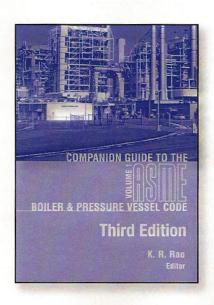
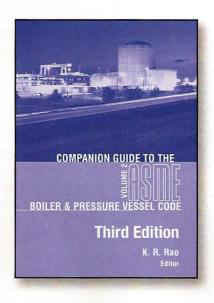


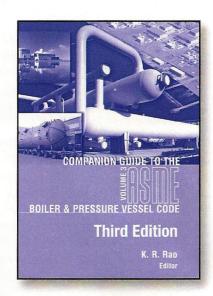
### NEW THIRD EDITION!



Companion Guide to the ASME Boiler and Pressure Vessel Code Volumes 1, 2, and 3







# Companion Guide to the ASME Boiler & Pressure Vessel Code, Third Edition Volumes 1, 2 & 3

Edited by K.R. Rao

This third edition of the Companion Guide of ASME Boiler & Pressure Vessel and Piping Codes has been updated to the current (2007) Code Edition, except where specifically noted in the text. Since the first edition, a total of 140 authors have contributed to this publication, and in this edition there are 107 contributors of which 51 are new authors. Several of the new contributors are from countries around the world that use ASME B&PV Codes, with knowledge of ASME Codes, in addition to expertise of their own countries' B&PV Codes. All of these authors who contributed to this third edition considerably updated, revised or added to the content matter covered in the second edition to address the current and futuristic trend as well as dramatic changes in the industry.

2009 2,400 pp. Hardcover ISBN: 9780791802687 Order No. 802687 \$660.00 (list) / \$528.00 (ASME member)



#### VOLUME 1

ISBN: 978-07918-0269-4 Order No. 802694 \$295/\$236

## PART 1: POWER BOILERS — SECTIONS I & VII OF B&PV CODE

CHAPTER 1 - Introduction to Power Boilers, Lloyd W. Yoder and John R. MacKay

CHAPTER 2 - Section VII Recommended Guidelines for the Care of Power Boilers, Edmund W.K. Chang and Geoffrey M. Halley

#### PART 2: SECTION II OF B&PV CODE

CHAPTER 3 - PART 2, Section II — Materials and Specifications, Domenic A. Canonico, Elmar Upitis, Richard A. Moen, Dennis Rahoi, and Marvin L. Carpenter

## PART 3: SECTION III — RULES FOR CONTRUCTION OF NUCLEAR POWER PLANT COMPONENTS

CHAPTER 4 - A Commentary for Understanding and Applying the Principles of the ASME Boiler and Pressure Vessel Code, Roger F. Reedy

CHAPTER 5 - Subsection NCA — General Requirements for Division 1 and Division 2, Richard W. Swayne

CHAPTER 6 - Subsection NB — Class 1 Components, Greg L. Hollinger and David P. Jones

CHAPTER 7 - Section III: Subsection NC and ND — CLASS 2 and 3 Components, Marcus N. Bressler

CHAPTER 8 - Subsection NB, NC, ND-3600 Piping, Donald F. Landers

CHAPTER 9 - Subsection NE — Class MC Components, Kamran Mokhtarian and Roger F. Reddy

CHAPTER 10 - Subsection NF — Supports, Uma S. Bandyopadhyay

CHAPTER 11 - Subsection NG — Core Support Structures, John T. Land

CHAPTER 12 - Subsection NH — Class 1 Components in Elevated Temperature Service, Robert I. Jetter

CHAPTER 13 - Nuclear Pumps and Valves, Marcus N. Bressler

#### **SECTION III DIVISION 2**

CHAPTER 14 - Code for Concrete Reactor Vessels and Containments, Hansraj Ashar, Barry Scott, Joseph F. Artuso and John D. Stevenson

#### **SECTION III DIVISION 3**

CHAPTER 15 - Containments for Transportation and Storage of Spent Nuclear Fuel and High-level Radioactive Material and Waste, D. Keith Morton and D. Wayne Lewis

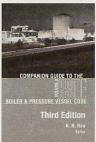
#### PART 4: CODE FOR B31.1 AND B31.3 PIPING

CHAPTER 16 - B31.1, Power Piping, Charles Becht IV CHAPTER 17 - B31.3 Process Piping, Charles Becht IV

