(3) CERTIFICATE OF COMPETENCY. A certificate issued to a boiler or pressure vessel inspector who has passed a prescribed industrial commission examination.

(4) EXISTING INSTALLATION. Boiler and unfired pressure vessels placed in operation or contracted for prior to January 1, 1957.

(5) EXTERNAL INSPECTION. One made while boiler or vessel is in operation.

(6) FUSION WELDING. The melting together of filler metal and base metal, or of base metal only, which results in coalescence.

(7) HOT WATER HEATING BOILER AND HOT WATER SUPPLY. A boiler completely filled with water that furnishes hot water to be used externally to itself at pressures not exceeding 160 psig or at temperatures not exceeding 250 F. (A boiler exceeding either of these limits shall be classified as a power boiler.)

(8) INSPECTOR, AUTHORIZED OR QUALIFIED. (a) *Field inspector.* A boiler or unfired pressure vessel inspector who holds a valid certificate of competency.

(b) *Shop inspector.* A boiler or unfired pressure vessel inspector who is employed by a city or state which has adopted the A.S.M.E. boiler and pressure vessel code, or who is employed by an insurance company, and who when performing shop inspections in Wisconsin holds a Wisconsin certificate of competency.

(9) INTERNAL INSPECTION. One made when the boiler or unfired pressure vessel is shut down and handholes and manholes or other inspection openings are opened or removed for inspection of the interior.

(10) MAJOR REPAIR. A riveted or welded repair to a boiler drum, unfired pressure vessel drum, or boiler water leg.

(11) NEW INSTALLATION, BOILER OR UNFIRED PRESSURE VESSEL. One placed in operation or contracted for after January 1, 1957.

(12) NON-STANDARD BOILER OR NON-STANDARD UNFIRED PRESSURE VESSEL. One not bearing a valid Wisconsin stamping, nor the A.S.M.E. stamping, nor the National Board stamping, nor the Interstate Commerce Commission stamping, nor the stamping of the A.P.I.–A.S.M.E., nor any stamping authorized by other applicable codes.

(13) OWNER OR USER. Any person, firm, or corporation owning or operating a boiler or unfired pressure vessel.

(14) SECOND HAND VESSEL. A boiler or unfired pressure vessel when both location and ownership have been changed subsequent to the original installation.

(15) UNFIRED PRESSURE VESSEL. A vessel that obtains its pressure from an external source or from an indirect application of heat.

Note: For further explanation of definitions see the current edition of the A.S.M.E. Code—Section VIII—Scope.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61; am. (2) (b), (7), (10), Register, January, 1966, No. 121, eff. 2–1–66.

PART III

GENERAL RULES

Ind 41.03 Safety regulations. (1) No boiler or unfired pressure vessel shall be operated at a pressure in excess of the allowable working pressure stated on its current inspection certificate.

(2) No unauthorized peron shall remove or tamper with any connected safety device nor shall any person adjust a connected safety valve to a greater relieving pressure than that allowed for the vessel as stated on its current certificate of inspection.

(3) Boiler and unfired pressure vessels shall be so installed that there will be sufficient room between the vessel and any ceiling, wall, partition, or floor to facilitate the connection and operation of valves, pipes, and other appurtenances and shall be installed in a manner that will not block any inspection opening.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61; am. (3), Register, January, 1966, No. 121, eff. 2–1–66.

Ind 41.04 Reporting of accidents and major repairs. (1) Whenever a boiler or unfired pressure vessel fails and causes injury to any person, the owner or user shall report the facts involved to the industrial commission within the following 24 hours. The owner or user shall not remove or disturb the vessel or any of its parts nor permit any such removal or disturbance prior to receiving authorization from the industrial commission, except for the purpose of saving human life or further property damage.

(2) The owner, user, or his agent shall report any major repairs of a boiler or unfired pressure vessel as provided in Part VII—"Repairs, Additions, Alterations and Special Rules."

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61.

Ind 41.05 Reporting boiler and unfired pressure vessel locations. (1) The owner or user of any boiler or unfired pressure vessel shall report the location of such vessels unless either of the following conditions are met:

(a) The vessels are exempt from periodic inspections. See section Ind 41.21.

