

WISCONSIN LEGISLATIVE COUNCIL STAFF

LCRC
FORM 2

APR 30 1999

RULES CLEARINGHOUSE

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CLEARINGHOUSE REPORT TO AGENCY

[THIS REPORT HAS BEEN PREPARED PURSUANT TO S. 227.15, STATS. THIS IS A REPORT ON A RULE AS ORIGINALLY PROPOSED BY THE AGENCY; THE REPORT MAY NOT REFLECT THE FINAL CONTENT OF THE RULE IN FINAL DRAFT FORM AS IT WILL BE SUBMITTED TO THE LEGISLATURE. THIS REPORT CONSTITUTES A REVIEW OF, BUT NOT APPROVAL OR DISAPPROVAL OF, THE SUBSTANTIVE CONTENT AND TECHNICAL ACCURACY OF THE RULE.]

CLEARINGHOUSE RULE 99-064

AN ORDER to repeal ILHR 41.36 (1), chapter ILHR 42 and chapters ILHR 41 to 42 Appendix A; to amend Comm 5.30 (4) (a), chapter ILHR 41 (title), ILHR 41.01, 41.02, 41.04 (intro.) and (29), 41.05 (1), 41.06, 41.16 (2) (a) and (e), 41.17 (4) and (5), 41.18 (2) and (3) (c), 41.23 (1), (2) (a) and (3) (b), 41.24, 41.28 (1), 41.29 (2) (intro.), 41.30 (title) and (1) (c), 41.31 (2), 41.34, 41.38 (1) and (2), 41.42, 41.43 (1) (a) and (d), (2) (a) and (d) and (3) (a) and (d), 41.45 (1) (intro.) and (3) (a), 41.46 (1) and (2), 41.48 and 41.55 (2); to repeal and recreate ILHR 41.10; and to create Comm 5.30 (4) (d), ILHR 41.15 (3) and 41.38 (4), and subchapters VI, VII and VIII of chapter ILHR 41, relating to boilers and pressure vessels.

Submitted by **DEPARTMENT OF COMMERCE**

03-31-99 RECEIVED BY LEGISLATIVE COUNCIL.

04-28-99 REPORT SENT TO AGENCY.

RNS:RJC:kjf;ksm

LEGISLATIVE COUNCIL RULES CLEARINGHOUSE REPORT

This rule has been reviewed by the Rules Clearinghouse. Based on that review, comments are reported as noted below:

1. STATUTORY AUTHORITY [s. 227.15 (2) (a)]

Comment Attached YES NO

2. FORM, STYLE AND PLACEMENT IN ADMINISTRATIVE CODE [s. 227.15 (2) (c)]

Comment Attached YES NO

3. CONFLICT WITH OR DUPLICATION OF EXISTING RULES [s. 227.15 (2) (d)]

Comment Attached YES NO

4. ADEQUACY OF REFERENCES TO RELATED STATUTES, RULES AND FORMS [s. 227.15 (2) (e)]

Comment Attached YES NO

5. CLARITY, GRAMMAR, PUNCTUATION AND USE OF PLAIN LANGUAGE [s. 227.15 (2) (f)]

Comment Attached YES NO

6. POTENTIAL CONFLICTS WITH, AND COMPARABILITY TO, RELATED FEDERAL REGULATIONS [s. 227.15 (2) (g)]

Comment Attached YES NO

7. COMPLIANCE WITH PERMIT ACTION DEADLINE REQUIREMENTS [s. 227.15 (2) (h)]

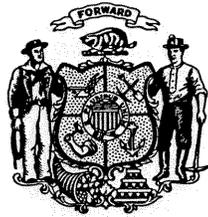
Comment Attached YES NO

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CLEARINGHOUSE RULE 99-064

Comments

[NOTE: All citations to "Manual" in the comments below are to the Administrative Rules Procedures Manual, prepared by the Revisor of Statutes Bureau and the Legislative Council Staff, dated September 1998.]

2. Form, Style and Placement in Administrative Code

- a. In s. Comm 5.30 (4) (a), the bracket should be around "Revisor inserts date" only. This comment also applies to s. ILHR 41.61 (2).
- b. In s. ILHR 41.02 (1), the phrase "in the administrative rule" in the second sentence should be changed to "in this chapter."
- c. Generally, whenever a title is amended, the notation "(title)" must be included in the introductory and treatment clauses of the rule and inserted before the amended title to notify the reader that the title has been amended. [See s. 1.05 (3) (a), Manual.] This practice should be followed throughout the rule. For example, see the treatment of s. ILHR 41.24.
- d. SECTION 24 of the rule needs to be divided into two separate treatments. One treatment would amend s. ILHR 41.42 (1) and (2). Doing so would eliminate the need to reproduce the note that is not being amended. The second treatment would create s. ILHR 41.42 (3). Accordingly, the material in sub. (3) would not be underscored.
- e. The title of s. ILHR 41.64 (1) is "DEFINITIONS." However, the material in that subsection does not follow the format for definitions in s. 1.01 (7), Manual. The defined term should be in quotation marks in par. (a) 1. and preceded by a phrase such as "In this section,". The material in par. (b) is substantive and should be deleted. Paragraph (c) should begin: "Repair of a safety valve or safety relief valve" does not include"