## PART 5: HEATING BOILERS — SECTIONS IV AND VI OF B&PV CODE

CHAPTER 18 - ASME Section IV: Rules for the Construction of Heating Boilers, Geoffrey M. Halley and Edwin A. Nordstrom

CHAPTER 19 - ASME Section VI: Recommended Rules for the Care and Operation of Heating Boilers, Geoffrey M. Halley and Edwin A. Nordstrom



#### **VOLUME 2**

ISBN: 978-07918-0270-0 Order No. 802700 \$295/\$236

#### PART 6: SECTION V OF B&PV CODE NDE

CHAPTER 20 - Nondestructive Examination (NDE), Jon E. Batey

#### PART 7: SECTION VIII — RULES FOR CONSTRUC-TION OF PRESSURE VESSELS

CHAPTER 21 - Section VIII–Division 1: Rules for Construction of Pressure Vessels, Urey R. Miller and Thomas P. Pastor.

CHAPTER 22 - Section VIII: Division 2 — Alternative Rules, David A. Osage, Clay D. Rodery, Guido G. Karcher, Thomas P. Pastor, Robert G. Brown, and Philip A. Henry

CHAPTER 23 - Section VIII, Division 3 — Alternative Rules for Construction of High-Pressure Vessels, J. Robert Sims, Jr.

## PART 8: SECTION IX OF B&PV CODE — WELDING AND BRAZING QUALIFICATIONS

CHAPTER 24 - Welding and Brazing Qualifications, Joel G. Feldstein

#### PART 9: SECTION X OF B&PV CODE

CHAPTER 25 - Fiber-Reinforced Plastic Pressure Vessels And ASME Rtp-1 — Reinforced Thermoset Plastic Corrosion-Resistance Equipment, Peter Conlisk

## PART 10: SECTION XI OF B&PV CODE — RULES FOR INSERVICE INSPECTION OF NUCLEAR POWER PLANT COMPONENTS

CHAPTER 26 - Overview of Section XI Stipulations, Owen Hedden

CHAPTER 27 - Repair/Replacement Activities for Nuclear Power Plant Items, Richard E. Gimple

CHAPTER 28 - Section XI: Rules for Inservice Inspection and Tests of Nuclear Power Plant Components, Richard W. Swayne

CHAPTER 29 - Section XI Flaw Acceptance Criteria and Evaluation Using Code Procedures, Russell C. Cipolla

CHAPTER 30 - IWE and IWL, Robert F. Sammataro and Jim E. Staffiera

CHAPTER 31 - Fatigue Crack Growth, Fatigue, and Stress Corrosion Crack Growth: Section XI Evaluation, Warren H. Bamford

## PART 11: SPECIAL TOPICS RELATED TO B&PV CODE

CHAPTER 32 - The Maintenance Rule, C. Wesley Rowley and John D. Stevenson

CHAPTER 33 - History of the Code Rules for Accreditation, Certification, and Related Issues, Marcus N. Bressler

CHAPTER 34 - Perspective on Cyclic, Impact, and Inpulse Loads, John D. Stevenson and Michael A. Porter

CHAPTER 35 - Functionality and Operability Criteria, Stephen R. Gosselin and Guy H. DeBoo

CHAPTER 36 - Fluids, Frederick J. Moody

CHAPTER 37 - Pipe Vibration Testing and Analysis, David E. Olson

CHAPTER 38 - Stress Intensification Factors, Stress Indices, and Flexibility Factors, Everett C. Rodabaugh

CHAPTER 39 - Code Design and Evaluation for Cyclic Loading — Sections III and VIII, W. J. O'Donnell

CHAPTER 40 - Bolted-Flange Joints and Connections, William J. Koves



#### • VOLUME 3 ISBN: 978-07918-0271-7 Order No. 802717 \$295/\$236

## PART 12: CURRENT ISSUES OF B&PV CODES AND STANDARDS

CHAPTER 41 - BWR Reactor Internals and Other BWR Issues, Hardayal S. Mehta

CHAPTER 42 - License Renewal and Aging Management, Kenneth C, Chang, P.T. Kuo and Kaihwa R. Hsu

CHAPTER 43 - PWR Reactor Vessel Integrity and Internals Aging Management, Timothy J. Griesbach

CHAPTER 44 - PWR Reactor Vessel Alloy 600 Issues, Jeff Gorman, Steve Hunt, Pete Riccardella, and Glenn A. White

CHAPTER 45 - PRA and Risk-Informed Analysis, Sidney A. Bernsen, Fredric A. Simonen, Kenneth R. Balkey, Raymond West and Ralph S. Hill III

