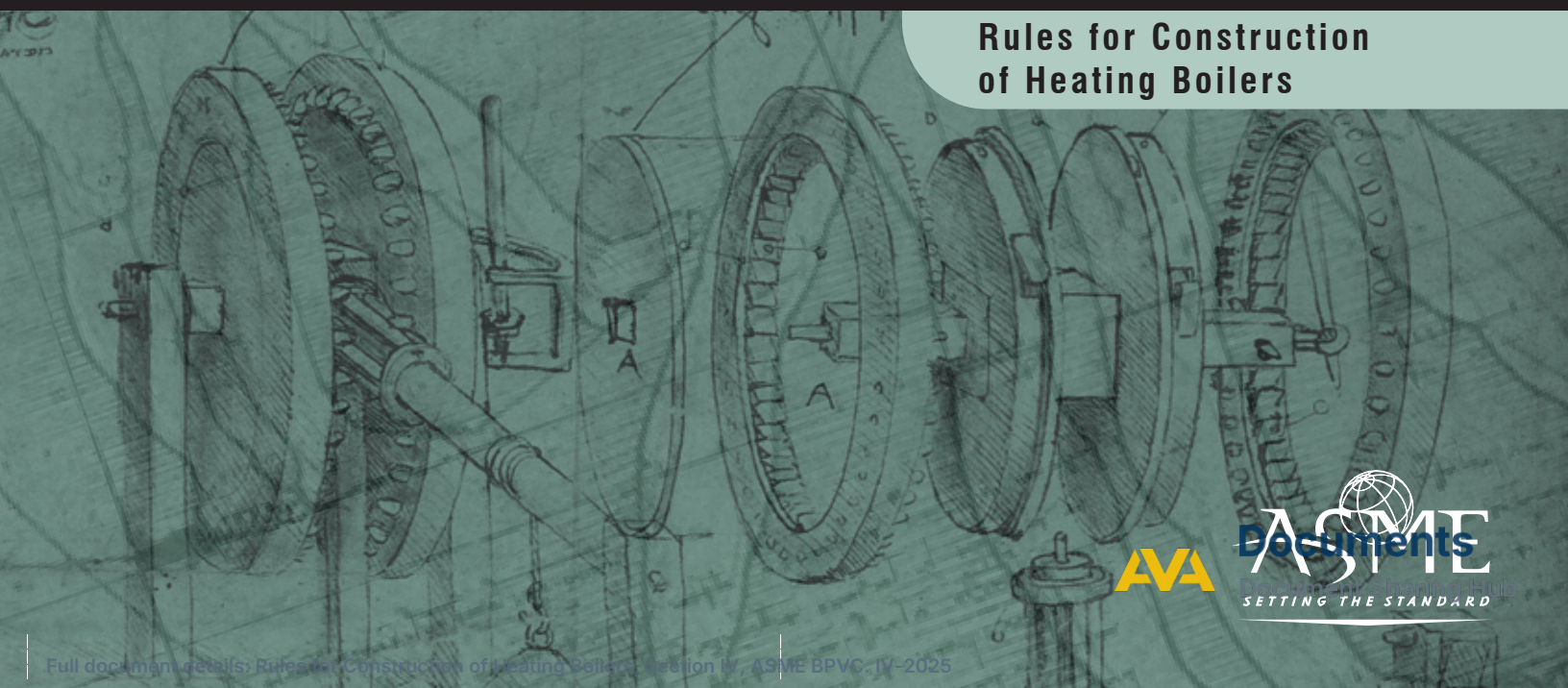


SECTION IV

2025 ASME Boiler and Pressure Vessel Code

An International Code

Rules for Construction of Heating Boilers



Documents
Document Sharing Hub

Markings such as “ASME,” “ASME Standard,” or any other marking including “ASME,” ASME logos, or the ASME Single Certification Mark shall not be used on any item that is not constructed in accordance with all of the applicable requirements of the Code or Standard. Use of the ASME Single Certification Mark requires formal ASME certification; if no certification program is available, such ASME markings may not be used. (For Certification and Accreditation Programs, see https://www.asme.org/certification-accreditation.)

Items produced by parties not formally possessing an ASME Certificate may not be described, either explicitly or implicitly, as ASME certified or approved in any code forms or other document.

Documents
Document Sharing Hub

Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

AN INTERNATIONAL CODE

2025 ASME Boiler & Pressure Vessel Code

2025 Edition July 1, 2025

IV

RULES FOR CONSTRUCTION OF HEATING BOILERS

ASME Boiler and Pressure Vessel Committee
on Heating Boilers

The American Society of Mechanical Engineers

Two Park Avenue • New York, NY • 10016 USA

AVA Documents
Document Sharing Hub

Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Date of Issuance: July 1, 2025

This international code or standard was developed under procedures accredited as meeting the criteria for American National Standards and it is an American National Standard. The standards committee that approved the code or standard was balanced to ensure that individuals from competent and concerned interests had an opportunity to participate. The proposed code or standard was made available for public review and comment, which provided an opportunity for additional public input from industry, academia, regulatory agencies, and the public-at-large

ASME does not "approve," "certify," "rate," or "endorse" any item, construction, proprietary device, or activity. ASME does not take any position with respect to the validity of any patent rights asserted in connection with any items mentioned in this document, and does not undertake to insure anyone utilizing a standard against liability for infringement of any applicable letters patent, nor does ASME assume any such liability. Users of a code or standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, is entirely their own responsibility

Participation by federal agency representatives or persons affiliated with industry is not to be interpreted as government or industry endorsement of this code or standard.

ASME accepts responsibility for only those interpretations of this document issued in accordance with the established ASME procedures and policies, which precludes the issuance of interpretations by individuals.

The endnotes and preamble in this document (if any) are part of this American National Standard.

ASME Collective Membership Mark

ASME Single Certification Mark

All rights reserved. "ASME" and the above ASME symbols are registered trademarks of The American Society of Mechanical Engineers. No part of this document may be copied, modified, distributed, published, displayed, or otherwise reproduced in any form or by any means, electronic, digital, or mechanical, now known or hereafter invented, without the express written permission of ASME. No works derived from this document or any content therein may be created without the express written permission of ASME. Using this document or any content therein to train, create, or improve any artificial intelligence and/or machine learning platform, system, application, model, or algorithm is strictly prohibited.

Library of Congress Catalog Card Number: 56-3934

Adopted by the Council of The American Society of Mechanical Engineers, 1914; latest edition 2025.

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

Copyright © 2025 by
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS
All rights reserved
Printed in U.S.A.

Documents
Document Sharing Hub

Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

TABLE OF CONTENTS

List of Sections xiv
Foreword xv
Statement of Policy on the Use of the ASME Single Certification Mark and Code Authorization in Advertising xvii
Statement of Policy on the Use of ASME Marking to Identify Manufactured Items xvii
Personnel xviii
Correspondence With the Committee xli
Preamble xliii
Summary of Changes xliv
Cross-Referencing in the ASME BPVC xlvii

Part HG **General Requirements for All Materials of Construction** 1
Article 1 **Scope and Service Restrictions** 1
HG-100 Scope 1
HG-101 Service Restrictions 1
HG-102 Units 1
HG-103 Tolerances 2
Article 2 **Material Requirements** 3
HG-200 General Material Requirements 3
HG-201 Specific Material Requirements 3
Article 3 **Design** 4
HG-300 Design Pressure 4
HG-301 Cylindrical Parts Under Internal Pressure 4
HG-305 Formed Heads, Pressure on Concave Side 4
HG-306 Formed Heads, Pressure on Convex Side 5
HG-307 Flat Heads 5
HG-309 Spherically Dished Covers (Bolted Heads) 9
HG-312 Cylindrical Parts Under External Pressure 11
HG-320 Openings in Boilers, General Requirements 14
HG-321 Reinforcement Required for Openings in Shells and Formed Heads 15
HG-323 Flanged-In Openings in Formed Heads 16
HG-325 Reinforcement Required for Openings in Flat Heads 16
HG-326 Limits of Metal Available for Reinforcement 17
HG-327 Strength of Reinforcement 19
HG-328 Reinforcement for Multiple Openings 19
HG-330 Inspection and Access Openings 19
HG-340 Stayed Surfaces 21
HG-341 Staybolts 23
HG-342 Dimensions of Stays 23

AVA Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

HG-343	Dimensions of Diagonal Stays	26
HG-345	Staying of Heads	26
HG-346	Tubesheets With Firetubes Used as Stays	27
HG-350	Ligaments	30
HG-360	Requirements for Tube Holes and Tube Attachments	30
HG-370	External Piping Connections	33
Article 4A	**Overpressure Protection**	34
HG-400A	General Requirements	34
HG-401A	Responsibility	34
HG-402A	Pressure Relief Valve Requirements	34
HG-403A	Heating Surface	36
Article 5	**Tests, Inspection, and Marking**	37
HG-500	Proof Tests to Establish Design Pressure	37
Article 6	**Instruments, Fittings, and Controls**	52
HG-600	General	52
HG-601	For Steam Heating Boilers	52
HG-610	For Hot Water Heating or Hot Water Supply Boilers	54
HG-620	For All Boilers	55
HG-630	Electric Wiring	55
HG-640	Controls and Heat Generating Apparatus	55
Article 7	**Installation Requirements**	57
HG-700	Installation Requirements, All Boilers	57
Article 8	**Modular Boilers**	66
HG-800	Inspection and Access Openings	66
HG-801	Marking, Certification, and Data Reports	66
HG-803	Installation Requirements	67
Part HF	**Requirements for Boilers Constructed of Wrought Materials**	69
Article 1	**General**	69
HF-100	Scope	69
Article 2	**Material Requirements**	70
HF-200	General Material Requirements	70
HF-201	Plate	70
HF-202	Rods, Bars, and Shapes	70
HF-203	Prefabricated or Preformed Pressure Parts	70
HF-204	Pipe and Tubes	71
HF-205	Material Not Fully Identified	72
HF-206	Recertification of Material Produced to a Specification Not Permitted by This Section	73
HF-207	Austenitic Stainless Steel	73
HF-210	Maintaining Material Identification	73
Article 3	**Design Stresses and Minimum Thicknesses**	74
HF-300	Maximum Allowable Stress Values	74
HF-301	Minimum Thicknesses	74
HF-302	Basis for Establishing Stress Values in Section II, Part D, Table 6A or Table 6B	74
Part HF — Subpart HW	**Requirements for Boilers Fabricated by Welding**	75

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Article 4	**General Requirements**	75
HW-400	Scope	75
HW-401	Responsibility of Manufacturer or Contractor	75
Article 5	**Material Requirements**	76
HW-500	Permissible Materials	76
HW-501	Materials of Different Specifications	76
HW-502	Materials for Small Parts	76
Article 6	**Welding Processes and Qualifications**	77
HW-600	Welding Processes	77
HW-610	Welding Qualifications	77
HW-611	No Production Work Without Qualifications	77
HW-612	Interchange of Qualifying Tests Among Manufacturers Prohibited	77
HW-613	Maintenance of Records of Qualifications and Identifying Marks	77
Article 7	**Design of Weldments**	78
HW-700	Design of Welded Joints	78
Article 8	**Fabrication Requirements**	93
HW-800	Forming Plates	93
HW-801	Base Metal Preparation	93
HW-810	Assembly	93
HW-812	Alignment Tolerance	93
HW-813	Distortion	93
HW-820	Specific Welding Requirements	94
HW-830	Repair of Weld Defects	95
HW-840	Posthydrotest Welding of Nonpressure Parts to Pressure Parts	95
Article 9	**Inspection**	96
HW-900	Inspection During Fabrication	96
HW-910	Check of Welding Procedure Qualifications	96
HW-911	Check of Welder and Welding Operator Performance Qualifications	96
Part HF — Subpart HB	**Requirements for Boilers Fabricated by Brazing**	97
Article 10	**General Requirements**	97
HB-1000	Scope	97
HB-1001	Responsibility of Manufacturer or Contractor	97
Article 11	**Material Requirements**	98
HB-1100	General	98
HB-1101	Combinations of Dissimilar Materials	98
HB-1102	Brazing Filler Metals	98
HB-1103	Fluxes and Atmospheres	98
Article 12	**Brazing Processes, Procedures, and Qualifications**	99
HB-1200	Brazing Processes	99
HB-1201	Joint Brazing Procedures	99
HB-1202	Brazing Qualifications and Records	99
Article 13	**Design**	100
HB-1300	Strength of Brazed Joints	100
HB-1301	Brazed Joint Efficiency Factors	100
HB-1302	Minimum Thickness	100

Documents
Document Sharing Hub

Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

HB-1303	Permissible Service Temperature	100
HB-1304	Application of Brazing Filler Metal	100
HB-1305	Joint Clearance	100
HB-1306	Openings	101
HB-1307	Brazed Connections	101
Article 14	**Fabrication Requirements**	102
HB-1400	Cleaning of Surfaces to Be Brazed	102
HB-1401	Postbrazing Operations	102
HB-1402	Repair of Defective Brazing	102
Article 15	**Inspection and Marking**	103
HB-1500	Inspection	103
Part HC	**Requirements for Boilers Constructed of Cast Iron**	104
Article 1	**General**	104
HC-100	Scope	104
Article 2	**Material Requirements**	105
HC-200	General Material Requirements	105
HC-201	Manufacture	105
HC-202	Chemical Composition	105
HC-203	Tensile Strength Classification	105
HC-204	Test Bars	105
HC-205	Selection of Test Bar Size	105
HC-206	Molding and Pouring Test Bars	105
HC-207	Number of Tests	105
HC-208	Tension Test	106
HC-209	Tension Test Procedure	106
HC-210	Tension Retests	106
HC-211	Transverse Test	107
HC-212	Transverse Test Procedure	107
HC-213	Transverse Retests	107
HC-214	Workmanship, Finish, and Repair	108
HC-215	Examinations and Tests	108
HC-216	Test Records	108
Article 3	**Design**	110
HC-300	Maximum Allowable Stress Values	110
HC-301	Basis for Establishing Stress Values in Table HC-300	110
HC-310	Heads	110
HC-311	Spherically Shaped Covers	110
HC-315	Openings and Reinforcements	112
HC-320	Corners and Fillets	112
HC-325	Washout Openings	112
HC-330	Assembly Method	113
Article 4	**Tests**	114
HC-400	Tests to Establish Design Pressure	114
Article 5	**Quality Control and Inspection**	116
HC-501	General	116

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

HC-502	Outline of Features to Be Included in the Written Description of the Quality Control System	116
HC-510	Examination	117
HC-520	Certificates of Conformance	118
Part HA	**Requirements for Boilers Constructed of Cast Aluminum**	119
Article 1	**General**	119
HA-100	Scope	119
Article 2	**Material Requirements**	120
HA-200	General Material Requirements	120
HA-201	Workmanship, Finish, and Repair	120
HA-202	Examinations and Tests	120
HA-203	Test Records	120
Article 3	**Design**	121
HA-300	Maximum Allowable Stress Values	121
HA-301	Heads and Spherically Shaped Covers	121
HA-302	Openings and Reinforcements	121
HA-303	Corners and Fillets	121
HA-304	Washout Openings	121
HA-305	Assembly Method	121
Article 4	**Tests**	122
HA-400	Tests to Establish Design Pressure	122
Article 5	**Quality Control and Inspection**	125
HA-501	General	125
HA-502	Outline of Features to Be Included in the Written Description of the Quality Control System	125
HA-503	Examination	126
HA-504	Certificates of Conformance	127
Part HLW	**Requirements for Potable-Water Heaters**	128
	Introduction	128
	Article 1 — General	128
	Article 2 — Materials	128
	Article 3 — Design	128
	Article 4 — Weldments	128
	Article 5 — Tests	128
	Article 6 — Inspection and Marking	129
	Article 7 — Controls	129
	Article 8 — Installation	129
Article 1	**General**	130
HLW-100	Scope	130
HLW-101	Service Limits	130
HLW-102	Permissible Marking	130
HLW-103	Units	130
Article 2	**Material Requirements**	132
HLW-200	Lining	132
HLW-201	Primary Pressure Parts Material	133
HLW-202	Acceptance of Unidentified or Small Quantities of Material	133

AVA Documents
Document Sharing Hub

Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

HLW-203	Miscellaneous Pressure Parts Material	134
HLW-204	Flanges and Pipe Fittings	134
HLW-205	Nonpressure Part Material	134
Article 3	**Design**	136
HLW-300	Design	136
HLW-301	Basis for Establishing Stress Values in Section II, Part D, Tables 6C and 6D	136
HLW-302	Minimum Thicknesses	136
HLW-303	Shells Under Internal Pressure	136
HLW-305	Blank Unstayed Dished Heads, Pressure on Concave Side	137
HLW-306	Blank Unstayed Dished Heads, Pressure on Convex Side	137
HLW-307	Tubes	137
HLW-308	Openings	137
HLW-309	Tubes Attached by Expanding	138
HLW-310	Storage Tanks	138
Article 4	**Design of Weldments**	139
HLW-400	Design of Welded Joints	139
Article 5	**Tests**	154
HLW-500	Tests to Establish Maximum Allowable Working Pressure and Production Line Tests	154
Article 6	**Inspection and Marking**	157
HLW-600	Inspection and Certification	157
HLW-601	Manufacturer's Data and Partial Data Reports	158
HLW-602	Marking of Water Heaters and Storage Tanks	158
Article 7	**Controls**	161
HLW-700	Controls	161
Article 8	**Installation Requirements**	162
HLW-800	Pressure Relief Valves	162
HLW-801	Mounting Pressure Relief Valves	162
HLW-805	Water Supply	163
HLW-809	Provisions for Thermal Expansion in Hot Water Systems	163
HLW-810	Bottom Drain Valve	163
HLW-820	Thermometer	164
Article 9	**Modular Water Heater Requirements**	166
HLW-900	General	166
HLW-901	Marking	166
HLW-902	Instruments, Fittings, and Controls	166
HLW-903	Installation Requirements	166
Mandatory Appendix 2	**Codes, Standards, and Specifications Referenced in Text**	168
2-100	Reference Standards	168
2-200	Organizations	168
Mandatory Appendix 3	**Adhesive Attachment of Nameplates**	170
3-100	Scope	170
3-101	Nonmetallic Duplicate Nameplate Application Procedure Qualification	170
3-102	Metallic Nameplate Adhesive Application Procedure Qualification	201
Mandatory Appendix 4	**Guide to Manufacturer's Forms**	172

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

4-100	Introduction	172
4-200	Manufacturer's Data Report Forms	172
4-300	Manufacturer's Certificate of Conformance Forms	172
4-400	Manufacturer's Report for the Application of Nameplates Forms	172
Mandatory Appendix 5	**Vacuum Boilers**	201
5-100	Scope	201
5-200	Maximum Pressure and Temperature	201
5-300	Design Parameters	201
5-400	Welding	201
5-500	Alternative to Hydrotest	201
5-600	Instruments, Fittings, and Controls	202
5-700	Inspection Openings	202
Mandatory Appendix 6	**Standard Units for Use in Equations**	203
Mandatory Appendix 7	**Rules for Mass-Production of Heating Boilers**	204
7-100	Introduction	204
7-200	Scope	204
7-300	General	204
7-400	Quality Control Procedures	204
7-500	Manufacturer's Data Reports	205
Mandatory Appendix 8	**Criteria for Reapplication of a Certification Mark**	207
Mandatory Appendix 9	**Establishing Governing Code Editions, Addenda, and Cases for Heating Boilers and Replacement Parts**	208
9-100	General	208
9-200	Design	208
9-300	Materials	208
9-400	Fabrication	208
9-500	Examination	208
9-600	Inspection	208
9-700	Testing	209
9-800	Overpressure Protection	209
9-900	Field Assembly	209
9-1000	Certification	209
Mandatory Appendix 10	**Requirements for Feedwater Economizers**	210
10-100	General	210
10-200	Design	210
10-300	Pressure Relief	210
Nonmandatory Appendix A	**Estimating Pressure Relief Valve Capacity Requirements**	211
A-100	Guide for Estimating Pressure Relief Valve Capacity Based on Heating Surface	211
Nonmandatory Appendix B	**Method of Checking Pressure Relief Valve Capacity by Measuring Maximum Amount of Fuel That Can Be Burned**	212
B-100	Procedure	212
B-101	Examples	212
B-102	Heats of Combustion of Fuels	213
Nonmandatory Appendix C	**Examples of Method of Calculating a Welded Ring Reinforced Furnace**	214
C-100	For a Steam or Hot Water Boiler	214

