

RULES CERTIFICATE

STATE OF WISCONSIN)
) SS
DEPT. OF INDUSTRY,)
LABOR & HUMAN RELATIONS)

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, Carol Skornicka, Secretary of the Department of Industry,
Labor and Human Relations, and custodian of the official records of said department, do hereby certify that
the annexed rule(s) relating to boilers and pressure vessels

(Subject)

were duly approved and adopted by this department on October 26, 1992

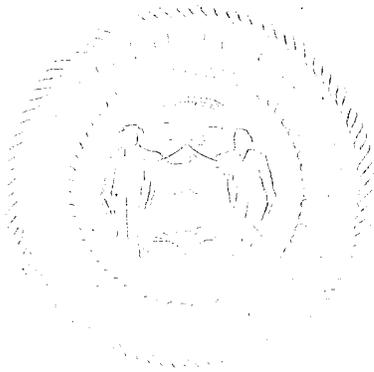
(Date)

I further certify that said copy has been compared by me with the original on file in the department
and that the same is a true copy thereof, and of the whole of such original.

RECEIVED

OCT 26 1992

11:10
Revisor of Statutes
Bureau



IN TESTIMONY WHEREOF, I have hereunto set
my hand and affixed the official seal of the
department at 9:15 a.m.
in the city of Madison, this 26th
day of October A.D. 19 92

Carol Skornicka
Secretary

1-1-93

ORDER OF ADOPTION

Pursuant to authority vested in the Department of Industry, Labor and Human Relations by section(s)

101.02(1) and (15)(h) to (j) and 101.17

Stats., the Department of Industry, Labor and Human Relations creates; amends;

repeals and recreates; repeals and adopts rules of Wisconsin Administrative Code chapter(s):

ILHR 41-42

Boiler and Pressure Vessel

(Number)

(Title)

The attached rules shall take effect on the first day of the month following publication
in the Wisconsin Administrative Register pursuant to section 227.22, Stats.

RECEIVED

OCT 26 1992

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Adopted at Madison, Wisconsin this

date: October 26, 1992

DEPARTMENT OF INDUSTRY, LABOR AND HUMAN
RELATIONS

Laurel Kamm
Secretary



RULES in FINAL DRAFT FORM

Rule No.: _____ Chapters ILHR 41-42

Relating to: _____ Boilers and Pressure Vessels

Clearinghouse Rule No.: _____ 92-53

The Wisconsin Department of Industry, Labor and Human Relations proposes an order to amend ILHR 41.08, ILHR 41.16 (1) (d), ILHR 41.16 (2) (c), ILHR 41.17 (1) (title) and (a), ILHR 41.31 (4) (d), (e) and (f), ILHR 41.41 (1) (a), ILHR 41.41 (2) (a), ILHR 42.03 (1) and ILHR 42.17 (3); to repeal and recreate ILHR 41.45 (1) (a) and ILHR 41.45 (3) (b); and to create ILHR 41.16 (1) (e), ILHR 41.31 (5), ILHR 41.45 (3) (a) Note and ILHR 41.49, relating to boilers and pressure vessels.

ANALYSIS OF PROPOSED RULES

Statutory Authority: ss. 101.02 (1) and (15) (h) to (j) and 101.17
Statutes Interpreted: ss. 101.17

The Division of Safety and Buildings within the Department is responsible for adopting and enforcing rules relative to the protection of the life, health, safety and welfare of employes and frequenters in public buildings and places of employment. The provisions of chapters ILHR 41-42 contain safety and health rules relating to the design, construction, installation, operation and inspection of boilers and pressure vessels.