(b) The vessels are subjected to periodic inspection by the industrial commission, a city, an insurance company, or a company authorized to make its own inspections.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61.

Ind 41.06 Identification of boilers and unfired pressure vessels. (1) The owner or user of a boiler or unfired pressure vessel shall number each vessel in some permanent manner and in an accessible location.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61.

Ind 41.08 Certificate of competency as inspector. (1) CERTIFICATE REQUIRED. An inspection report covering a boiler or unfired pressure vessel may be recognized and accepted only when the inspector holds a valid certificate of competency issued by the industrial commission.

(2) ELIGIBILITY. (a) The applicant for a certificate of competency as a boiler or unfired pressure vessel inspector shall be an employee of the state, a municipality, an insurance company, or a corporation or company authorized to make its own inspections.

(b) The applicant shall be at least 25 years of age. He shall have had at least 3 years of experience in one or more of the following endeavors: construction, repairing, inspecting, operating engineer in charge of high pressure steam boilers or unfired pressure vessels.

(c) A degree in mechanical engineering may be accepted as the equivalent of 2 years practical experience.

(d) The applicant's employer shall certify that applicant's statement of experience is correct.

(3) APPLICATIONS AND RENEWALS. (a) Fees for examination and reciprocal certificates of competency shall be submitted with applications and in the amount specified in Wis. Adm. Code chapter Ind 69.

(b) Renewal fees shall be submitted with the request for renewal and in the amount specified in chapter Ind 69.

(c) A request for renewal shall be filed with the industrial commission on or before January 1 of the calendar year for which the certificate is to be valid.

(d) Applications for examination and applications for renewals by employees of the state and employees of the city of Milwaukee require no fee.

(4) EXAMINATIONS. (a) Certificates of competency for a boiler or unfired pressure vessel inspector may be issued by the industrial commission to eligible applicants passing the examinations prescribed by and conducted by the commission.

(b) Holders of certificates, who do not apply for renewal in any 3 year period may be required to pass a scheduled examination.

(5) ANNULMENTS AND REVOCATIONS. (a) A certificate becomes invalid when the holder terminates his employment with the employer of record at the time of issue. A renewal may be obtained under the provisions of this section provided applicant meets eligibility requirements.

(b) A certificate may be annulled or revoked when incompetency or negligence is determined after investigation.

(6) RECIPROCAL COMMISSIONS. (a) A reciprocal certificate of competency may be granted by the industrial commission to a boiler or unfired pressure vessel inspector under the following conditions:

1. The inspector shall be employed by a boiler insurance company licensed to do business in Wisconsin. The boiler insurance company shall make the application for a reciprocal commission to the industrial commission.

2. The inspector shall hold a commission issued by the National Board of Boiler and Pressure Vessel Inspectors or a certificate of competency from a city or state which has adopted the A.S.M.E. Boiler and Pressure Vessel Code and which holds a written examination similar to that required by Wisconsin.

3. The inspector shall appear before an examining board appointed by the industrial commission to review his qualifications as an inspector.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61.

Ind 41.11 Boiler blow-down equipment. (1) The blow-down from a boiler or boilers that enters a sewer system or blow-down which is considered a hazard to life or property shall pass through some form of blow-off equipment that will reduce pressure and temperature as required hereinafter.

(2) The temperature of the water leaving the blow-off equipment shall not exceed 140 F.

(3) The pressure of the blow-down leaving any type of blow-off equipment shall not exceed 5 psi.

(4) The blow-off piping and fittings between the boiler and the blow-off tank shall comply with sections Ind 41.50 and Ind 41.51 of this code.

(5) The tank shall be designed in accordance with sections Ind 41.50 and Ind 41.51 of this code for a working pressure of at least one-fourth the maximum working pressure of the boiler to which it is connected.

(6) All blow-off equipment, except centrifugal blow-down separators, shall be fitted with openings to facilitate cleaning and inspection.

Note. Blow-off equipment designed in accordance with the boiler blow-off equipment code issued by the National Board of Boiler and Pressure Vessel Inspectors, 1957 edition, will meet the requirements of this section. Other methods of designing blow-off equipment may be used if approved by the industrial commission.

