

CHAPTER 183

FOUNDRIES, ELEVATORS, BOILERS; REGULATIONS

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FOUNDRIES

183.05 FOUNDRIES; ENTRANCE; GANGWAY; AISLES. An iron or steel foundry means a place where iron or steel, or both metals, are melted and poured into sand molds in the making of castings, together with all cleaning, core-making, drying, and wash-rooms and toilet-rooms used in connection therewith.

The term "entrance," as used in sections 183.05 to 183.34 means main doorways opening directly to the outer air.

The term "gangway," as used in sections 183.05 to 183.34 means well defined passageways dividing the working floors of foundries, but not the spaces between molds. Spaces between molds shall be divided into three classes, which shall be known as "bull-ladle aisles," "hand-ladle aisles," and "buggy-ladle aisles."

[1919 c. 84 s. 1] (4054)

183.06 FOUNDRIES EXEMPT FROM CERTAIN LAWS. Except as otherwise specified the provisions of sections 183.05 to 183.34 shall, as to the subjects covered therein, exempt foundries from the laws relating to factories and workshops.

[1919 c. 84 s. 2] (4055)

183.07 PROTECTION OF ENTRANCE TO FOUNDRIES. Entrances to foundries shall be protected from November first to April first of each year by a covered vestibule, either stationary or movable, so constructed as to eliminate drafts and of such dimensions as to answer ordinary purposes, such as the passage of wheelbarrows, trucks, and small industrial cars. This shall not apply to entrances used for railroad or industrial cars handled by locomotives or motors, or for traveling cranes; or for vehicles, or for large industrial cars moved by hand; these entrances may remain open only for such time as is necessary for the ingress and egress of such cars, trucks and trains.

No locomotive shall be permitted to remain inside the foundry during the loading or unloading of the cars.

[1919 c. 84 s. 3] (4056)

183.08 SIZE OF GANGWAYS. Main gangways where metal is carried by hand, bull or truck ladles shall not be less than five feet wide. Truck-ladle gangways which are not main gangways shall be not less than four feet wide. Bull-

ladle aisles between floors shall not be less than three feet wide. Single hand-ladle or buggy-ladle aisles between floors shall be not less than 18 inches wide. Where trolleys are used over molding floors for pouring metal, the aisles shall be of sufficient width to permit the safe ingress and egress of employees and the safe use of the ladles. The provisions of this section shall apply to all foundries hereafter established. In existing foundries, where it is impractical to widen the gangways and aisles to the width required in this section, the department of labor and industry, or its assistants, may permit gangways and aisles to be of a narrower width.

[1919 c 84 s 4; Ex1967 c 1 s 6] (4057)

183.09 GANGWAYS KEPT FREE; CONSTRUCTION. During the progress of casting, every gangway or aisle shall be kept entirely free from pools of water or obstructions of any nature. Every gangway, where industrial tracks are used shall be constructed of a hard material of substantial character, and the top of the rails shall be flush with the floor. Every gangway shall be kept in a good and safe condition at all times.

[1919 c. 84 s. 5] (4058)

183.10 MECHANICAL VENTILATION. Where smoke, steam, gases, or dust arising from any of the operations of the foundry are dangerous to the health or eyes, and where a natural circulation of air does not carry off the greater part of such smoke, steam, gases, or dust, there shall be installed and operated adequate mechanical means of ventilation.

[1919 c. 84 s. 6] (4059)

183.11 MOLDING ROOM. The cleaning and chipping of castings shall be done in cleaning rooms, except that castings may, when necessary, be chipped or cleaned in the molding room or where cast, provided sufficient protection is furnished by the use of a curtain or screen, or some other means equally good, to protect employees therein.

This section shall not apply if mechanical appliances are used for cleaning castings and the dust and particles arising therefrom are effectively removed.

[1919 c. 84 s. 7] (4060)

183.12 EXHAUST SYSTEMS IN TUMBLER MILLS. Where tumbler mills are used, exhaust systems shall be installed to effectively carry off the dust arising from the cleaning of castings, except where the mill is operated outside the foundry. This section shall not prohibit the use of a water barrel for cleaning castings. Sand blast operations shall be carried on in the open air or in a separate room used solely for that purpose. The milling of cupola cinders, when done inside the foundry, shall be carried on by an exhaust mill or water mill.

[1919 c. 84 s. 8] (4061)

183.13 WHEN COMPRESSED AIR CANNOT BE USED. No cores shall be blown out of castings by compressed air unless such work is done outside the foundry or in a special or dust-proof enclosure. Employees engaged in cleaning castings by compressed air or sand blast shall wear eye guards and helmets, to be furnished by the employer.

[1919 c. 84 s. 9] (4062)

183.14 HOODS AND PIPES TO BE SUPPLIED. When fumes, gases, and smoke are emitted from drying ovens in such quantities as to be detrimental to the health or eyes of the employees, hoods and pipes or other adequate means of ventilation shall be provided.

[1919 c. 84 s. 10] (4063)

183.15 ARTIFICIAL LIGHT. Where natural light is insufficient to properly light the foundry, artificial light of sufficient power shall be provided.