AVA Documents
Document Sharing Hub

Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

C-101 For a Hot Water Boiler 215
Nonmandatory Appendix D Examples of Methods of Computation of Openings in Boiler Shells . 216
D-100 Pad Reinforced Opening 216
D-101 Nozzle Reinforced Opening 216
Nonmandatory Appendix E Terminology 219
E-100 Terms Relating to Certification 219
E-101 Terms Relating to Design 219
E-102 Terms Relating to Welding 221
Nonmandatory Appendix F Quality Control System 224
F-100 General 224
F-202 Outline of Features to Be Included in the Written Description of the Quality Control System 224
Nonmandatory Appendix H List of Abbreviations and Websites 226
Nonmandatory Appendix K Guide to Information Appearing on Certificate of Authorization . . . 227
Nonmandatory Appendix M Guidance for the Use of U.S. Customary and SI Units in the ASME Boiler and Pressure Vessel Code 230
M-100 Use of Units in Equations 230
M-200 Guidelines Used to Develop SI Equivalents 230
M-300 Soft Conversion Factors 232
Nonmandatory Appendix N Guide to Manufacturer's Certificate of Conformance for Pressure Relief Valves 233

Figures

HG-307 Some Acceptable Types of Unstayed Flat Heads and Covers 6
HG-309 Spherically Dished Steel Plate Covers With Bolting Flanges 10
HG-312.4 Acceptable Type of Ring-Reinforced Furnace 12
HG-312.7 Connection Between Plain and Corrugated Furnace 13
HG-312.8 Acceptable Type of Semicircular Furnace Reinforcement 14
HG-321 Chart for Determining Values of F 16
HG-326.1 Some Representative Configurations Describing the Reinforcement Dimension, t_e, and the Finished Opening Dimension, d 18
HG-326.2 Nomenclature and Formulas for Reinforced Openings 20
HG-340.1 Pitch of Staybolts Adjacent to Upper Corners of Fireboxes 22
HG-340.2 Acceptable Proportions for Ends of Through-Stays 22
HG-340.3 Examples of Acceptable Corner Welds for Pressures Not Over 30 psi . . 23
HG-343 Details of Installation of Diagonal Stays 26
HG-345.1(a) Sketch Showing Application of HG-345.1 to the Staying of Boilers 28
HG-345.1(b) Sketch Showing Application of HG-345.1 to the Staying of Boilers 29
HG-350.1 Example of Tube Spacing With Pitch of Holes Equal in Every Row 30
HG-350.2 Example of Tube Spacing With Pitch of Holes Unequal in Every Second Row 31
HG-350.3 Example of Tube Spacing With Pitch of Holes Varying in Every Second and Third Row 32
HG-350.4 Example of Tube Spacing With Tube Holes on Diagonal Lines 32
HG-530.1 Official Certification Mark to Denote the American Society of Mechanical Engineers' Standard 44

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

HG-530.2	Steam and Water Boilers Form of Marking on Completed Boilers or Their Nameplates (Not Applicable for Boilers Constructed Primarily of Cast Iron)	45
HG-530.3	Boilers Suitable for Water Only Form of Marking on Completed Boilers or Their Nameplates (Not Applicable for Boilers Constructed Primarily of Cast Iron)	45
HG-530.4	Steam and Water Boilers Form of Data Cast or Marked on Cast Iron Boiler Sections	46
HG-530.5	Boilers Suitable for Water Only Form of Data Cast or Marked on Cast Iron Boiler Sections	46
HG-530.6	Boilers Suitable for Water Only Form of Data Cast or Marked on Cast Aluminum Boiler Sections	47
HG-530.7	Steam and Water Boilers Form of Marking on Completed Cast Iron Boilers or Their Nameplates	47
HG-530.8	Boilers Suitable for Water Only Form of Marking on Completed Cast Iron or Cast Aluminum Boilers or Their Nameplates	48
HG-531.1	Form of Marking on Part or Accessory — H Designator	48
HG-531.2	Form of Marking on Part or Accessory — PRT IV Designator	49
HG-703.1(a)	Steam Boilers in Battery — Pumped Return — Acceptable Piping Installation	59
HG-703.1(b)	Steam Boilers in Battery — Gravity Return — Acceptable Piping Installation	60
HG-703.2	Hot Water Boilers in Battery — Acceptable Piping Installation	61
HG-725(a)	Spacing and Weld Details for Supporting Lugs in Pairs on Horizontal-Return Tubular Boiler	64
HG-725(b)	Welded Bracket Connection for Horizontal-Return Tubular Boiler	64
HW-701.1	Butt Welding of Plates of Unequal Thickness	79
HW-701.3	Some Forms of Attachments of Pressure Parts to Flat Plates to Form a Corner Joint (Tee Joint)	80
HW-710.4(a)	Some Acceptable Types of Diagonal Stays for Installation by Welding	81
HW-710.4(b)	Unacceptable Types of Diagonal Stays for Installation by Welding	81
HW-715.1	Heads Attached to Shells	83
HW-731	Some Acceptable Types of Welds for Fittings, Nozzles, and Other Connections to Shells, Drums, and Headers	85
HW-740	Three-Ply Joint Assemblies	88
HW-745	Two-Ply Joint Assemblies	91
HC-204.1	Dimensions of Tensile Test Specimen	106
HC-205.1	Cast Test Bars	107
HC-311	Spherically Shaped Covers With Bolting Flanges	111
HLW-401.1	Butt Welding of Plates of Unequal Thickness	139
HLW-401.2	Typical Corner Joints	140
HLW-411	Typical Water Heater Welded Joints	142
HLW-413	Tubes Attached by Welding	144
HLW-415	Heads Attached to Shells	145
HLW-431.1	Some Acceptable Types of Welds for Fittings, Nozzles, and Other Connections to Shells and Head	147
HLW-431.5	Some Acceptable Types of Welds for Fittings, Nozzles, and Other Connections to Shells and Head	148
HLW-432.1	Some Acceptable Types of Brazed Fittings, Nozzles, and Other Connections to Copper-Lined Shells and Heads	151

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

HLW-602.1 Official Symbol to Denote The American Society of Mechanical Engineers' Standard . . . 159
HLW-602.2 Form of Marking on Completed Water Heaters . . . 159
HLW-809.1 A Typical Acceptable Piping Installation for Storage Water Heaters in Battery 164
HLW-809.2 A Typical Acceptable Piping Installation for Flow Through Water Heater With Provisions for Piping Expansion . . . 165
D-100 Computation of Typical Pad Reinforcement . . . 216
D-101 Computation of a Typical Nozzle Fitting . . . 217
K-1 Sample Certificate of Authorization . . . 229

Tables

HG-321 Values of Spherical Radius Factor K_1 . . . 16
HG-340 Allowable Pitch [Note (1)] of Stays, in. (mm) (Limited by HG-340.3) . . . 24
HG-360 Permitted O-Ring Materials . . . 32
HG-370 Minimum Thickness of Material for Threaded Connections to Boilers . . 33
HG-709.2 Expansion Tank Capacities for Forced Hot Water Systems . . . 62
HG-715 Size of Bottom Blowoff Piping, Valves, and Cocks . . . 63
HW-713 Firetube Extension Through Tubesheets for Welded Construction . . . 83
HB-1305 Recommended Joint Clearances at Brazing Temperature . . . 101
HC-212 Correction Factors for Transverse Test Bars . . . 108
HC-214 Pipe Plug Size for Minimum Wall Thickness . . . 109
HC-300 Maximum Allowable Stress Values in Tension for Cast Iron, ksi (MPa) . . 110
HLW-401.3-1 Alignment Tolerance . . . 140
HLW-809.1 Expansion Tank Capacities for a Water Heater . . . 165
2-100 Codes, Standards, and Specifications Referenced in Text . . . 169
4-1 Guide for the Preparation of Section IV Manufacturer's Data Report Forms 173
4-2 Guide for the Preparation of Section IV Manufacturer's Certificate of Conformance Forms and Manufacturer's Report for the Application of Nameplates Forms . . . 189
6-1 Standard Units for Use in Equations . . . 203
A-100 Guide for Estimating Steaming Capacity Based on Heating Surface . . . 211

Forms

H-1 Manufacturer's Modular Master Data Report for Modular Boilers or Modular Water Heaters . . . 176
H-2 Manufacturer's Data Report for All Types of Boilers Except Waterrtube and Those Made of Cast Iron or Cast Aluminum . . . 178
H-3 Manufacturer's Data Report for Watertube Boilers and Economizers . . . 180
H-4 Manufacturer's Partial Data Report . . . 182
H-5 Manufacturer's Master Data Report for Boilers Constructed From Cast Iron 184
H-5A Manufacturer's Master Data Report for Boilers Constructed From Case Aluminum . . . 186
H-6 Manufacturer's Data Report Supplementary Sheet . . . 188
HC-1 Manufacturer's Material Certificate of Conformance for Cast Iron Boiler Sections . . . 190
HC-2 Manufacturer's Material Certificate of Conformance for Hydrostatic Testing of Cast Iron Boiler Sections . . . 191

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

HC-3 Manufacturer's Report for the Application of Nameplates on Cast Iron Boilers 192
HA-1 Manufacturer's Material Certificate of Conformance for Cast Aluminum Boiler Sections 193
HA-2 Manufacturer's Material Certificate of Conformance for Hydrostatic and Pneumatic Testing of Cast Aluminum Boiler Sections 194
HA-3 Manufacturer's Report for the Application of Nameplates on Cast Aluminum Boilers 195
HLW-6 Manufacturer's Data Report for Water Heaters or Storage Tanks 196
HLW-7 Manufacturer's Partial Data Report for Water Heaters and Storage Tanks 198
HLW-8 Manufacturer's Master Data Proof Test Report for Water Heaters or Storage Tanks 200

Endnotes 234

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

(25)

LIST OF SECTIONS

SECTIONS

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 Inservice Inspection of Nuclear Power Plant Components
- 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

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

FOREWORD*

(25)

In 1911, The American Society of Mechanical Engineers established the Boiler and Pressure Vessel Committee to formulate standard rules for the construction of steam boilers and other pressure vessels. In 2009, the Boiler and Pressure Vessel Committee was superseded by the following committees:

(a) Committee on Power Boilers (I)
(b) Committee on Materials (II)
(c) Committee on Construction of Nuclear Facility Components (III)
(d) Committee on Heating Boilers (IV)
(e) Committee on Nondestructive Examination (V)
(f) Committee on Pressure Vessels (VIII)
(g) Committee on Welding, Brazing, and Fusing (IX)
(h) Committee on Fiber-Reinforced Plastic Pressure Vessels (X)
(i) Committee on Nuclear Inservice Inspection (XI)
(j) Committee on Transport Tanks (XII)
(k) Committee on Overpressure Protection (XIII)
(l) Technical Oversight Management Committee (TOMC)

Where reference is made to "the Committee" in this Foreword, each of these committees is included individually and collectively.

The Committee's function is to establish rules of safety relating to pressure integrity. The rules govern the construction** of boilers, pressure vessels, transport tanks, and nuclear components, and the inservice inspection of nuclear components and transport tanks. For nuclear items other than pressure-retaining components, the Committee also establishes rules of safety related to structural integrity. The Committee also interprets these rules when questions arise regarding their intent. The technical consistency of the Sections of the Code and coordination of standards development activities of the Committees is supported and guided by the Technical Oversight Management Committee. The Code does not address other safety issues relating to the construction of boilers, pressure vessels, transport tanks, or nuclear components, or the inservice inspection of nuclear components or transport tanks. Users of the Code should refer to the pertinent codes, standards, laws, regulations, or other relevant documents for safety issues other than those relating to pressure integrity and, for nuclear items other than pressure-retaining components, structural integrity. Except for Sections XI and XII, and with a few other exceptions, the rules do not, of practical necessity, reflect the likelihood and consequences of deterioration in service related to specific service fluids or external operating environments. In formulating the rules, the Committee considers the needs of users, manufacturers, and inspectors of components addressed by the Code. The objective of the rules is to afford reasonably certain protection of life and property, and to provide a margin for deterioration in service to give a reasonably long, safe period of usefulness. Advancements in design and materials and evidence of experience have been recognized.

The Code contains mandatory requirements, specific prohibitions, and nonmandatory guidance for construction activities and inservice inspection and testing activities. The Code does not address all aspects of these activities and those aspects that are not specifically addressed should not be considered prohibited. The Code is not a handbook and cannot replace education, experience, and the use of engineering judgment. The phrase *engineering judgment* refers to technical judgments made by knowledgeable engineers experienced in the application of the Code. Engineering judgments must be consistent with Code philosophy, and such judgments must never be used to overrule mandatory requirements or specific prohibitions of the Code.

The Committee recognizes that tools and techniques used for design and analysis change as technology progresses and expects engineers to use good judgment in the application of these tools. The designer is responsible for complying with Code rules and demonstrating compliance with Code equations when such equations are mandatory. The Code neither requires nor prohibits the use of computers for the design or analysis of components constructed to the requirements of the Code. However, designers and engineers using computer programs for design or analysis are cautioned that they are

* The information contained in this Foreword is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. Therefore, this Foreword may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the Code.

** *Construction*, as used in this Foreword, is an all-inclusive term comprising materials, design, fabrication, examination, inspection, testing, certification, and overpressure protection.

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

responsible for all technical assumptions inherent in the programs they use and the application of these programs to their design.

The rules established by the Committee are not to be interpreted as approving, recommending, or endorsing any proprietary or specific design, or as limiting in any way the manufacturer's freedom to choose any method of design or any form of construction that conforms to the Code rules.

The Committee meets regularly to consider revisions of the rules, new rules as dictated by technological development, Code cases, and requests for interpretations. Only the Committee has the authority to provide official interpretations of the Code. Requests for revisions, new rules, Code cases, or interpretations shall be addressed to the staff secretary in writing and shall give full particulars in order to receive consideration and action (see the Correspondence With the Committee page). Proposed revisions to the Code resulting from inquiries will be presented to the Committee for appropriate action. The action of the Committee becomes effective only after confirmation by ballot of the Committee and approval by ASME. Proposed revisions to the Code approved by the Committee are submitted to the American National Standards Institute (ANSI) and published at http://go.asme.org/BPVCPublicReview to invite comments from all interested persons. After public review and final approval by ASME, revisions are published at regular intervals in Editions of the Code.

The Committee does not rule on whether a component shall or shall not be constructed to the provisions of the Code. The scope of each Section has been established to identify the components and parameters considered by the Committee in formulating the Code rules.

Questions or issues regarding compliance of a specific component with the Code rules are to be directed to the ASME Certificate Holder (Manufacturer). Inquiries concerning the interpretation of the Code are to be directed to the Committee. ASME is to be notified should questions arise concerning improper use of the ASME Single Certification Mark.

When required by context in the Code, the singular shall be interpreted as the plural, and vice versa.

The words "shall," "should," and "may" are used in the Code as follows:

- *Shall* is used to denote a requirement.
- *Should* is used to denote a recommendation.
- *May* is used to denote permission, neither a requirement nor a recommendation.

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

STATEMENT OF POLICY ON THE USE OF THE ASME SINGLE CERTIFICATION MARK AND CODE AUTHORIZATION IN ADVERTISING

ASME has established procedures to authorize qualified organizations to perform various activities in accordance with the requirements of the ASME Boiler and Pressure Vessel Code. It is the aim of the Society to provide recognition of organizations so authorized. An organization holding authorization to perform various activities in accordance with the requirements of the Code may state this capability in its advertising literature.

Organizations that are authorized to use the ASME Single Certification Mark for marking items or constructions that have been constructed and inspected in compliance with the ASME Boiler and Pressure Vessel Code are issued Certificates of Authorization. It is the aim of the Society to maintain the standing of the ASME Single Certification Mark for the benefit of the users, the enforcement jurisdictions, and the holders of the ASME Single Certification Mark who comply with all requirements.

Based on these objectives, the following policy has been established on the usage in advertising of facsimiles of the ASME Single Certification Mark, Certificates of Authorization, and reference to Code construction. The American Society of Mechanical Engineers does not "approve," "certify," "rate," or "endorse" any item, construction, or activity and there shall be no statements or implications that might so indicate. An organization holding the ASME Single Certification Mark and/or a Certificate of Authorization may state in advertising literature that items, constructions, or activities "are built (produced or performed) or activities conducted in accordance with the requirements of the ASME Boiler and Pressure Vessel Code," or "meet the requirements of the ASME Boiler and Pressure Vessel Code." An ASME corporate logo shall not be used by any organization other than ASME.

The ASME Single Certification Mark shall be used only for stamping and nameplates as specifically provided in the Code. However, facsimiles may be used for the purpose of fostering the use of such construction. Such usage may be by an association or a society, or by a holder of the ASME Single Certification Mark who may also use the facsimile in advertising to show that clearly specified items will carry the ASME Single Certification Mark.

STATEMENT OF POLICY ON THE USE OF ASME MARKING TO IDENTIFY MANUFACTURED ITEMS

The ASME Boiler and Pressure Vessel Code provides rules for the construction of boilers, pressure vessels, and nuclear components. This includes requirements for materials, design, fabrication, examination, inspection, and stamping. Items constructed in accordance with all of the applicable rules of the Code are identified with the ASME Single Certification Mark described in the governing Section of the Code.

Markings such as "ASME," "ASME Standard," or any other marking including "ASME" or the ASME Single Certification Mark shall not be used on any item that is not constructed in accordance with all of the applicable requirements of the Code.

Items shall not be described on ASME Data Report Forms nor on similar forms referring to ASME that tend to imply that all Code requirements have been met when, in fact, they have not been. Data Report Forms covering items not fully complying with ASME requirements should not refer to ASME or they should clearly identify all exceptions to the ASME requirements.

