

ASME Standards Technology, LLC

Exceed your R&D goals with a team of hands-on industry experts.

ASME Standards Technology, LLC (ASME ST-LLC) is a subsidiary not-for-profit company under ASME established in 2004. ASME ST-LLC can help bridge the gap between new technology and applicable standards development by managing research projects through all key steps, including (a) identification of need, (b) proposal creation, (c) project initiation, (d) results review and publication, and (e) initiation of ASME standards actions. ASME ST-LLC's project managers, project engineers, and consultants (e.g., scientists, technical experts) possess the hands-on experience necessary to develop and perform the most challenging research project. Technology proponents can be confident in the results: every ASME ST-LLC project goes through a rigorous qualification, validation, and peer-review process.

ASME STLLC approaches its projects as well as meets client needs with the following capabilities:

- Standards development supports new regulations.
- ASME standards and certification involvement in research projects helps ensure results will be relevant to standards committees.
- Directed research focuses limited resources on priority areas.
- Collaborative research projects minimize individual investment while maximizing benefits.
- International partnerships of government, industry, and academia help build consensus leading to technically relevant standards.
- Experienced project managers and project engineers successfully coordinate a project to meet stakeholder needs, including meeting project milestones, schedule, and budget as well as providing complete oversight of publishing of final reports.

New Publications



STP-NU-061-1 **NEW!**
**Comprehensive
Evaluation of the NSQ
100 Nuclear Safety and
Quality Management
System Requirements**

This report summarizes the assessment that was performed addressing the competitive strengths and weaknesses of NQSA products compared to corresponding ASME products. The products compared during this assessment were the NSQ 100 document "Nuclear Safety and Quality Management System Requirements," Revision 0 with an issue date of Dec. 2011 and corresponding ASME standards.

ISBN: 978-0-7918-7038-9
eBook Order No. A2491T \$49.95



STP-NU-062-1 **NEW!**
**Comprehensive
Comparison of
International Quality
Standards**

This document compares international quality standards: ASME NQA-1 "Quality Assurance Requirements for Nuclear Facility Application-Edition 2009a", NQSA NSQ-100 "Nuclear Safety and Quality Management System Requirements," IAEA GS-R-3: 2006 "The Management System for Facilities and Activities," and ISO 9001: 2008 "Quality Management Systems Requirements."

ISBN: 978-0-7918-7039-6
eBook Order No. A2511T \$49.95



STP-NU-063 **NEW!**
**Correct and Extend
Allowable Stress Values
for 304 and 316 Stainless
Steel**

This publication provides criteria to users, manufacturers, and specifiers of mobile cranes in determining which standards should be invoked for a particular application or facility.

ISBN: 978-0-7918-6906-2
eBook Order No. A2481Q \$39.95



STP-PT-064 **NEW!**
**Evaluation of Fracture
Properties Test Methods
for Hydrogen Service**

This report evaluates testing methods on the measurement of fracture properties for design of ASME Boiler and Pressure Vessel Code, Section VIII, Division 3.

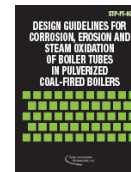
ISBN: 978-0-7918-6903-1
eBook Order No. A2471Q \$29.95



STP-PT-065 **NEW!**
**Branch Leg Study
for Bioprocessing
Equipment**

This document provides information on the flow conditions required to displace air from piping branches.

ISBN: 978-0-7918-6916-1
eBook Order No. A2521Q \$59.95



STP-PT-066 **NEW!**
**Design Guidelines on
the Corrosion, Erosion,
and Steam Oxidation
of Boiler Tubes in
Pulverized Coal-Fired
Boilers**

These guidelines are aimed at the minimization of the effects of fireside corrosion, particle impact erosion, and steam-side oxidation on boiler tubing and other components of large pulverized coal-fired boilers.

ISBN: 978-0-7918-69369
eBook Order No. A2561Q \$49.95

STP-NU-067 **NEW!**
**Roadmap for the Development of
ASME Code Rules for Section III
Division IV Fusion Energy Devices**

The primary focus of the Roadmap is on the development of a complete set of code rules for the design and operating conditions that are being proposed for the next generation of fusion facilities.