f. The note to the revisor in SECTION 34 of the rule is unnecessary and should be deleted. Also, in the treatment clause of SECTION 34, “of chapter Comm 42” should be inserted before “is.”

4. Adequacy of References to Related Statutes, Rules and Forms

a. The rule makes numerous changes to chs. ILHR 41 and 42. However, chs. ILHR 41 and 42 no longer exist. They have been renumbered chs. Comm 41 and 42. Accordingly, the entire rule should be reviewed and all of the references to chs. ILHR 41 and 42 should be revised.

b. The reference to chs. Ind 41 and 42 in the note to s. ILHR 41.63 (1) is not particularly helpful since those provisions no longer exist in any current copy of the Wisconsin Administrative Code.

5. Clarity, Grammar, Punctuation and Use of Plain Language

a. In s. Comm 5.30 (4) (d), what does it mean to pass an “audit of the quality control manual”? Is this an exam on the contents of the manual? The rule should be clarified.

b. In s. ILHR 41.23 (1), the phrase “of the boiler or pressure vessel” should be inserted at the end of the new material after the word “user.”

c. In s. ILHR 41.38 (2) and (3), “to the department” should be inserted after “report.”

The Department of Commerce proposes an order to repeal ILHR 41.36 (1), chapter ILHR 42, and chapters ILHR 41-42 Appendix A; to amend Comm 5.30 (4)(a), chapter ILHR 41 (title), ILHR 41.01, ILHR 41.02, ILHR 41.04 (intro.), ILHR 41.04 (29), ILHR 41.05 (1), ILHR 41.06, ILHR 41.16 (2)(a) and (e), ILHR 41.17 (4) and (5), ILHR 41.18 (2) and (3)(c), ILHR 41.23 (1), (2)(a) and (3)(b), ILHR 41.24, ILHR 41.28 (1), ILHR 41.29 (2)(intro.), ILHR 41.30 (title) and (1)(c), ILHR 41.31 (2), ILHR 41.34, ILHR 41.38 (1) and (2), ILHR 41.42, ILHR 41.43 (1)(a) and (d), (2)(a) and (d), and (3)(a) and (d), ILHR 41.45 (1)(intro.) and (3)(a), ILHR 41.46 (1) and (2), ILHR 41.48, and ILHR 41.55 (2); to repeal and recreate ILHR 41.10; and to create Comm 5.30 (4)(d), ILHR 41.15 (3), ILHR 41.38 (4), and ILHR 41 subchapters VI, VII and VIII, relating to boilers and pressure vessels.

Analysis of Proposed Rules

Statutory authority: Sections 101.02 (15)(h) to (j), and 101.17, Stats.

Statutes interpreted: Sections 101.02 (15)(h) to (j), and 101.17, Stats.

The Division of Safety and Buildings within the Department of Commerce is responsible for protecting the health, safety and welfare of the public by establishing reasonable and effective safety standards for the construction, repair and maintenance of public buildings and places of employment. Chapters ILHR 41-42 contain minimum safety standards for the design, construction, installation, operation, inspection, testing, maintenance, repair and alteration of boilers and pressure vessels installed in public buildings and at places of employment.

The proposed rules consist of an update of chapters ILHR 41-42 in order to bring the state boiler and pressure vessel code up to date with current technology and nationally recognized standards. The following is a summary of the major changes being proposed in chapters ILHR 41-42.

