

PRESSURE POINTS

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Codes &
Standards

MANUFACTURER'S DATA REPORT FORMS: MANDATORY OR NON MANDATORY

Manufacturers are required to fill out Data Report Forms for pressure vessels and boilers (power / heating) marked with the applicable Code symbol Stamps per ASME Section VIII-1 [UG-120(a)], Section I [PG-106.1, PG-112.1] & Section IV [HG-520.1]. The National Board refers to a Data Report as the "Birth Certificate" of a pressure-retaining object. But why do the Data Report Forms reside in the non mandatory appendices of the Code books if they are so important? This article addresses that question and also clears up some associated misconceptions.

Data Report Forms are not treated the same way ASME Section IX handles the WPS, PQR & WPQ Forms. Note the verbiage, "Guide" or "Suggested Format" in QW-200.1(d), QW-200.2 (d), QW-300.3 and Non Mandatory Appendix B in Section IX about the Forms QW-482 (WPS), QW-483 (PQR) & QW-484 (WPQ). On the contrary, UG-120(a), PG-112.1 & HG-520.1 clearly mandate the usage of appropriate Data Report Forms by using the words, "these Forms shall be used" or "shall be filled out on Form.....".

The following Interpretations have also been published clarifying the intent regarding the mandatory usage of Data Report Forms.

Interpretation: VIII-1-83-17
Subject: Section VIII-1, UG-120, Data Report Forms
Date Issued: July 26, 1982
File: BC82-238

Question: Does Section VIII, Division 1, allow the creation of Data Report Forms by the Manufacturer

using any printed form as long as the size, arrangement, and content are identical, without addition or deletion, to either the forms available from ASME, samples of which are shown in Appendix W, or the corresponding forms available from The National Board of Boiler and Pressure Vessel Inspectors?

Reply: Yes.

Interpretation: VIII-80-87
Subject: Section VIII - Division 1, UG-100(a) (1) and (2)
Date Issued: September 5, 1980
File: BC-80-419

Question (1): May a pneumatic test be used in lieu of the required hydrostatic test in Section VIII - Division 1 when the exemptions from performing the hydrostatic test as given in UG-100(a)(1) and (2) are not a consideration?

Reply (1): No.

Question (2): Must the Manufacturer's Data Report Forms U-1, U-1A, etc., be completed in accordance with the latest Form published?

Reply (2): The mandatory requirements concerning the completion of Manufacturer's Data Report Forms are the same as for any other Code revisions. As stated in the eighth* paragraph of the Foreword of Section VIII - Division 1: "... Revisions become mandatory as minimum requirements six months after such date of issuance, except for boilers or pressure vessels contracted for prior to the end of the six month period." The latest form may be used upon publication.

* This interpretation is technically correct, however, the reference to the eighth paragraph of the Foreword would be the eleventh paragraph in the current code.

Interpretation: I-89-27
Subject: Section I, Use of Computer - Generated Manufacturer's Data Report Forms
Date Issued: September 18, 1989
File: BC88-417

Question: Does Section I allow creation of Manufacturer's Data Report Forms by a Code Symbol Stamp Holder using any printed or computer-generated forms, provided the

(continued on page 2)

size, arrangement, and content are identical, without addition or deletion, to the Data Report Forms in the latest Edition and Addenda of Section I?

Reply: Yes.

Interpretation: IV-93-03
Subject: Section IV, Form H-3
Date Issued: February 24, 1993
File: BC92-153

Question: Does Section IV allow the creation of Data Report Forms by the Manufacturer using any printed form as long as the size, arrangement, and content are identical, without addition or deletion, to either the forms available from ASME, samples of which are shown in Appendix K*, or the corresponding forms available from the National Board of Boiler and Pressure Vessel Inspectors?

Reply: Yes.

**The Data Report Forms are now in Appendix L.*

In summary, the Data Report Forms published in each Code book or obtained through National Board (via their Electronic Data Transfer (EDT) system) are mandatory. Manufacturers can create these forms on their own with the limitations highlighted in the three Interpretations (VIII-1-83-17, I-89-27, & IV-93-03) cited above.

But the question still remains open. Why do the Data Report Forms reside in the non mandatory appendices of the Code books? While the answer is not officially stated anywhere that the author is aware of, here are some thoughts.