The continuous use of hand torches or other lamps that emit injurious smoke and gases is prohibited.

[1919 c. 84 s. 11] (4064)

183.16 HEAT. Proper and sufficient heat shall be provided and maintained in every foundry. The use of the open salamander stove, or stoves of that type, for heating purposes shall be prohibited, except in cases of emergency.

[1919 c. 84 s. 12] (4065)

183.17 DRYING OF LADLES. All hand and bull-ladles shall be dried outside of the foundry, or in accordance with section 183.10. A sufficient number of sheet iron shields shall be available in foundries for use in covering hand and bull-ladles.

[1919 c. 84 s. 13] (4066)

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183.18 DRYING OF CLOTHES. Suitable facilities shall be provided for drying the clothing of such employees as may be found necessary.

[1919 c. 84 s. 14] (4067)

183.19 WATER-CLOSETS. In every foundry where water-closets or privy accommodations are permitted to remain outside of the foundry, the passageway leading from the foundry to the water-closets or privy accommodations shall be so constructed that the employees in passing thereto or therefrom shall not be exposed to outdoor atmosphere, and such passageways, water-closets or privy accommodations shall be properly heated during cold weather.

[1919 c. 84 s. 15] (4068)

183.20 NUMBER OF CLOSETS. Water-closets shall be provided in every foundry and for each sex according to the following table:

Number of persons	Number of closets	Ratio
1 to 10	1	(1 for 10)
11 to 25	2	(1 for 12½)
26 to 50	3	(1 for 16%)
51 to 80	4	(1 for 20)
80 to 125	5	(1 for 25)

[1919 c. 84 s. 16] (4069)

183.21 INDIVIDUAL LOCKERS. Individual lockers, arranged for locking, shall be provided for employees, and shall be placed either in a room used exclusively for that purpose, in the wash-room, in the drying-room, or at convenient places in the foundry. The necessity for individual lockers shall be determined by the department or its assistants.

[1919 c 84 s 17; Ex1967 c 1 s 6] (4070)

183.22 INSPECTION OF APPLIANCES. Ladles, shanks, tongs, slings and yokes, skimmers and slag hoes used in the pouring of molten metals shall, prior to their use, be inspected daily as to their safety for the men preparing and using same; and, in addition, a regular inspection, as to their safety, shall be made once a month by a man designated for that purpose.

A monthly inspection shall also be made of the chains and cables on counter-weights in connection with drying ovens, and reports of such inspection shall be made on prescribed forms and be kept on file for examination by the state factory inspector.

[1919 c. 84 s. 18] (4071)

183.23 BREAKING OF CASTINGS PROHIBITED. The breaking of castings by the use of a drop inside the foundry during the general working hours is prohibited. Where a drop is used for the breaking of castings or scrap outside of the foundry, a permanent shield of heavy planking or other adequate protection shall be provided.

[1919 c. 84 s. 19] (4072)

183.24 FEMALES NOT TO BE EMPLOYED IN CORE ROOMS. No female shall be employed in placing cores into ovens or in taking cores out of ovens.

[1919 c. 84 s. 20] (4073)

183.25 NUMBER OF POUNDS SPECIFIED. No female employed in any core-making room shall be permitted to make or handle cores when the combined weight of core, core box and plate at which she is working shall exceed 25 pounds.

[1919 c. 84 s. 21] (4074)

183.26 BRASS FOUNDRY; CELLAR; BASEMENT. A "brass foundry" means a place where brass, aluminum, copper, tin, zinc, gold, silver, or composition metals containing any of the foregoing metals are melted or poured into sand molds in the making of castings. Foundries where only aluminum is melted shall be covered by the provisions of sections 183.05 to 183.34 governing iron and steel foundries.

The term "cellar," when used in sections 183.05 to 183.34, means a room or part of a building which is one-half or more of its height below the level of the curb on the ground adjoining the building, excluding areaways.

The term "basement," when used in sections 183.05 to 183.34, means a room or a part of a building which is one-half or more of its height above the level of the curb.

[1919 c. 84 s. 22] (4075)

183.27 APPLICATION TO BRASS FOUNDRIES. The provisions of sections 183.05 to 183.34 relative to dust, smoke, gases or fumes, ventilation, sanitation, heat, light, gangways and aisles, safety appliances, drying and locker accommodations, as specified for iron and steel foundries, shall apply to brass foundries.

[1919 c. 84 s. 23] (4076)

183.28 DETAIL CONSTRUCTION IN BRASS FOUNDRIES. In all brass foundries, when the crown plate of an upright melting furnace is elevated above the surrounding floor in excess of 12 inches, the furnace shall be equipped with a platform with a standard rail; such platform shall be constructed of metal or other fireproof material, and shall extend along the front and sides of the furnace, flush with the crown plate, and shall be at least four feet in width, and shall be clear of all obstructions during pouring time. If the platform is elevated above the floor in excess of 12 inches, the lowering from same of crucibles containing molten metal shall be done by mechanical means.