1. Updating currently adopted standards and adding the adoption by reference of 2 new standards. The ASME Boiler and Pressure Vessel Code, the Power Piping Code (ANSI/ASME B31.1), and the Pressure Vessel Inspection Code (API 510) are being updated to the current editions. The Pressure Vessels for Human Occupancy standard (ANSI/ASME PVHO-1) and the National Board Inspection Code (ANSI/NB-23) are being added as adopted standards. [ILHR 41.10]
2. Adding a new requirement for certified inspectors to report to the department when inspection service is started or discontinued on a boiler or pressure vessel. [ILHR 41.15 (3)]
3. Adding a new requirement for obtaining concurrence of the certified inspector before an owner's request for an extension between inspections would be granted. [ILHR 41.17 (5)]
4. Adding a new requirement for boilers installed prior to 1957 to have at least one pressure control or one temperature control. [ILHR 41.29 (2)(intro.)]
5. Adding a new rule requiring pressure vessels for human occupancy to be constructed and installed in accordance with the ANSI/ASME PVHO-1 standard. [ILHR 41.42 (3)]
6. Revising the rule that currently prohibits the use of slip-on flanges exceeding 4 inches nominal pipe size on power piping. [ILHR 41.46 (1)]

7. Eliminating most of the chapter ILHR 42 requirements, and requiring repairs and alterations to be completed in accordance with the National Board Inspection Code (ANSI/NB-23). The remaining requirements from chapter ILHR 42 are being moved into subchapters in chapter ILHR 41, and chapter ILHR 42 is being repealed. [Treatment SECTIONS 30 to 33]

8. Phasing out of the repair registration issued by the department. No new state repair registrations will be issued, and current holders of the repair registration may continue to repair boilers and pressure vessels under that registration but may renew that registration only once. Renewal of the registration will be contingent upon passing an audit of the holder's quality control manual and program. [ILHR 41.61 and Comm 5.30 (4)(d)]

The proposed rules have been developed with the assistance of the Boiler and Pressure Vessel Code Advisory Council. The members of that citizen advisory council are as follows:

| <u>Name</u> | <u>Representing</u> |
|--------------------|--|
| William H. Andrae | Boiler and Pressure Vessel Repairers Association |
| Larry Hamm | Wisconsin Association of Power Engineers |
| Rick Heeren | Mechanical Contractors Association of Wisconsin |
| Daniel Hegyi | American Insurance Association |
| Matt Keenan | Wisconsin Boiler Inspectors Association |
| Douglas McLeish | Wisconsin Manufacturers and Commerce |
| John Nepscha | Wisconsin Utilities Association |
| Paul E. Prill | Wisconsin Pipe Trades Association |
| Randy Pucek | City of Milwaukee |
| Ernest J. Spring | Wisconsin Department of Administration |
| Raymond P. Swanson | Uniform Boiler & Pressure Vessel Laws Society |

SECTION 1. Comm 5.30 (4)(a) is amended to read:

Comm 5.30 (4) (a) ~~A~~ After [the effective date of these rules ... Revisor to insert date], a person may renew his or her registration as a boiler repairer one time only.

SECTION 2. Comm 5.30 (4)(d) is created to read:

Comm 5.30 (4) (d) The renewal of a boiler repairer registration shall be contingent upon the applicant passing an audit of the quality control manual and program required under sub. (3) (b).

[Note to Revisor: In Comm 5.30 (1) Note, the reference to ILHR 42.02 should be changed to Comm 41.61.]

SECTION 3. Chapter ILHR 41 (title) is amended to read:

Chapter ILHR 41
ADMINISTRATION, INSPECTION AND GENERAL INSTALLATION REQUIREMENTS
BOILERS AND PRESSURE VESSELS

SECTION 4. ILHR 41.01 and 41.02 are amended to read:

ILHR 41.01 Purpose. Pursuant to s. 101.17, Stats., the purpose of ~~chs. ILHR 41 and 42~~ this chapter is to protect the health, safety and welfare of the public and employes by establishing minimum standards for the design, construction, installation, operation, inspection, testing, maintenance, alteration and repair of boilers and pressure vessels installed in all public buildings and places of employment.

ILHR 41.02 Scope. (1) BOILERS AND PRESSURE VESSELS. The provisions of ~~chs. ILHR 41 and 42~~ this chapter apply to boilers and piping components associated with boilers, and to pressure vessels and power piping, in use at places of employment and in public buildings. The provisions of ~~these chapters~~ this chapter are not retroactive unless specifically stated in the administrative rule. Where different sections of ~~these chapters~~ this chapter specify different requirements, the most restrictive requirement shall govern.

Note: Section 101.01 (11), Stats., provides that the phrase "place of employment" ~~means and~~ includes every place, whether indoors or out or underground and the premises appurtenant thereto where either temporarily or permanently any industry, trade or business is carried on, or where any process or operation, directly or indirectly related to any industry, trade or business, is carried on, and where any person is, directly or indirectly, employed by another for direct or indirect gain or profit, but does not include any place where persons are employed in private domestic service which does not involve the use of mechanical power or in farming. "Farming" includes those activities specified in s. 102.04 (3), and also includes the transportation of farm products, supplies or equipment directly to the farm by the operator of said farm or his employes for use thereon, if such activities are directly or indirectly for the purpose of producing commodities for market, or as an accessory to such production. When used with relation to building codes, "place of employment" does not include an adult family home, as defined in s. 50.01 (1), or, except for the purposes of s. 101.11, a previously constructed building used as a community-based residential facility, as defined in s. 50.01 (1g), which serves 20 or fewer ~~unrelated~~ residents who are not related to the operator or administrator.