1. The code offers some flexibility to the Manufacturers to edit the Data Report Forms such as changing the letter font size/type, the width or height of the columns/cells, etc. If the Form was located in the mandatory section, it could be interpreted that the format is absolutely locked-in with no editing rights given to the Manufacturer whatsoever. Paragraphs UG-120 (a) (2) & PG-112.2.8 provide guidance on the permitted modifications that could be made to the Data Report Forms.
2. Additionally, one sample Form may never be sufficient to fit all the pertinent details of the various vessel /boiler types that people can possibly build and supplementary Forms (U-4, P-6 & H-6) shall be used in those cases.

Nonmandatory Appendix A of Section I is titled "EXPLANATION OF THE CODE CONTAINING MATTER NOT MANDATORY UNLESS SPECIFICALLY REFERRED TO IN THE RULES OF THE CODE". The words in italics are not used in Section VIII-1 and Section IV. However, with regards to the usage of non mandatory appendices, through the actual code words themselves and the above quoted Interpretations, it is clear that the intent is the same in those Code books for the usage of Data Report Forms.

By Codes and Standards Group

Q Are there any mandatory Post Forming Heat Treatment requirements in ASME Section I for carbon and low alloy steels subsequent to cold forming?

A At present, Section I has mandatory rules only for cold forming of Austenitic Stainless Steels and Creep Strength Enhanced Ferritic Steels (Grade 91 & 92). These rules are found in paragraphs PG-19 and PG-20 respectively.

Post Forming Heat Treatment of Carbon and Low Alloy Steels (other than Grade 91 & 92) subsequent to cold forming would be an option of the Manufacturer if desired, or as required by the customer for Section I construction. UCS-79 of ASME Section VIII-1 and 129.3 of ASME B31.1 are two options available for guidance per the second paragraph of the PREAMBLE of Section I.

Q I am designing a pressure vessel for an MDMT equal to -20°F. May the rules of UG-20(f) and UCS-66 of Section VIII, Division 1 be used in combination to exempt a pressure vessel from impact testing?

A There is no simple "Yes" or "No" answer to the above question.

For a given vessel, it is permitted to use the rules of UG-20(f) to exempt some components from impact testing and use UCS-66 rules for the rest. Section VIII Interpretation VIII-1-89-199, (copied below) validates the above statement.

Interpretation: VIII-1-89-199
Subject: Section VIII, Division 1
(1989 Edition), UG-20(f) and UCS-66
Date Issued: May 22, 1990
File: BC90-314

Question (1): May both UG-20(f) and UCS-66 of Section VIII, Division 1 be used to establish impact test requirements for vessels fabricated of two or more carbon steel materials?

Reply (1): Yes.

Question (2): A carbon steel vessel is made up of a $\frac{3}{4}$ in. thick shell of curve B material and has 3 in. thick welded flat covers also of curve B material. Can UG-20(f) be used for the shell material and UCS-66(a) and (b) be used for the flat covers to establish impact test requirements for the vessel?

Reply (2): Yes.

However, it is not permitted to combine the impact test exemption rules of both UG-20(f) and Part UCS on the same component for a given vessel. In other words, rules in UCS such as low stress exemption [UCS-66 (b)], PWHT exemption [UCS-68(c)] cannot be used in

conjunction with the rules of UG-20(f). Two Section VIII Interpretations [VIII-1-95-85 and VIII-1-01-121] have been published (copied below) in support of that argument. Note that the only references UG-20(f) makes to Part UCS are for the definition of nominal thickness and for the material curve assignments.

Interpretation: VIII-1-95-85
Subject: Section VIII, Division 1 (1995 Edition); UCS-66(b)
Date Issued: December 28, 1995
File: BC95-397

Question: May the reductions permitted by UCS-66(b) in Section VIII, Division 1 be applied to materials whose minimum design temperatures are determined by UG-20(f)?

Reply: No.

Interpretation: VIII-1-01-121
Subject: Section VIII, Division 1 (2001 Edition); UG-20(f), USC-66, Fig. UCS-66, and UCS-68(c)
Date Issued: May 7, 2002
File: BC02-2427

Question: Is it permissible to apply the temperature reduction of UCS-68(c) to pressure vessels or pressure parts whose MDMT is determined by application of the rules in UG-20(f)?

Reply: No.