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

(25)

PERSONNEL
ASME Boiler and Pressure Vessel Standards Committees, Subgroups, and Working Groups

January 1, 2025

TECHNICAL OVERSIGHT MANAGEMENT COMMITTEE (TOMC)

R. E. McLaughlin, *Chair*
N. A. Finney, *Vice Chair*
S. J. Rossi, *Staff Secretary*
R. W. Barnes
T. L. Bedeaux
C. T. Brown
R. P. Deubler
G. W. Galanes
J. A. Hall
T. E. Hansen
G. W. Hembree
R. B. Keating
B. Linnemann
W. M. Lundy
D. I. Morris
M. D. Rana
S. C. Roberts
F. J. Schaaf, Jr.
G. Scribner
W. J. Sperko
D. Srnic
R. W. Swayne
J. Vattappilly
M. Wadkinson
D. W. Lamond, *Ex-Officio Member*
B. K. Nutter, *Ex-Officio Member*
E. M. Ortman, *Ex-Officio Member*
M. J. Pischke, *Ex-Officio Member*
J. F. Henry, *Honorary Member*

Subgroup on Research and Development (TOMC)

S. C. Roberts, *Chair*
S. J. Rossi, *Staff Secretary*
R. W. Barnes
N. A. Finney
G. W. Galanes
R. B. Keating
R. E. McLaughlin
E. M. Ortman
D. Andrei, *Contributing Member*

Subgroup on Strategic Initiatives (TOMC)

N. A. Finney, *Chair*
S. J. Rossi, *Staff Secretary*
R. W. Barnes
G. W. Galanes
G. W. Hembree
R. B. Keating
R. E. McLaughlin
E. M. Ortman
S. C. Roberts
M. Wadkinson

Task Group on Field Sites (TOMC)

R. V. Wielgoszinski, *Chair*
M. Vazquez, *Staff Secretary*
P. Becker
T. Bedeaux
J. Hoskinson
D. T. Peters
G. Scribner

Task Group on Remote Inspection and Examination (SI-TOMC)

S. C. Roberts, *Chair*
M. Frediani, *Staff Secretary*
P. J. Coco
N. A. Finney
S. A. Marks
R. Rockwood
C. Stevens
M. Tannenbaum
J. Cameron, *Alternate*
A. Byk, *Contributing Member*
S. J. Rossi, *Contributing Member*
C. A. Sanna, *Contributing Member*

Special Working Group on High Temperature Technology (TOMC)

D. Dewees, *Chair*
F. W. Brust
T. D. Burchell
P. R. Donavin
B. F. Hantz
R. I. Jetter
P. Smith

Honors and Awards Committee (TOMC)

E. M. Ortman,
G. W. Galanes
D. W. Lamond
B. K. Nutter
R. E. McLaughlin

ADMINISTRATIVE COMMITTEE

R. E. McLaughlin, *Chair*
N. A. Finney, *Vice Chair*
S. J. Rossi, *Staff Secretary*
G. W. Galanes
R. B. Keating
D. W. Lamond
B. Linnemann
B. K. Nutter
E. M. Ortman
M. J. Pischke
M. D. Rana
S. C. Roberts
R. R. Stevenson
M. Wadkinson

MARINE CONFERENCE GROUP

J. Oh, *Staff Secretary*
J. G. Hungerbuhler, Jr.
G. Nair
H. N. Patel
N. Prokopuk
J. D. Reynolds

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

CONFERENCE COMMITTEE

R. D. Troutt — Texas, *Chair*
J. T. Amato — Ohio, *Secretary*
M. O. Amuzie — New Jersey
R. Becker — Colorado
H. Berny — Minnesota
T. D. Boggs — Missouri
R. A. Boillard — Indiana
D. P. Brockerville — Newfoundland and Labrador, Canada
R. J. Bunte — Iowa
A. Buquis — Arizona
J. H. Burpee — Maine
M. Carlson — Washington
T. Carter — Mississippi
N. Chiasson — Prince Edward Island, Canada
T. G. Clark — Oregon
B. J. Crawford — Georgia
E. L. Creaser — New Brunswick, Canada
J. J. Dacanay — Hawaii
M. Davidian — California
R. DeLury — Manitoba, Canada
A. Denham — Michigan
C. Derks — Wisconsin
C. Dinic — Ontario, Canada
D. A. Ehler — Nova Scotia, Canada
S. D. Frazier — Washington
A. Gibbs — Wisconsin
T. J. Granneman II — Oklahoma
M. L. Jordan — Kentucky
R. Kamboj — British Columbia, Canada
E. Kawa — Massachusetts
A. Khssassi — Quebec, Canada
D. Kinney — North Carolina
K. S. Lane — Alaska
A. M. Lorimor — South Dakota
T. Maher — Illinois
M. Mailman — Northwest Territories, Canada
W. McGivney — City of New York, New York
S. F. Noonan — Maryland
B. S. Oliver — New Hampshire
J. L. Oliver — Nevada
P. B. Polick — Illinois
B. Ricks — Montana
W. J. Ross — Pennsylvania
M. H. Sansone — New York
T. S. Seime — North Dakota
C. S. Selinger — Saskatchewan, Canada
J. E. Sharier — Ohio
R. Spiker — North Carolina
D. Srnic — Alberta, Canada
D. J. Stenrose — Michigan
R. J. Stimson II — Kansas
R. K. Sturm — Utah
D. K. Sullivan — Arkansas
J. Taveras — Rhode Island
R. Termini — Louisiana
S. Van Slavens — Delaware
D. M. Warburton — Florida
E. Wiggins — Alabama

INTERNATIONAL INTEREST REVIEW GROUP

V. Felix
Y.-G. Kim
S. H. Leong
W. Lin
O. F. Manafa
C. Minu
Y.-W. Park
A. R. Reynaga Nogales
P. Williamson

COMMITTEE ON POWER BOILERS (BPV I)

E. M. Ortman, *Chair*
D. E. Tompkins, *Vice Chair*
U. D'Urso, *Staff Secretary*
D. I. Anderson
R. Antoniuk
J. L. Arnold
K. K. Coleman
S. Fincher
G. W. Galanes
P. F. Gilston
T. E. Hansen
J. S. Hunter
M. Ishikawa
M. Lemmons
M. Lewis
C. T. McDaris
R. E. McLaughlin
L. Moedinger
Y. Oishi
M. Ortolani
A. Spangenberg
D. E. Tuttle
J. Vattappilly
M. Wadkinson
F. Zeller
H. Michael, *Contributing Member*
D. Berger, *Honorary Member*
P. D. Edwards, *Honorary Member*
J. G. Feldstein, *Honorary Member*
D. N. French, *Honorary Member*
J. Hainsworth, *Honorary Member*
J. F. Henry, *Honorary Member*
P. A. Molvie, *Honorary Member*
J. T. Pillow, *Honorary Member*
B. W. Roberts, *Honorary Member*
J. M. Tanzosh, *Honorary Member*
R. V. Wielgoszinski, *Honorary Member*
R. L. Williams, *Honorary Member*

Executive Committee (BPV I)

D. E. Tompkins, *Chair*
E. M. Ortman, *Vice Chair*
P. Becker
J. R. Braun
P. F. Gilston
A. Hantodkar
M. Lewis
C. T. McDaris
L. S. Nicol
A. Spangenberg
K. Thanupillai
M. Wadkinson

Subgroup on Design (BPV I)

C. T. McDaris, *Chair*
L. S. Tsai, *Secretary*
T. K. Acharya
D. I. Anderson
P. Becker
T. Huynh
L. Krupp
N. S. Ranck
J. Vattappilly
M. Wadkinson
C. Welles

Subgroup on Fabrication and Examination (BPV I)

P. F. Gilston, *Chair*
P. Becker, *Vice Chair*
J. L. Arnold
K. K. Coleman
S. Fincher
G. W. Galanes
T. E. Hansen
M. Lewis
S. J. Lombardo
C. T. McDaris
R. E. McLaughlin
Y. Oishi

Subgroup on General Requirements and Piping (BPV I)

D. E. Tompkins, *Chair*
M. Wadkinson, *Vice Chair*
M. Lemmons, *Secretary*
R. Antoniuk
T. E. Hansen
M. Ishikawa
S. J. Lombardo
R. E. McLaughlin
L. Moedinger
E. M. Ortman
D. E. Tuttle
J. Vattappilly

Subgroup on Locomotive Boilers (BPV I)

J. R. Braun, *Chair*
S. M. Butler, *Secretary*
G. W. Galanes
S. A. Lee
L. Moedinger
G. M. Ray
M. W. Westland

Subgroup on Materials (BPV I)

M. Lewis, *Chair*
L. S. Nicol, *Vice Chair*
S. H. Bowes
K. K. Coleman
G. W. Galanes
P. F. Gilston
K. Hayes
J. S. Hunter
E. Liebl
F. Masuyama
M. Ortolani
D. W. Rahoi
F. Zeller
B. W. Roberts, *Contributing Member*
J. M. Tanzosh, *Contributing Member*

Subgroup on Solar Boilers (BPV I)

R. E. Hearne, *Secretary*
S. Fincher
J. S. Hunter
P. Swarnkar

Task Group on Additive Manufacturing (BPV I)

K. K. Coleman, *Chair*
P. Becker, *Secretary*
J. L. Arnold
G. W. Galanes
P. F. Gilston
L. Moedinger
J. Vattappilly

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Task Group on Modernization (BPV I)

S. J. Lombardo, *Chair*
U. D'Urso, *Staff Secretary*
D. I. Anderson
J. L. Arnold
G. W. Galanes
R. E. McLaughlin
E. M. Ortman
D. E. Tuttle

European International Working Group (BPV I)

A. Spangenberg, *Chair*
B. Daume
J. Fleischfresser
C. Jaekel
R. Kauer
D. Koelbl
S. Krebs
T. Ludwig
R. A. Meyers
H. Michael
F. Miunske
M. Sykora
P. Chavdarov, *Contributing Member*
J. Henrichsmeyer, *Contributing Member*
B. Müller, *Contributing Member*

India International Working Group (BPV I)

K. Thanupillai, *Chair*
A. Hantodkar, *Vice Chair*
A. Ghosh, *Secretary*
P. Brahma
H. Dalal
T. Dhanraj
A. S. Ganeth
S. Gopalakrishnan
A. Jain
R. Madnani
S. Purkait
A. Relekar
M. Shiroya
D. K. Shrivastava
K. Singha
R. Sundararaj
S. Velu
S. Venkataramana

COMMITTEE ON MATERIALS (BPV II)

G. W. Galanes, *Chair*
M. Ortolani, *Vice Chair*
C. E. Rodrigues, *Staff Secretary*
A. Appleton
P. Chavdarov
J. F. Grubb
J. A. Hall
D. O. Henry
K. M. Hottle
M. Ishikawa
M. Kowalczyk
D. L. Kurle
F. Masuyama
S. Neilsen
L. S. Nicol
D. W. Rahoi
W. Ren
E. Shapiro
R. C. Sutherlin
F. Zeller
J. Cameron, *Contributing Member*
A. Chaudouet, *Contributing Member*
K. K. Coleman, *Contributing Member*
D. W. Gandy, *Contributing Member*
K. L. Hayes, *Contributing Member*
W. Hoffelner, *Contributing Member*
K. E. Orie, *Contributing Member*
D. T. Peters, *Contributing Member*
B. W. Roberts, *Contributing Member*
J. M. Tanzosh, *Contributing Member*
E. Upitis, *Contributing Member*
T. M. Cullen, *Honorary Member*
G. C. Hsu, *Honorary Member*

Executive Committee (BPV II)

G. W. Galanes, *Chair*
C. E. Rodrigues, *Staff Secretary*
E. Alexis
A. Appleton
J. Cameron
P. Chavdarov
J. F. Grubb
S. Guzey
K. L. Hayes
K. M. Hottle
W. MacDonald
M. Ortolani
P. K. Rai
J. Robertson
E. Shapiro

Subgroup on External Pressure (BPV II)

E. Alexis, *Chair*
S. Guzey, *Vice Chair*
J. A. A. Morrow, *Secretary*
L. F. Campbell
H. Chen
M. Ghorashi
D. S. Griffin
J. F. Grubb
S. Krishnamurthy
D. L. Kurle
R. W. Mikitka
P. K. Rai
M. Wadkinson

Subgroup on Ferrous Specifications (BPV II)

K. M. Hottle, *Chair*
A. Appleton, *Vice Chair*
C. Hyde, *Secretary*
D. Amire-Brahimi
G. Cuccio
O. Elkadim
D. Fialkowski
J. Grimm
J. F. Grubb
D. S. Janikowski
Y.-J. Kim
W. C. Mack
J. Nickel
D. Poweleit
R. Rezaeifar
R. Schmidt
E. Upitis
L. Watzke
C. Meloy, *Contributing Member*

Subgroup on International Material Specifications (BPV II)

P. Chavdarov, *Chair*
M. Ishikawa, *Vice Chair*
C. Zhou, *Secretary*
A. Chaudouet
H. Chen
A. F. Garbolevsky
D. O. Henry
W. M. Lundy
F. Zeller
T. F. Miskell, *Contributing Member*
E. Upitis, *Contributing Member*

Subgroup on Nonferrous Alloys (BPV II)

J. Robertson, *Chair*
W. MacDonald, *Vice Chair*
R. M. Beldyk
J. M. Downs
H. Dutta
J. F. Grubb
J. A. Hall
D. Maitra
D. W. Rahoi
R. Rezaeifar
E. Shapiro
J. Shubilla
R. C. Sutherlin
R. Wright
S. Yem
D. B. Denis, *Contributing Member*
D. T. Peters, *Contributing Member*

Subgroup on Physical Properties (BPV II)

P. K. Rai, *Chair*
S. Neilsen, *Vice Chair*
D. Chandiramani
H. Eshraghi
J. F. Grubb
B. F. Hantz
R. D. Jones
P. K. Lam
D. W. Rahoi
E. Shapiro
D. K. Verma
S. Yem
D. B. Denis, *Contributing Member*

Subgroup on Strength, Ferrous Alloys (BPV II)

M. Ortolani, *Chair*
S. Rosinski, *Vice Chair*
L. S. Nicol, *Secretary*
G. W. Galanes
J. A. Hall
M. Ishikawa
S. W. Knowles
F. Masuyama
M. Osterfoss
D. W. Rahoi
M. Ueyama
F. Zeller
F. Abe, *Contributing Member*

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Subgroup on Strength of Weldments (BPV II & BPV IX)

K. L. Hayes, *Chair*
G. W. Galanes, *Vice Chair*
S. H. Bowes, *Secretary*
K. K. Coleman, *Chair*
M. Denault
D. W. Gandy
M. Ghahremani
W. F. Newell, Jr.
J. A. Penso
D. W. Rahoi
W. J. Sperko
J. P. Swezy, Jr.
B. W. Roberts, *Contributing Member*

China International Working Group (BPV II)

Sanjiang Liu, *Chair*
H. Zhang, *Vice Chair*
T. Xu, *Secretary*
W. Cai
W. Fang
F. Kong
H. Li
J. Li
Z. Rongcan
S. Tan
C. Wang
Jinguang Wang
Jiongxiang Wang
Q.-J. Wang
H.-C. Yang
J. Yang
L. Yin
X.-H. Zhang
Y. Zhang

Working Group on Creep Strength Enhanced Ferritic Steels (BPV II)

M. Ortolani, *Chair*
G. W. Galanes, *Vice Chair*
P. Becker, *Secretary*
S. H. Bowes
K. Kimura
M. Lang
S. Luke
F. Masuyama
T. Melfi
W. F. Newell, Jr.
J. J. Sanchez-Hanton
J. A. Siefert
W. J. Sperko
F. Zeller
F. Abe, *Contributing Member*
K. K. Coleman, *Contributing Member*
J. M. Tanzosh, *Contributing Member*

Working Group on Data Analysis and the Materials Properties Database (BPV II)

W. MacDonald, *Chair*
C. E. Rodrigues, *Staff Secretary*
J. F. Grubb
F. Masuyama
S. Neilsen
M. Ortolani
R. C. Sutherlin
M. J. Swindeman
F. Abe, *Contributing Member*
D. Andrei, *Contributing Member*
J. Cameron, *Contributing Member*
G. W. Galanes, *Contributing Member*
W. C. Mack, *Contributing Member*
D. T. Peters, *Contributing Member*
W. Ren, *Contributing Member*
E. Shapiro, *Contributing Member*

Task Group on Modernization of Materials Data (BPV II)

C. E. Rodrigues, *Staff Secretary*
E. Alexis
M. Brijlani
D. B. Denis
G. W. Galanes
J. A. Hall
B. F. Hantz
A. Hassan
W. MacDonald
S. Neilsen
L. S. Nicol
W. Ren
J. C. Sowinski
M. Wadkinson
J. Cameron, *Contributing Member*
J. F. Grubb, *Contributing Member*
W. Hoffelner, *Contributing Member*

COMMITTEE ON CONSTRUCTION OF NUCLEAR FACILITY COMPONENTS (BPV III)

R. B. Keating, *Chair*
T. M. Adams, *Vice Chair*
D. E. Matthews, *Vice Chair*
A. Maslowski, *Staff Secretary*
A. Appleton
S. Asada
R. W. Barnes
W. H. Borter
M. E. Cohen
R. P. Deubler
P. R. Donavin
A. C. Eberhardt
J. V. Gardiner
W. J. Geringer
J. Grimm
S. Hunter
R. I. Jetter
J. I. Kim
G. H. Koo
D. W. Lewis
M. A. Lockwood
D. W. Mann
K. A. Manoly
K. Matsunaga
B. McGlone
S. McKillop
J. B. McLean
J. C. Minichiello
M. N. Mitchell
T. Nagata
J. B. Ossmann
S. Pellet
E. L. Pleins
W. J. Sperko
Y. J. Wang
W. Windes
C. Basavaraju, *Alternate*
T. P. Davis, *Contributing Member*
T.-L. Sham, *Contributing Member*
C. T. Smith, *Contributing Member*
R. M. Jessee, *Honorary Member*
E. B. Branch, *Honorary Member*
M. N. Bressler, *Honorary Member*
G. D. Cooper, *Honorary Member*
D. F. Landers, *Honorary Member*
C. Pieper, *Honorary Member*

Executive Committee (BPV III)

R. B. Keating, *Chair*
A. Maslowski, *Secretary*
T. M. Adams
T. P. Davis
P. R. Donavin
D. W. Lewis
D. Mann
K. A. Manoly
D. E. Matthews
B. McGlone
S. McKillop
J. B. McLean
Yanli Wang
K. A. Kavanagh, *Alternate*

Latin America International Working Group (BPV III)

M. F. Liendo, *Chair*
J. Fernández, *Vice Chair*
O. Martinez, *Staff Secretary*
P. Yamamoto, *Secretary*
E. H. Aldaz
G. O. Anteri
A. P. Antipasti
D. O. Bordato
G. Bourguigne
M. Brusa
A. Claus
R. G. Cocco
A. J. Dall'Osto
J. I. Duo
M. M. Gamizo
I. M. Guerreiro
I. A. Knorr
D. E. Matthews
A. E. Pastor
M. Rivero
R. Taboada
O. A. Verastegui
M. D. Vigliano
M. Zunino

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

China International Working Group (BPV III)

Yong Wang, *Chair*
J. Gu, *Vice Chair*
C. Jiang, *Vice Chair*
H. Yu, *Secretary*
L. Feng
L. Guo
D. Kang
Y. Li
H. Lin
Shenghua Liu
W. Liu
J. Ma
K. Mao
D. E. Matthews
J. Ming
W. Pei
C. Peiyin
Z. Sun
G. Tang
L. Ting
J. Wen
F. Wu
C. Yang
P. Yang
W. Yang
H. Yin
D. Yuangang
D. Zhao
Z. Zhong
Q. Zhou
H. Zhu

European International Working Group (BPV III)

J. Wendt, *Chair*
D. Koelbl, *Vice Chair*
R. Gersinska, *Secretary*
P. Ancion
P. R. Donavin
R. Döring
C. G. Frantescu
T. Hantzka
A. Huber
R. E. Hueggenberg
E. Iacopetta
A. Juengert
F. Juettemann
M. H. Koeppen
C. Kuschke
H.-W. Lange
T. Ludwig
M. Reichert
G. Roos
J. Rudolph
L. Sybertz
I. Tewes
R. Tiete
F. Wille

India International Working Group (BPV III)

S. B. Parkash, *Chair*
V. Sehgal, *Vice Chair*
M. Brijlani, *Secretary*
S. Aithal
A. D. Bagdare
H. Dalal
S. K. Goyal
D. Kulkarni
Raj Kumar
Ritesh Kumar
S. Kumar
T. Mukherjee
D. Narain
A. D. Paranjpe
J. R. Patel
E. L. Pleins
S. Ponnappan
T. J. P. Rao
S. Singh
B. K. Sreedhar
N. Mistry, *Alternate*

Korea International Working Group (BPV III)

G. H. Koo, *Chair*
O.-S. Kim, *Secretary*
H. Ahn
S. Cho
G.-S. Choi
M. Choi
M.-J. Choi
S. Choi
J. Y. Hong
N.-S. Huh
S. S. Hwang
C. Jang
I.-S. Jeong
S. H. Kang
J. Kim
J. I. Kim
J.-S. Kim
M.-W. Kim
S.-S. Kim
Y.-B. Kim
Y.-S. Kim
D. Kwon
B. Lee
D. Lee
D. W. Lee
Sanghoon Lee
Sungjae Lee
S.-G. Lee
H. Lim
I.-K. Nam
C.-K. Oh
C.-Y. Oh
E.-J. Oh
C. Park
H. Park
Y.-H. Park
Y. S. Pyun
J. H. Seo
T. Shin
S. Song
T.-K. Song
W. J. Sperko
J. S. Yang
O. Yoo

Seismic Design Steering Committee (BPV III)

T. M. Adams, *Chair*
K. Gresh, *Secretary*
C. Basavaraju
D. Chowdhury
R. Döring
G. H. Koo
A. Maekawa
J. B. McLean
R. M. Pace
M. Pérès
K. Shibukuwa
F. G. Abatt, *Contributing Member*
M. Arcaro, *Contributing Member*
P. R. Donavin, *Contributing Member*
R. W. Haupt, *Contributing Member*