Where the combined weight of crucible, tongs, and molten metal exceeds 250 pounds, the same shall be removed from the furnace and deposited on the floor by mechanical means.

[1919 c. 84 s. 24] (4077)

183.29 PROTECTION FOR LEGS AND FEET. All persons removing pots containing molten metal from furnaces and handling same shall be provided with protection for legs and feet.

[1919 c. 84 s. 25] (4078)

183.30 GANGWAYS. In all brass foundries, gangway dirt and floor scrapings shall not be riddled in the room where workmen are employed, unless they are so dampened as to prevent dust arising therefrom.

[1919 c. 84 s. 26] (4079)

183.31 CASINGS FOR STOVES. Stoves used for drying molds, when located in the rooms used by workmen, shall be surrounded by a casing of fireproof material to the full height of the stove.

[1919 c. 84 s. 27] (4080)

183.32 CLEARANCES. No brass foundry shall hereafter be constructed with a clearance of less than 14 feet between the lowest point of the ceiling and the floor, except that where a peak, sawtooth, monitor or arch roof is constructed the side walls may be of a minimum height of 12 feet.

[1919 c. 84 s. 28] (4081)

183.33 REOPENING OF FOUNDRIES. In case any foundry that was legally operated in a cellar or basement on January 1, 1919, shall be discontinued or unused for a period of more than four consecutive months, it can thereafter be reopened as a foundry only by complying with all the provisions of sections 183.05 to 183.34 relating to future foundries. The occasional operation of a foundry for the purpose of evading this section shall not be deemed a continuance of use thereof.

[1919 c. 84 s. 29] (4082)

183.34 ENFORCEMENT. The department and its assistants shall enforce the provisions of sections 183.05 to 183.34. Any person, firm, or corporation violating any of the provisions of those sections shall, if after written notice by the department or its assistants of such violation they shall not after 30 days have complied with such notice, be guilty of a misdemeanor and punished by a fine not exceeding \$100 or by imprisonment not exceeding 90 days. If an employee neglects to use the devices furnished under the provisions of those sections he shall be guilty of a misdemeanor, punishable by a fine not exceeding \$10 or imprisonment for not exceeding ten days.

[1919 c 84 s 30; Ex1967 c 1 s 6] (4083)

ELEVATORS

183.35 [Repealed, 1955 c 561 s 6]

183.351 DEFINITIONS. Subdivision 1. As used in sections 183.351 to 183.356 the terms "passenger or freight elevator," "automatic operation" and "continuous pressure operation" shall have the following meanings.

Subd. 2. Passenger or freight elevator shall mean all elevators except those that comply with the safety regulations of the department of labor and industry relating to construction and installation and that have automatic operation or continuous pressure operation.

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Subd. 3. Automatic operation shall mean operation wherein the starting of the elevator car is effected in response to momentary actuation of operating devices at the landing or of operating devices in the car identified with the landings, or both, or in response to an automatic starting mechanism and wherein the car is stopped automatically at the landings.

Subd. 4. Continuous pressure operation shall mean operation by means of buttons or switches in the car and at the landing, any one of which may be used to control the movement of the car as long as the button or switch is manually maintained in the actuating position.

[1955 c 561 s 1; Ex1967 c 1 s 6]

183.352 ELEVATOR OPERATORS. The owner, manager, or lessee of any building in which there is installed a passenger or freight elevator, as hereinafter defined, shall designate a competent person or competent persons regularly to operate such elevator; provided, however, that any such owner, manager or lessee may arrange with one or more tenants of such building to designate one or more of his or their employees regularly to operate such elevator. No person not so designated shall operate any such elevator and no person shall employ or permit a person not so designated to operate any such elevator. The foregoing prohibitions shall not apply during any period of time when any such elevator is being constructed, installed, inspected, repaired or maintained.

[1955 c 561 s 1]

183.353 LICENSING AUTHORITIES. Any city or village may by ordinance establish a licensing authority with jurisdiction over all passenger and freight elevators within such city, fix the initial and renewal fee for, and the period of duration of, licenses to operate such elevators, and setting forth the requirements for applicants for and the terms and conditions of licenses to operate such elevators.

[1955 c 561 s 2]

183.354 ELEVATORS, ENTRANCES SEALED. It shall be the duty of the department of labor and industry and the licensing authority of any city or village which adopts any such ordinance whenever it finds any such elevator under its jurisdiction in use in violation of any provision of sections 183.351 to 183.355 to seal the entrances of such elevator and attach a notice forbidding the use of such elevator until the provisions thereof are complied with.

[1955 c 561 s 3; Ex1967 c 1 s 6]

183.355 VIOLATIONS, PENALTIES. Any person, firm or corporation who violates any of the provisions of sections 183.351 to 183.355 or who removes any seal or notice forbidding the use of any such elevator, except by authority of the department of labor and industry or the licensing authority having jurisdiction over such elevator, or who operates such elevator after such notice has been attached forbidding its use, unless such notice has been removed by authority of the department of labor and industry or the licensing authority having jurisdiction over such elevator shall be guilty of a misdemeanor.