ASME SINGLE CERTIFICATION MARK

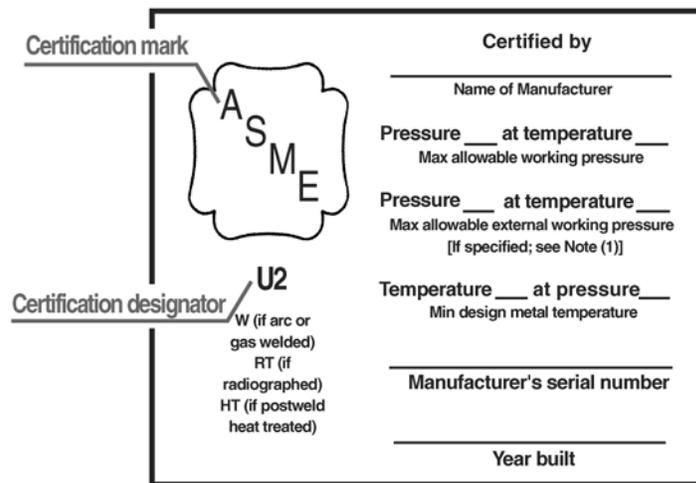
Over the years, the American Society of Mechanical Engineers (ASME) product certification programs has grown dramatically. The growth of these programs has presented many new opportunities as well as some challenges, especially regarding how to maintain the trademark registrations of ASME's 28 separate Product Certification Marks (25 Boiler and Pressure Vessel Code Symbol Stamps) across more than 100 nations in which these Marks are currently used on products.

To streamline its marking process, ASME has introduced a new single Product Certification Mark:



New ASME Product Certification Mark

Instead of 28 separate ASME Product Certification Marks, there will now be a single comprehensive mark. To maintain a link to the current ASME Marks, the new Mark will be used in conjunction with a "Certification Designator" to indicate the applicability of the certification. The following is an example of how the new Mark will be used on a nameplate (example: Vessel constructed to Section VIII, Division 2)



Sample ASME Product Certification Nameplate

As of January 1, 2012 the Certificates will be redesigned to show the new Certification Mark. Also, certified companies will continue to receive a separate certificate for each category of equipment with certificate numbers remaining the same upon receiving the new stamps. The Certification Designator must appear directly below the Certification Mark. However, it may be printed rather than stamped. If products are too small to be stamped, the alternative marking process that is currently in place will continue to be relevant.

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**WIL LaROCHELLE
HONORED WITH
THE BERNARD F. LANGER
NUCLEAR CODES AND STANDARDS AWARD**

Wil LaRochele, Principal Nuclear Consultant, Codes and Standards, was presented the American Society of Mechanical Engineers (ASME) prestigious Bernard F. Langer Nuclear Codes and Standards Award during Code Week in Las Vegas. Wil was recognized for his tireless leadership and dedicated service in promoting the acceptance of the ASME Codes and Standards around the world. The Bernard F. Langer Nuclear Codes and Standards Award, established in 1977, recognizes an individual who has contributed to the nuclear power plant industry through the development and promotion of ASME nuclear codes and standards or the ASME Nuclear Code Certification Program.

**MICHEL MARGAT
ELECTED
CHAIRMAN CONFORMITY
ASSESSMENT BODY FORUM**

HSB Global Standards announced that Michel Margat, Engineering Manager and Manager Codes and Standards, HSB Global Standards Europe has been elected to the prestigious position of Chairman of the Conformity

Assessment Body Forum (CABF). The Conformity Assessment Body Forum contributes to the preparation of unified interpretations and procedures for all equipment detailed in Article 1 of the European Pressure Equipment Directive (PED) and Article 1 of the Simple Pressure Vessel Directive. His initial term begins immediately for one year, followed by one year as Vice Chairman.

In addition to Chairing meetings comprised of Chairmen of National Conformity Body Forums, representatives from Notified Bodies, Recognized Third Parties, User Inspectorates, the EU Commission and CEN, he will also attend guideline working group meetings to represent the interests of CABF members. The Pressure Equipment Directive, (97/23/EC) specifies the intervention of Notified Body, User Inspectorates and Recognized Third-Party Organizations, appointed by Member States, as part of the conformity assessment procedure.

“His appointment once again raises the profile of HSB Global Standards within the Notified Body and Authorized Inspection Agency community and adds to our reputation as an Authorized Inspection Agency,” says Doris Gillert, Managing Director, HSB Global Standards Europe.