Task Group on Alternate Requirements (BPV III)

J. Wen, *Chair*
R. R. Romano, *Secretary*
T. Basso
P. J. Coco
P. R. Donavin
J. V. Gardiner
F. Grant
J. Grimm
R. S. Hill III
M. Kris
M. A. Lockwood
K. A. Manoly
D. E. Matthews
S. McKillop
B. P. Nolan
J. B. Ossmann
E. C. Renaud
M. A. Richter
R. Summitt
K. Voelsing
Yanli Wang
I. H. Tseng, *Alternate*

United Kingdom International Working Group (BPV III)

P. M. James, *Chair*
J. Emslie, *Vice Chair*
C. B. Carpenter, *Secretary*
T. Bann
M. J. Chevalier
A. J. Cole-Baker
M. Consonni
M. J. Crathorne
P. Gill
G. Innes
S. A. Jones
B. McGlone
B. Pellereau
E. I. S. Pendry
J. Randles
C. R. Schneider
J. W. Stairmand
J. Sulley
J. Talamantes-Silva
A. J. Holt, *Contributing Member*

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Special Working Group on New Plant Construction Issues (BPV III)

J. B. Ossmann, *Chair*
A. Maslowski, *Staff Secretary*
M. C. Buckley, *Secretary*
M. Arcaro
K. Burnett
A. Cardillo
P. J. Coco
K. Harris
E. Henry
J. Honcharik
M. Kris
R. E. McLaughlin
A. McLendon
Z. McLucas
N. J. McTiernan
K. Pigg
E. L. Pleins
J. Pollak
D. W. Sandusky
M. C. Scott
R. R. Stevenson
H. Xu
J. Yan
J. C. Minichiello, *Contributing Member*

Special Working Group on Editing and Review (BPV III)

D. E. Matthews, *Chair*
R. P. Deubler
A. C. Eberhardt
S. Hunter
B. McGlone
J. C. Minichiello
J. F. Strunk
Yanli Wang
C. Wilson

Special Working Group on HDPE Stakeholders (BPV III)

S. Patterson, *Secretary*
M. Kuntz
J. E. O'Sullivan

Special Working Group on Honors and Awards (BPV III)

R. W. Barnes, *Chair*
A. Appleton
R. M. Jessee
D. E. Matthews
J. C. Minichiello

Special Working Group on International Meetings and IWG Liaisons (BPV III)

D. E. Matthews, *Chair*
A. Maslowski, *Staff Secretary*
R. W. Barnes
P. R. Donavin
E. L. Pleins
W. J. Sperko

Joint ACI-ASME Committee on Concrete Components for Nuclear Service (BPV III)

J. B. McLean, *Chair*
L. J. Colarusso, *Vice Chair*
A. Dinizulu, *Staff Secretary*
S. Bae
C. J. Bang
A. C. Eberhardt
B. D. Hovis
T. C. Inman
C. Jones
T. Kang
N.-H. Lee
S. Malushte
J. A. Munshi
T. Muraki
J. S. Saini
J. F. Strunk
G. Thomas
A. Varma
S. Wang
A. Istar, *Alternate*
A. Adediran, *Contributing Member*
J.-B. Domage, *Contributing Member*
P. S. Ghosal, *Contributing Member*
M. R. Senecal, *Contributing Member*
Z. Shang, *Contributing Member*
M. Sircar, *Contributing Member*
C. T. Smith, *Contributing Member*

Special Working Group on Modernization (SG Div 2) (BPV III)

A. Varma, *Chair*
J. B. McLean, *Vice Chair*
J. S. Saini, *Vice Chair*
A. Adediran
S. Malushte
S. Wang
I. Zivanovic
R. Janowiak, *Contributing Member*
F. Lin, *Contributing Member*
J. A. Pires, *Contributing Member*

Task Group on Steel-Concrete Composite Containments (SG Div 2) (BPV III)

A. Varma, *Chair*
R. Janowiak
S. Malushte
J. B. McLean
J. A. Pires
J. S. Saini

Working Group on Design (SG Div 2) (BPV III)

N.-H. Lee, *Chair*
S. Bae
L. J. Colarusso
A. C. Eberhardt
B. D. Hovis
T. C. Inman
C. Jones
J. A. Munshi
T. Muraki
J. S. Saini
G. Thomas
S. Wang
A. Istar, *Alternate*
P. S. Ghosal, *Contributing Member*
S.-Y. Kim, *Contributing Member*
J. Kwon, *Contributing Member*
S. E. Ohler-Schmitz, *Contributing Member*
B. B. Scott, *Contributing Member*
Z. Shang, *Contributing Member*
M. Shin, *Contributing Member*
M. Sircar, *Contributing Member*

Working Group on Materials, Fabrication, and Examination (SG Div 2) (BPV III)

C. Jones, *Chair*
A. Eberhardt, *Vice Chair*
C. J. Bang
B. Birch
J.-B. Domage
T. Kang
N.-H. Lee
Z. Shang
J. F. Strunk
I. Zivanovic
A. A. Aboelmagd, *Contributing Member*
P. S. Ghosal, *Contributing Member*

Subcommittee on Design (BPV III)

P. R. Donavin, *Chair*
S. McKillop, *Vice Chair*
R. P. Deubler, *Secretary*
T. P. Davis
M. A. Gray
R. I. Jetter
R. B. Keating
J. I. Kim
K. A. Manoly
D. E. Matthews
M. N. Mitchell
B. Pellereau
Yanli Wang
W. F. Weitze
C. Basavaraju, *Alternate*
G. L. Hollinger, *Contributing Member*
W. J. O'Donnell, Sr., *Contributing Member*
K. Wright, *Contributing Member*

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Subgroup on Component Design (SC-D) (BPV III)

D. E. Matthews, *Chair*
P. Vock, *Vice Chair*
D. Chowdhury, *Secretary*
D. J. Ammerman
G. A. Antaki
J. J. Arthur
S. Asada
C. Basavaraju
N. A. Costanzo
R. P. Deubler
P. Hirschberg
M. Kassar
D. Keck
T. R. Liszkai
K. A. Manoly
R. Martin
K. R. May
J. C. Minichiello
T. Mitsuhashi
D. Murphy
T. M. Musto
T. Nagata
S. Pellet
S. Willoughby-Braun
C. Wilson
T. M. Adams, *Contributing Member*
R. B. Keating, *Contributing Member*
O.-S. Kim, *Contributing Member*
R. J. Masterson, *Contributing Member*
H. S. Mehta, *Contributing Member*
G. Z. Tokarski, *Contributing Member*
J. P. Tucker, *Contributing Member*

Task Group on Pressurized Heavy Water Reactor (SG-CD) (BPV III)

R. W. Barnes, *Chair*
M. Brijlani
D. E. Matthews
B. McGlone
J. B. Ossmann
S. B. Parkash
E. L. Pleins
W. D. Reinhardt
C. A. Sanna
V. Sehgal
S. Singh

Task Group to Improve Section III/XI Interface (SG-CD) (BPV III)

P. Vock, *Chair*
E. Henry, *Secretary*
G. A. Antaki
A. Cardillo
D. Chowdhury
J. Honcharik
J. Hurst
J. Lambin
C. A. Nove
T. Nuoffer
J. B. Ossmann
A. T. Roberts III
J. Sciulli
A. Udyawar
S. Willoughby-Braun

Working Group on Core Support Structures (SG-CD) (BPV III)

R. Martin, *Chair*
R. Z. Ziegler, *Secretary*
G. W. Delport
L. C. Hartless
D. Keck
T. R. Liszkai
M. Nakajima
M. D. Snyder
R. O. Vollmer
T. M. Wiger
C. Wilson
Y. Wong
K. Hsu, *Alternate*
H. S. Mehta, *Contributing Member*

Working Group on Design of Division 3 Containment Systems (SG-CD) (BPV III)

D. J. Ammerman, *Chair*
S. Klein, *Secretary*
J. Bignell
G. Bjorkman
V. Broz
D. D. Imholte
D. W. Lewis
A. Rigato
P. Sakalaukus, Jr.
D. Siromani
C. R. Sydnor
R. Sypulski
R. Williamson
X. Zhai
X. Zhang
J. Smith, *Alternate*
J. C. Minichiello, *Contributing Member*

Working Group on HDPE Design of Components (SG-CD) (BPV III)

M. Brandes
J. R. Hebeisen
P. Krishnaswamy
M. Kuntz
K. A. Manoly
D. P. Munson
R. Stakenborghs
B. Lin, *Alternate*

Working Group on Piping (SG-CD) (BPV III)

G. A. Antaki, *Chair*
S. Weindorf, *Secretary*
C. Basavaraju
J. Catalano
C. M. Faidy
R. G. Gilada
M. A. Gray
R. J. Gurdal
R. W. Haupt
A. Hirano
P. Hirschberg
M. Kassar
D. Lieb
M. Moenssens
I.-K. Nam
K. E. Reid II
B. Still
D. Vlaicu
W. F. Weitze
K. Hsu, *Alternate*
R. B. Keating, *Contributing Member*
T. B. Littleton, *Contributing Member*
Y. Liu, *Contributing Member*
J. F. McCabe, *Contributing Member*
J. C. Minichiello, *Contributing Member*
A. N. Nguyen, *Contributing Member*
M. S. Sills, *Contributing Member*
N. C. Sutherland, *Contributing Member*
G. Z. Tokarski, *Contributing Member*
E. A. Wais, *Contributing Member*
C.-I. Wu, *Contributing Member*

Working Group on Pressure Relief (SG-CD) (BPV III)

K. R. May, *Chair*
J. F. Ball, *Vice Chair*
R. Krithivasan, *Secretary*
J. W. Dickson
N. Hansing
S. Jones
D. Miller
T. Patel
B. J. Yonsky
Y. Wong, *Alternate*
J. Yu, *Alternate*
M. Brown, *Contributing Member*
S. T. French, *Contributing Member*
S. Ruesenberg, *Contributing Member*

Working Group on Pumps (SG-CD) (BPV III)

D. Chowdhury, *Chair*
J. V. Gregg, Jr., *Secretary*
B. Busse
R. Ibrahim
T. Johnson
K. J. Noel
D. Skidmore
J. Sulley
Y. Wong
N. Chandran, *Alternate*

Working Group on Supports (SG-CD) (BPV III)

N. A. Costanzo, *Chair*
U. S. Bandyopadhyay, *Secretary*
K. Avrithi
N. M. Bisceglia
R. P. Deubler
N. M. Graham
Y. Matsubara
S. Pellet
G. Thomas
G. Z. Tokarski
L. Vandersip
P. Wiseman
J. Bozga, *Alternate*
R. J. Masterson, *Contributing Member*
R. Roche-Rivera, *Contributing Member*
J. R. Stinson, *Contributing Member*

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Working Group on Valves (SG-CD) (BPV III)

P. Vock, *Chair*
S. Jones, *Secretary*
M. C. Buckley
N. Hansing
G. A. Jolly
J. Lambin
T. Lippucci
C. A. Mizer
H. O'Brien
J. O'Callaghan
M. Rain
K. E. Reid II
J. Sulley
Y. Wong, *Alternate*

Working Group on Vessels (SG-CD) (BPV III)

D. Murphy, *Chair*
S. Willoughby-Braun, *Secretary*
J. J. Arthur
C. Basavaraju
M. Brijlani
L. Constantinescu
J. I. Kim
D. E. Matthews
T. Mitsuhashi
T. J. Schriefer
M. C. Scott
J. Shupert
D. Vlaicu
C. Wilson
R. Z. Ziegler
M. R. Breach, *Alternate*
B. Basu, *Contributing Member*
R. B. Keating, *Contributing Member*
W. F. Weitze, *Contributing Member*

Subgroup on Design Methods (SC-D) (BPV III)

S. McKillop, *Chair*
P. R. Donavin, *Vice Chair*
J. Wen, *Secretary*
K. Avrithi
M. A. Gray
J. V. Gregg, Jr.
K. Hsu
E. Isom
R. Kalnas
D. Keck
J. I. Kim
B. Pellereau
W. D. Reinhardt
P. Smith
R. O. Vollmer
W. F. Weitze
Y. Wong, *Alternate*
S. R. Gosselin, *Contributing Member*
H. T. Harrison III, *Contributing Member*
W. J. O'Donnell, Sr., *Contributing Member*
K. Wright, *Contributing Member*

Special Working Group on Computational Modeling for Explicit Dynamics (SG-DM) (BPV III)

G. Bjorkman, *Chair*
D. J. Ammerman, *Vice Chair*
V. Broz, *Secretary*
J. Bignell
S. Kuehner
D. Molitoris
W. D. Reinhardt
E. Rosvall
P. Sakalaukus, Jr.
D. Siromani
C.-F. Tso
M. C. Yaksh
U. Zencker
X. Zhang
M. R. Breach, *Contributing Member*
Y. Wong, *Contributing Member*

Working Group on Design Methodology (SG-DM) (BPV III)

B. Pellereau, *Chair*
R. O. Vollmer, *Secretary*
K. Avrithi
C. Basavaraju
F. Berkepile
M. Cho
D. Clarkson
C. M. Faidy
Y.-J. Gao
M. Kassar
J. I. Kim
T. R. Liszkai
D. Lytle
K. Matsunaga
S. Ranganath
W. D. Reinhardt
S. Wang
W. F. Weitze
J. Wen
T. M. Wiger
J. Wu
K. Hsu, *Alternate*
G. Banyay, *Contributing Member*
D. S. Bartran, *Contributing Member*
R. D. Blevins, *Contributing Member*
M. R. Breach, *Contributing Member*
H. T. Harrison III, *Contributing Member*
P. Hirschberg, *Contributing Member*
S. McKillop, *Contributing Member*
A. Walker, *Contributing Member*
K. Wright, *Contributing Member*

Working Group on Environmental Fatigue Evaluation Methods (SG-DM) (BPV III)

M. A. Gray, *Chair*
W. F. Weitze, *Secretary*
S. Asada
K. Avrithi
R. C. Cipolla
T. M. Damiani
C. M. Faidy
A. Hirano
P. Hirschberg
K. Hsu
A. Morley
J.-S. Park
B. Pellereau
T. Seppanen
D. Vlaicu
K. Wang
K. A. Manoly, *Alternate*
S. Cuvilliez, *Contributing Member*
T. D. Gilman, *Contributing Member*
S. R. Gosselin, *Contributing Member*
Y. He, *Contributing Member*
H. S. Mehta, *Contributing Member*
K. Wright, *Contributing Member*

Working Group on Fatigue Strength (SG-DM) (BPV III)

P. R. Donavin, *Chair*
T. M. Damiani
D. W. DeJohn
C. M. Faidy
P. Gill
R. J. Gurdal
K. Hsu
J. I. Kim
A. Morley
B. Pellereau
M. S. Shelton
I. Viscarra
Yanli Wang
W. F. Weitze
Y. Zou
C. E. Hinnant, *Contributing Member*
P. Hirschberg, *Contributing Member*
S. H. Kleinsmith, *Contributing Member*
S. Majumdar, *Contributing Member*
H. S. Mehta, *Contributing Member*
W. J. O'Donnell, Sr., *Contributing Member*
S. Ranganath, *Contributing Member*
K. Wright, *Contributing Member*

Working Group on Probabilistic Methods in Design (SG-DM) (BPV III)

M. Golliet, *Chair*
R. Kalnas, *Vice Chair*
G. Brouette
R. Fougerousse
J. Hakii
E. Hanson
D. O. Henry
A. Hirano
K. A. Manoly
A. Morley
B. Pellereau
A. Weaver
M. Yagodich
I. H. Tseng, *Alternate*
K. Avrithi, *Contributing Member*
R. S. Hill III, *Contributing Member*

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Subgroup on Containment Systems for Spent Nuclear Fuel and High-Level Radioactive Material (BPV III)

D. W. Lewis, *Chair*
D. J. Ammerman, *Vice Chair*
S. Klein, *Secretary*
J. Bignell
G. Bjorkman
V. Broz
D. D. Imholte
A. Rigato
P. Sakalaukus, Jr.
D. Siromani
C. R. Sydnor
R. Sypulski
J. Wellwood
X. J. Zhai
X. Zhang
J. Smith, *Alternate*
W. H. Borter, *Contributing Member*
E. L. Pleins, *Contributing Member*
N. M. Simpson, *Contributing Member*

Subgroup on Fusion Energy Devices (BPV III)

T. P. Davis, *Chair*
A. Maslowski, *Staff Secretary*
M. Ellis, *Secretary*
L. Babu
M. Bashir
J. P. Blanchard
B. R. Doshi
L. El-Guebaly
R. Holmes
D. Johnson
I. Kimihiro
P. Mokaria
F. J. Schaaf, Jr.
P. Smith
Y. Song
D. White
R. W. Barnes, *Contributing Member*
W. K. Sowder, Jr., *Contributing Member*

Special Working Group on Fusion Stakeholders (SG-FED) (BPV III)

R. Holmes, *Chair*
C. Barnes
R. W. Barnes
J. Brister
A. A. Campbell
V. Chugh
T. P. Davis
S. S. Desai
F. Deschamps
M. Hua
S. Krishnan
W. K. Sowder, Jr.
N. Young

Working Group on General Requirements (SG-FED) (BPV III)

P. Smith, *Chair*
L. Babu
T. P. Davis
M. Ellis
B. McGlone
P. Mokaria
W. K. Sowder, Jr.
D. White, *Contributing Member*

Working Group on In-Vessel Components (SG-FED) (BPV III)

M. Bashir, *Chair*
T. P. Davis
S. T. Madabusi

Working Group on Magnets (SG-FED) (BPV III)

D. S. Bartran
W. K. Sowder, Jr., *Contributing Member*

Working Group on Materials (SG-FED) (BPV III)

T. P. Davis

Working Group on Vacuum Vessels (SG-FED) (BPV III)

I. Kimihiro, *Chair*
B. R. Doshi
D. Johnson

Subgroup on General Requirements (BPV III)

B. McGlone, *Chair*
A. McLendon, *Secretary*
V. Apostolescu
A. Appleton
S. Bell
G. Brouette
P. J. Coco
G. C. Deleanu
N. DeSantis
O. Elkadim
J. V. Gardiner
J. Grimm
J. Harris
J. W. Highlands
E. V. Imbro
K. A. Kavanagh
Y.-S. Kim
D. T. Meisch
L. Noyes
E. C. Renaud
T. N. Rezk
J. Rogers
B. S. Sandhu
R. Spuhl
J. L. Williams
Y. Diaz-Castillo, *Alternate*
J. DeKleine, *Contributing Member*
S. F. Harrison, Jr., *Contributing Member*
H. Michael, *Contributing Member*
D. J. Roszman, *Contributing Member*
C. T. Smith, *Contributing Member*
G. E. Szabatura, *Contributing Member*

Working Group on General Requirements for Graphite and Ceramic Composite Core Components and Assemblies (SG-GR) (BPV III)

W. J. Geringer, *Chair*
A. Appleton
J. R. Berry
A. A. Campbell
C. Cruz
Y. Diaz-Castillo
J. Lang
M. N. Mitchell
J. Potgieter
E. C. Renaud
S. Sekar
R. Spuhl
W. Windes
B. Lin, *Alternate*

Subgroup on High Temperature Reactors (BPV III)

Yanli Wang, *Chair*
N. Broom
F. W. Brust
M. E. Cohen
W. J. Geringer
B. F. Hantz
M. Hiser
R. I. Jetter
K. Kimura
G. H. Koo
W. Li
M. C. Messner
X. Wei
W. Windes
R. Wright
G. L. Zeng
J. Bass, *Alternate*
P. Carter, *Contributing Member*
W. O'Donnell, Sr., *Contributing Member*
T.-L. Sham
L. Shi, *Contributing Member*
R. W. Swindeman, *Contributing Member*

Special Working Group on High Temperature Reactor Stakeholders (SG-HTR) (BPV III)