(2) OTHER VESSELS. The provisions of ~~chs. ILHR 41 and 42~~ this chapter apply to vessels used for the storage and transportation of flammable liquids, liquefied petroleum gas, liquefied natural gas, compressed natural gas, anhydrous ammonia and refrigerants, unless these vessels are covered by other Wisconsin administrative codes or federal codes.

SECTION 5. ILHR 41.04 (intro.) is amended to read:

ILHR 41.04 Definitions. The definitions contained in this section shall be applicable throughout ~~chs. ILHR 41 and 42~~ this chapter.

SECTION 6. ILHR 41.04 (29) is amended to read:

ILHR 41.04 (29) "Power piping" means any steam piping system beyond the scope of ASME code section I and having ~~an operating~~ a maximum allowable working pressure in excess of 15 psig, any hot water piping system beyond the scope of ASME code section I and subject to temperatures in excess of 250° F, or any piping system using an organic thermal fluid as a heat transfer media and subject to temperatures in excess of 250° F.

SECTION 7. ILHR 41.05 (1) is amended to read:

ILHR 41.05 (1) PROCEDURE. The department shall consider and may grant a variance to an administrative rule upon receipt of a fee, a completed petition for variance form from the owner and, where applicable, a completed position statement from the chief of the local fire department, provided an equivalency is established in the petition for variance which meets the intent of the rule from which a variance is being petitioned. The department may impose specific conditions in the petition for variance to promote the protection of the health, safety and welfare of the employees or the public. Violation of those conditions under which the petition is granted constitutes a violation of ~~chs. ILHR 41 and 42~~ this chapter.

SECTION 8. ILHR 41.06 is amended to read:

ILHR 41.06 Penalties. Penalties for violations of ~~chs. ILHR 41 and 42~~ this chapter shall be assessed in accordance with s. 101.02, Stats.

SECTION 9. ILHR 41.10 is repealed and recreated to read:

ILHR 41.10 Adoption of standards by reference. (1) CONSENT TO INCORPORATE. Pursuant to s. 227.21, Stats., the attorney general and the revisor of statutes have consented to the incorporation by reference of the standards listed in sub. (2).

Note: Copies of the listed standards are on file in the offices of the department, the secretary of state and the revisor of statutes. Copies for personal use may be obtained, at a cost, from the organizations listed.

(2) STANDARDS. The following standards are hereby incorporated by reference into this chapter:

(a) American Society of Mechanical Engineers (ASME), Order Department, P.O. Box 2300, Fairfield, NJ 07007-2300, telephone 800/843-2763 Ext. 555.

1. ASME Boiler and Pressure Vessel Code, 1998 edition, Section I – Power Boilers, Section II – Material Specifications, Section III – Nuclear Power Plant Components, Section IV – Heating Boilers, Section V – Nondestructive Examination, Section VIII – Pressure Vessels, Section IX – Welding and Brazing Qualifications, Section X – Fiber-Reinforced Plastic Pressure Vessels, Section XI – In-service Inspection of Nuclear Power Plant Components.

2. Power Piping, ANSI/ASME B31.1 – 1998.

3. Pressure Vessels for Human Occupancy, ANSI/ASME PVHO-1-1997.

(b) National Board of Boiler and Pressure Vessel Inspectors, 1055 Crupper Avenue, Columbus, OH 43229-1183, telephone 614/888-8320. National Board Inspection Code, ANSI/NB-23, 1998 edition.

(c) American Petroleum Institute, 1220 L Street, Northwest, Washington, D.C. 20005, telephone 202/682-8375. Pressure Vessel Inspection Code, API 510-1997.

SECTION 10. ILHR 41.15 (3) is created to read:

ILHR 41.15 (3) REPORTING CHANGES. The certified inspector shall report to the department not later than 30 calendar days after inspection service is started or discontinued on a boiler or pressure vessel. The reason for discontinuing the service shall be given on the report. If the boiler or pressure vessel is installed in a city of the first class that provides boiler and pressure vessel inspections, the report shall also be provided to the city.

SECTION 11. ILHR 41.16 (2)(a) and (e) are amended to read:

ILHR 41.16 (2) (a) Except as provided in par. (b), all power piping systems not covered by ASME code section I and required to be constructed in accordance with ~~the ANSI standard for power piping as listed in Table 41.10~~ ANSI/ASME B31.1, shall receive an initial inspection by a certified inspector.