ISBN: 978-0-7918-6934-5
eBook Order No. A2541Q \$29.95

STP-NU-068 **NEW!**
**Corrosion of A193 Grade B7
Bolt Material in BWR Sodium
Pentaborate Solutions**

This report assesses the use of A193 Grade B7 bolts in stainless steel flanges installed in a BWR sodium pentaborate system.

ISBN: 978-0-7918-6935-2
eBook Order No. A2551Q \$39.95

STP-NU-069 **NEW!**

Analysis of Selected Nondestructive Examination Methodologies for Assessment of Cracking in Concrete Containments

This report provides exploratory research into the reliability of available NDE technology to detect delaminations and cracking. It also provides the foundation for further interactions with the industry and ASME code to develop appropriate inservice inspection methodologies to perform detailed assessments of the integrity of aging concrete containment structures.

ISBN: 978-0-7918-6937-6
eBook Order No. A2571Q \$39.95

STP-PT-070 **NEW!**

Design Guidelines for the Effects of Creep, Fatigue, & Creep-Fatigue Interaction with Design-by-Analysis and Nondestructive Inspection Acceptance Criteria

The key of this project was to review an extensive selection of current codes and standards that relate to power boilers and develop guidelines for component design and flaw acceptance criteria.

ISBN: 978-0-7918-6946-8
eBook Order No. A2591Q \$59.95

STP-PT-071 **NEW!**

Stress Intensity Factor Solutions for Internal Cracks in Thick-Walled Cylinder Vessels

This report describes the analysis methods and results for internal surface crack stress intensity K solutions in thick-walled cylinders. The 744 cases analyzed include a range of geometry ratios and crack size ratios for internal axial and internal circumferential surface cracks, axial full-width cracks, and 360° circumferential cracks.

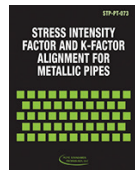
ISBN: 978-0-7918-6957-4
eBook Order No. A2611Q \$59.95

STP-NU-072 **NEW!**

Small Modular Reactor Roadmap

This document discusses areas in the ASME Boiler & Pressure Vessel Code and ASME Operation and Maintenance of Nuclear Power Plants Code (OM Code) where potential differences between vendors and NRC regarding the proper interpretation and application these Code requirements may present licensing issues.

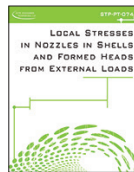
ISBN: 978-0-7918-6962-8
eBook Order No. A2621Q \$29.95

STP-PT-073 **NEW!**

Stress Intensity Factor and K-factor Alignment for Metallic Pipes

This report aligns stress intensification and flexibility factors for metallic pipe used in ASME's Pressure Piping Codes (B31) and Boiler and Pressure Vessel Code (B&PVC) Section III Class 2 and Class 3 Piping, hereinafter the "Codes".

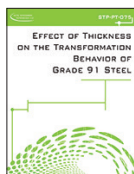
ISBN: 978-0-7918-7010-5
eBook Order No. A2641Q \$59.95

STP-PT-074 **NEW!**

Local Stress in Nozzles, Shells and Formed Heads from External Heads

This report contains recommendations and supporting data for rules to compute local stresses in nozzles in shells and formed heads due to external loads and pressure. These rules follow the general format used in Part 4 of ASME Boiler and Pressure Vessel Code Section VIII-Rules for Construction of Pressure Vessels Division 2-Alternative Rules (BPVC VIII Section 2).

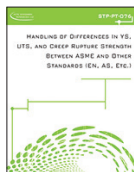
ISBN: 978-0-7918-7035-8
eBook Order No. A2661Q \$59.95

STP-PT-075 **NEW!**

Effect of Thickness on the Transformation Behavior of Grade 91 Steel

This report evaluates the effect of thickness on the transformation behavior of Grade 91 steel alloy to further define the materials properties.

ISBN: 978-0-7918-7036-5
eBook Order No. A2671Q \$19.95

STP-PT-076 **NEW!**

Handling of Differences in YS, UTS, and Creep Rupture Strength between ASME and other Standards (EN, AS, Etc.)

This report identifies and addresses discrepancies between ASME data, as reflected in the stress tables in ASME Section II Part D, and data from other codes and standards (EN, AS, etc.). Additionally, the report proposes action for resolving these discrepancies (either provide technical arguments to explain the valid basis for the differences, or make recommendations for revising the stress tables).