M. E. Cohen, *Chair*
M. C. Albert
M. Arcaro
R. W. Barnes
R. Bass
N. Broom
K. Burnett
A. A. Campbell
V. Chugh
W. Corwin
G. C. Deleanu
R. A. Fleming
K. Harris
R. I. Jetter
G. H. Koo
N. J. McTiernan
M. N. Mitchell
K. J. Noel
J. Roll
B. Song
Yanli Wang
X. Wei
G. L. Zeng
R. M. Iyengar, *Alternate*
T. Asayama, *Contributing Member*

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Task Group on Alloy 709 Code Case (SG-HTR) (BPV III)

Yanli Wang, *Chair*
H. Mahajan, *Secretary*
R. I. Jetter
M. C. Messner
W. J. Sperko
R. Wright
T.-L. Sham, *Contributing Member*

Task Group on Class A Rewrite (SG-HTR) (BPV III)

Yanli Wang, *Chair*
R. W. Barnes
M. E. Cohen
R. I. Jetter
H. Mahajan
S. McKillop
N. J. McTiernan
M. C. Messner
T. Nguyen
D. Pease
X. Wei
J. Young

Task Group on Division 5 AM Components (SG-HTR) (BPV III)

R. Wright, *Chair*
R. W. Barnes
F. W. Brust
Z. Feng
S. Lawler
X. Lou
M. McMurtrey
M. C. Messner
T. Patterson
E. C. Renaud
D. Rudland
B. Sutton
I. J. Van Rooyen
Yanli Wang
X. Wei
R. Bass, *Alternate*

Task Group on Graphite Design Analysis (SG-HTR) (BPV III)

A. Mack, *Chair*
J. Bass
S. Baylis
G. Beirnaert
O. Booler
P.-A. Juan
J. Potgieter
J. Quick
M. Saitta
A. Walker

Task Group on High Temperature Piping Design (SG-HTR) (BPV-III)

G. A. Antaki, *Chair*
S. Weindorf, *Secretary*
R. Adibi-Asl
T. D. Al-Shawaf
D. Bankston, Jr.
R. P. Deubler
R. I. Jetter
H. Mahajan
J. C. Minichiello
D. Pease
Yanli Wang
C. D. Weary
T.-L. Sham, *Contributing Member*

Working Group on Allowable Stress Criteria (SG-HTR) (BPV III)

R. Wright, *Chair*
M. McMurtrey, *Secretary*
R. W. Barnes
R. Bass
K. Kimura
W. Li
D. Maitra
R. J. McReynolds
M. C. Messner
T. Patterson
Yanli Wang
X. Wei
R. M. Iyengar, *Alternate*
R. W. Swindeman, *Contributing Member*

Working Group on Analysis Methods (SG-HTR) (BPV III)

M. C. Messner, *Chair*
H. Mahajan, *Secretary*
R. Adibi-Asl
R. W. Barnes
J. A. Blanco
P. Carter
R. I. Jetter
G. H. Koo
T. Nguyen
M. Petkov
K. Pigg
H. Qian
T. Riordan
X. Song
Yanli Wang
X. Wei
S. X. Xu
J. Young
J. Bass, *Alternate*
M. R. Breach, *Contributing Member*
Y.-J. Gao, *Contributing Member*
T. Hassan, *Contributing Member*
S. Krishnamurthy, *Contributing Member*
M. J. Swindeman, *Contributing Member*

Working Group on Creep-Fatigue and Negligible Creep (SG-HTR) (BPV III)

W. Li, *Chair*
J. Bass
C. M. Brusconi
P. Carter
M. E. Cohen
J. I. Duo
R. I. Jetter
G. H. Koo
H. Mahajan
M. McMurtrey
M. C. Messner
H. Qian
R. Rajasekaran
M. Shah
Yanli Wang
X. Wei
J. Young
R. Bass, *Alternate*

Working Group on Nonmetallic Design and Materials (SG-HTR) (BPV III)

W. Windes, *Chair*
W. J. Geringer, *Vice Chair*
J. Potgieter, *Secretary*
G. Beirnaert
A. A. Campbell
C. Chen
A. N. Chereskin
V. Chugh
C. Contescu
N. Gallego
S. T. Gonczy
K. Harris
M. G. Jenkins
P.-A. Juan
J. Lang
A. Mack
M. P. Metcalfe
M. N. Mitchell
J. Parks
K. Pigg
J. Podhiny
J. Roll
A. Tzelepi
A. Walker
Yanli Wang
G. L. Zeng
J. Bass, *Alternate*
A. Appleton, *Contributing Member*
R. W. Barnes, *Contributing Member*
S.-H. Chi, *Contributing Member*
Y. Katoh, *Contributing Member*
J. B. Ossmann, *Contributing Member*
J. Quick, *Contributing Member*
M. Saitta, *Contributing Member*

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Subgroup on Materials, Fabrication, and Examination (BPV III)

D. W. Mann, *Chair*
J. Grimm, *Vice Chair*
J. B. Ossmann, *Vice Chair*
S. Hunter, *Secretary*
W. H. Borter
M. Brijlani
G. R. Cannell
A. Cardillo
S. Cho
P. J. Coco
R. H. Davis
D. B. Denis
B. D. Frew
D. W. Gandy
S. E. Gingrich
M. Golliet
L. S. Harbison
M. Kris
T. Melfi
I.-K. Nam
J. E. O'Sullivan
M. C. Scott
W. J. Sperko
J. F. Strunk
W. Windes
R. Wright
H. Xu
S. Yee
J. Wise, Jr., *Alternate*
S. Wolbert, Jr., *Alternate*
R. W. Barnes, *Contributing Member*
S. Levitus, *Contributing Member*
H. Michael, *Contributing Member*

Working Group on Advanced Manufacturing (SG-MFE) (BPV III)

D. W. Mann, *Chair*
D. W. Gandy, *Secretary*
D. Chowdhury
P. J. Coco
B. D. Frew
J. Grimm
J. Lambin
T. Lippucci
T. Melfi
A. Mori
E. C. Renaud
W. J. Sperko
J. F. Strunk
J. Sulley
S. Tate
J. Wise
S. Wolbert
H. Xu
R. H. Davis, *Alternate*
S. Malik, *Contibuting Member*

Joint Working Group on HDPE (SG-MFE) (BPV III)

M. Brandes, *Chair*
T. M. Musto, *Chair*
J. B. Ossmann, *Secretary*
G. Brouette
M. C. Buckley
S. Choi
M. Golliet
J. Hebeisen
J. Johnston, Jr.
P. Krishnaswamy
M. Kuntz
B. Lin
K. Manoly
D. P. Munson
J. O'Sullivan
V. Rohatgi
F. Schaaf, Jr.
S. Schuessler
R. Stakenborghs
M. Troughton
P. Vibien
J. Wright
T. Adams, *Contributing Member*

COMMITTEE ON HEATING BOILERS (BPV IV)

M. Wadkinson, *Chair*
J. L. Kleiss, *Vice Chair*
C. R. Ramcharran, *Staff Secretary*
B. Ahee
L. Badziagowski
T. L. Bedeaux
B. Calderon
J. P. Chicoine
C. Dinic
J. M. Downs
J. A. Hall
M. Mengon
Y. Teng
D. Picart, *Delegate*
Y. R. Cho, *Alternate*
B. J Iske, *Alternate*
T. Wagner, *Alternate*
H. Michael, *Contributing Member*
P. A. Molvie, *Contributing Member*

Executive Committee (BPV IV)

M. Wadkinson, *Chair*
C. R. Ramcharran, *Staff Secretary*
T. L. Bedeaux
J. P. Chicoine
J. A. Hall
J. L. Kleiss

Subgroup on Cast Boilers (BPV IV)

J. P. Chicoine, *Chair*
J. M. Downs, *Vice Chair*
C. R. Ramcharran, *Staff Secretary*
T. L. Bedeaux
J. A. Hall
J. L. Kleiss
M. Mengon
B. J. Iske, *Alternate*
T. Wagner, *Alternate*

Subgroup on Materials (BPV IV)

J. A. Hall, *Chair*
J. M. Downs, *Vice Chair*
C. R. Ramcharran, *Staff Secretary*
L. Badziagowski
T. L. Bedeaux
Y. Teng
M. Wadkinson

Subgroup on Water Heaters (BPV IV)

J. L. Kleiss, *Chair*
L. Badziagowski, *Vice Chair*
C. R. Ramcharran, *Staff Secretary*
B. Ahee
M. Carlson
J. P. Chicoine
C. Dinic
M. Mengon
Y. Teng
B. J. Iske, *Alternate*
T. Wagner, *Alternate*
P. A. Molvie, *Contributing Member*

Subgroup on Welded Boilers (BPV IV)

T. L. Bedeaux, *Chair*
J. P. Chicoine, *Vice Chair*
C. R. Ramcharran, *Staff Secretary*
B. Ahee
E. Alexis
L. Badziagowski
B. Calderon
M. Carlson
C. Dinic
J. L. Kleiss
M. Mengon
M. Wadkinson
M. Washington
B. J. Iske, *Alternate*
M. J. Melita, *Alternate*
T. J. Wagner, *Alternate*
P. A. Molvie, *Contributing Member*

COMMITTEE ON NONDESTRUCTIVE EXAMINATION (BPV V)

N. A. Finney, *Chair*
C. May, *Vice Chair*
C. R. Ramcharran, *Staff Secretary*
D. Bajula
P. L. Brown
M. A. Burns
N. Carter
C. Emslander
A. F. Garbolevsky
P. T. Hayes
G. W. Hembree
F. B. Kovacs
K. Krueger
B. D. Laite
P. Lang
T. R. Lerohl
J. Schoneweis
P. B. Shaw
C. Vorwald
M. Carlson, *Alternate*
J. E. Batey, *Contributing Member*
T. Clausing, *Contributing Member*
J. F. Halley, *Contributing Member*
R. W. Kruzic, *Contributing Member*
L. E. Mullins, *Contributing Member*
H. C. Graber, *Honorary Member*
T. G. McCarty, *Honorary Member*

Executive Committee (BPV V)

C. May, *Chair*
N. A. Finney, *Vice Chair*
C. R. Ramcharran, *Staff Secretary*
V. F. Godinez-Azcuaga
P. T. Hayes
G. W. Hembree
F. B. Kovacs
K. Krueger
B. D. Laite
E. Peloquin
C. Vorwald

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Subgroup on General Requirements/Personnel Qualifications and Inquiries (BPV V)

C. Vorwald, *Chair*
K. Krueger, *Vice Chair*
D. Bajula
N. Carter
P. Chavdarov
C. Emslander
N. A. Finney
G. W. Hembree
F. B. Kovacs
P. Lang
T. R. Lerohl
C. May
J. Schoneweis
T. Clausing, *Contributing Member*
J. F. Halley, *Contributing Member*
D. I. Morris, *Contributing Member*
J. P. Swezy, Jr., *Contributing Member*

Subgroup on Volumetric Methods (BPV V)

C. May, *Chair*
P. T. Hayes, *Vice Chair*
P. L. Brown
N. A. Finney
A. F. Garbolevsky
V. F. Godinez-Azcuaga
C. Hansen
R. W. Hardy
G. W. Hembree
F. B. Kovacs
K. Krueger
N. Pasemko
E. Peloquin
J. Schoneweis
C. Vorwald
J. F. Halley, *Contributing Member*
R. W. Kruzic, *Contributing Member*
L. E. Mullins, *Contributing Member*
C. Wassink, *Contributing Member*

Working Group on Radiography (SG-VM) (BPV V)

C. Vorwald, *Chair*
D. M. Woodward, *Vice Chair*
D. Bajula
P. L. Brown
C. Emslander
A. F. Garbolevsky
R. W. Hardy
G. W. Hembree
P. Howie
F. B. Kovacs
B. D. Laite
T. R. Lerohl
C. May
R. J. Mills
J. F. Molinaro
N. Pasemko
J. Schoneweis
T. L. Clifford, *Contributing Member*
R. W. Kruzic, *Contributing Member*

Working Group on Ultrasonics (SG-VM) (BPV V)

K. Krueger, *Chair*
D. Bajula, *Vice Chair*
D. Adkins
C. T. Brown
C. Emslander
N. A. Finney
P. Furr
C. Hansen
P. T. Hayes
G. W. Hembree
B. D. Laite
T. R. Lerohl
C. May
E. Peloquin
J. Schoneweis
D. Van Allen
C. Vorwald
J. F. Halley, *Contributing Member*
R. W. Kruzic, *Contributing Member*
P. Mudge, *Contributing Member*
L. E. Mullins, *Contributing Member*
M. J. Quarry, *Contributing Member*
J. Vanvelsor, *Contributing Member*

Special Working Group for Advance UT Techniques (WG-UT) (BPV V)

K. Krueger, *Chair*
J. Schoneweis, *Vice Chair*
D. Bajula
C. David
N. A. Finney
P. Furr
J. Garner
C. Hansen
P. Hayes
B. D. Laite
T. R. Lerohl
E. Peloquin
D. Tompkins
D. Van Allen
C. Wassink

Working Group on Acoustic Emissions (SG-VM) (BPV V)

V. F. Godinez-Azcuaga, *Chair*
J. Catty, *Vice Chair*
S. R. Doctor
N. F. Douglas, Jr.

Working Group on Full Matrix Capture (SG-VM) (BPV V)

E. Peloquin, *Chair*
P. T. Hayes, *Vice Chair*
D. Bajula
J. Catty
N. A. Finney
J. L. Garner
R. T. Grotenhuis
G. W. Hembree
K. Krueger
M. Lozev
R. Nogueira
D. Richard
M. Sens
D. Tompkins
J. F. Halley, *Contributing Member*
L. E. Mullins, *Contributing Member*
C. Wassink, *Contributing Member*

Subgroup on Inservice Examination Methods and Techniques (BPV V)

P. T. Hayes, *Chair*
E. Peloquin, *Vice Chair*
D. Bajula
R. Barker
R. J. Bunte
M. A. Burns
M. Carlson
T. Demmer
N. Douglas, Jr.
N. A. Finney
V. F. Godinez-Azcuaga
C. Hansen
G. W. Hembree
K. Krueger
C. May
N. Pasemko
D. D. Raimander
B. Ray
J. Schoneweis
C. Vorwald

Working Group on Assisted Analysis (SG-ISI) (BPV V)

T. Demmer, *Chair*
C. Hansen, *Vice Chair*
J. Aldrin
J. Chen
M. Elen
N. A. Finney
V. F. Godinez-Azcuaga
R. T. Grotenhuis
K. Hayes
G. W. Hembree
G. I. Kraljic
G. M. Lozev
R. S. F. Orozco
E. Peloquin
T. Thulien
J. Williams
S. Zafar

Working Group on Methods and Techniques (SG-ISI) (BPV V)

C. May, *Chair*
R J. Bunte, *Vice Chair*
D. Bajula
R. Barker
M. A. Burns
M. Carlson
J. Catty
P. T. Hayes
K. Krueger
B. D. Laite
G. Morais
N. Pasemko
J. Schoneweis

Working Group on Supplemental Requirements for Corrosion and Other Damage Mechanisms (SG-ISI) (BPV V)

J. Schoneweis, *Chair*
N. Pasemko, *Vice Chair*
D. Bajula
R. Barker
N. A. Finney
C. Hansen
P. T. Hayes
K. Krueger
E. Peloquin
I. Roux

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Subgroup on Surface Examination Methods (BPV V)

B. D. Laite, *Chair*
D. Bajula
R.. Behe
R. M. Beldyk
P. L. Brown
N. Carter
C. Emslander
N. Farenbaugh
N. A. Finney
A. F. Garbolevsky
G. W. Hembree
K. Krueger
T. R. Lerohl
C. May
G. Morais
J. Schoneweis
P. B. Shaw
R. Tedder
C. Vorwald
D. M. Woodward
T. Clausing, *Contributing Member*
J. F. Halley, *Contributing Member*
K. Hayes, *Contributing Member*
R. W. Kruzic, *Contributing Member*
L. E. Mullins, *Contributing Member*
C. Wassink, *Contributing Member*

Germany International Working Group (BPV V)

P. Chavdarov, *Chair*
V. Pohl, *Vice Chair*
H.-P. Schmitz, *Secretary*
D. Kaiser
C. Kringe
S. Mann
V. Reusch
P. Van IJS

India International Working Group (BPV V)

P. Kumar, *Chair*
A. V. Bhagwat, *Vice Chair*
V. Ligade, *Secretary*
S. Jobanputra
D. Joshi
G. R. Joshi
J. V. Muthukumaraswamy
A. Relekar
V. J. Sonawane
N. Suryawanshi
D. B. Tanpure

Italy International Working Group (BPV V)

D. D. Raimander, *Chair*
O. Oldani, *Vice Chair*
C. R. Ramcharran, *Staff Secretary*
P. Campli, *Secretary*
M. Agostini
T. Aldo
F. Bresciani
N. Caputo
M. Colombo
P. L. Dinelli
F. Ferrarese
E. Ferrari
M. A. Grimoldi
G. Luoni
U. Papponetti
P. Pedersoli
A. Veroni
M. Zambon
G. Gobbi, *Contributing Member*
A. Gusmaroli, *Contributing Member*
G. Pontiggia, *Contributing Member*

COMMITTEE ON PRESSURE VESSELS (BPV VIII)

S. C. Roberts, *Chair*
M. D. Lower, *Vice Chair*
J. Oh, *Staff Secretary*
S. J. Rossi, *Staff Secretary*
S. R. Babka
L. Bower
P. Chavdarov
B. F. Hantz
C. S. Hinson
J. Hoskinson
M. Kowalczyk
D. L. Kurle
R. Mahadeen
S. A. Marks
P. Matkovics
D. T. Peters
M. J. Pischke
M. D. Rana
G. B. Rawls, Jr.
F. L. Richter
C. D. Rodery
J. C. Sowinski
D. Srnic
P. L. Sturgill
K. Subramanian
J. P. Swezy, Jr.
S. Terada
E. Upitis
A. Viet
K. Xu
K. Oyamada, *Delegate*
M. E. Papponetti, *Delegate*
G. Aurioles, Sr., *Contributing Member*
R. J. Basile
A. Chaudouet, *Contributing Member*
D. B. DeMichael, *Contributing Member*
K. T. Lau, *Contributing Member*
H. Michael, *Contributing Member*
R. W. Mikitka, *Contributing Member*
D. A. Swanson, *Contributing Member*
G. G. Karcher, *Honorary Member*
U. R. Miller, *Honorary Member*
T. P. Pastor, *Honorary Member*
K. K. Tam, *Honorary Member*

Executive Committee (BPV VIII)

M. D. Lower, *Chair*
S. J. Rossi, *Staff Secretary*
G. Aurioles, Sr.
C. W. Cary
P. Chavdarov
T. Halligan
J. Hoskinson
P. Matkovics
S. C. Roberts
J. C. Sowinski
K. Subramanian
K. Xu

Subgroup on Design (BPV VIII)

J. C. Sowinski, *Chair*
C. S. Hinson, *Vice Chair*
S. R. Babka
O. A. Barsky
M. Faulkner
D. Francis
B. F. Hantz
C. E. Hinnant
S. Krishnamurthy
D. L. Kurle
K. Kuscu
M. D. Lower
R. W. Mikitka
B. Millet
M. D. Rana
G. B. Rawls, Jr.
S. C. Roberts
T. G. Seipp
D. Srnic
S. Terada
K. Xu
K. Oyamada, *Delegate*
M. E. Papponetti, *Delegate*
G. Aurioles, Sr., *Contributing Member*
R. J. Basile, *Contributing Member*
D. Chandiramani, *Contributing Member*
M. H. Jawad, *Contributing Member*
P. K. Lam, *Contributing Member*
K. Mokhtarian, *Contributing Member*
C. D. Rodery, *Contributing Member*
D. A. Swanson, *Contributing Member*
K. K. Tam, *Contributing Member*
E. Upitis, *Contributing Member*

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Working Group on Design-by-Analysis (BPV VIII)

B. F. Hantz, *Chair*
T. W. Norton, *Secretary*
J. Bedoya
A. Feller
S. Guzey
C. E. Hinnant
S. Kataoka
S. Kilambi
K. D. Kirkpatrick
S. Krishnamurthy
C. Nadarajah
T. G. Seipp
M. Shah
S. Terada
D. A. Arnett, *Contributing Member*
A. Mann, *Contributing Member*
K. Saboda, *Contributing Member*