The proposed rules consist of miscellaneous changes in chapters ILHR 41-42 in order to correct some inconsistencies and to address new products and technology. In the proposal, the current rules for inspections are revised to require all initial inspections of boilers and pressure vessels by authorized inspectors to be performed within 30 days of installation. The rules relating to boiler blowoff equipment are clarified relative to the location and size of vent piping. The installation registration requirements are changed to require the installer, rather than the owner or user, to notify the Department of an installation of a boiler, pressure vessel or power piping system. The current rules relating to water heaters and hot water storage tanks are also revised by requiring these units to meet the design, construction and pressure relief device requirements of the state plumbing code. A clarification is also added to allow a qualified organization to perform the welding on an alteration if the engineering calculations are provided by an ASME certificate holder.

Because of the increasing use of wood-burning boilers that are not covered under the current code, the proposed rules contain a new code section containing provisions to promote the safe use of these boilers. The proposal requires wood-burning boilers to meet specified requirements for design, plan submittal, installation, inspection and repairs. The boilers must be listed by a nationally recognized testing laboratory and must operate at atmospheric pressure. Plans for the boiler installation must be submitted to the Department, and the boiler must be located away from other structures in accordance with specified distances. The installation must be inspected by the Department before the boiler is placed in operation. Welded repairs must be made by qualified welders, and the Department must be notified of any welded repairs to the boiler.

SECTION 1. ILHR 41.08 is amended to read:

ILHR 41.08 FEES. Fees for the registration, inspection, certificate of operation and other services performed by the department pertaining to boilers and pressure vessels shall be submitted as specified in ch. ~~Ind-69~~ ILHR 2. The owner shall be responsible for the payment of fees.

SECTION 2. ILHR 41.16 (1)(d) is amended to read:

ILHR 41.16 (1)(d) Where the inspections specified in par. (a) are performed by an authorized inspector other than a department inspector, the authorized inspector shall file an inspection report with the department and shall affix the Wisconsin registration number as required in s. ILHR 41.36. The inspection report shall be filed with the department within 30 calendar days after completion of the boiler or pressure vessel installation. If the report is not filed within the 30-day period, the department shall perform the inspection. ~~Inspection reports shall be made on forms SBD-7678 and SBD-7679.~~

SECTION 2M. ILHR 41.16 (1)(e) is created to read:

ILHR 41.16 (1)(e) Required initial inspections shall be reported to the department on forms SBD-7678 and SBD-7679.

[Note to Revisor: Existing note should follow s. ILHR 41.16 (1)(e).]

SECTION 2R. ILHR 41.16 (2)(c) is amended to read:

ILHR 41.16 (2)(c) ~~The installing contractor~~ installer shall notify the department, the city of the first class or the authorized inspector employed by an insurance company prior to the start of construction of the power piping system so that inspections may be arranged. The department or the city shall be given a minimum of 2 business days notice to arrange for inspection.

SECTION 3. ILHR 41.17 (1)(title) and (a) are amended to read:

ILHR 41.17 (1) (title) INSPECTION OF POWER BOILERS. (a) Except as provided in ~~sub. (3)~~ and s. ILHR 41.18, power boilers and organic fluid heat transfer boilers shall be subjected to either a regular internal or external inspection at least once every 12 months by an authorized inspector.

SECTION 4. ILHR 41.31 (4)(d), (e) and (f) are amended to read:

ILHR 41.31 (4)(d) A drain connection of at least 2-inch standard pipe size; and

(e) Connections designed so that freezing will not close the inlet, the outlet or the vent; and

~~(f) Vent piping, full size, piped to the outside atmosphere and discharged to a safe location.~~

SECTION 5. ILHR 41.31 (5) is created to read:

ILHR 41.31 (5) VENT PIPING. All blowoff equipment shall have vent piping, full size, piped to the outside atmosphere and discharged to a safe location.

[Note to Revisor: Existing note should follow s. ILHR 41.31 (5)]

SECTION 6. ILHR 41.41 (1)(a) is amended to read:

ILHR 41.41 (1)(a) Except as provided in par. (b), the installation of any boiler or pressure vessel shall be registered with the department by the ~~owner or user~~ installer before the operation of the boiler or pressure vessel. Registration shall be in writing on form SBD-6314.

