

CHAPTER 183

REGULATIONS AS TO FOUNDRIES, ELEVATORS, AND BOILERS

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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 LAWS RELATING TO FACTORIES AND WORKSHOPS. 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 commission, or its assistants, may permit gangways and aisles to be of a narrower width.

[1919 c. 84 s. 4] (4057)

183.09 GANGWAYS KEPT FREE; MATERIAL OF WHICH CONSTRUCTED. 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)

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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)

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 16½)
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 commission or its assistants.

[1919 c. 84 s. 17] (4070)

183.22 INSPECTION OF APPLIANCES. Ladles, shanks, tongs, slings and yokes, skimmers and slage 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 OF SECTIONS 183.05 TO 183.34. The commission 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 commission 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 \$100.00 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 \$10.00 or imprisonment for not exceeding ten days.

[1919 c. 84 s. 30] (4083)

ELEVATORS

183.35 OPERATION OF ELEVATORS. In any building occupied in whole or in part for factories, workshops, or offices by two or more tenants and in which building two or more tenants use jointly the same elevator for the purpose of moving persons or freight from one floor to another, it shall be the duty of the owner of the building to provide a competent person or persons to regularly operate such elevator and no other person shall operate such elevator. The owner may arrange, by agreement, with one or more of such tenants to provide regular operators to run such elevator.

[1919 c. 483 s. 1] (4051)

183.36 LOCK OR FASTENING DEVICE ON ELEVATORS. Every elevator or the entrance to such elevator in any building mentioned in section 183.35 shall be provided with a lock or fastening device which shall prevent the use of such elevator except by a person authorized to operate the same and such lock or fastening device shall be applied by the operator to the controlling apparatus or gate of such elevator before leaving the elevator without an authorized attendant.

[1919 c. 483 s. 2] (4052)

183.37 INSPECTION. It shall be the duty of the commission and its assistants whenever they find an elevator in use in violation of sections 183.35 and 183.36 to seal the entrances of such elevator and attach a notice forbidding the use of such elevator until the provisions of sections 183.35 and 183.36 are complied with. Any person, firm, or corporation who violates any of the provisions of those sections or who removes any seal or notice forbidding the use of such elevator except by authority of the commission or who operates such elevator after a notice has been attached forbidding the use of such elevator except after such notice has been removed by authority of the commission shall be guilty of a misdemeanor, punishable by a fine or imprisonment.

[1919 c. 483 s. 3] (4053)

BOILERS

183.375 DIVISION OF BOILER INSPECTION. Subdivision 1. **Chief of division.** On and after the first day of June, 1921, there shall be a division in the department of labor and industry to be known as the division of boiler inspection. The chief of such division shall be known as the chief of the division of boiler inspection and he shall have an assistant to be known as the deputy chief of the division of boiler inspection. There shall be in such division a district boiler inspector for each boiler inspection district then provided for by law.

Subd. 2. **Powers and duties.** On and after the first day of June, 1921, the powers and duties then by law vested in and imposed on the board of boiler inspectors, the district boiler inspectors, the chief boiler inspector and his subordinates shall be exercised and performed by the industrial commission and its subordinates as functions of the division of boiler inspection.

Subd. 3. **Fees.** All fees collected, except as otherwise provided by section 182.38, shall be paid into the state treasury in the manner provided by law for fees received by other state departments.

Subd. 4. **Reports and notices.** All reports and notices heretofore required by law to be made or given to the board of boiler inspectors, district boiler inspectors, or the chief boiler inspector shall be hereafter made or given to the industrial commission.

[1921 c. 83 ss. 1, 2, 5, 6] (4203, 4204, 4207, 4208)

183.38 DISTRICT BOILER INSPECTOR; INSPECTIONS; EXAMINATIONS; FEES. The commission shall appoint a resident of each senatorial district as a district boiler inspector for such district, except in counties where there is more than one senatorial district, in which case there shall be appointed one district boiler inspector for such county, for a term of two years.

The district boiler inspector shall inspect all steam boilers and pressure vessels in use in his district not expressly excepted from such inspection by law and issue and sign a license for such boiler or a certificate condemning such boiler and sealing the same, upon forms to be prepared and furnished by the commission. Each district boiler inspector shall examine all applicants residing in his district for second-class and special engineer's licenses and certify the result of such examination to the chief of the division of boiler inspection, whereupon such chief of the

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division of boiler inspection shall issue such license as the certification of the district boiler inspector shall show the applicant to be entitled to receive.

The chief of the division of boiler inspection or his deputy shall hold examinations at such time and place as he may fix and determine for the purpose of examining applicants for chief and first-class engineer's license and give notice to all applicants of the time and place for such examination and grant and sign such license certificates as such applicants may be entitled to receive upon such examination. All engineer's licenses shall be for a period of one year, with privilege of renewal upon application for such renewal and payment of the fee provided by law not later than ten days after the expiration of such license.

The district boiler inspectors shall receive as full compensation for their services all fees collected by them for the inspection of boilers, pressure vessels, and hulls, and 50 per cent of all fees collected by them for examination of applicants for engineer's license, and also 50 per cent of the annual renewal fees received from such engineers. Fifty per cent of such renewal fees shall be remitted to the chief of the division of boiler inspection.

The district boiler inspector shall make monthly reports to the chief of the division of boiler inspection in such form as shall be prescribed by the industrial commission.