(Available for inspection at the office of the industrial commission and the secretary of state's office and the office of the revisor of statutes or may be procured for personal use from the National Board of Boiler and Pressure Vessel Inspectors, 1155 N. High Street, Columbus, Ohio.)

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61.

Ind 41.12 Vessels supplied through pressure reducing valves. (1) The following formula shall be used for determining the sizes of safety and relief valves on unfired pressure vessels such as pressure cookers, indirect hot water heaters, equipment in heating systems, etc., which are supplied through pressure reducing valves from boilers carrying a higher steam pressure. Where a pressure reducing valve is supplied by a boiler, the capacity of the safety valve or valves on the low pressure side of the system need not exceed the capacity of the boiler.

$$RVC = \tfrac{1}{3} \times OC \times VSPA$$

Where RVC = relief valve capacity, lbs. of steam per hour.

OC = orifice capacity, lbs. of steam per hour per sq. in. (See Table 1.)

VSPA = valve size pipe area, sq. in. (See Table 2.)

Note: Most pressure reducing valves are arranged with a valved bypass which also acts as a potential steam source hazard in case the bypass is left open. Where such valved bypass is used, the following formula shall be used to determine the steam flow rate through the bypass.

$$RVC = \tfrac{1}{2} \times OC \times BPA$$

Where RVC = relief valve capacity, lbs. of steam per hour.

OC = orifice capacity, lbs. of steam per hour per square inch. (See Table 1.)

BPA = Bypass pipe area, sq. inch. (See Table 2.)

The larger of the relief valve capacities calculated by the above 2 formulas shall be used for selecting the relief valve for the vessel.

Example: Suppose a high pressure boiler operating at 125 psi distributes steam to a series of 40 psi A.S.M.E. constructed retorts through a 1½ inch size pressure reducing valve provided with a glove-valved 1 inch bypass. Determine the proper A.S.M.E. relief valve protection for the retorts. Utilizing data in tables and the first of the 2 formulas above:

$W = \tfrac{1}{3} \times 7200 \times 2.04 = 4896$ lbs. steam per hour.

Checking the bypass steam flow according to the second formula gives:

$W = \tfrac{1}{2} \times 7200 \times 0.86$—3100 lbs. steam per hour.

The potential steam flow through the pressure reducing valve is 4896 lbs. per hour rated capacity or

4896×1000 or 4,896.000 BTU per hour.

TABLE 1.—ORIFICE RELIEVING CAPACITIES, LB. PER HR. PER SQ. IN. FOR DETERMINING THE PROPER SIZE OF RELIEF VALVES USED ON LOW PRESSURE SIDE OF REDUCING VALVES

Outlet pressure, psi	Pressure-reducing valve inlet pressure, psi								
	125	100	85	75	60	50	40	30	25
110	4550								
100	5630								
85	6640	4070							
75	7050	4980	3150						
60	7200	5750	4540	3520					
50	7200	5920	5000	4230	2680				
40	7200	5920	5140	4630	3480	2470			
30	7200	5920	5140	4630	3860	3140	2210		
25	7200	5920	5140	4630	3860	3340	2580	1485	
15	7200	5920	5140	4630	3860	3340	2830	2320	1800
10	7200	5920	5140	4630	3860	3340	2830	2320	2060
5	7200	5920	5140	4630	3860	3340	2830	2320	2060

TABLE 2.—INTERNAL PIPE AREA

Nominal pipe size, inches	STANDARD		
	Actual external diameter, inches	Approx. internal diameter, inches	Approx. internal area, square inches
⅜	0.675	0.49	0.19
½	0.840	0.62	0.30
¾	1.050	0.82	0.53
1	1.315	1.05	0.86
1¼	1.660	1.38	1.50
1½	1.900	1.61	2.04
2	2.375	2.07	3.36
2½	2.875	2.47	4.78
3	3.5	3.07	7.39
3½	4.0	3.55	9.89
4	4.5	4.03	12.73
5	5.563	5.05	19.99
6	6.625	6.07	28.89
8	8.625	8.07	51.15
10	10.750	10.19	81.55
12	12.750	12.09	114.80

Note: In applying these rules, the area of the pipe is always based upon standard weight pipe and the inlet size of the pressure-reducing valve.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61; am. Register, January, 1966, No. 121, eff. 2–1–66.