ISBN: 978-0-7918-7037-2
eBook Order No. A2681Q \$39.95

STP-NU-001

Risk Initiatives in ASME Nuclear Codes and Standards

ISBN: 0-7918-2975-8
eBook Order No. A1560Q \$49.95
Print Book Order No. A15605 \$49.95

STP-PT-002

ASME Section I PED Guide: Supplement to Guide for ASME Stamp Holders Use of Section I to Meet EC Pressure Equipment Directive (97/23/EC)

ISBN: 0-7918-2991-X
eBook Order No. A1570Q \$49.95
Print Book Order No. A15705 \$49.95

STP-PT-003

Hydrogen Standardization Interim Report for Tanks, Piping, and Pipelines

ISBN: 0-7918-2992-8
eBook Order No. A1580Q \$39.95
Print Book Order No. A15805 \$39.95

STP-PT-004

Impregnated Graphite for Pressure Vessels

ISBN: 0-7918-3001-2
eBook Order No. A1590Q \$39.95
Print Book Order No. A15905 \$39.95

STP-PT-005

Design Factor Guidelines for High Pressure Composite Hydrogen Tanks

ISBN: 0-7918-3038-1
eBook Order No. A1610Q \$49.95
Print Book Order No. A16106 \$49.95

STP-PT-006

Design Guidelines for Hydrogen Piping and Pipelines

ISBN: 0-7918-3137-X
eBook Order No. A1700Q \$49.95
Print Book Order No. A17007 \$49.95

STP-PT-007

Comparison of Pressure Vessel Codes ASME Section VIII and EN13445

ISBN: 0-7918-3093-4
eBook Order No. A1620Q **FREE**
Print Book Order No. A16207 \$24.95

STP-NU-008

Conservatism in the B2 and B2' Index

ISBN: 978-0-7918-3182-3
 eBook Order No. A1820Q \$29.95
 Print Book Order No. A18208 \$29.95

STP-NU-009

Graphite for High Temperature Gas-Cooled Nuclear Reactors

ISBN: 0-7918-3176-0
 eBook Order No. A1800Q \$49.95
 Print Book Order No. A18008 \$49.95

STP-NU-010

Regulatory Safety Issues in the Structural Design Criteria of ASME Section III Subsection NH for Very High Temperatures for VHTR & Gen IV

ISBN: 0-7918-3143-4
 eBook Order No. A1730Q \$29.95
 Print Book Order No. A17307 \$29.95

STP-PT-011

Integrity Management of Stress Corrosion Cracking in Gas Pipeline High Consequence Areas

ISBN: 978-0-7918-3183-0
 eBook Order No. A1830Q \$49.95
 Print Book Order No. A18308 \$49.95

STP-TS-012-1

Thermophysical Properties of Working Gases Used in Working Gas Turbine Applications

ISBN: 978-0-7918-3403-9
 eBook Order No. A1901Q \$39.95

STP-NU-013

Improvement of ASME NH for Grade 91 Negligible Creep and Creep-Fatigue

ISBN: 978-0-7918-3165-6
 eBook Order No. A1770Q \$49.95
 Print Book Order No. A17708 \$49.95

STP-PT-014

Data Supporting Composite Tank Standards Development for Hydrogen Infrastructure Applications

ISBN: 0-7918-3142-6
 eBook Order No. A1720Q \$49.95
 Print Book Order No. A17208 \$49.95

STP-NU-015

A Guide to American Crane Standards for Electric Overhead Traveling Cranes, Hoists, and Related Equipment for Nuclear Facilities

ISBN: 0-7918-3141-8
 eBook Order No. A1710Q **FREE**
 Print Book Order No. A17108 \$24.95

STP-PT-017

Properties for Composite Materials in Hydrogen Service

56 pp. ISBN: 0-7918-3179-5
 eBook Order No. A1810Q \$49.95
 Print Book Order No. A18108 \$49.95

STP-NU-018

Creep-Fatigue Data and Existing Evaluation Procedures for Grade 91 and Hastelloy XR

162 pp. ISBN: 0-7918-3184-7
 eBook Order No. A1840Q \$59.95
 Print Book Order No. A18408 \$59.95

STP-NU-019-1

Verification of Allowable Stresses in ASME Section III Subsection NH for Grade 91 Steel

117 pp. ISBN: 978-0-7918-3221-9
 eBook Order No. A1850T \$59.95
 Print Book Order No. A18509 \$59.95