[1955 c 561 s 4; Ex1967 c 1 s 6]

183.356 LICENSES FOR OPERATORS. In the event an operator is employed to operate an automatic elevator or continuous pressure elevator as provided in sections 183.351 to 183.355, such operator shall be duly licensed as provided in sections 183.351 to 183.355.

[1955 c 561 s 5]

183.36, 183.37 [Repealed, 1955 c 561 s 6]

BOILERS

183.375 DIVISION OF BOILER INSPECTION. Subdivision 1. **Management of division.** The department of labor and industry, division of boiler inspection, is hereby continued under the management, supervision, and control of the department of labor and industry.

Subd. 2. **Chief of division.** Subject to the provisions of Minnesota Statutes, Chapter 43, the commissioner shall appoint a chief and a deputy chief of the division of boiler inspection. They shall be qualified steam engineers with at least ten years of experience as such and shall be licensed as chief Grade A engineers in this state and shall possess a current commission issued by the national board of boiler and pressure vessel inspectors.

Subd. 3. **Inspectors.** The department may employ such inspectors and other persons as are necessary to efficiently perform the duties and exercise the powers imposed upon the division of boiler inspection.

Subd. 4. **Powers and duties.** Subject to the provisions of Minnesota Statutes, Chapter 43, the department shall prescribe the duties of the division of boiler inspection.

Subd. 5. **Fees.** All fees collected by the division of boiler inspection shall be paid into the state treasury in the manner provided by law for fees received by other state departments and credited to the general fund.

Subd. 6. **Reports and notices.** All reports and notices heretofore required by law to be made or given to the board of boiler inspectors, or the chief boiler inspector shall be made or given to the department.

[1921 c 83 s 1, 2, 5, 6; 1957 c 503 s 2; 1965 c 303 s 1; Ex1967 c 1 s 6; 1969 c 399 s 49] (4203, 4204, 4207, 4208)

183.38 BOILER INSPECTOR; INSPECTIONS; EXAMINATIONS; LICENSES.

Subdivision 1. The division of boiler inspection shall inspect all steam boilers and pressure vessels in use not expressly excepted from such inspection by law. Immediately upon inspection the division of boiler inspection shall issue a license therefor or a certificate condemning the boiler or pressure vessel and shall seal it. Forms for these licenses and certificates shall be prepared and furnished by the commission. The division of boiler inspection shall examine all applicants for engineer's licenses. The chief of the division of boiler inspection shall issue such license to an applicant as the examination shall show he is entitled to receive.

Subd. 2. For the purpose of examining applicants for license the chief of the division of boiler inspection or his deputy shall fix and determine a time and place for the examinations, and give notice to all applicants of the time and place. The chief or his deputy shall grant and sign such license certificates as applicants are entitled to receive upon examination.

[R. L. s 2168; 1919 c 240 s 1; 1927 c 378; 1957 c 503 s 3] (5474)

183.39 **PERSONS ELIGIBLE.** Subdivision 1. Each boiler inspector shall be a man of good moral character, and shall be licensed in this state as a chief engineer, except for the purpose of organizing the division under Laws 1957, chapter 503, the requirements of Section 183.39, Subdivision 1, shall not apply. There shall be a qualifying examination conducted among the present inspectors regardless of license. The requirements for inspectors hired after the qualifying examination shall be as required in Section 183.39, Subdivision 1. He shall not be interested in the manufacture or sale of boilers or steam machinery or in any patented article required or generally used in the construction of engines or boilers.

Subd. 2. All boiler inspectors who are now employed by the division of boiler inspection on a full time basis and are now compensated for their services on a fee basis and who are now in the classified service, as defined in Minnesota Statutes, Section 43.09, Subdivision 4, shall retain their civil service status during such time as they continue as boiler inspectors. Their compensation shall not at any time be less than the amount they are now receiving.

[R. L. s 2169; 1957 c 503 s 4] (5475)

183.40 [Repealed, 1957 c 503 s 24]

183.41 **BOATS; REGULATIONS.** Subdivision 1. "Boat" means any boat or vessel propelled by mechanical power used and operated for carrying passengers for hire on any inland waters of the state.

Subd. 2. The department shall prescribe regulations for the annual inspection of the hulls, machinery, boilers, steam connections, fire apparatus, life saving appliances and equipment of all power boats navigating the inland waters of the state, which shall conform as near as may be to the requirements of the United States in similar cases; these regulations shall have the force of law.

Subd. 3. The department shall designate the number of passengers that each boat may safely carry, and no such boat shall carry a greater number than is allowed by the inspectors certificate.

[R. L. s 2171; 1957 c 503 s 5; Ex1967 c 1 s 6] (5477)

183.42 **INSPECTION EACH YEAR.** Every owner, lessee, or other person having charge of steam boilers, unfired pressure vessels or any boat subject to inspection under this chapter shall cause the same to be inspected at least once each year by the division of boiler inspection.