SECTION 7. ILHR 41.41 (2)(a) is amended to read:

ILHR 41.41 (2)(a) Except as provided in par. (b), the installation of any power piping system shall be registered with the department by the ~~owner or user~~ installer before the operation of the piping system. Registration shall be in writing on form SB-5204.

SECTION 8. ILHR 41.45 (1)(a) is repealed and recreated to read:

ILHR 41.45 (1)(a) Water heaters and hot water storage tanks, provided water temperatures do not exceed 210° F;

Note: See ch. ILHR 84 for requirements relating to water heaters and hot water storage tanks.

SECTION 9. ILHR 41.45 (3)(a) Note is created to read:

ILHR 41.45 (3)(a) Note: Pressure relief devices are not required on each vessel of a system if the system is properly equipped with pressure relief devices. For systems containing unheated water storage tanks, a pressure relief device is needed when the pressure-inducing source is capable of imposing a pressure greater than the design pressure of the tanks.

SECTION 10. ILHR 41.45 (3)(b) is repealed and recreated to read:

ILHR 41.45 (3)(b) Water heaters and hot water storage tanks shall be equipped with pressure-temperature relief devices in accordance with ch. ILHR 84.

SECTION 11. ILHR 41.49 is created to read:

ILHR 41.49 WOOD-BURNING BOILERS. This section applies to hand-fired wood-burning boilers that are used for space heating and that are not constructed and installed in accordance with the ASME code.

(1) DESIGN. (a) The boiler shall be constructed with self-contained weatherproofing with no additional structure enclosing the fired unit.

(b) The boiler shall be listed by a nationally recognized testing laboratory acceptable to the department.

Note: Examples of acceptable testing laboratories include, but are not limited to, PFS Corporation, UL and Factory Mutual.

(c) The boiler shall be designed for operation at atmospheric pressure and be properly vented to prevent a positive pressure condition.

(2) PLAN SUBMITTAL. (a) Two sets of plot plans shall be submitted to the department. The plot plans shall show the location of the boiler, buildings, property lines, streets, highways and pedestrian walkways.

Note: The plans should be submitted to the Division of Safety and Buildings, Boiler Safety Section, P.O. Box 7969, Madison, WI 53707.

(b) The following information shall be submitted with the plot plans:

1. A statement indicating the local fire department's evaluation of the proposed installation;
2. Construction and installation specifications; and
3. Verification of testing laboratory listing.

(c) A change from originally approved plans shall require submittal of new plans.

(3) INSTALLATION. (a) The boiler shall be located away from other structures in accordance with the following distances or in accordance with the manufacturer's recommendation, whichever is greater:

1. Residential occupancy - 25 feet;
2. Public assembly occupancy - 75 feet;
3. Institutional occupancy - 75 feet;
4. Commercial occupancy - 50 feet;
5. Industrial occupancy - 25 feet; and
6. Mixed occupancy - most restrictive distance.

(b) The boiler shall be enclosed by fencing or other barriers to prevent access by unauthorized persons.

(c) The boiler shall be manually fired and shall be limited to using wood or other solid fuels as the source of energy.

(d) The installation shall be provided with means to prevent freezing of the water supply and return lines.

(4) INSPECTION. (a) The installation shall be inspected by the department for compliance with this section and the approved plans before the boiler is placed in operation.

Note: Periodic inspections will not be performed on wood-burning boilers.

(b) Fees for the installation inspection shall be charged in accordance with s. ILHR 2.03.

(5) REPAIRS. (a) Repairs to the boiler shall be made in accordance with the manufacturer's recommendations.

(b) Welded repairs to the boiler shall be made by welders qualified in accordance with s. ILHR 53.53 or the ASME Code section IX.

(c) The department shall be notified by the contractor of any welded repairs to the boiler.