(e) Prefabricated piping that is part of a power piping system shall be inspected by a certified inspector at the fabrication shop. The shop fabricator shall provide a copy of the ~~authorized~~ certified inspector's report to the installer at the job site verifying that the prefabricated piping complies with ~~the ANSI standard for power piping adopted under s. ILHR 41.10~~ ANSI/ASME B31.1.

SECTION 12. ILHR 41.17 (4) and (5) are amended to read:

ILHR 41.17 (4) INSPECTION OF SAFETY VALVES AND SAFETY RELIEF VALVES.

The certified inspectors shall satisfy themselves that safety valves and safety relief valves have been operated or tested at least once every 12 months.

(5) EXTENSION OF PERIOD BETWEEN INSPECTIONS. If operating conditions require, an extension of periods not to exceed 6 months between inspections of boilers, pressure vessels, safety valves and safety relief valves may be approved by the department upon a written request from the owner or user for an extension. Concurrence with the owner's or user's request for an extension shall be obtained from the certified inspector in writing to the department.

SECTION 13. ILHR 41.18 (2) and (3)(c) are amended to read:

ILHR 41.18 (2) EXCEPTIONS. In individual cases, the boilers and pressure vessels exempted in sub. (1) shall be subject to inspection by or on order of the department upon the complaint of any person or upon the initiative of the department when there is reasonable cause to suspect that the construction, installation, maintenance or operation of the vessel is not in keeping with the general purpose and intent of chs. ILHR 41 and 42 this chapter.

(3) (c) The ~~inspection agency of record~~ certified inspector has verified in writing to the department that the maintenance and treatment programs are adequate for the boiler.

SECTION 14. ILHR 41.23 (1), (2)(a) and (3)(b) are amended to read:

ILHR 41.23 (1) REPORT PROCESSING TIME. Reports of periodic internal or external inspections of boilers and pressure vessels shall be sent to the department within 30 calendar days from the date of inspection. A copy of the report shall also be provided to the owner or user.

(2) INSPECTION REPORT FORMS. (a) Required periodic inspections shall be reported to the department on forms SBD-7678 and SBD-7679 or other approved forms.

Note: Form SBD-7678 is used for reporting inspections of pressure vessels, and form SBD-7679 is used for reporting inspections of boilers. See Appendix A for copies of these forms. Copies of the forms are available at no charge from the Safety and Buildings Division, P.O. Box 2509, Madison, WI 53701-2509, telephone 608/266-1818.

(3) (b) When violations of chs. ILHR 41 and 42 this chapter or unsafe conditions involving the safety of the vessel are found.

SECTION 15. ILHR 41.24 is amended to read:

ILHR 41.24 ~~Certificate of operation~~ Permit to operate. (1) **RESPONSIBILITY.** (a) The owner or user of the boiler or pressure vessel shall be responsible for obtaining and maintaining a valid certificate of operation permit to operate.

(b) The certificate of operation permit to operate shall be posted on the premises by the owner or user of the boiler or pressure vessel.

~~Note: See Appendix A for a copy of the certificate of operation.~~

(2) ~~ISSUANCE.~~ After each initial or periodic inspection for boilers and pressure vessels found to be in compliance with ~~chs. ILHR 41 and 42 this chapter,~~ a certificate of operation permit to operate shall be issued by the department to the owner or user of the boiler or pressure vessel. The department shall issue the certificate within ~~15~~ 30 business days of determination of compliance.

(3) ~~ALLOWABLE PRESSURE INFORMATION.~~ The ~~certificate of operation permit to operate~~ shall give the maximum allowable working pressure as determined using the regulations of ~~chs. ILHR 41 and 42 this chapter,~~ the certified inspector's name and telephone number, and the expiration date.

(4) ~~EXPIRATION.~~ The ~~certificate of operation permit to operate~~ shall be valid until the next required periodic inspection.

SECTION 16. ILHR 41.28 (1) is amended to read:

ILHR 41.28 (1) MAXIMUM ALLOWABLE WORKING PRESSURE. No boiler or pressure vessel may be operated at a pressure in excess of the maximum allowable working pressure stated on its current ~~certificate of operation permit to operate.~~

SECTION 17. ILHR 41.29 (2)(intro.) is amended to read:

ILHR 41.29 (2) (intro.) PRESSURE AND TEMPERATURE CONTROLS. Boilers installed prior to January 1, 1957, shall have at least one pressure control for steam boilers or one temperature control for hot water boilers or organic fluid heat transfer systems. Compliance with the following requirements is optional for boilers installed prior to January 1, 1957:

SECTION 18. ILHR 41.30 (title) and (1)(c) are amended to read:

ILHR 41.30 Low-water cutoff, ~~and~~ water feeder and fusible plug. (1) (c) Boilers which are manually fired and have a residual heat source shall have a fusible plug installed which will extinguish the fire in the event of low water. Fire doors shall be provided with secure latches on manually fired boilers having fusible plugs.