Task Group on Electrochemical Cell Stacks (TG-ECS) (BPV VIII)

K. Xu, *Chair*
K. Quackenbush, *Vice Chair*
N. Barkley
E. Gadsby
S. Goyette
T. Halligan
R. Kauer
P. Matkovics
L. Moulthrop
J. Panicker
E. Prause
P. T. Shanks
S. Ulemek
E. Andrade, *Contributing Member*
B. D. Carter, *Contributing Member*
K. Choi, *Contributing Member*
L. T. Dalton, *Contributing Member*
M. Duda, *Contributing Member*
R. Fournier, *Contributing Member*
E. Gernot, *Contributing Member*
S. Grimm, *Contributing Member*
N. Hart, *Contributing Member*
R. Müller, *Contributing Member*
P. K. Panigrahy, *Contributing Member*
R. Robles, *Contributing Member*
M. Stelzel, *Contributing Member*
M. Sweetland, *Contributing Member*

Working Group on Elevated Temperature Design (BPV I and VIII)

C. Nadarajah, *Chair*
L. S. Tsai, *Secretary*
D. Anderson
D. Dewees
B. F. Hantz
R. I. Jetter
S. Kataoka
S. Krishnamurthy
S. R. Kummari
T. Le
B.-L. Lyow
C T. McDaris
M. C. Messner
M. N. Mitchell
P. Prueter
A. Ramos
M. Rathinasabapathy
M. J. Swindeman
A. Mann, *Contributing Member*
N. McMurray, *Contributing Member*
B. J. Mollitor, *Contributing Member*

Task Group on Fired Heater Pressure Vessels (BPV VIII)

J. Hoskinson, *Chair*
D. Nelson
R. Robles
J. Rust
P. T. Shanks
E. Smith
D. Srnic

Subgroup on Fabrication and Examination (BPV VIII)

T. Halligan, *Chair*
D. I. Morris, *Vice Chair*
D. Smith, *Secretary*
J. Lu
S. A. Marks
O. Mulet
M. J. Pischke
M. J. Rice
J. Roberts
C. D. Rodery
B. F. Shelley
P. L. Sturgill
J. P. Swezy, Jr.
E. Upitis
C. Violand
K. Oyamada, *Delegate*
W. J. Bees, *Contributing Member*
L. F. Campbell, *Contributing Member*
N. Carter, *Contributing Member*

Subgroup on Heat Transfer Equipment (BPV VIII)

P. Matkovics, *Chair*
L. Bower, *Vice Chair*
T. Bunyarattaphantu, *Secretary*
S. R. Babka
J. H. Barbee
O. A. Barsky
A. Chaudouet
D. L. Kurle
R. Mahadeen
S. Mayeux
S. Neilsen
E. Smith
A. M. Voytko
R. P. Wiberg
G. Aurioles, Sr., *Contributing Member*
K. M. Chikhaliya, *Contributing Member*
J. Pasek, *Contributing Member*
D. Srnic, *Contributing Member*
Z. Tong, *Contributing Member*

Subgroup on General Requirements (BPV VIII)

J. Hoskinson, *Chair*
M. Faulkner, *Vice Chair*
N. Barkley
T. P. Beirne
R. Darby
Z. Jakovljevic
M. D. Lower
T. Newman
I. A. Powell
J. Qu
G. B. Rawls, Jr.
F. L. Richter
S. C. Roberts
J. Rust
P. T. Shanks
J. C. Sowinski
P. Speranza
D. Srnic
D. B. Stewart
D. B. DeMichael, *Contributing Member*
T. P. Pastor, *Contributing Member*
R. Robles, *Contributing Member*
D. A. Swanson, *Contributing Member*
Y. Yang, *Contributing Member*

Working Group on Plate Heat Exchangers (BPV VIII)

D. I. Morris, *Chair*
S. R. Babka
V. Gudge
T. Halligan
Z. Jakovljevic
P. Matkovics
M. J. Pischke
P. T. Shanks
E. Smith
D. Srnic

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Subgroup on High Pressure Vessels (BPV VIII)

K. Subramanian, *Chair*
M. Sarzynski, *Vice Chair*
A. Dinizulu, *Staff Secretary*
L. P. Antalffy
N. Barkley
J. Barlow
R. C. Biel
P. N. Chaku
L. Fridlund
D. Fuenmayor
J. Gibson
R. T. Hallman
K. Karpanan
A. K. Khare
G. T. Nelson
D. T. Peters
E. D. Roll
J. R. Sims
E. Smith
F. W. Tatar
S. Terada
Y. Xu
A. M. Clayton, *Contributing Member*
R. Cordes, *Contributing Member*
R. D. Dixon, *Contributing Member*
J. Hademenos, *Contributing Member*
R. M. Hoshman, *Contributing Member*
F. Kirkemo, *Contributing Member*
G. M. Mital, *Contributing Member*
M. Parr, *Contributing Member*
M. D. Rana, *Contributing Member*
C. Tipple, *Contributing Member*
K.-J. Young, *Contributing Member*
D. J. Burns, *Honorary Member*
G. J. Mraz, *Honorary Member*

Subgroup on Materials (BPV VIII)

P. Chavdarov, *Chair*
M. Kowalczyk, *Vice Chair*
S. Kilambi, *Secretary*
J. Cameron
H. Dutta
J. F. Grubb
D. Maitra
R. K. Patadia
D. Pugh
D. W. Rahoi
E. Upitis
K. Xu
M. Katcher, *Contributing Member*
R. C. Sutherlin, *Contributing Member*

Subgroup on Toughness (BPV VIII)

K. Xu, *Chair*
T. Halligan, *Vice Chair*
T. Finn
C. S. Hinson
S. Kilambi
D. L. Kurle
T. Newman
J. Qu
M. D. Rana
F. L. Richter
K. Subramanian
J. P. Swezy, Jr.
S. Terada
E. Upitis
J. Vattappilly
K. Oyamada, *Delegate*
L. Dong, *Contributing Member*
S. Krishnamurthy, *Contributing Member*
D. A. Swanson, *Contributing Member*

Subgroup on Graphite Pressure Equipment (BPV VIII)

C. W. Cary, *Chair*
A. Viet, *Vice Chair*
G. C. Becherer
F. L. Brown
J. D. Clements
H. Lee, Jr.
S. Mehrez
T. Rudy
A. A. Stupica
J. Wince

Argentina International Working Group (BPV VIII)

A. Dominguez, *Chair*
R. Robles, *Vice Chair*
G. Glissenti, *Secretary*
A. Antipasti
D. A. Bardelli
R. A. Barey
O. S. Bretones
A. Burgueno
G. Casanas
D. A. Del Teglia
M. Favareto
J. A. Labastidas
F. P. Larrosa
M. A. Mendez
J. J. Monaco
C. Parente
M. A. A. Pipponzi
L. C. Rigoli
A. Rivas
D. Rizzo
M. A. Sena
G. Telleria
C. Alderetes, *Contributing Member*
D. H. Da Rold, *Contributing Member*
J. C. Rubeo, *Contributing Member*

China International Working Group (BPV VIII)

X. Chen, *Chair*
B. Shou, *Vice Chair*
Z. Fan, *Secretary*
Y. Chen
J. Cui
R. Duan
J.-G. Gong
B. Han
J. Hu
Q. Hu
H. Hui
K. Li
D. Luo
Y. Luo
C. Miao
L. Sun
C. Wu
J. Xiaobin
F. Xu
G. Xu
F. Yang
Y. Yang
Y. Yuan
Yanfeng Zhang
Yijun Zhang
S. Zhao
J. Zheng
G. Zhu

Germany International Working Group (BPV VIII)

R. Kauer, *Chair*
M. Sykora, *Vice Chair*
A. Aloui
P. Chavdarov
M. Delzeit
A. Emrich
C. Jaekel
S. Jetzlsperger
D. Koelbl
S. Krebs
T. Ludwig
R. A. Meyers
H. Michael
R. Müller
S. Reich
A. Spangenberg
C. Stobbe

India International Working Group (BPV VIII)

D. Chandiramani, *Chair*
D. Kulkarni, *Vice Chair*
A. D. Dalal, *Secretary*
P. Arulkumar
P. Gandhi
U. Ganesan
S. K. Goyal
V. Jayabalan
V. K. Joshi
A. Kakumanu
T. Mukherjee
P. C. Pathak
D. Prabhu
A. Sadasivam
M. P. Shah
Y. Z. Shaikh
R. Tiru
V. T. Valavan
M. Sharma, *Contributing Member*

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Italy International Working Group (BPV VIII)

M. Millefanti, *Chair*
P. Campli, *Secretary*
P. Aliprandi
A. Avogadri
A. Camanni
M. Camposaragna
N. Caputo
M. Colombo
P. Conti
D. Cortassa
A. Fabiano
F. Finco
M. Guglielmetti
A. F. Magri
L. Moracchioli
P. Pacor
S. Sarti
A. Teli
N. Wagner
V. Calo, *Contributing Member*
G. Gobbi, *Contributing Member*
A. Gusmaroli, *Contributing Member*
G. Pontiggia, *Contributing Member*
D. D. Raimander, *Contributing Member*

Special Working Group on Bolted Flanged Joints (BPV VIII)

W. Brown, *Chair*
M. Osterfoss, *Vice Chair*
D. Bankston, Jr.
C. W. Cary
A. Chaudouet
H. Chen
D. Francis
H. Lejeune
A. Mann
W. McDaniel
R. W. Mikitka
D. Nash
M. Ruffin
M. Siddiqui
E. Jamalyaria, *Contributing Member*
G. Van Zyl, *Contributing Member*
J. Veiga, *Contributing Member*
R. Wacker, *Contributing Member*

Subgroup on Interpretations (BPV VIII)

P. Matkovics, *Chair*
J. Oh, *Staff Secretary*
S. R. Babka
L. Bower
T. Bunyarattaphantu
J. Cameron
C. W. Cary
P. Chavdarov
M. Faulkner
T. Halligan
B. F. Hantz
J. Hoskinson
M. Kowalczyk
D. L. Kurle
K. Kuscu
M. D. Lower
S. A. Marks
D. I. Morris
D. T. Peters
J. Qu
F. L. Richter
S. C. Roberts
C. D. Rodery
T. G. Seipp
E. Smith
J. C. Sowinski
K. Subramanian
J. P. Swezy, Jr.
A. Viet
K. Xu
G. Aurioles, Sr., *Contributing Member*
R. J. Basile, *Contributing Member*
D. A. Swanson, *Contributing Member*

COMMITTEE ON WELDING, BRAZING, AND FUSING (BPV IX)

M. J. Pischke, *Chair*
P. L. Sturgill, *Vice Chair*
R. Rahaman, *Staff Secretary*
D. Barborak
M. Bernasek
M. A. Boring
D. A. Bowers
N. Carter
J. G. Feldstein
P. Gilston
S. E. Gingrich
K. L. Hayes
J. S. Lee
W. M. Lundy
D. W. Mann
S. A. Marks
T. Melfi
W. F. Newell, Jr.
E. G. Reichelt
M. J. Rice
W. J. Sperko
J. P. Swezy, Jr.
A. D. Wilson
L. Costa, *Delegate*
D. Pojatar, *Delegate*
D. D. Raimander, *Delegate*
A. Roza, *Delegate*
M. Consonni, *Contributing Member*
R. M. Jessee, *Contributing Member*
P. L. Van Fosson, *Contributing Member*
R. K. Brown, Jr., *Honorary Member*
M. L. Carpenter, *Honorary Member*
B. R. Newmark, *Honorary Member*
S. D. Reynolds, Jr., *Honorary Member*

Subgroup on Brazing (BPV IX)

S. A. Marks, *Chair*
E. W. Beckman
A. F. Garbolevsky
N. Mohr
M. J. Pischke
P. L. Sturgill
J. P. Swezy, Jr.

Subgroup on General Requirements (BPV IX)

N. Carter, *Chair*
P. Gilston, *Vice Chair*
S. A. Marks, *Secretary*
J. P. Bell
D. A. Bowers
T. Bunyarattaphantu
M. Cox
M. Heinrichs
R. M. Jessee
P. Matkovics
W. May
K. Meszaros
H. B. Porter
D. Smith
P. L. Sturgill
J. P. Swezy, Jr.
E. W. Woelfel
L. Costa, *Delegate*
E. W. Beckman, *Contributing Member*
A. Davis, *Contributing Member*
B. R. Newmark, *Honorary Member*

Subgroup on Materials (BPV IX)

M. Bernasek, *Chair*
T. Anderson
L. Constantinescu
E. Cutlip
S. E. Gingrich
L. S. Harbison
M. James
R. M. Jessee
T. Melfi
S. D. Nelson
M. J. Pischke
D. D. Raimander
A. Roza
C. E. Sainz
P. L. Sturgill
C. Zanfir
L. Costa, *Delegate*
V. G. V. Giunto, *Delegate*
D. J. Kotecki, *Contributing Member*
B. Krueger, *Contributing Member*
W. J. Sperko, *Contributing Member*
M. J. Stanko, *Contributing Member*

Subgroup on Plastic Fusing (BPV IX)

K. L. Hayes, *Chair*
M. Brandes
R. M. Jessee
J. Johnston, Jr.
J. E. O'Sullivan
E. G. Reichelt
M. J. Rice
S. Schuessler
M. Troughton
C. Violand
E. W. Woelfel
J. Wright

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Subgroup on Welding Qualifications (BPV IX)

T. Melfi, *Chair*
A. D. Wilson, *Vice Chair*
K. L. Hayes, *Secretary*
M. Bernasek
M. A. Boring
D. A. Bowers
R. Campbell
R. B. Corbit
L. S. Harbison
M. Heinrichs
J. S. Lee
W. M. Lundy
D. W. Mann
K. Meszaros
W. F. Newell, Jr.
E. G. Reichelt
M. J. Rice
M. B. Sims
A. Spangenberg
W. J. Sperko
P. L. Sturgill
J. P. Swezy, Jr.
C. Violand
L. Costa, *Delegate*
D. D. Raimander, *Delegate*
D. Chandiramani, *Contributing Member*
M. Consonni, *Contributing Member*
M. Dehghan, *Contributing Member*
T. C. Wiesner, *Contributing Member*

Argentina International Working Group (BPV IX)

A. Burgueno, *Chair*
A. R. G. Frinchaboy, *Vice Chair*
R. Rahaman, *Staff Secretary*
M. D. Kuhn, *Secretary*
P. J. Cabot
J. Caprarulo
M. Favareto
J. A. Gandola
M. A. Mendez
A. E. Pastor

Germany International Working Group (BPV IX)

P. Chavadarov, *Chair*
R. Rahaman, *Staff Secretary*
P. Khwaja, *Secretary*
B. Daume
D. Haase
S. Krebs
T. Ludwig
P. Müller
S. Wegener
J. Daldrup, *Contributing Member*
E. Floer, *Contributing Member*
A. Scherpenisse, *Contributing Member*
K.-G. Toelle, *Contributing Member*

Italy International Working Group (BPV IX)

D. D. Raimander, *Chair*
F. Ferrarese, *Vice Chair*
R. Rahaman, *Staff Secretary*
P. Campli, *Secretary*
M. Bernasek
A. Camanni
M. Mandina
A. S. Monastra
L. Moracchioli
P. Pacor
G. Signoretta
V. Calo, *Contributing Member*
G. Gobbi, *Contributing Member*
A. Gusmaroli, *Contributing Member*
G. Pontiggia, *Contributing Member*
P. Siboni, *Contributing Member*

Spain International Working Group (BPV IX)

F. J. Q. Pandelo, *Chair*
F. Manas, *Vice Chair*
R. Rahaman, *Staff Secretary*
F. R. Hermida, *Secretary*
C. A. Celimendiz
M. A. F. Garcia
B. B. Miguel
A. D. G. Munoz
A. B. Pascual
G. Gobbi, *Contributing Member*
R. G. Garcia, *Contributing Member*

COMMITTEE ON FIBER-REINFORCED PLASTIC PRESSURE VESSELS (BPV X)

J. L. Bustillos, *Chair*
D. Eisberg, *Vice Chair*
C. R. Ramcharran, *Staff Secretary*
A. L. Beckwith
B. R. Colley
T. W. Cowley
I. L. Dinovo
J. Eihusen
K. L. Gilmore
M. R. Gorman
B. Hebb
L. E. Hunt
B. Linnemann
D. H. McCauley
N. L. Newhouse
G. Ramirez
J. R. Richter
B. F. Shelley
G. A. Van Beek
S. L. Wagner
D. O. Yancey, Jr.
P. H. Ziehl
D. H. Hodgkinson, *Contributing Member*
D. L. Keeler, *Contributing Member*

COMMITTEE ON NUCLEAR INSERVICE INSPECTION (BPV XI)

D. W. Lamond, *Chair*
S. D. Kulat, *Vice Chair*
A. T. Roberts III, *Vice Chair*
D. Miro-Quesada, *Staff Secretary*
M. L. Benson
C. T. Brown
S. B. Brown
T. L. Chan
R. C. Cipolla
R. Clow
D. R. Cordes
H. Do
E. V. Farrell, Jr.
M. J. Ferlisi
J. Hakii
M. L. Hall
P. J. Hennessey
D. O. Henry
R. Hinkle
K. Hojo
A. E. Keyser
H. Malikowski
S. L. McCracken
L. A. Melder
S. A. Norman
T. Nuoffer
J. Nygaard
J. E. O'Sullivan
N. A. Palm
G. C. Park
D. A. Scarth
F. J. Schaaf, Jr.
R. W. Swayne
S. Takaya
A. Udyawar
D. Vetter
J. G. Weicks
M. Weis
B. K. Welch
Y.-K. Chung, *Delegate*
C. Ye, *Delegate*
M. Homiack, *Alternate*
C. Latiolais, *Alternate*
R. O. McGill, *Alternate*
T. J. Griesbach, *Contributing Member*
J. T. Lindberg, *Contributing Member*
T. V. Vo, *Contributing Member*
C. D. Cowfer, *Honorary Member*
E. B. Gerlach, *Honorary Member*
R. E. Gimple, *Honorary Member*
F. E. Gregor, *Honorary Member*
R. D. Kerr, *Honorary Member*
P. C. Riccardella, *Honorary Member*
R. A. West, *Honorary Member*
C. J. Wirtz, *Honorary Member*
R. A. Yonekawa, *Honorary Member*

Executive Committee (BPV XI)

S. D. Kulat, *Chair*
D. W. Lamond, *Vice Chair*
D. Miro-Quesada, *Staff Secretary*
M. L. Benson
M. J. Ferlisi
D. O. Henry
S. L. McCracken
N. A. Palm
G. C. Park
A. T. Roberts III
R. W. Swayne
D. Vetter
M. Homiack, *Alternate*

Latin American International Working Group (BPV XI)

O. Martinez, *Staff Secretary*
A. Claus
I. M. Guerreiro
L. R. Miño
F. J. Schaaf, Jr.
F. M. Schroeter
P. Yamamoto

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

China International Working Group (BPV XI)

T. Yuchun, *Chair*
J. F. Cai, *Vice Chair*
C. Ye, *Vice Chair*
M. W. Zhou, *Secretary*
M. Chao
H. D. Chen
Y. Cheng
C. Gao
Y. Guanghua
Y. B. Guo
Y. Hongqi
D. R. Horn
Y. Hou
Y. S. Li
Shangyuan Liu
Y. Nie
W. N. Pei
L. Shiwei
S. Shuo
Y. Sixin
Y. X. Sun
Z. Wan
Q. Wang
Q. W. Wang
Z. S. Wang
L. Xing
F. Xu
S. X. Xu
Q. Yin
Y. Zhe
Z. M. Zhong

European International Working Group (BPV XI)

R. Döring, *Chair*
M. Hagenbruch, *Vice Chair*
R. Piel, *Secretary*
P. Ancion
A. Casse
C. G. Frantescu
T. Hantzka
E. Iacopetta
A. Juengert
S. D. Kulat
H.-W. Lange
N. Legl
T. Ludwig
M. Reichert
L. Sybertz
I. Tewes
R. Tiete
Yixing Wang
J. Wendt