[R. L. s 2172; 1957 c 503 s 6] (5478)

183.43 [Repealed, 1957 c 503 s 24]

183.44 **EXAMINATIONS; REGULATIONS; LICENSING, REVOCATIONS.** Subdivision 1. The division of boiler inspection shall examine all masters and

pilots of steamboats and vessels and all gasoline boats and vessels carrying passengers for hire on the inland waters of the state as to their qualifications and fitness. If found trustworthy and competent to perform his duties as a master or pilot he shall be given a certificate authorizing him to act as such on the inland waters of the state designated in the certificate.

Subd. 2. The division of boiler inspection shall make such regulations for the navigation of any such boat or vessel as will require their operation without danger to life or property.

Subd. 3. The division of boiler inspection shall revoke the license of any master, pilot or engineer found under the influence of intoxicating liquor when on duty or who otherwise disregards any regulation promulgated by it.

[R. L. s 2174; 1919 c 240 s 2; 1957 c 503 s 7] (5480)

183.45 INSPECTION. All steam boilers and steam generators shall be inspected by the division of boiler inspection before same are used and all boilers shall be inspected at least once each year thereafter. Inspectors shall subject all boilers to hydrostatic pressure or hammer test, and ascertain by a thorough internal and external examination that they are well made and of good and suitable material; that the openings for the passage of water and steam, respectively, and all pipes and tubes exposed to heat, are of proper dimensions and free from obstruction; that the flues are circular in form; that the arrangements for delivering the feed water are such that the boilers cannot be injured thereby; and that such boilers and their steam connections may be safely used without danger to life or property. Inspectors shall ascertain that the safety valves are of suitable dimensions, sufficient in number, and properly arranged, and that the safety valves are so adjusted as to allow no greater pressure in the boilers than the amount prescribed by the inspector's certificate; that there is a sufficient number of gauge cocks, properly inserted, to indicate the amount of water, and suitable gauges that will correctly record the pressure of steam; and that the fusible metals are properly inserted so as to fuse by the heat of the furnace whenever the water in the boiler falls below its prescribed limit; and that provisions are made for an ample supply of water to feed the boilers at all times, so that in high-pressure boilers the water shall not be less than three inches above the top of the fire surface; and that means for blowing out are provided, so as to thoroughly remove the mud and sediment from all parts when under pressure of steam.

[R. L. s 2175; 1957 c 503 s 8] (5481)

183.46 TESTS. In subjecting both high and low pressure boilers and unfired pressure vessels to the hydrostatic test, and to determine the safe allowable working pressure, the inspector shall use the latest approved formula of the American Society of Mechanical Engineers Code.

[R. L. s 2176; 1957 c 503 s 9] (5482)

183.465 STANDARDS OF INSPECTION. The engineering standards of boilers and unfired pressure vessels for use in this state shall be that established by the current edition of the construction code of the American Society of Mechanical Engineers and amendments thereto and the regulations of the division of boiler inspection adopted by the department of labor and industry. Notwithstanding this section or any other provision of law or code or rule to the contrary, the engineering standard for boilers on antique steam equipment used for educational and entertainment purposes only shall be a hydrostatic test of two times the operating pressure.

[1957 c 503 s 10; Ex 1967 c 1 s 6; 1969 c 1149 s 1]

183.47 [Repealed, 1957 c 503 s 24]

183.48 SPECIAL EXAMINATION. At any time the inspector deems it necessary he shall make an examination of any boiler or unfired pressure vessel which has become unsafe, and notify the owners or operators thereof of any defect therein, and what repairs are necessary. Such boiler or unfired pressure vessel shall not thereafter be used until so repaired.

[R. L. s 2178; 1957 c 503 s 11] (5484)

183.49 [Repealed, 1957 c 503 s 24]

183.50 INSPECTION OF STEAM BOILERS. The owner or manager of a steam boiler or unfired pressure vessel shall allow inspectors full access thereto. Every engineer operating a steam boiler shall assist the inspector in his examination, and point out any known defects in the boilers, steam engines or turbines in his charge. No person shall be entrusted with the operation of any steam boiler, steam engines, or turbine who has not received a license of such grade as to

cover that steam boiler, steam engines or turbines. The license shall be renewed annually. When a violation of this section occurs the division of boiler inspection shall cause a complaint to be made for the prosecution of the offender.

[*R. L. s 2180; 1919 c 240 s 3; 1939 c 397; 1947 c 563 s 1; 1957 c 503 s 12; 1957 c 876 s 1*] (5486)

183.505 APPLICATIONS FOR LICENSES. The chief boiler inspector shall prepare blank applications on which applications for engineers' licenses shall be made under oath of the applicant. These blanks shall be so formulated as to elicit such information as is desirable to enable the examiners to pass on the qualifications of applicants.

[*1919 c 240 s 9; 1957 c 503 s 19*] (5494)

183.51 EXAMINATIONS; CLASSIFICATIONS; QUALIFICATIONS. Subdivision 1. Engineers shall be divided into five classes:

(1) Chief engineers; Grade A, Grade B, and Grade C. (2) first class engineers; Grade A, Grade B, and Grade C. (3) second class engineers; Grade A, Grade B, and Grade C. (4) third class engineers. (5) fourth class engineers.