SECTION 19. ILHR 41.31 (2) is amended to read:

ILHR 41.31 (2) PIPING AND FITTINGS. The blowoff piping and fittings between the boiler and the blowoff tank shall comply with ~~the ANSI standard listed in Table 41.10~~ ANSI/ASME B31.1 or the code in effect at the time of construction.

SECTION 20. ILHR 41.34 is amended to read:

ILHR 41.34 Portable boilers. (1) CERTIFICATE PERMIT REQUIRED. The owner or user of a portable boiler located in Wisconsin or brought into Wisconsin for use, shall possess a certificate of operation permit to operate issued by the department prior to use.

(2) BOILER REQUIREMENTS. The certificate of operation permit to operate shall be issued only after all of the following requirements are met:

(a) The boiler ~~is of ASME construction;~~ complies with s. ILHR 41.42.

(b) The boiler is installed according to the applicable requirements of ~~chs. ILHR 41 and 42;~~ and this chapter.

(c) An internal or external inspection of the boiler has been made which is acceptable to the department.

SECTION 21. ILHR 41.36 (1) is repealed.

SECTION 22. ILHR 41.38 (1) and (2) are amended to read:

ILHR 41.38 (1) ACCIDENTS. Whenever a boiler or pressure vessel fails and causes injury to any person, the owner or user shall report in writing the facts involved to the department within the following 24 hours. The owner or user may not remove or disturb the boiler or pressure vessel or any of its parts nor permit any such removal or disturbance prior to receiving authorization from the department, except for the purpose of saving human life or further property damage.

(2) REPAIRS AND ALTERATIONS. The owner or user shall report any repairs or alterations of a boiler or pressure vessel as required in ~~ch. ILHR 42~~ subch. VI.

SECTION 23. ILHR 41.38 (4) is created to read:

ILHR 41.38 (4) HEAT INPUT. The owner or user shall report any modification that increases the heat input capacity of the boiler.

SECTION 24. ILHR 41.42 is amended to read:

ILHR 41.42 ASME code vessels. (1) ASME CODE COMPLIANCE. Except as provided in ss. ILHR 41.43, 41.44 and 41.45, boilers and pressure vessels shall be constructed and installed in accordance with the ASME ~~standards adopted under s. ILHR 41.10~~ code. Boilers and pressure vessels designed to other national or international standards may be approved if the design has been accepted by a nationally recognized independent third party.

Note: The department will recognize the applicable case interpretations of the ASME boiler and pressure vessel code as being acceptable.

(2) FILING WITH NATIONAL BOARD. Boilers and pressure vessels constructed and installed in accordance with the ASME standards adopted in s. ILHR 41.10 code shall have the manufacturer's data report filed with the National Board and shall bear a National Board number.

(3) HUMAN OCCUPANCY. Pressure vessels for human occupancy shall be constructed and installed in accordance with ANSI/ASME PVHO-1.

SECTION 25. ILHR 41.43 (1)(a) and (d), (2)(a) and (d), and (3)(a) and (d) are amended to read:

ILHR 41.43 (1) (a) When the method of designing or constructing the boiler or pressure vessel is not covered by the ASME codes listed in s. ILHR 41.10 code, the department may approve the installation provided adequate proof of comparable safety of the design or construction is shown.

(d) All other applicable requirements of the ASME code listed in s. ILHR 41.10 shall be met.

(2) (a) When the boiler or pressure vessel is to be built by an owner for the owner's use, the department may waive the stamping required by the ASME codes listed in s. ILHR 41.10 code.

(d) All other applicable requirements of the ASME code listed in s. ILHR 41.10 shall be met.

(3) (a) When a small number of boilers or pressure vessels is to be built by a manufacturer, the department may waive the stamping required by the ASME codes listed in s. ILHR 41.10 code.

(d) All other applicable requirements of the ASME code listed in s. ILHR 41.10 shall be met.

SECTION 26. ILHR 41.45 (1)(intro.) and (3)(a) are amended to read:

ILHR 41.45 (1) EXEMPTED VESSELS. The following vessels are not required to be constructed and installed in accordance with the ASME codes listed in Table 41.10 code:

(3) (a) Except as provided in par. (b), the vessels listed in sub. (1) shall meet the pressure relief device requirements of the ASME codes listed in Table 41.10 code.