PART IV

INSPECTIONS

Ind 41.20 Periodic inspections required. (1) INSPECTION OF BOILERS. Except as regulated in section Ind 41.21, boilers shall be subjected to either a regular internal or external inspection at least once every 12 months by a qualified inspector.

(2) INSPECTION OF UNFIRED PRESSURE VESSELS. Except as regulated in section Ind 41.21, unfired pressure vessels shall be subjected to a regular internal or external inspection at least once every 24 months by a qualified inspector.

(3) WHEN INTERNAL INSPECTION IS NOT POSSIBLE. Where an internal inspection is not possible because of the construction of the boiler or pressure vessel, an external inspection will be acceptable.

(4) EXTENSION OF PERIOD BETWEEN INSPECTIONS. If operating conditions require, longer periods between inspections of boilers and unfired pressure vessels may be approved by the industrial commission upon a written request for an extension.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61.

Ind 41.21 Vessels exempt from periodic inspections. The following boilers and unfired pressure vessels will not be subject to periodic inspection, but in individual cases any such vessel will be subject to inspection by or on order of the commission upon complaint of any person or upon initiative of the commission 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 this code:

(1) Boilers or unfired pressure vessels which receive regular inspections by United States government inspectors.

(2) Steam boilers or unfired pressure vessels having an internal or external operating pressure not exceeding 15 psi with no limitations to size. Hot water boilers and their expansion tanks having an internal operating pressure not exceeding 30 psi with no limitations to size.

(3) Boilers used exclusively for agricultural purposes.

(4) Miniature boilers.

(5) Unfired pressure vessels having an inside diameter not exceeding 6 inches with no limitation to pressure.

(6) Unfired pressure vessels having a volume of less than 5 cubic feet and an operating pressure of less than 250 psi.

(7) Unfired pressure vessels with a volume of less than 1½ cubic feet with no limit on pressure.

(8) Unfired pressure vessels which are used in accordance with the regulations of the interstate commerce commission.

(9) Air receivers having a volume not to exceed 12 cubic feet and an operating pressure of less than 225 psi.

(10) Hot water supply boilers and hot water storage tanks.

(11) Vessels used for the storage or processing of cold water including those with air cushions.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61.

Ind 41.22 Preparation for internal inspections. The owner or user of a boiler or an unfired pressure vessel subject to inspection shall prepare the vessel for internal inspection after due notice from the inspector. To prepare a vessel for an internal inspection, all handhole, manhole plates and washout plugs shall be removed. The shell and heads shall be thoroughly cleaned and exposed when so requested. Each steam boiler shall be thoroughly drained of hot water and the combustion chamber and furnace cleaned out before an internal inspection is made.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61.

Ind 41.23 Insurance company inspections. Periodic inspections of boilers and unfired pressure vessels by insurance companies may be accepted by the industrial commission under the following conditions:

(1) The boiler and pressure vessel inspectors employed by the insurance company shall hold certificates of competency issued by the industrial commission.

(2) The insurance company shall report inspections of boilers and unfired pressure vessels to the industrial commission as required in section Ind 41.26.

(3) The inspection procedures used by the insurance company shall conform to the regulations of this code.

(4) The insurance company shall report to the industrial commission within 30 days when insurance coverage is started or discontinued on a boiler or unfired pressure vessel. The reason for discontinuing the coverage shall be given on the report.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61.

Ind 41.24 Inspections by cities. Periodic inspections of boiler and unfired pressure vessels by cities of the first class may be accepted by the industrial commission under the following conditions:

(1) The boiler and pressure vessel inspectors employed by the city shall hold certificates of competency issued by the industrial commission.

(2) The city shall keep a record of such periodic inspections.

(3) The inspection procedures used by the city shall conform to the regulations of this code.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61.

Ind 41.25 Companies or corporations allowed to make inspections. Periodic inspections by companies or corporations of boilers or unfired pressure vessels which they own or operate may be accepted by the industrial commission under the following conditions:

(1) The boiler and pressure vessel inspectors employed by the company or corporation shall hold certificates of competency issued by the industrial commission.