STP-NU-020

Verification of Allowable Stresses in ASME Section III Subsection NH for Alloy 800H

76 pp. ISBN: 978-0-7918-3186-1
 eBook Order No. A1860Q \$59.95
 Print Book Order No. A18608 \$59.95

STP-PT-021

Non-Destructive Testing and Evaluation Methods for Composite Hydrogen Tanks

112 pp. ISBN: 978-0-7918-3187-8
 eBook Order No. A1870Q \$59.95
 Print Book Order No. A18708 \$59.95

STP-PT-022

Comparison and Validation of Creep-Buckling Analysis Methods

29 pp. ISBN: 0-7918-3174-4
 eBook Order No. A1780Q \$49.95
 Print Book Order No. A17808 \$49.95

STP-PT-023

Guidelines for In-Service Inspection of Composite Pressure Vessels

25 pp. ISBN: 978-0-7918-3208-0
 eBook Order No. A1940Q \$39.95
 Print Book Order No. A19409 \$39.95

STP-PT-024

Development of Basic Time-Dependent Allowable Stresses for Creep Regime in Section VIII Division I

eBook Order No. A1880Q \$49.95
 Print Book Order No. A18809 \$49.95

STP-PT-025

Extend Fatigue Exemption Rules for Low Cr Alloys into the Time-Dependent Range

63 pp. ISBN: 978-0-7918-3190-8
 eBook Order No. A1890Q \$49.95
 Print Book Order No. A18909 \$49.95

STP-PT-026

Guaranteed Higher Strength Properties

33 pp. ISBN: 978-0-7918-3202-8
 eBook Order No. A1910Q \$39.95
 Print Book Order No. A19109 \$39.95

STP-PT-027

Extend Low Chrome Steel Fatigue Rules

29 pp. ISBN: 978-0-7918-3203-5
 eBook Order No. A1920Q \$39.95
 Print Book Order No. A19209 \$39.95

STP-PT-028

Impact Testing Exemption Curves

32 pp. ISBN: 978-0-7918-3204-2
 eBook Order No. A1930Q \$39.95
 Print Book Order No. A19309 \$39.95

STP-PT-029-1

External Pressure Design in Creep Range

44 pp. ISBN: 978-0-7918-3398-8
 eBook Order No. A1971Q \$49.95

STP-SA-030

Comparison of FEM Storage/Retrieval Machine Documents to the ASME B30.13 Specification

36 pp. ISBN: 978-0-7918-3268-4
 eBook Order No. A1980Q **FREE**
 Print Book Order No. A19809 \$24.95

STP-PT-031

Pressure Induced Fatigue28 pp. ISBN: 978-0-7918-3269-1
eBook Order No. A1990Q \$39.95

STP-PT-032

Buckling of Cylindrical, Thin Wall, Trailer Truck Tanks and ASME Section XII24 pp. ISBN: 978-0-7918-3270-7
eBook Order No. A2000Q \$49.95
Print Book Order No. A20009 \$49.95

STP-PT-033

Degradation of Notch Toughness by a Post Weld Heat Treatment (PWHT)29 pp. ISBN: 978-0-7918-3380-3
eBook Order No. A2171Q \$39.95

STP-PT-034

Alignment of Sustained Load Stress Indices in the ASME B31 Code67 pp. ISBN: 978-0-7918-3413-8
eBook Order No. A2231Q \$29.95

STP-NU-035

Extend Allowable Stress Values for Alloy 800HISBN: 9780791868591
eBook Order No A2321Q \$49.95

STP-PT-036

Bolted Flanged Connections in Elevated Temperature Service62 pp. ISBN: 978-0-7918-3338-4
eBook Order No. A2081Q \$39.95

STP-NU-037

Stress Values in ASME Section III, Subsec. NH64 pp. ISBN: 978-0-7918-3323-0
eBook Order No. A2031Q \$49.95
Print Book Order No. A19309 \$39.95

STP-NU-038

Intermediate Heat Exchanger90 pp. ISBN: 978-0-7918-3336-0
eBook Order No. A2071Q \$59.95
Print Book Order No. A19309 \$39.95

STP-NU-039

Creep and Creep-Fatigue Crack Growth at Structural Discontinuities and Welds82 pp. ISBN: 978-0-7918-3363-6
eBook Order No. A2101Q \$49.95