SECTION 27. ILHR 41.46 (1) and (2) are amended to read:

ILHR 41.46 (1) GENERAL. Power piping shall be installed in accordance with the ANSI standard for power piping, including addenda, listed in Table 41.10 ANSI/ASME B31.1. The use of slip-on flanges exceeding 4 inches nominal pipe size shall not be permitted on power piping shall be limited in applications to no higher than Class 300 primary pressure service rating. Slip-on flanges shall be installed with double fillet welds in accordance with ANSI/ASME B31.1.

(2) BOILER EXTERNAL PIPING. Boiler external piping within the scope of section I of the ASME code shall be installed in accordance with the ANSI standard for power piping, including addenda, listed in Table 41.10 ANSI/ASME B31.1.

SECTION 28. ILHR 41.48 is amended to read:

ILHR 41.48 Organic fluid heat transfer systems. Boilers and coil type heaters which utilize organic thermal fluids as a heat transfer media shall be designed, constructed and installed in accordance with the ASME standards adopted under s. ILHR 41.10 code. Piping for organic thermal fluids used as a heat transfer media and subject to temperatures in excess of 250° F shall be installed in accordance with the ANSI standard for power piping adopted under s. ILHR 41.10 ANSI/ASME B31.1.

SECTION 29. ILHR 41.55 (2) is amended to read:

ILHR 41.55 (2) STATEMENT OF INSPECTION SERVICE CONTRACT. The owner or user shall file a statement with the department indicating possession of an arrangement with a certified inspector to provide inspection services under section XI of the ASME code. The statement shall include the name and address of the current authorized inspection agency certified inspector.

SECTION 30. Chapter ILHR 41 subchapter VI is created to read:

SUBCHAPTER VI
REPAIRS AND ALTERATIONS

ILHR 41.60 General requirements. Welded repairs or alterations to any boiler or pressure vessel or their fittings, settings or appurtenances shall be completed in accordance with the requirements of ANSI/NB-23.

ILHR 41.61 General rules for repairs. (1) AUTHORIZATION. Except as provided in sub. (2), repairs to boilers and pressure vessels shall be performed by an organization in possession of a valid National Board repair "R" certificate of authorization or a valid ASME certificate of authorization containing provisions for welded repairs.

(2) EXCEPTION. A person or entity that holds a valid registration issued by the department to perform boiler or pressure vessel repairs on [the effective date of these rules ... Revisor to insert date] may continue to repair boilers or pressure vessels under that registration and may renew that registration one time only.

Note: See ch. Comm 5 for renewal requirements.

ILHR 41.62 Reports. Anyone making welded repairs or alterations in accordance with this chapter shall submit the National Board repair and alteration forms to the department.

ILHR 41.63 Riveted repairs. (1) GENERAL. When riveted patches are used, they shall be designed and applied using methods acceptable to the department.

Note: Information regarding the use of riveted patches is available from the department and may be found in Wisconsin Administrative Code chapters Ind 41-42, Boiler and Pressure Vessel Code, Register, May 1974, No. 221.

(2) **MATERIALS FOR RIVETED PATCHES.** Patch material shall meet the applicable requirements of ANSI/NB-23.

(3) **PRESSURE TEST.** The certified inspector may require a pressure test, as specified in ANSI/NB-23, after completion of a riveted repair.

ILHR 41.64 Safety and safety relief valve repairs. (1) DEFINITIONS. (a) Repair of a safety valve or safety relief valve means the replacement, re-machining or cleaning of any critical part; lapping of seat and disc or any other operation which may affect the flow passage, capacity, function or pressure retaining integrity; and disassembly, re-assembly and adjustments which affect the safety valve or safety relief valve function.

(b) Safety valves and safety relief valves on which the seals have been broken shall be subject to the requirements for repairs.

(c) The initial adjustments of a new safety valve or safety relief valve on a boiler or pressure vessel are not considered a repair if made by the manufacturer or assembler of the valve.

(2) **AUTHORIZED REPAIRS.** Repairs to safety valves and safety relief valves shall be performed by an organization in possession of one or more of the following:

(a) ASME V, HV or UV code symbol stamp.

(b) National Board VR stamp covering the work to be performed.

(3) **NAMEPLATES.** (a) When a safety valve or safety relief valve is repaired, a metal repair nameplate stamped with the information required by par. (b) shall be welded or otherwise permanently attached to the valve either above, adjacent to or below the original stamping. On small valves, a metal tag showing the repair nameplate information may be securely attached to the repaired valve.