India International Working Group (BPV XI)

S. B. Parkash, *Chair*
D. Narain, *Vice Chair*
Z. M. Mansuri
M. R. Nadgouda
N. Palm
K. K. Rai
D. Rawal
R. Sahai
R. K. Sharma

Special Working Group on Editing and Review (BPV XI)

R. W. Swayne, *Chair*
R. C. Cipolla
D. O. Henry
M. Orihuela
D. A. Scarth
A. Udyawar

Task Group on Inspectability (BPV XI)

E. Henry, *Chair*
B. Langston, *Secretary*
D. Brown
A. Bushmire
A. Cardillo
K. Caver
D. R. Cordes
D. O. Henry
J. Honcharik
C. Latiolais
J. T. Lindberg
L. Loomis
S. Matsumoto
D. E. Matthews
P. J. O'Regan
J. B. Ossmann

Working Group on Spent Nuclear Fuel Storage and Transportation Containment Systems (BPV XI)

K. Hunter, *Chair*
M. Orihuela, *Secretary*
D. J. Ammerman
J. Broussard
C. R. Bryan
T. Carraher
D. Dunn
N. Fales
R. C. Folley
A. Gonzalez
G. Grant
B. Gutherman
M. W. Joseph
M. Keene
M. Liu
K. Mauskar
R. M. Meyer
R. M. Pace
M. A. Richter
B. Sarno
R. Sindelar
M. Staley
J. Tatman
J. Wellwood
K. A. Whitney
X. J. Zhai
P.-S. Lam, *Alternate*
G. White, *Alternate*
H. Smith, *Contributing Member*

Task Group on Mitigation and Repair of Spent Nuclear Fuel Canisters (WG-SNFS & TCS) (BPV XI)

J. Tatman, *Chair*
D. J. Ammerman
J. Broussard
C. R. Bryan
G. R. Cannell
K. Dietrich
D. Dunn
N. Fales
R. C. Folley
D. Jacobs
N. Klymyshyn
M. Kris
M. Liu
K. Mauskar
S. L. McCracken
M. Orihuela
M. Richter
K. E. Ross
B. Sarno
R. Sindelar
J. Wellwood
A. Williams

Subgroup on Evaluation Standards (BPV XI)

N. A. Palm, *Chair*
S. X. Xu, *Secretary*
M. L. Benson
R. C. Cipolla
C. M. Faidy
M. M. Farooq
T. J. Griesbach
K. Hojo
M. Kirk
D. R. Lee
Y. S. Li
R. O. McGill
R. M. Pace
S. Ranganath
C. J. Sallaberry
D. A. Scarth
D. J. Shim
A. Udyawar
T. V. Vo
G. M. Wilkowski
K. Hasegawa, *Contributing Member*
H. S. Mehta, *Contributing Member*

Task Group on Evaluation of Beyond Design Basis Events (SG-ES) (BPV XI)

R. M. Pace, *Chair*
S. X. Xu, *Secretary*
G. A. Antaki
P. R. Donavin
R. G. Gilada
T. J. Griesbach
M. Hayashi
K. Hojo
S. A. Kleinsmith
M. Moenssens
T. V. Vo
K. Voelsing
G. M. Wilkowski
F. G. Abatt, *Contributing Member*
H. S. Mehta, *Contributing Member*

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Working Group on Flaw Evaluation (SG-ES) (BPV XI)

R. C. Cipolla, *Chair*
S. X. Xu, *Secretary*
M. L. Benson
H. D. Chung
N. G. Cofie
M. A. Erickson
C. M. Faidy
M. M. Farooq
B. R. Ganta
R. G. Gilada
C. Guzman-Leong
K. Hojo
F. Iwamatsu
S. Kalyanam
Y. Kim
V. Lacroix
D. R. Lee
Y. S. Li
C. Liu
M. Liu
G. A. Miessi
S. Noronha
R. K. Qashu
D. A. Scarth
W. L. Server
D. J. Shim
S. Smith
M. Uddin
A. Udyawar
T. V. Vo
M. Walter
K. Wang
B. Wasiluk
G. M. Wilkowski
H. S. Mehta, *Contributing Member*

Working Group on Flaw Evaluation Reference Curves (SG-ES) (BPV XI)

A. Udyawar, *Chair*
D. A. Scarth, *Secretary*
M. L. Benson
F. W. Brust
R. C. Cipolla
M. M. Farooq
A. E. Freed
K. Hasegawa
K. Hojo
F. Iwamatsu
V. Lacroix
A. Morley
B. Pellereau
S. Ranganath
D. J. Shim
S. Smith
M. Uddin
T. V. Vo
G. White
S. X. Xu
H. S. Mehta, *Contributing Member*

Working Group on High Temperature Flaw Evaluation (SG-ES) (BPV XI)

C. J. Sallaberry, *Chair*
F. W. Brust
P. Carter
K. Gresh
S. Kalyanam
B. Lin
B.-L. Lyow
M. C. Messner
M. Petkov
H. Qian
D. A. Scarth
D. J. Shim
A. Udyawar
X. Wei
S. X. Xu
J. Bass, *Alternate*

Working Group on Operating Plant Criteria (SG-ES) (BPV XI)

M. Kirk, *Chair*
D. Rudland, *Secretary*
D. B. Denis
M. A. Erickson
A. E. Freed
T. J. Griesbach
B. Hall
M. Hayashi
R. Janowiak
S. A. Kleinsmith
H. Kobayashi
A. D. Odell
R. M. Pace
N. A. Palm
S. Ranganath
W. L. Server
C. A. Tomes
A. Udyawar
T. V. Vo
H. Q. Xu
M. Yamamoto
E. Haywood, *Alternate*
H. S. Mehta, *Contributing Member*

Task Group on Appendix L (WG-OPC) (SG-ES) (BPV XI)

N. Glunt, *Chair*
R. M. Pace, *Secretary*
C. Coleman
J. I. Duo
A. E. Freed
M. A. Gray
T. J. Griesbach
H. Nam
A. Nana
A. D. Odell
C.-S. Oh
H. Park
S. Ranganath
A. Scott
D. J. Shim
S. Smith
A. Udyawar
T. V. Vo

Working Group on Pipe Flaw Evaluation (SG-ES) (BPV XI)

D. A. Scarth, *Chair*
S. Kalyanam, *Secretary*
K. Azuma
F. W. Brust
H. D. Chung
R. C. Cipolla
N. G. Cofie
C. M. Faidy
M. M. Farooq
B. R. Ganta
R. G. Gilada
S. R. Gosselin
C. E. Guzman-Leong
K. Hasegawa
K. Hojo
D. N. Hopkins
E. J. Houston
F. Iwamatsu
R. Janowiak
Y. Kim
V. Lacroix
Y. S. Li
R. O. McGill
G. A. Miessi
S. M. Parker
S. H. Pellet
D. Rudland
C. J. Sallaberry
W. L. Server
D. J. Shim
S. Smith
M. F. Uddin
A. Udyawar
T. V. Vo
K. Wang
B. Wasiluk
G. M. Wilkowski
S. X. Xu
Y. Zou
K. Gresh, *Alternate*
H. S. Mehta, *Contributing Member*

Task Group on Code Case N-513 (WG-PFE) (SG-ES) (BPV XI)

R. O. McGill, *Chair*
S. M. Parker, *Secretary*
G. A. Antaki
R. C. Cipolla
M. M. Farooq
K. Gresh
E. J. Houston
R. Janowiak
M. Kassar
S. H. Pellet
D. Rudland
D. A. Scarth
S. X. Xu

Task Group on Evaluation Procedures for Degraded Buried Pipe (WG-PFE) (SG-ES) (BPV XI)

R. O. McGill, *Chair*
S. X. Xu, *Secretary*
F. G. Abatt
G. A. Antaki
R. C. Cipolla
R. G. Gilada
R. Janowiak
M. Kassar
M. Moenssens
R. M. Pace
S. H. Pellet
D. Rudland
D. A. Scarth

Task Group on Flaw Evaluation for HDPE Pipe (WG-PFE) (SG-ES) (BPV XI)

S. Kalyanam, *Chair*
P. Krishnaswamy
C. Liu
M. Moenssens
D. P. Munson
D. A. Scarth
D. J. Shim
M. Troughton
R. Wolfe
J. Wright
S. X. Xu

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Subgroup on Nondestructive Examination (BPV XI)

D. O. Henry, *Chair*
T. Cinson, *Secretary*
C. T. Brown
A. Bushmire
T. L. Chan
D. R. Cordes
S. E. Cumblidge
K. J. Hacker
J. Harrison
D. A. Kull
C. Latiolais
J. T. Lindberg
F. J. Schaaf, Jr.
D. R. Slivon
R. V. Swain
C. A. Nove, *Alternate*

Working Group on Personnel Qualification and Surface Visual and Eddy Current Examination (SG-NDE) (BPV XI)

C. T. Brown, *Chair*
M. Orihuela, *Secretary*
D. Brown
T. Cinson
S. E. Cumblidge
N. Farenbaugh
J. Harrison
D. O. Henry
B. Langston
C. Shinsky
R. Tedder
T. Thulien
J. T. Timm

Working Group on Procedure Qualification and Volumetric Examination (SG-NDE) (BPV XI)

J. Harrison, *Chair*
D. A. Kull, *Secretary*
A. Bushmire
D. R. Cordes
K. J. Hacker
R. E. Jacob
W. A. Jensen
C. Latiolais
C. A. Nove
D. R. Slivon
R. V. Swain
D. Van Allen
J. Williams
B. Lin, *Alternate*

Subgroup on Reliability and Integrity Management Program (BPV XI)

A. T. Roberts III, *Chair*
D. Vetter, *Secretary*
T. Anselmi
M. T. Audrain
N. Broom
F. W. Brust
S. R. Doctor
J. D. Fletcher
J. T. Fong
K. Harris
P. J. Hennessey
S. Kalyanam
D. R. Lee
C. Mallet
R. J. McReynolds
M. P. Metcalfe
R. Meyer
M. Orihuela
C. J. Sallaberry
F. J. Schaaf, Jr.
H. M. Stephens, Jr.
R. W. Swayne
S. Takaya
C. Wax
B. K. Welch
R. W. Youngblood
B. Lin, *Alternate*
V. Chugh, *Contributing Member*
R. Grantom, *Contributing Member*
T. Lupold, *Contributing Member*

Working Group on MANDE (SG-RIM) (BPV XI)

H. M. Stephens, Jr., *Chair*
M. Orihuela, *Vice Chair*
M. Turnbow, *Secretary*
T. Anselmi
M. T. Audrain
S. R. Doctor
N. A. Finney
J. T. Fong
D. O. Henry
R. J. McReynolds
R. Meyer
K. Yamada
T. Lupold, *Contributing Member*

Task Group on Nonmetallic Component Degradation and Failure Monitoring (SG-RIM) (BPV XI)

M. P. Metcalfe, *Chair*
A. Tzelepi, *Secretary*
M. T. Audrain
S. Baylis
G. Beirnaert
A. A. Campbell
C. Chen
N. Craft
W. J. Geringer
K. Harris
P.-A. Juan
J. Lang
C. Marks
J. Potgieter

ASME/JSME Joint Working Group on RIM Processes and System-Based Code (SG-RIM) (BPV XI)

S. Takaya, *Chair*
C. Wax, *Vice Chair*
M. T. Audrain
K. Dozaki
J. T. Fong
J. Hakii
K. Harris
M. Hayashi
S. Kalyanam
D. R. Lee
H. Machida
M. Mallet
R. J. McReynolds
R. Meyer
T. Muraki
S. Okajima
A. T. Roberts III
C. J. Sallaberry
F. J. Schaaf, Jr.
R. Vayda
D. Watanabe
H. Yada
K. Yamada
T. Asayama, *Contributing Member*
T. Lupold, *Contributing Member*

Subgroup on Repair/Replacement Activities (BPV XI)

S. L. McCracken, *Chair*
E. V. Farrell, Jr., *Secretary*
M. Brandes
S. B. Brown
R. Clow
S. J. Findlan
M. L. Hall
R. Hinkle
J. Honcharik
A. B. Meichler
L. A. Melder
G. T. Olson
J. E. O'Sullivan
G. C. Park
A. Patel
R. A. Patel
R. R. Stevenson
R. W. Swayne
J. G. Weicks

Working Group on Design and Programs (SG-RRA) (BPV XI)

S. B. Brown, *Chair*
R. A. Patel, *Secretary*
O. Bhatty
R. Clow
R. R. Croft
E. V. Farrell, Jr.
K. Harris
H. Malikowski
A. B. Meichler
G. C. Park
M. A. Pyne
A. Rezai
R. R. Stevenson
K. Sullivan
R. W. Swayne

Task Group on Repair and Replacement Optimization (WG-D&P) (SG-RRA) (BPV XI)

S. L. McCracken, *Chair*
S. J. Findlan, *Secretary*
T. Basso
R. Clow
K. Dietrich
E. V. Farrell, Jr.
M. J. Ferlisi
R. C. Folley
M. L. Hall
D. Jacobs
H. Malikowski
G. C. Park
A. Patel
R. R. Stevenson
J. G. Weicks

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Working Group on Nonmetals Repair/Replacement Activities (SG-RRA) (BPV XI)

J. E. O'Sullivan, *Chair*
S. Schuessler, *Secretary*
M. Brandes
S. W. Choi
M. Golliet
J. Johnston, Jr.
T. M. Musto
A. Rezai
S. Rios
F. J. Schaaf, Jr.
R. Stakenborghs
P. Vibien
M. P. Marohl, *Contributing Member*
A. Pridmore, *Contributing Member*

Task Group on Repair by Carbon Fiber Composites (WG-NMRRA) (SG-RRA) (BPV XI)

S. W. Choi, *Chair*
W. Bushika
D. Cimock
M. J. Constable
M. Elen
M. Golliet
P. Krishnaswamy
M. Kuntz
H. Lu
L. Nadeau
C. A. Nove
R. P. Ojdrovic
J. E. O'Sullivan
N. Otten
A. Pridmore
S. Rios
J. Sealey
R. Stakenborghs
D. J. Swaim
M. Tatkowski
M. F. Uddin
J. Wen

Working Group on Welding and Special Repair Processes (SG-RRA) (BPV XI)

J. G. Weicks, *Chair*
G. T. Olson, *Secretary*
D. Barborak
K. Dietrich
S. J. Findlan
R. C. Folley
M. L. Hall
J. Honcharik
D. Jacobs
M. Kris
S. E. Marlette
S. L. McCracken
L. A. Melder
J. E. O'Sullivan
A. Patel

Task Group on Temper Bead Welding (WG-W&SRP) (SG-RRA) (BPV XI)

S. J. Findlan, *Chair*
J. Tatman, *Secretary*
D. Barborak
D. Barton
R. C. Folley
J. Graham
M. L. Hall
D. Jacobs
H. Kobayashi
S. L. McCracken
N. Mohr
G. T. Olson
J. E. O'Sullivan
A. Patel
J. G. Weicks

Task Group on Weld Overlay (WG-W&SRP) (SG-RRA) (BPV XI)

S. L. McCracken, *Chair*
S. Hunter, *Secretary*
D. Barborak
D. Barton
S. J. Findlan
J. Graham
M. L. Hall
D. Jacobs
S. E. Marlette
S. K. Min
G. T. Olson
A. Patel
D. W. Sandusky
J. Tatman
J. G. Weicks

Subgroup on Water-Cooled Systems (BPV XI)

M. J. Ferlisi, *Chair*
J. Nygaard, *Secretary*
S. T. Chesworth
J. Collins
H. Q. Do
K. W. Hall
P. J. Hennessey
A. Keller
A. E. Keyser
S. D. Kulat
D. W. Lamond
T. Nomura
S. A. Norman
M. A. Pyne
H. M. Stephens, Jr.
M. Weis
B. K. Welch
I. A. Anchondo-Lopez, *Alternate*
Y.-K. Chung, *Contributing Member*

Task Group on High Strength Nickel Alloys Issues (SG-WCS) (BPV XI)

H. Malikowski, *Chair*
C. Waskey, *Secretary*
T. Cinson
J. Collins
O. Cruz
K. Dietrich
H. Kobayashi
S. E. Marlette
J. Robinson
D. Van Allen
G. White
K. A. Whitney

Working Group on Containment (SG-WCS) (BPV XI)

M. J. Ferlisi, *Chair*
S. Walden, *Secretary*
H. T. Hill
S. Johnson
A. E. Keyser
P. Leininger
J. A. Munshi
S. Richter
M. Sircar
P. C. Smith
R. S. Spencer
A. Staller
J. Swan
C. Tillotson
G. Z. Wang
M. Weis

Working Group on Inspection of Systems and Components (SG-WCS) (BPV XI)

H. Q. Do, *Chair*
M. Weis, *Secretary*
R. W. Blyde
J. Collins
M. J. Ferlisi
M. L. Garcia Heras
K. W. Hall
E. Henry
J. Howard
A. Keller
E. E. Keyser
S. D. Kulat
E. Lantz
J. C. Nygaard
S. Orita
R. S. Spencer
M. Walter
A. W. Wilkens

Working Group on Pressure Testing (SG-WCS) (BPV XI)

S. A. Norman, *Chair*
M. Moenssens, *Secretary*
T. Anselmi
A. Knighton
D. W. Lamond
S. Levitus
R. A. Nettles
J. Swan
K. Whitney

Working Group on Risk-Informed Activities (SG-WCS) (BPV XI)

M. A. Pyne, *Chair*
S. T. Chesworth, *Secretary*
G. Brouette
R. Fougerousse
J. Hakii
K. W. Hall
M. J. Homiack
J. T. Jewell
S. D. Kulat
D. W. Lamond
E. Lantz
P. J. O'Regan
N. A. Palm
S. E. Woolf

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Working Group on General Requirements (BPV XI)

D. Vetter, *Chair*
S. E. Woolf, *Secretary*
T. L. Chan
P. J. Hennessey
R. Hinkle
K. A. Kavanagh
A. Mills
G. Ramaraj
T. N. Rezk
A. T. Roberts III
B. K. Welch
B. Harris, *Alternate*

COMMITTEE ON TRANSPORT TANKS (BPV XII)

N. J. Paulick, *Chair*
M. D. Rana, *Vice Chair*
J. Oh, *Staff Secretary*
A. N. Antoniou
K. W. A. Cheng
P. Chilukuri
O. Mulet
M. Pitts
J. Roberts
T. A. Rogers
R. C. Sallash
M. Shah
S. Staniszewski
A. P. Varghese
R. Meyers, *Contributing Member*

Executive Committee (BPV XII)

M. D. Rana, *Chair*
N. J. Paulick, *Vice Chair*
J. Oh, *Staff Secretary*
P. Chilukuri
M. Pitts
T. A. Rogers
S. Staniszewski

Subgroup on Design and Materials (BPV XII)

P. Chilukuri, *Chair*
K. W. A. Cheng
S. L. McWilliams
N. J. Paulick
M. D. Rana
T. J. Rishel
T. A. Rogers
R. C. Sallash
M. Shah
S. Staniszewski
A. P. Varghese
K. Xu
D. K. Chandiramani, *Contributing Member*
Y. Doron, *Contributing Member*
M. Pitts, *Contributing Member*
D. G. Shelton, *Contributing Member*
B. E. Spencer, *Contributing Member*
J. Zheng, *Contributing Member*

Subgroup on Fabrication, Inspection, and Continued Service (BPV XII)

M. Pitts, *Chair*
P. Chilukuri, *Secretary*
K. W. A. Cheng
Y. Doron
M. Koprivnak
O. Mulet
T. J. Rishel
J. Roberts
R. C. Sallash
S. Staniszewski
K. Mansker, *Contributing Member*
G. McRae, *Contributing Member*
T. A. Rogers, *Contributing Member*

Subgroup on General Requirements (BPV XII)

S. Staniszewski, *Chair*
A. N. Antoniou
P. Chilukuri
J. L. Freiler
O. Mulet
B. F. Pittel
M. Pitts
T. J. Rishel
R. C. Sallash
Y. Doron, *Contributing Member*
S. L. McWilliams, *Contributing Member*
T. A. Rogers, *Contributing Member*
D. G. Shelton, *Contributing Member*