Subd. 2. Any person who desires an engineer's license shall make a written application, on blanks furnished by the inspector. He shall also successfully pass a written examination for such grade of license applied for.

Subd. 3. For the purposes of sections 183.50, 183.51, high pressure boilers shall mean boilers operating at a pressure in excess of 15psi. Low pressure shall mean boilers operating at a pressure of 15psi or less.

Subd. 4. Chief engineer, Grade A, shall be at least 21 years of age, be of such habits and have had such experience as to justify the belief that he is competent to take charge of all classes of steam boilers, steam engines, or turbines; and, before receiving a license, he shall take and subscribe an oath that he has had at least five years actual experience in operating such boilers, steam engines or turbines.

Subd. 5. Chief engineer, Grade B, shall be at least 21 years of age, be of such habits and have had such experience as to justify the belief that he is competent to take charge of all classes of steam boilers, and before receiving a license, he shall take and subscribe an oath that he has at least five years actual experience in operating such boilers.

Subd. 6. Chief engineer, Grade C, shall be at least 21 years of age, be of such habits and have had such experience as to justify the belief that he is competent to take charge of all classes of low pressure steam boilers, and before receiving a license, he shall take and subscribe an oath that he has at least five years of actual experience in operating such boilers.

Subd. 7. A first-class engineer, Grade A, shall be at least 21 years of age, be of such habits and have had such experience as to justify the belief that he is competent to take charge of all classes of steam boilers, steam engines, or turbines of not more than 300 horsepower. Before receiving a license, he shall take and subscribe an oath that he has had at least three years actual experience in operating such boilers, steam engines, or turbines.

Subd. 8. A first-class engineer, Grade B, shall be at least 21 years of age, be of such habits and have had such experience as to justify the belief that he is competent to take charge of all classes of steam boilers of not more than 300 horsepower. Before receiving a license he shall take and subscribe an oath that he has had at least three years actual experience in operating such boilers.

Subd. 9. A first-class engineer, Grade C, shall be at least 21 years of age, be of such habits and have had such experience as to justify the belief that he is competent to take charge of all classes of low pressure steam boilers of not more than 300 horsepower. Before receiving a license, he shall take and subscribe an oath that he shall have had at least three years actual experience in operating such boilers.

Subd. 10. A second-class engineer, Grade A, shall be at least 21 years of age, be of such habits and have had such experience as to justify the belief that he is competent to take charge of all classes of steam boilers, steam engines, or turbines of not more than 100 horsepower. Before receiving a license he shall take and subscribe an oath that he has had at least one year of actual experience in operating such boilers, steam engines, or turbines.

Subd. 11. A second-class engineer, Grade B, shall be at least 20 years of age,

be of such habits and have had such experience as to justify the belief that he is competent to take charge of all classes of steam boilers of not more than 100 horsepower. Before receiving a license he shall take and subscribe an oath that he has had at least one year of actual experience in operating such boilers.

Subd. 12. A second-class engineer, Grade C, shall be at least 19 years of age, be of such habits and have had such experience as to justify the belief that he is competent to take charge of all classes of low pressure steam boilers of not more than 100 horsepower. Before receiving a license, he shall take and subscribe an oath that he has had at least one year of actual experience in operating such boilers.

Subd. 13. Third-class engineers shall be at least 18 years of age, be of such habits and have had such experience as to justify the belief that he is competent to take charge of all classes of steam boilers of not more than 30 horsepower. Before receiving a license he shall take and subscribe an oath that he has had at least six months of actual experience in operating such boilers.

Subd. 14. A fourth-class engineer shall be at least 18 years of age, be of such habits and acquainted with the duties of an engineer to justify the belief that he can be safely entrusted with low pressure steam boilers of not more than 30 horsepower.

Subd. 15. Any person who, at the time of the enactment of Laws 1947, Chapter 563, was, and since that time has been licensed as a first-class or second-class engineer, shall be granted a renewal license for Grade A of the respective classification without examination upon application therefor, or who held a special license shall be granted a third-class license without examination upon application therefor.

Subd. 16. Any person, who received a first-class or second-class engineer's license after enactment of Laws 1947, Chapter 563, but before the effective date of Laws 1957, Chapter 876, upon presentation of an affidavit furnished by the inspector and sworn to by his employer or a chief engineer stating that he has had the required steam engine or turbine experience, shall be granted a renewal license without further examination for Grade A of the respective classification. Any other engineer licensed during such period shall receive a Grade B license of the respective classification unless he otherwise qualifies as provided in this section.

Subd. 17. Any person with a chief engineer's license received before the effective date of sections 183.50, 183.51, shall receive a Grade A license.

Subd. 18. Engineers now licensed and operating a low pressure boiler at the time of enactment of sections 183.50, 183.51, shall be issued a license to cover their respective position, upon presentation of an affidavit furnished by the inspector and sworn to by his employer or a chief engineer.