(2) The company or corporation shall report inspections of boilers and unfired pressure vessels to the industrial commission as required in section Ind 41.26.

(3) The inspection procedures used by the company or corporation shall conform to the regulations of this code.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61.

Ind 41.26 Reporting of inspections. (1) Reports of periodic internal inspections shall be sent to the industrial commission within 30 days from the date of the inspection.

(2) External inspections shall be reported only when either of the following conditions is found:

(a) An internal inspection is not possible because of the construction of the vessel. In such cases the first inspection shall be reported to the commission in the same manner as an internal inspection. The report shall be marked "external" and the reason for making an external inspection instead of an internal shall be given.

(b) When violations of this code or unsafe conditions involving the safety of the vessel are found. This report shall be made on A.S.M.E. Form P-6 and shall explain the violation or unsafe condition with references to code section numbers. A copy of the recommendations to the owner or user of the vessel shall accompany the report to the commission.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61.

Ind 41.27 Inspection report forms. (1) FIRST INTERNAL INSPECTION. The first internal inspection (or external if internal is not possible) of a boiler or pressure vessel which conforms to the A.S.M.E. Code shall be reported on A.S.M.E. Form P-6. If the boiler or pressure vessel does not conform to the A.S.M.E. Code Form P-5 shall be used. The first inspection report shall be as complete as possible and shall contain the maximum allowable working pressure, number of safety valves and their settings and capacities, and the known violations of this code.

(2) SUBSEQUENT INSPECTIONS. After the report of the first internal or external inspection has been sent to the commission, the subsequent reports may be copies of the report of inspection made to the owner or user of the vessel. Such reports shall show the location identifying number or description, safe working pressure, and safety or relief valve setting of the boiler or unfired pressure vessel. Such report shall give recommendations for correction of known violations of this code.

(3) MULTIPLE VESSELS ON A SINGLE REPORT. A group of unfired pressure vessels of the same design and use that are interconnected or are operated so as to form a unit, machine, or apparatus may be included in a single report. The report shall contain the number, description, and use of the vessels.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61.

Ind 41.28 Inspection certificates. (1) After each periodic internal or external inspection, the city, insurance company, or company or corporation shall issue an inspection certificate to the owner or user of the boiler or unfired pressure vessel.

(2) The inspection certificate shall give the maximum allowable working pressure for the vessel. Such pressure shall be determined using the regulations of the code.

(3) The inspection certificate shall be valid until the next required periodic inspection.

(4) The inspection certificate shall be kept on file on the premises by the owner or user of the boiler or unfired pressure vessel and shall be available when called for by a deputy of the industrial commission.

(5) For unfired pressure vessels, the inspection report made to the owner or user may be used as the inspection certificate if the report is so marked.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61; am. (1), (4) and (5), Register, January, 1966, No. 121, eff. 2–1–66.

PART V

NEW INSTALLATIONS
ORIGINAL CONSTRUCTION

Ind 41.50 A.S.M.E. code vessels. (1) Except as regulated in Wis. Adm. Code sections Ind 41.51, 41.52 and 42.53, boilers and unfired pressure vessels installed after February 1, 1966, shall be constructed

and installed in accordance with the following sections of the A.S.M.E. Boiler and Pressure Vessel Code:

(a) Section	I	Power Boilers	1965 Edition	As Amended to July 1, 1965
(b) Section	II	Material Specifications	"	"
(c) Section	III	Nuclear Vessels	"	"
(d) Section	IV	Low Pressure Heating Boilers	"	"
(e) Section	VIII	Unfired Pressure Vessels	"	"
(f) Section	IX	Welding Qualifications	"	"
(g)		A.S.M.E. Code Cases	"	"

Note 1. Copies of the above publication are available for inspection at the office of the industrial commission, secretary of state's office, and the office of the revisor of statutes, or they may be procured for personal use from the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, New York 10017.

Note 2. Because the A.S.M.E. references are subject to revision and amendment, this section of the code will be amended at intervals. It is recommended that holders of this code subscribe to the upkeep service available from the Department of Administration, Document Sales and Distribution, Room B 237, State Office Building, 1 West Wilson Street, Madison, Wisconsin 53702.