SECTION 12. ILHR 42.03 (1) is amended to read:

ILHR 42.03 (1) AUTHORIZATION. Alterations to boilers and pressure vessels, with the exception of rerating as specified in s. ILHR 42.30, shall be performed by an organization in possession of a valid ASME certificate of authorization, provided the alterations are within the scope of the authorization. The required engineering calculations shall be provided by the ASME certificate holder. When welding is necessary to complete the alteration, it shall be performed by the ASME certificate holder or an organization qualified under s. ILHR 42.02 (1).

SECTION 13. ILHR 42.17 (3) is amended to read:

ILHR 42.17 (3) LAPPED AND FILLET WELDED PATCHES. Lapped and fillet welded patches may be applied provided they are not exposed to radiant heat. Lapped and fillet welded patches may be applied on the pressure side of the sheet. The maximum diameter of the opening repaired may not exceed 8 inches or 16 times the thickness of the plate. Lapped and fillet welded patches shall have a minimum lap of ½-inch. If the area to be patched includes a riveted seam, rivets shall be removed before the patch is applied and new rivets driven before the patch is welded at the edges. New staybolts shall be installed in the patched area, and the heads of the staybolts shall not be covered by welding.

SECTION 14. Appendix Form SBD-5204 is replaced with the following form:

[Note to Revisor: Several page number references in the general Table of Contents and in the tables of contents for chapters ILHR 41 and 42 are incorrect. Please review and correct. Also, please change all "Ind 69" references to "ILHR 2".]

-5-
**POWER PIPING INSTALLATION
REGISTRATION**

Installing contractor must prepare this document for copy distribution as follows:

- White - Send to Department of Industry, Labor and Human Relations, Safety and Buildings Division, P.O. Box 7969, Madison, WI 53707, or City of Milwaukee, if applicable.
- Yellow - Send to owner.
- Pink - Retain for file.

System Description

User or Owner's Name	Installing Contractor's Name	
Street Address	Street Address	
City, State, Zip Code	City, State, Zip Code	
Installation Designed By	Authorized Inspector	
	Employed By	
	Date Inspected	Cert. No.

Safety Valve Settings - Power Source	Capacity
1. _____	_____
2. _____	_____
3. _____	_____

PSIG

Maximum Allowable Pressure _____

Test Pressure _____

Date Tested _____

I certify this system was installed and tested in accordance with ILHR 41.46 of the Wisconsin Administrative Code.

Date Installation Completed	Installer's Signature and Title	FOR DILHR USE ONLY Date Installation Registered
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(END)

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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.

* * * * *

CODES6/51

Tommy G. Thompson
Governor
Carol Skornicka
Secretary



Mailing Address:
201 E. Washington Avenue
Post Office Box 7946
Madison, WI 53707-7946
Telephone (608) 266-7552

State of Wisconsin Department of Industry, Labor and Human Relations

October 26, 1992

Gary Poulson
Assistant Revisor of Statutes
2nd Floor
119 Martin Luther King Blvd.
Madison, Wisconsin 53703

Douglas LaFollette
Secretary of State
10th Floor
30 West Mifflin Street
Madison, Wisconsin 53703

Dear Messrs. Poulson and LaFollette:

TRANSMITTAL OF RULE ADOPTION

CLEARINGHOUSE RULE NO. 92-53

RULE NO. Chapters ILHR 41-42

RELATING TO: Boilers and Pressure Vessels

Pursuant to section 227.20, Stats., agencies are required to file a certified copy of every rule adopted by the agency with the offices of the Secretary of State and the Revisor of Statutes.

At this time, the following material is being submitted to you:

1. Order of Adoption.
2. Rules Certificate Form.
3. Rules in Final Draft Form.

Pursuant to section 227.114, Stats., a summary of the final regulatory flexibility analysis is included for permanent rules. A fiscal estimate and fiscal estimate worksheet is included with an emergency rule.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Carol Skornicka".

Carol Skornicka
Secretary