# **HSB Global Standards**

# 2015 Edition ASME Boiler & Pressure Vessel Code Synopsis Sample

# Section III & XI – Nuclear

Codes and Standards Group July 2015

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## HSB Global Standards ASME Boiler and Pressure Vessel Code 2015 Edition Synopsis – Executive Summary

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#### 2015 ASME Code Addenda Synopsis

The 2015 Edition of the ASME Boiler and Pressure Vessel Code was published on July 1, 2015, and includes revisions, additions and errata approved by the ASME B&PV Standards Committees in 2013 and 2014. The mandatory implementation date for the 2015 Edition is six months from the date of publication, or January 1, 2016. However Manufacturers may begin using the 2015 Edition beginning with the date of issuance.

There will be no addenda issued to this edition, and this edition will remain valid until publication of the 2017 edition in July of 2017. Changes that have taken place in the 2015 Edition are indicated by "(15)" in the margin adjacent to the affected paragraph/figure/table.

Code Case Supplements continue to be published four times per year and republished as a new Edition on a cycle concurrent with the rest of the Code.

Interpretations of the Code have historically been posted in January and July at <a href="http://cstools.asme.org/interpretations">http://cstools.asme.org/interpretations</a>. However interpretations approved between January 1, 2013 and December 31, 2014 have been included with the publication of the applicable Section of the Code in the 2015 Edition as Volume 63. Following the 2015 Edition, interpretations will not be included in the edition; they will be issued in real time in ASME's Interpretation Database at: <a href="http://go.asme.org/Interpretations">http://go.asme.org/Interpretations</a>. This online Interpretation database also contains previously approved BPVC interpretations dating back to 1977.

Errata [ publishing errors identified in the Code] are reviewed and approved by the Committee four times a year and posted on ASME's website. Information regarding "Special Notices" and "Errata" is published under the ASME Boiler and Pressure Vessel Code Resources Page at: http://cstools.asme.org/BPVErrataAndSpecialNotice.cfm.

ASME offers users the option to receive an e-mail notification when "Special Notices" or "Errata" are posted on their Web site. This will be especially useful now that annual Addenda are no longer published.

Nearly 1200 changes are itemized in this Synopsis. Many of these changes are the result of new technology and/or at the request of Certificate Holders like you.

This Synopsis was prepared by the HSB Global Standards (HSB GS) Codes & Standards staff to provide insight into the intent of these changes, and their potential impact on Code users. Each item that passed the ASME B&PV Standards Committee for the 2015 Edition was entered into the Synopsis database. The "Subject" and "Description" were created by HSB CT personnel involved with the cognizant Code Section Standards Committee, and each entry was checked against the published standard to verify that it made it into publication. This particular report contains a summary of changes for the three Divisions of Section VIII Pressure Vessel Code, as well as the three reference codes, Sections II (Materials), V (Nondestructive Examination) and IX (Welding, Brazing and Fusing Qualifications).

Commentary on revisions represents HSB Global Standard's opinion of the changes, and is not intended to be an official interpretation of the ASME Code. Every effort was made to accurately describe the changes. However, we caution Code users to always refer to the actual Code rules that apply and to use this document as a supplementary tool to the Code. Please contact HSB GS Codes & Standards Group if further background information is desired on any of the revisions or Code Cases.

### **HSB Global Standards** Synopsis of the 2015 Edition of the ASME BPV Code - Nuclear Sections

#### Code Book: III

#### **Part: Mandatory Appendices**

#### Subpart/Table: Mandatory Appendices

| Paragraph                                   | Туре     | Subject - Description   |
|---|----------|---|
| Mandatory Appendix<br>III-2100 and III-2200 | Revision | Revised Bolting S_m Values - Mandatory Appendix III - " Basis for Establishing Design<br>Stress Intensity Values and Allowable Stress Values" - Articles III-2100 and III-2200 were<br>deleted to reflect the revisions to the Design Stress Intensity Values for bolting. With this<br>change, design stresses (such as pressure stresses) will continue to use "S_m" based<br>allowables but services stresses (which include actual bolt loads) will utilize "S_y" based<br>allowables.  |
| Mandatory Appendix<br>XIII-1182             | Revision | Revised Bolting S_m Values - Mandatory Appendix XIII - "Design Based on Stress Analysis<br>(for Vessels Designed in Accordance With Division 1, NC-3200 and Division 3, WC-3200)" -<br>Paragraph XIII-1182 was revised to reflect the revisions to the Section II Appendix 2 "Basis<br>for Establishing Design Stress Intensity Values for Bolting". Design stresses (such as<br>pressure stresses) will continue to use S_m based allowables but services stresses which<br>include actual bolt loads will utilize S_y based allowables. The previous sentence "two times<br>the stress values of Section II, Part D, Subpart 1, Table 4", and "three times the stress values of<br>Section II, Part D, Subpart 1, Table 4", were replaced by "the yield strength values of<br>Section II, Part D, Subpart 1, Table Y-1.". |
| Mandatory Appendix<br>XIV-1322 (b)          | Revision | Revised Bolting S_m Values - Mandatory Appendix XIV - "Design Based on Fatigue<br>Analysis (for Vessels Designed in Accordance With Division 1, NC-3200 and Division 3,<br>WC-3200)" - Paragraph XIV-1322(b) was revised to reflect the revisions to the Section II<br>Appendix 2 "Basis for Establishing Design Stress Intensity Values for Bolting". With this<br>change, design stresses (such as pressure stresses) will continue to use S_m based allowables<br>but services stresses (which include actual bolt loads) will utilize S_y based allowables. The<br>previous values of "2.7 S_m" and "2.0S_m" were replaced by "0.9 S_y" and "2/3 S_y",<br>respectively.   |

#### Subpart/Table:

| Paragraph                                    | Туре     | Subject - Description   |
|--|----------|---|
| Mandatory Appendix<br>XXI                    | Revision | Editorial Revisions Mandatory Appendix XXI - Added Appendix title to its proper location and inserted metric equivalents.   |
| Foreword                                     | Revision | Deleted Subtitle and Added Footnote - The previous parenthetical subtitle was deleted and the ANSI Disclaimer was added as a footnote to the Foreword. Also recognition of the Technical Oversight Management Committee (TOMC) has been added to the Foreword. As a result of the Boiler and Pressure Vessel Committee reorganization that took place in 2009, the"BPV Main Committee" was replaced by TOMC, which has responsibility for technical consistency of the Sections of the Code and coordination of standards development activities.   |
| Mandatory and<br>non-mandatory<br>appendices | Errata   | BPV-III, 2013 Mandatory and non-mandatory appendices - Errata on the BPV-III Design Appendices  |
| Mandatory Appendix<br>III-2000               | Revision | Deleted Article III-2000 - Deleted Appendix III, Article 2000 to reflect the revisions to the Section II Appendix 2 "Basis for Establishing Design Stress Intensity Values for Bolting" and to avoid duplication of information. Design stresses (such as pressure stresses) will continue to use "S_m" based allowables, but services stresses, which include actual bolt loads, will utilize "S_y" based allowables. Changes are also reflected in Division 1, NB-3230; Division 3, WB-3230; Mandatory Appendix XIII, and Mandatory Appendix XIV. |
| Mandatory Appendix III                       | Revision | Revised Mandatory Appendix III - Section III Mandatory Appendix III was not updated when stress tables were transferred to Section II, Part D, Appendices 1 and 2. With this revision, references to Section II, Part D have been added and duplicate information eliminated.   |

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