(b) The information on the valve nameplate shall include the name of the repair organization, the symbol stamp and symbol stamp number, and the date of repair. If the set pressure has been changed, the new set pressure and capacity shall be indicated and the original nameplate or stamping shall be modified by marking out, although leaving legible, the prior set pressure and capacity. The new capacity shall be based on that for which the valve was originally certified. Only the current repair nameplate need be attached to the valve with the original or duplicate nameplate.

SECTION 31. Chapter ILHR 41 subchapter VII is created to read:

SUBCHAPTER VII SECONDHAND VESSELS

ILHR 41.70 Application. Sections ILHR 41.70 to 41.76 apply to secondhand boilers and secondhand pressure vessels.

ILHR 41.71 Existing vessels. Secondhand boilers and secondhand pressure vessels, originally installed in Wisconsin and not constructed and stamped according to some edition of the

ASME code, may be reinstated if the maximum allowable working pressure is recalculated with a factor of safety of 6.

Note 1: The pressure calculation formula for shells is as follows:

$$P = (T.S. \times t \times E) / (R \times F.S.)$$

where P = maximum allowable working pressure, pounds per square inch
T.S. = tensile strength of shell plate, pounds per square inch
t = minimum thickness of shell plates, inches
E = efficiency of longitudinal joint
R = inside radius of the outside course of the shell, inches
F.S. = factor of safety

Note 2: The pressure calculation formula for flat heads and flat surfaces is as follows:

$$P = (T.S. \times t^2) / (0.5 \times d^2 \times F.S.)$$

where P = maximum allowable working pressure, pounds per square inch
T.S. = tensile strength of shell plate, pounds per square inch
t = thickness of plate, inches
d = diameter of head or shortest unsupported span of head or maximum pitch between stays, inches
F.S. = factor of safety

ILHR 41.72 Vessels from out-of-state. Secondhand boilers and secondhand pressure vessels, from out-of-state, shall be constructed and stamped according to some edition of the ASME code. A copy of the manufacturer's data report shall be furnished to the department for each vessel indicating that it was manufactured originally to the requirements of an earlier edition of the applicable ASME code. If a vessel has been repaired or altered since its fabrication, a copy of the manufacturer's data report, welded repair report or alteration report shall be furnished to the department.

ILHR 41.73 Lap seam boilers. Secondhand boilers which have lap seam construction and which are larger than 36 inches in diameter shall be limited to a maximum allowable working pressure of not more than 15 pounds per square inch.

ILHR 41.74 Prohibited boilers. The installation of secondhand boilers which have the longitudinal joint exposed to the intense heat of the furnace is prohibited. The locomotive or inside butt strap may not be considered as strengthening or changing the original type of boiler joint.

ILHR 41.75 Inspection and testing. (1) **HYDROSTATIC PRESSURE TEST.** Every secondhand vessel shall be inspected and given a hydrostatic pressure test at one and one-half times the maximum allowable working pressure at its new point of installation location before it is placed in operation. The test shall be witnessed by a certified inspector.

(2) **ALTERNATIVE TESTS.** When the certified inspector determines that a hydrostatic test at one and one-half times the maximum allowable working pressure is not possible or desirable, the certified inspector may accept alternative means to determine if the vessel is safe for its intended use.

Note: Where water is used in a hydrostatic test, the temperature of the water should not be less than 70° F and the maximum temperature during inspection should not exceed 120° F. If a test is conducted a 1-1/2 times the maximum

allowable working pressure (MAWP) and the owner specifies a temperature higher than 120° F, the pressure should be reduced to the MAWP and the temperature should be reduced to 120° F for the close examination.

(3) EXEMPT VESSELS. Boilers and pressure vessels used for portable or emergency use shall be exempt from secondhand vessel test requirements.

ILHR 41.76 Installation. Except for vessels exempted in s. ILHR 41.18, all secondhand vessels when reinstalled, shall comply with the ASME code in regard to fittings, appliances, valves, connections, settings and supports. These vessels shall also comply with the installation and permit to operate requirements in this chapter.

SECTION 32. Chapter ILHR 41 subchapter VIII is created to read:

SUBCHAPTER VIII
PRESSURE VESSELS IN PETROLEUM REFINERIES

ILHR 41.80 General requirements. Pressure vessels in petroleum refineries shall comply with the standards specified in API 510.

SECTION 33. Chapter ILHR 42 is repealed.

SECTION 34. Appendix A is repealed.

[Note to Revisor: Appendix B will be retained and updated.]

(END)

EFFECTIVE DATE

Pursuant to s. 227.22 (2)(intro.), Stats., these rules shall take effect on the first day of the month following publication in the Wisconsin Administrative Register.