CHAPTER 46 - Applications of Elastic-Plastic Fracture Mechanics in Section XI, ASME Code Evaluations, Hardayal S. Mehta and Sampath Ranganath

## PART 13: INTERNATIONAL CODES & STANDARDS RELATED TO ASME B&PV CODE

CHAPTER 47 - Perspectives of the Pressure Equipment Directive with Respect to ASME BPVC, Anne Chaudouet, Francis Osweiller, Peter Hanmore, and Guido G. Karcher

CHAPTER 48 - Canadian Boiler and Pressure Vessel Standards, Wolf Reinhardt, Nick van den Brekel, and Douglas Rodgers

CHAPTER 49 - French Codes Dealing With Pressure Equipment, Francis Osweiller, Alain Bonnefoy, Jean-Marie Grandemange, Gerard Perraudin, and Bernard Pitrou

CHAPTER 50 - Recent Development of Codes and Standards of Boiler and Pressure Vessels in Japan, Yasuhide Asada, Toshiki Karasawa, Kunio Hasegawa, Toshio Isomura, and Yoshinori Kajimura

CHAPTER 51 - UK Rules for Unfired Pressure Vessels, David H. Nash

## PART 14: OTHER ONGOING ISSUES OF PUBLIC SAFETY

CHAPTER 52 - The Evolution of U.S. Transportation Regulations for Radioactive Materials — A Retrospective, Ronald S. Hafner

CHAPTER 53 - Description of Rules of Section XII Transport Tank Code, Mahendra D. Rana, Stanley Staniszewski and Stephen V. Voorhees CHAPTER 54 - Pipeline Integrity and Security, Alan Murray and Rafael G. Mora

CHAPTER 55 - Decommissioning of Nuclear Facilities, Anibal L.Taboas

## PART 15: ISSUES CRITICAL FOR THE NEXT GENERATION OF NUCLEAR FACILITIES

CHAPTER 56 - Spent Nuclear Fuel, Tony Williams and K.P. Singh

CHAPTER 57 - Generation III + PWRs; Part A: AP1000 John T. Land, Part B: EPR Marty Parece, Part C: U.S. APWR, Masahiko Kaneda

CHAPTER 58 - New Generation of BWRs, Hardayal S. Mehta and Daniel C. Pappone

CHAPTER 59 - Future Code Needs for Very High Temperature Generation IV Reactors, William J. O'Donnell and Donald S. Griffin

## PART 16: GLOBAL PV&P ISSUES OF WESTERN EUROPEAN COUNTRIES

CHAPTER 60 - Risk-informed Licensing, Regulation, and Safety Management of NPPS in Finland, Reino Virolainen and Kaisa Simola

CHAPTER 61 - Belgium Pressure Equipment Regulation, Luc H. Geraets

CHAPTER 62 - Boiler and Pressure Vessels in Germany, Dieter Kreckel

CHAPTER 63 - Pressure Equipment Regulations, Codes, and Standards in Spain, Carlos Cueto-Felgueroso

## PART 17: GLOBAL PV&P ISSUES OF EASTERN EUROPEAN COUNTRIES

CHAPTER 64 - Czech and Slovakian Codes, Milan Brumovsky

CHAPTER 65 - Comprehensive Adaptation of the ASME Code at Paks NPP, Hungary, Peter Trampus and Peter Pal Babics

CHAPTER 66 - Some Aspects of Russian Regulation and Codes in Nuclear Power, Victor V. Kostarev and Alexander V. Sudakov

## PART 18: GLOBAL PV&P ISSUES OF AFRICAN COUNTRIES

CHAPTER 67 - Codes and Standards Used in the Nuclear Industry in the Republic of South Africa, Malcolm J. Europa, Paul J. Brinkhurst, John Fletcher, and Neil Broom

## PART 19: GLOBAL PV&P ISSUES OF ASIAN COUNTRIES

CHAPTER 68 - Design of Indian Pressurized Heavy Water Reactor Components, H.S. Kushwaha, K.K. Vaze, and K.B. Dixit

CHAPTER 69 - Korean Regulatory System and Codes of Nuclear Boiler and Pressure Vessels, Jong C. Jo and Howard H. Chung

CHAPTER 70 - Development of Nuclear Boiler and Pressure Vessels in Taiwan, Yi-Bin Chen, Shin Chang, and Ting Chow

To order: http://catalog.asme.org or 1-800-843-2763