Subgroup on Nonmandatory Appendices (BPV XII)

T. A. Rogers, *Chair*
S. Staniszewski, *Secretary*
P. Chilukuri
N. J. Paulick
M. Pitts
T. J. Rishel
R. C. Sallash
D. G. Shelton
Y. Doron, *Contributing Member*

COMMITTEE ON OVERPRESSURE PROTECTION (BPV XIII)

B. K. Nutter, *Chair*
A. Donaldson, *Vice Chair*
C. E. Rodrigues, *Staff Secretary*
R. Antoniuk
T. P. Beirne
Joey Burgess
D. B. DeMichael
J. W. Dickson
B. Engman
K. R. May
D. Miller
T. Patel
B. F. Pittel
T. R. Tarbay
D. E. Tompkins
J. A. West
M. Edwards, *Alternate*
J. F. Ball, *Contributing Member*
R. W. Barnes, *Contributing Member*
R. D. Danzy, *Contributing Member*
J. Grace, *Contributing Member*
S. F. Harrison, Jr., *Contributing Member*
A. Hassan, *Contributing Member*
P. K. Lam, *Contributing Member*
M. Mengon, *Contributing Member*
J. Mize, *Contributing Member*
M. Mullavey, *Contributing Member*
J. Phillips, *Contributing Member*
S. Ruesenberg, *Contributing Member*
K. Shores, *Contributing Member*
D. E. Tezzo, *Contributing Member*
A. Wilson, *Contributing Member*

Executive Committee (BPV XIII)

A. Donaldson, *Chair*
B. K. Nutter, *Vice Chair*
C. E. Rodrigues, *Staff Secretary*
T. Beirne
K. R. May
T. Patel
B. F. Pittel

Subgroup on Design and Materials (BPV XIII)

T. Patel, *Chair*
V. Kalyanasundaram, *Vice Chair*
A. Williams, *Secretary*
T. K. Acharya
W. E. Chapin
B. Joergensen
R. Krithivasan
J. Latshaw
D. Miller
T. R. Tarbay
J. A. West
D. J. Azukas, *Contributing Member*
R. D. Danzy, *Contributing Member*
M. Mullavey, *Contributing Member*
G. Ramirez, *Contributing Member*
S. Zalar, *Contributing Member*

Subgroup on General Requirements (BPV XIII)

B. F. Pittel, *Chair*
J. Grace, *Secretary*
R. Antoniuk
J. F. Ball
Joey Burgess
John Burgess
D. B. DeMichael
A. Donaldson
S. T. French
J. Horne
R. Klimas, Jr.
Z. E. Kumana
D. Mainiero-Cessna
K. R. May
J. Mize
L. Moedinger
M. Mullavey
A. Peck
D. E. Tezzo
D. E. Tompkins
J. F. White
M. Edwards, *Alternate*
P. Chavdarov, *Contributing Member*
J. L. Freiler, *Contributing Member*
G. D. Goodson, *Contributing Member*
B. Joergensen, *Contributing Member*
P. K. Lam, *Contributing Member*
E. Pearson, *Contributing Member*
J. Phillips, *Contributing Member*
S. Ruesenberg, *Contributing Member*
S. Zalar, *Contributing Member*

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Subgroup on Nuclear (BPV XIII)

K. R. May, *Chair*
J. F. Ball, *Vice Chair*
R. Krithivasan, *Secretary*
M. Brown
J. W. Dickson
N. Hansing
S. Jones
D. Miller
T. Patel
B. J. Yonsky
J. Yu, *Alternate*
S. T. French, *Contributing Member*

Subgroup on Testing (BPV XIII)

T. P. Beirne, *Chair*
J. W. Dickson, *Vice Chair*
C. Hofmeister, *Secretary*
V. Chicola III
B. Engman
R. J. Garnett
R. Houk
N. Jump
B. K. Nutter
J. R. Thomas, Jr.
C. Bauer, *Alternate*
R. Lack, *Alternate*
M. Brown, *Contributing Member*
J. Mize, *Contributing Member*
M. Mullavey, *Contributing Member*
S. Ruesenberg, *Contributing Member*
C. Sharpe, *Contributing Member*
K. Shores, *Contributing Member*
A. Strecker, *Contributing Member*
A. Wilson, *Contributing Member*

COMMITTEE ON BOILER AND PRESSURE VESSEL CONFORMITY ASSESSMENT (CBPVCA)

L. E. McDonald, *Chair*
E. Whittle, *Vice Chair*
G. Moino, *Staff Secretary*
P. Chavdarov
J. P. Chicoine
A. Donaldson
T. E. Hansen
W. Hibdon
M. Prefumo
R. Rockwood
G. Scribner
D. E. Tuttle
R. V. Wielgoszinski
P. Williams
T. P. Beirne, *Alternate*
N. Caputo, *Alternate*
J. M. Downs, *Alternate*
Y.-S. Kim, *Alternate*
B. L. Krasiun, *Alternate*
K. Roewe, *Alternate*
B. C. Turczynski, *Alternate*
R. Underwood, *Alternate*
J. Yu, *Alternate*
D. Cheetham, *Contributing Member*
A. J. Spencer, *Honorary Member*

COMMITTEE ON NUCLEAR CERTIFICATION (CNC)

R. R. Stevenson, *Chair*
M. A. Lockwood, *Vice Chair*
H. Ruan, *Secretary*
S. Andrews
A. Appleton
G. Claffey
N. DeSantis
C. Dinic
G. Gobbi
J. Grimm
J. W. Highlands
K. A. Kavanagh
J. C. Krane
B. McGlone
I. Olson
E. L. Pleins
L. Ponce
T. E. Quaka
T. N. Rezk
E. A. Whittle
T. Aldo, *Alternate*
M. Blankinship, *Alternate*
G. Brouette, *Alternate*
Y. Diaz-Castillo, *Alternate*
P. D. Edwards, *Alternate*
R. Hinkle, *Alternate*
K. M. Hottle, *Alternate*
J. Kiefer, *Alternate*
S. J. Montano, *Alternate*
R. Spuhl, *Alternate*
M. Wilson, *Alternate*
S. Yang, *Alternate*
M. Burke, *Contributing Member*
S. F. Harrison, Jr., *Contributing Member*

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

CORRESPONDENCE WITH THE COMMITTEE

General

ASME codes and standards are developed and maintained by committees with the intent to represent the consensus of concerned interests. Users of ASME codes and standards may correspond with the committees to propose revisions or cases, report errata, or request interpretations. Correspondence for this Section of the ASME Boiler and Pressure Vessel Code (BPVC) should be sent to the staff secretary noted on the Section's committee web page, accessible at https://go.asme.org/CSCommittees.

NOTE: See ASME BPVC Section II, Part D for guidelines on requesting approval of new materials. See Section II, Part C for guidelines on requesting approval of new welding and brazing materials ("consumables").

Revisions and Errata

The committee processes revisions to this Code on a continuous basis to incorporate changes that appear necessary or desirable as demonstrated by the experience gained from the application of the Code. Approved revisions will be published in the next edition of the Code.

In addition, the committee may post errata and Special Notices at http://go.asme.org/BPVCerrata. Errata and Special Notices become effective on the date posted. Users can register on the committee web page to receive email notifications of posted errata and Special Notices.

This Code is always open for comment, and the committee welcomes proposals for revisions. Such proposals should be as specific as possible, citing the paragraph number, the proposed wording, and a detailed description of the reasons for the proposal, including any pertinent background information and supporting documentation.

Cases

(a) The most common applications for cases are

(1) to permit early implementation of a revision based on an urgent need

(2) to provide alternative requirements

(3) to allow users to gain experience with alternative or potential additional requirements prior to incorporation directly into the Code

(4) to permit use of a new material or process

(b) Users are cautioned that not all jurisdictions or owners automatically accept cases. Cases are not to be considered as approving, recommending, certifying, or endorsing any proprietary or specific design, or as limiting in any way the freedom of manufacturers, constructors, or owners to choose any method of design or any form of construction that conforms to the Code.

(c) The committee will consider proposed cases concerning the following topics only:

(1) equipment to be marked with the ASME Single Certification Mark, or

(2) equipment to be constructed as a repair/replacement activity under the requirements of Section XI

(d) A proposed case shall be written as a question and reply in the same format as existing cases. The proposal shall also include the following information:

(1) a statement of need and background information

(2) the urgency of the case (e.g., the case concerns a project that is underway or imminent)

(3) the Code Section and the paragraph, figure, or table number to which the proposed case applies

(4) the editions of the Code to which the proposed case applies

(e) A case is effective for use when the public review process has been completed and it is approved by the cognizant supervisory board. Cases that have been approved will appear in the next edition or supplement of the Code Cases books, "Boilers and Pressure Vessels" or "Nuclear Components." Each Code Cases book is updated with seven Supplements.

AVA Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Supplements will be sent or made available automatically to the purchasers of the Code Cases books until the next edition of the Code. Annulments of Code Cases become effective six months after the first announcement of the annulment in a Code Case Supplement or Edition of the appropriate Code Case book. The status of any case is available at http://go.asme.org/BPVCCDatabase. An index of the complete list of Boiler and Pressure Vessel Code Cases and Nuclear Code Cases is available at http://go.asme.org/BPVCC.

Interpretations

(a) Interpretations clarify existing Code requirements and are written as a question and reply. Interpretations do not introduce new requirements. If a revision to resolve conflicting or incorrect wording is required to support the interpretation, the committee will issue an intent interpretation in parallel with a revision to the Code.

(b) Upon request, the committee will render an interpretation of any requirement of the Code. An interpretation can be rendered only in response to a request submitted through the online Inquiry Submittal Form at http://go.asme.org/InterpretationRequest. Upon submitting the form, the inquirer will receive an automatic email confirming receipt.

(c) ASME does not act as a consultant for specific engineering problems or for the general application or understanding of the Code requirements. If, based on the information submitted, it is the opinion of the committee that the inquirer should seek assistance, the request will be returned with the recommendation that such assistance be obtained. Inquirers may track the status of their requests at http://go.asme.org/Interpretations.

(d) ASME procedures provide for reconsideration of any interpretation when or if additional information that might affect an interpretation is available. Further, persons aggrieved by an interpretation may appeal to the cognizant ASME committee or subcommittee. ASME does not "approve," "certify," "rate," or "endorse" any item, construction, proprietary device, or activity.

(e) Interpretations are published in the ASME Interpretations Database at http://go.asme.org/Interpretations as they are issued.

Committee Meetings

The ASME BPVC committees regularly hold meetings that are open to the public. Persons wishing to attend any meeting should contact the secretary of the applicable committee. Information on future committee meetings can be found at http://go.asme.org/BCW.

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

PREAMBLE

The rules of this Section of the Code cover minimum construction requirements for the design, fabrication, installation, and inspection of steam heating, hot water heating, and hot water supply boilers that are directly fired with oil, gas, electricity, coal, or other solid or liquid fuels, and for operation at or below the pressure and temperature limits set forth in this document. Similar rules for potable water heaters are also included.

For Section IV application, the boiler proper or other vessels terminate at the supply and return connections to the system or the supply and feedwater connections of a hot water supply boiler. These connections may be any of the following:

(a) the first circumferential joint for welding end connections

(b) the face of the first flange in bolted flanged connections

(c) the first threaded joint in that type of connection

Included within the scope of the boiler are pressure-retaining covers for inspection openings, such as manhole covers, handhold covers, and plugs; and headers required to connect individual coils, tubes, or cast sections within a boiler.

The rules are divided into four major Parts: Part HG, applying to all materials of construction except as provided for in Part HLW; Part HF, applying to assemblies fabricated of wrought material, except as provided for in Part HLW; Part HC, applying to cast iron assemblies; Part HA, applying to boilers constructed of cast aluminum; and Part HLW, applying to potable water heaters. Part HF is further subdivided into Subpart HW, containing rules for welded construction, and Subpart HB, containing rules for brazed construction.

The Parts and Subparts of this Section are divided into Articles. Each Article is given a number and a title, as for example, Part HG, Article 3, Design. Articles are divided into paragraphs that are given a three-digit number, the first of which corresponds to the Article number. Thus, under Article 3 of Part HG, paragraph HG-307 will be found. Paragraphs are further subdivided into subparagraphs. Major subdivisions of paragraphs are designated by three- or four-digit numbers followed by a decimal point and a digit or digits. Where necessary, further subdivisions are represented by letters and then by numbers in parentheses. Minor subdivisions of the paragraphs are also represented by letters. A reference to one of these paragraphs in the text of the Section includes all of the applicable rules in that paragraph. Thus, reference to HG-307 includes all the rules in HG-307.1 through HG-307.4.

This Section does not contain rules to cover all possible details of design and construction. Where complete details are not given, it is intended that the manufacturer, subject to the acceptance of the Authorized Inspector, shall provide details of design and construction that will be as safe as otherwise required by these rules.

When the strength of any part cannot be computed with a satisfactory assurance of safety, these rules provide procedures for establishing its maximum allowable working pressure.

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

SUMMARY OF CHANGES

Changes listed below are identified on the pages by a margin note, **(25)**, placed next to the affected area.

Page	*Location*	*Change*
xiv	List of Sections	Title of Section XI, Division 1 revised
xv	Foreword	Third, fourth, seventh, tenth, and eleventh paragraphs editorially revised
xviii	Personnel	Updated
4	HG-301.2	Title and subpara. (e) revised
23	HG-342.5	Deleted
30	HG-350.2	Equation (2) revised
33	Table HG-370	Units for "Size of Pipe Connection" revised
33	HG-370.2	(1) Subparagraph (b) revised (2) Subparagraphs (c) and (d) added
34	HG-402A	Subparagraph (i) revised
41	HG-511	Subparagraph (e) revised
42	HG-515.3	Subparagraph (b) revised and subpara. (b)(16) added
43	HG-515.4	Revised
43	HG-520	Revised in its entirety
44	HG-530.1	Subparagraphs (a)(4) and (c) revised
45	Figure HG-530.2	Note (2) revised
45	Figure HG-530.3	Note (1) revised
46	HG-530.2	(1) Spacing in second line of subparas. (g)(1) and (g)(3) corrected by errata (2) Paragraphs following subpara. (g)(4) revised
46	Figure HG-530.4	Revised
46	Figure HG-530.5	Revised
47	Figure HG-530.6	Revised
47	Figure HG-530.7	Revised
48	Figure HG-530.8	Revised
49	HG-532.2	Last sentence revised
49	HG-533.2	Revised in its entirety
49	HG-533.3	Revised
49	HG-533.6	Title and first sentence revised
50	HG-540.5	First paragraph revised
50	HG-540.7	Revised
53	HG-605	First paragraph revised
53	HG-606	Title and subpara. (a) revised
54	HG-613	First paragraph revised
54	HG-614	Subparagraph (a) revised
58	HG-705	Subparagraph (c) revised
66	HG-801	Revised in its entirety
67	HG-803.1	Subparagraph (d) revised
70	HF-203.1	Endnote 19 and subpara. (b) revised
71	HF-203.2	Last sentence revised
75	HW-401	First paragraph revised
77	HW-613	Revised
94	HW-820.8	Subparagraph (d)(2) revised
96	HW-910	Subparagraph (b) revised
96	HW-911	Subparagraphs (a) and (b) revised
97	HB-1001	Revised

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Page	*Location*	*Change*
99	HB-1202.4	Subparagraph (a) revised
103	HB-1501	First sentence revised
103	HB-1502	Subparagraph (a) editorially revised
103	HB-1503	Subparagraph (a) revised
116	HC-501.1	Third paragraph revised
117	HC-502.11.3	Revised
117	HC-502.12	Revised
117	HC-502.12.1	Subparagraphs (b)(2) and (d) revised
120	HA-200	In subpara. (a), cross-reference revised
125	HA-501.1	Third paragraph revised
126	HA-502.11.3	Revised
126	HA-502.12	Revised
126	HA-502.12.1	Subparagraph (d) revised
134	HLW-203	Subparagraph (b) revised
134	HLW-204	Revised in its entirety
139	HLW-401.4	Subparagraph (c) added
150	HLW-451	Subparagraph (b)(4)(-b) revised
152	HLW-453	Revised
156	HLW-506	Added
157	HLW-600.3	(1) Subparagraphs (a) and (c) revised (2) Subparagraph (g) added
158	HLW-601	Revised in its entirety
158	HLW-602.1	(1) Subparagraphs (a)(4), (c), (e), (e)(3), and (f) revised (2) Former subpara. (d) revised and redesignated as subpara. (b), and former subparas. (b) and (c) redesignated
159	Figure HLW-602.2	Note (3) revised
161	HLW-701.1	HLW-701.1 First paragraph revised by errata
166	HLW-901	(1) Subparagraph (a)(3) deleted (2) Subparagraphs (a), (b)(2), (b)(3), (b)(5), and (b)(6) revised, and subpara. (b)(6) added
166	HLW-903	Subparagraph (d) revised
168	2-100	Updated
169	Table 2-100	Updated
170	Mandatory Appendix 3	Title revised
170	3-100	Revised in its entirety
170	3-101	Title and subparas. (a), (b), and (c) revised
170	3-102	Added
172	Mandatory Appendix 4	Revised in its entirety
176	Form H-1	“Certificate of Shop Inspection” and “Certificate of Field Assembly Inspection if Required” revised
178	Form H-2	“Certificate of Shop Inspection” and “Certificate of Field Assembly Inspection” revised
180	Form H-3	“Certificate of Shop Inspection” and “Certificate of Field Assembly Inspection” revised
182	Form H-4	Form H-4 Line 10 and “Certificate of Shop Inspection” revised
184	Form H-5	Line 10(b) revised
189	Table 4-2	Added
190	Form HC-1	Circled reference numbers added
191	Form HC-2	Circled reference numbers added
192	Form HC-3	Circled reference numbers added
193	Form HA-1	Circled reference numbers added
194	Form HA-2	Circled reference numbers added

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

Page	*Location*	*Change*
195	Form HA-3	Circled reference numbers added
196	Form HLW-6	(1) In line 9, "(rolled or welded)" corrected by errata to "(expanded or welded)" (2) "Certificate of Shop Inspection" revised
198	Form HLW-7	"Certificate of Shop Inspection" revised
200	Form HLW-8	"Proof Test Certificate" revised
219	E-100	Revised
224	F-100.1	Second paragraph revised
225	F-202.10.2.2	Revised
226	Nonmandatory Appendix H	Updated

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

CROSS-REFERENCING IN THE ASME BPVC

Paragraphs within the ASME BPVC may include subparagraph breakdowns, i.e., nested lists. The following is a guide to the designation and cross-referencing of subparagraph breakdowns:

(a) Hierarchy of Subparagraph Breakdowns

(1) First-level breakdowns are designated as (a), (b), (c), etc.

(2) Second-level breakdowns are designated as (1), (2), (3), etc.

(3) Third-level breakdowns are designated as (-a), (-b), (-c), etc.

(4) Fourth-level breakdowns are designated as (-1), (-2), (-3), etc.

(5) Fifth-level breakdowns are designated as (+a), (+b), (+c), etc.

(6) Sixth-level breakdowns are designated as (+1), (+2), etc.

(b) Cross-References to Subparagraph Breakdowns. Cross-references within an alphanumerically designated paragraph (e.g., PG-1, UIG-56.1, NCD-3223) do not include the alphanumerical designator of that paragraph. The cross-references to subparagraph breakdowns follow the hierarchy of the designators under which the breakdown appears. The following examples show the format:

(1) If X.1(c)(1)(-a) is referenced in X.1(c)(1), it will be referenced as (-a).

(2) If X.1(c)(1)(-a) is referenced in X.1(c)(2), it will be referenced as (1)(-a).

(3) If X.1(c)(1)(-a) is referenced in X.1(e)(1), it will be referenced as (c)(1)(-a).

(4) If X.1(c)(1)(-a) is referenced in X.2(c)(2), it will be referenced as X.1(c)(1)(-a).

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025

INTENTIONALLY LEFT BLANK

Documents
Document Sharing Hub
Full document details: Rules for Construction of Heating Boilers, Section IV, ASME BPVC. IV-2025