[*R L s 2181; 1919 c 113 s 1; 1919 c 240 s 4; 1947 c 563 s 2; 1957 c 503 s 13; 1957 c 876 s 2; 1965 c 49 s 1*] (5487)

183.52 REVOCATION OF LICENSE. When any person makes a complaint against any licensed engineer that, by reason of negligence, want of skill, inattention to duty, or violation of any provision of sections 183.375 to 183.58, the engineer permitted a boiler to burn or become in bad condition, the license of that engineer shall be revoked by the division of boiler inspection upon satisfactory evidence. An engineer aggrieved by a revocation of his license on any of these grounds may appeal to the commissioner of labor and industry. The decision of the commissioner in the case is final.

[*R L s 2182; 1957 c 503 s 14; Ex1967 c 1 s 6*] (5488)

183.53 VERIFICATION OF CERTIFICATE. In making an inspection of boilers, machinery, or steam vessels, inspectors may act jointly or separately. In all cases inspectors shall verify the certificate of inspection.

[*R. L. s 2183; 1957 c 503 s 15*] (5489)

183.54 DISTRICT BOILER INSPECTOR TO DELIVER CERTIFICATES; PAYMENT OF INSPECTION FEES. Subdivision 1. After examination and tests, if a boiler inspector finds any steam boiler or pressure vessel safe and suitable for use, he shall deliver to the chief boiler inspector a verified certificate in such form as prescribed by the chief boiler inspector containing a specification of the tests applied and the working pressure allowed. A copy of the certificate is delivered to the owner of the boiler or pressure vessel, who shall place and retain the same in a conspicuous place on or near the boiler or pressure vessel.

Subd. 2. Fees for the inspection of steam boilers and pressure vessels are payable at the time of the delivery of the certificate.

Subd. 3. If the owner or lessee of any boiler or pressure vessel, which boiler or pressure vessel has been duly inspected, refuses to pay the required fee within 30 days from the date of the inspection, the chief boiler inspector, or his deputy, may seal the boiler or pressure vessel until the fee is paid.

[R. L. s 2184; 1919 c 240 s 5; 1933 c 257; 1943 c 340 s 1; 1947 c 563 s 3; 1957 c 503 s 16] (5490)

183.545 FEES FOR INSPECTION. Subdivision 1. The fees for the inspection of the hull, boiler, machinery, and equipments of vessels are:

Vessels of 50 tons burden or over, \$10.

Vessels of less than 50 tons burden, \$5.

Subd. 2. The fee for an examination of an applicant for a master's or pilot's license is \$5. The fee for an annual renewal of a master's or a pilot's license is \$3.

Subd. 3. The fees for the inspection of boilers and pressure vessels are:

Boiler inaccessible for internal inspection\$10

Boiler accessible for internal inspection\$15

Pressure vessel accessible for internal inspection\$6

Pressure vessel inaccessible for internal inspection\$4

Shop inspection for full day \$60, one-half day \$35, plus mileage.

Subd. 4. The fee for an examination of an applicant for an engineer's license is:

Chief engineer's license\$15

First class engineer's license\$10

Second class engineer's license\$10

Special engineer's license\$4

If an applicant, after an examination, is entitled to receive a license, it shall be issued to him without the payment of any additional charge. Any license so issued expires one year after the date of its issuance. An engineer's license may be renewed upon application therefor and the payment of an annual renewal fee as follows:

Chief engineer's license renewal\$5

First class engineer's license renewal\$5

Second class engineer's license renewal\$4

Special engineer's license renewal\$3

The fee is payable at the time of application, which shall be made not later than ten days after the date of expiration of such license. If application is made more than ten days after the date of expiration of such license, an expired fee shall be paid instead of the renewal fee prescribed above; the expired fees are:

Chief engineer\$7

First class engineer\$7

Second class engineer\$6

Special engineer\$4

Subd. 5. Where an applicant for an engineer's license has paid the fees provided by subdivision 4, and thereafter fails to take an examination therefor, within a period of one year, said application fee shall be forfeited to the state of Minnesota. Application fees heretofore paid shall be forfeited to the state of Minnesota if the applicant therefor fails to take such an examination within one year from the effective date of Laws 1959, Chapter 586.

[1957 c 503 s 17; 1959 c 586 s 1; 1969 c 1148 s 30-32]

183.55 [Repealed, 1957 c 503 s 24]

183.56 EXCEPTIONS. The provisions of sections 183.38 to 183.58, shall not apply to heating plants in buildings occupied solely for residence purposes with accommodations therein for not more than four families, nor to domestic type water supply heaters regardless of where installed, nor to railroad locomotives operated by railroad companies for transportation purposes, nor in railroad construction work, nor for unloading materials or freight, nor to railroad-locomotive engineers and firemen employed by railroad companies, nor to tanks or cylinders used for storage or transfer of liquefied petroleum gases, nor to unfired pressure vessels in petroleum refineries; nor to an air tank or pressure vessel which is an integral part of a passenger motor bus, truck or trailer.