STP-NU-040

Update and Improve Subsection NH – Simplified Elastic and Inelastic Design Methods90 pp. ISBN: 978-0-7918-3392-6
eBook Order No. A2201Q \$59.95

STP-NU-041

Update and Improve Subsection NH – Alternative Simplified Creep-Fatigue Design MethodsISBN: 978-0-7918-3364-3
eBook Order No. A2111Q \$59.95

STP-NU-042

New Materials for ASME Subsection NH102 pp. ISBN: 978-0-7918-3388-9
eBook Order No. A2191Q \$59.95

STP-PT-043

ASME Flawed Cylinder TestingISBN: 978-0-7918-3353-7
eBook Order No. A20912 \$39.95

STP-NU-044

Non-Destructive Examination (NDE) and In-Service Inspection (ISI) Technology for High Temperature ReactorsISBN: 978-0-7918-3412-1
eBook Order No. A2221Q \$39.95

STP-NU-045-1

Roadmap to Develop ASME Code Rules for the Construction of High Temperature Gas Cooled Reactors (HTGRS)ISBN: 978-0-7918-3334-6
eBook Order No. A2061Q **FREE**

STP-PT-046

Review of Safety Considerations for Natural Gas Pipeline Block Valve SpacingISBN: 978-0-7918-3379-7
eBook Order No. A2161Q \$39.95

STP-PT-047

Principles of Safety and Performance for Medical Hyperbaric Chambers: Guidelines for Regulatory SubmissionISBN: 978-0-7918-3368-1
eBook Order No. A2151Q \$29.95

STP-PT-048

Criteria for Reliability Based Design and Assessment for ASME B31.8 CodeISBN: 978-0-7918-3365-0
eBook Order No. A2131Q \$39.95

STP-PT-049

Investigation of Temperature Derating Factors for High-Strength Line PipeISBN: 978-0-7918-3426-8
eBook Order No. A2251Q \$29.95

STP-PT-050

An Investigation of Three Radiographic Access Port Plug Geometries and the Surrounding Pipe Wall Undergoing CreepISBN: 978-0-7918-3427-5
eBook Order No. A2261Q \$29.95

STP-NU-051-1

Code Comparison Report for Class 1 Nuclear Power Plant ComponentsISBN: 978-0-7918-6868-3
eBook Order No. A2241T **FREE**

STP-PT-052

Align Mechanical and Civil-Structural Earthquake Design and Qualification Rules for ASME B31 Piping Systems and PipelinesISBN: 978-0-7918-3428-2
eBook Order No. A2271Q \$29.95

STP-PT-054

Concentrated Solar Power (CSP) Codes and Standards Gap AnalysisISBN: 978-0-7918-6866-9
eBook Order No. A2331Q \$29.95

STP-SA-055

Guide to Mobile Crane StandardsISBN: 978-0-7918-6867-6
eBook Order No. A2341Q \$29.95

STP-PT-056

Extend Stress-Strain Curve Parameters and Cyclic Stress-Strain Curves to All Materials Listed for Section VIII, Divisions 1 and 2 ConstructionISBN: 978-0-7918-6883-6
eBook Order No. A2421Q \$49.95

STP-NU-057

**ASME Code Development Roadmap
for HDPE Pipe in Nuclear Service**

ISBN: 978-0-7918-6871-3

eBook Order No. A2351Q **FREE**

STP-PT-058

**Temper Bead Qualification Hardness
Acceptance Criteria**

eBook Order No. A2501Q \$59.95

STP-NU-059

**Corrections to Stainless Steel
Allowable Stresses**

eBook Order No. A2441Q \$39.95

STP-TS-060

**Coal-Fired Plant Decommissioning
Investigation Report**

ISBN: 978-0-7918-6879-9

eBook Order No. A2401Q \$29.95

STP-PT-064

**Evaluation of Fracture Properties
Test Methods for Hydrogen Service**

eBook Order No. A2471Q \$29.95

STP-PT-065

**Branch Leg Study for Bioprocessing
Equipment**

eBook Order No. A2521Q \$59.95

STP-PT-070

**Design Guidelines for the Effects
of Creep, Fatigue, & Creep-Fatigue
Interaction with Design-By-Analysis
and Nondestructive Inspection
Acceptance Criteria**

eBook Order No. A2591Q \$59.95