Note 3. Section VII, "Suggested Rules for Care of Boilers" is recommended as a guide for boiler owners and operators.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61; r. and recr. Register, December, 1962, No. 84, eff. 1–1–63; am. Register, August, 1964, No. 104, eff. 9–1–64; am. Register, January, 1966, No. 121, eff. 2–1–66.

Ind 41.51 Wisconsin special vessels. (1) Where it is not possible or practical to construct a boiler or unfired pressure vessel in strict compliance with the A.S.M.E. codes listed in section Ind 41.50, the industrial commission may grant a modification to the owner or user to permit the installation of the vessel as a Wisconsin special within the state of Wisconsin under the following conditions:

(a) When the method of designing or constructing the vessel is not covered by the A.S.M.E. codes, the commission may approve the installation of the vessel if adequate proof of comparable safety of the design or construction is shown.

1. Complete plans, calculations, and specifications in duplicate shall be submitted to and approved by the commission before the vessel is installed.

2. The vessel shall be stamped "Wisconsin Special".

3. All other applicable requirements of the A.S.M.E. codes listed in section Ind 41.50 shall be met.

(b) When the vessel is to be built by an owner for his own use, the commission may waive the stamping required by the A.S.M.E. codes listed in section Ind 41.50.

1. Complete plans, calculations, and specifications in duplicate shall be submitted to and approved by the commission before the vessel is installed.

2. The vessel shall be stamped "Wisconsin Special".

3. All other applicable requirements of the A.S.M.E. codes listed in section Ind 41.50 shall be met.

(c) When a small number of vessels is to be built by a manufacturer, the commission may waive the stamping required by the A.S.M.E. codes listed in section Ind 41.50.

1. Complete plans, calculations, and specifications in duplicate shall be submitted to and approved by the commission before the vessel is installed.

2. The vessel shall be stamped "Wisconsin Special".

3. All other applicable requirements of the A.S.M.E. codes listed in section Ind 41.50 shall be met.

(2) The provisions of this section shall not apply to Wisconsin special vessels accepted by the industrial commission before the effective date of this section.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61.

Ind 41.52 Interstate commerce commission vessels. (1) Unfired pressure vessels carrying the stamping of the I.C.C. will be considered comparable to a vessel meeting the requirements of section Ind 41.50. When such vessels are used in the state of Wisconsin, it shall be the responsibility of the owner of the vessels to have the construction records of the vessels available for inspection by the industrial commission.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61.

Ind 41.53 Non-Code vessels. (1) The following vessels will only be required to meet the pressure-relief device requirements of the A.S.M.E. codes listed in section Ind 41.50.

(a) Water heating apparatus, such as range boilers or tanks having a self-contained gas, oil, or electric heating unit used exclusively for hot water service provided such apparatus carries a seal of approval from a testing agency recognized nationally and by the commission. The term "hot water service" shall be construed to mean a system in which the hot water is used for general cleaning purposes as in the bath, the laundry, and in the kitchen.

1. This exception shall not apply when the apparatus is used as a hot water heating boiler.

(b) Vessels for containing water under pressure for domestic supply including those having an air space for expansion.

(c) Hot water storage tanks, when heated indirectly by circulating either steam at or below 15 psig, or by hot water at or below 30 psig through a coil or heat exchanger, and the storage water temperature does not exceed 200 F.

(d) Pressure vessels used for water conditioning and filtration.

(e) The vessels listed in paragraphs (b), (c) and (d) of this section shall be identified by stamping showing the manufacturer's name, a serial number, the allowable working pressure, and the year fabricated.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61.

Ind 41.54 Low water fuel cut-off for hot water heating boilers. Every automatically fired hot water heating boiler installed after the effective date of this section with a heat input of more than 200,000 Btu per hour shall be provided with an automatic low-water fuel cut-off so located as to automatically cut off the fuel supply when the surface of the water falls to the lowest safe water line. The lowest safe water line shall be at or above the height required on a corresponding steam boiler.

History: Cr. Register, April, 1961, No. 64, eff. 5–1–61.