[R. L. s 2186; 1919 c 240 s 7; 1955 c 817 s 1; 1957 c 503 s 1] (5492)

183.57 REPORT OF INSURER; EXEMPTION FROM INSPECTION. Subdivision 1. Any insurance company insuring boilers and pressure vessels in this

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state shall make a written report thereof showing the date of inspection, the name of the person making the inspection, the condition of the boiler or pressure vessel as disclosed by the inspection, whether the same is operated by a properly licensed engineer, and whether a policy of insurance has been issued by the company with reference to the boiler or pressure vessel. Within 15 days after the inspection, the insurance company shall mail a copy of the report to the chief boiler inspector and a copy of the report to the person, firm, or corporation owning or operating the boiler or pressure vessel inspected. Such report shall be made annually for boilers and biennially for pressure vessels.

Subd. 2. Every boiler or pressure vessel as to which any insurance company authorized to do business in this state has issued a policy of insurance, after the inspection thereof, is exempt from inspection made under sections 183.375 to 183.58, while the same continues to be insured and the person, firm, or corporation owning or operating the same has an unexpired certificate of exemption from inspection, issued by the chief boiler inspector upon receipt of the exemption fee of \$2 for each object. A certificate of exemption expires one year from date of issue. The certificate of exemption shall be posted in a conspicuous place near the boiler or pressure vessel described therein and to which it relates. Every insurance company shall give written notice to the chief boiler inspector of the cancellation or expiration of every policy of insurance issued by it with reference to policies in this state, and the cause or reason for the cancellation or expiration. These notices of cancellation or expiration shall show the date of the policy and the date when the cancellation has or will become effective.

Subd. 3. [Repealed, 1957 c 503 s 24]

[1919 c 240 s 8; 1957 c 503 s 18; 1959 c 148 s 1; 1969 c 1148 s 33] (5493)

183.58 [Renumbered 183.505]

183.59 VIOLATIONS BY INSPECTORS. Every inspector who wilfully certifies falsely regarding any steam boiler or its attachments or the hull and equipments of any steam vessel, or who grants a license to any person to act as engineer, master, or pilot contrary to any provision of sections 183.375 to 183.58, is guilty of a felony. Upon conviction he shall be punished by a fine which shall not be less than \$50 nor more than \$500 or by imprisonment in the state prison for not more than one year, or by both. In addition to this punishment he shall be removed from office forthwith.

[1957 c 503 s 20]

183.60 VIOLATIONS IN CONSTRUCTION. Every person who constructs a boiler or steam pipe or iron or steel plates known to be faulty or imperfect, or drifts any rivet hole to make it come fair, or who delivers any such boiler for use, knowing it to be imperfect in its flues, flanging, riveting, bracing, or in any other of its parts, is guilty of a gross misdemeanor. Upon conviction he shall be punished by a fine of \$200. One-half of the fine shall be paid to the informer.

[1957 c 503 s 21]

183.61 VIOLATIONS BY THOSE RESPONSIBLE FOR OPERATION. Subdivision 1. Any owner, master, or other person violating any regulation prescribed by the department of labor and industry is guilty of a misdemeanor.

Subd. 2. Any person who causes to be operated, or operates, any steam boiler or boat subject to the provisions of Laws 1957, Chapter 503, without having the same inspected at least once each year and without having the proper engineer or pilot license is guilty of a misdemeanor.

Subd. 3. Every owner, lessee, master, or pilot violating any provision of section 183.44 is guilty of a misdemeanor.

Subd. 4. Every person operating any boiler after it has been examined and found to be unsafe and after the owner or operator thereof has been notified of any defect therein and what repairs are necessary to remedy the defect who fails to comply with the inspector's requirements is guilty of a misdemeanor.

Subd. 5. Every person who violates any provision of section 183.50 is guilty of a misdemeanor.

Subd. 6. Any insurance company that fails to comply with the requirements of section 183.57 is guilty of a misdemeanor. Upon conviction the company shall be fined not to exceed \$50.

[1957 c 503 s 22; 1961 c 560 s 17; Ex1967 c 1 s 6]

183.62 LIABILITY OF PERSONS HANDLING STEAMBOATS OR STEAM BOILERS; PENALTY. Every person who shall apply, or cause to be applied,

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to a steam boiler a higher pressure of steam than is allowed by law, or by the inspector, officer, or person authorized to limit the same; every captain or other person having charge of the machinery or boiler of a steamboat used for the conveyance of passengers in the waters of this state, who, from ignorance or gross neglect, or for the purpose of increasing the speed of the boat, shall create, or cause to be created, an undue and unsafe pressure of steam; and every engineer or other person having charge of a steam boiler, steam engine, or other apparatus for generating or employing steam, employed in a railway, manufactory, or other mechanical works, who shall wilfully, or from ignorance or gross neglect, create, or allow to be created, such an undue quantity of steam as to burst the boiler, engine, or apparatus, or cause any other accident, whereby human life is endangered, shall be guilty of a gross misdemeanor.

[*R L s 5003*] (*10265*)