All fees collected by the chief of the division of boiler inspection under sections 183.38 to 183.58 shall be paid into the state treasury in the manner provided by law for fees received by other state departments, to be credited to the revenue fund, except that 50 per cent of such license fees collected by the chief of the division of boiler inspection for chief and first-class engineer's licenses shall be paid to the district boiler inspector of the district in which the applicant resides.

Every district boiler inspector who shall collect fees in excess of \$375 in any calendar month, after deducting such necessary expenses as may be allowed by the commission, subject to the approval of the department of administration, shall pay the excess of such sum of \$375 and expenses into the state treasury, to be credited to the revenue fund. Any such district boiler inspector whose fees amount to less than \$375 in any one month, after deducting such expenses, shall have the right to retain a sufficient amount of fees collected in any succeeding calendar month in excess of the amount herein provided to be retained by him in such calendar month, to reimburse such district boiler inspector for any deficit due such inspector in such prior month.

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

183.39 WHO ELIGIBLE. Each boiler inspector shall be a man of good moral character, qualified by experience in the construction of steam boilers, and shall have had at least ten years' actual experience in operating steam engines and boilers. He shall not be directly or indirectly 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.

[R. L. s. 2169] (5475)

183.40 DEPUTY INSPECTORS. Each boiler inspector may appoint one or more deputies, who shall possess the qualifications and have the same authority as are prescribed for inspectors in section 183.39. Each such deputy, before entering upon the duties of the office, shall take and subscribe the oath required by law and file the same with the secretary of state.

[R. L. s. 2170] (5476)

183.41 MEETINGS; RULES. In February each year the boiler inspectors shall meet as a board at the capitol in St. Paul and establish regulations for the inspection of vessels and boilers and for the performance of their other duties. They shall prescribe regulations for the inspection of the hulls, machinery, boilers, steam connections, fire apparatus, life-saving appliances, and equipment of all vessels propelled, in whole or in part, by steam and 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; and, when approved by the governor, such regulations shall have the force of law. They shall designate the number of passengers that each steam vessel may safely carry, and no such vessel shall carry a greater number than is allowed by the inspector's certificate. Any owner, master, or other person violating any regulation prescribed by the board shall be guilty of a misdemeanor.

[R. L. s. 2171] (5477)

183.42 NEGLECT TO SECURE INSPECTION. Every owner, lessee, or other person having charge of steam boilers, or any boat propelled in whole or in part by steam, not subject to inspection under the laws of the United States, shall cause the same to be inspected at least once each year by the boiler inspector; and every such owner, lessee, or person in charge who shall raise steam or operate such boilers and machinery without such inspection shall be guilty of a misdemeanor.

[R. L. s. 2172] (5478)

183.43 INSPECTION BY REQUEST; CERTIFICATE; POSTING. On the written application of its owner, lessee or manager, the boiler inspector shall inspect the hull, boiler, machinery, and equipments of each vessel and boiler subject to inspection under sections 183.38 to 183.58, once at least in each year and satisfy himself that every such vessel is of a structure suitable for the service in which it is to be employed, has suitable accommodations for passengers and crew, and is in proper condition to be used in navigation with safety to life, and that life-preservers, floats, pumps, hose, anchors, and other things necessary to insure safety have been provided. When the inspection has been completed and the inspector approves the vessel and its equipments throughout, he shall make, subscribe, and file with the secretary of state a verified certificate of the facts found, and deliver a copy thereof to the owner or master, who shall post it in a conspicuous place on such vessel. He may collect a fee of \$10.00 for inspection of each vessel of 50 tons burden or over, and \$5.00 for each vessel of a less tonnage.

[R. L. s. 2173] (5479)

183.44 EXAMINATIONS OF MASTERS AND PILOTS, ESTABLISHING OF REGULATIONS, LICENSING AND REVOCATIONS. The chief boiler inspector or his deputy 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, and if such persons be found trustworthy and competent to perform their duties as master or pilot, as the case may be, he shall issue a certificate authorizing the applicant to act as such master or pilot on the inland waters of the state designated in the certificate. The chief boiler inspector shall also make such regulations for the navigation of any such boat or vessel as will require the operation of the same without danger to life or property. He 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 prescribed regulation.

The chief boiler inspector, or his deputy, shall collect a fee of \$5.00 for the examination of any applicant for a master's or pilot's license, and \$1.00 for the annual renewal of any such license. In case the applicant for license as master or pilot successfully passes an examination, a license shall be issued to him without any other fee. Every owner, lessee, master, or pilot violating any provision of this section or section 183.43 shall be guilty of a misdemeanor.

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

183.45 INSPECTION. Such boiler inspectors shall inspect all steam boilers and steam generators before the same shall be used, and all such boilers at least once each year thereafter. They 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 obstructions; 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. They shall also ascertain that the safety valves are of suitable dimensions, sufficient in number, and properly arranged, and that the safety valve weights 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

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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] (5481)

183.46 TESTS. In subjecting high-pressure boilers to the hydrostatic test, the inspector shall assume 125 pounds to the square inch as the maximum working pressure allowable for new boilers 42 inches in diameter, double riveted, and made in the best manner, of plates one-fourth of an inch thick and of good material; but he shall rate the working power of all high-pressure boilers according to their strength compared with this standard, and in all cases the test applied shall exceed the working power allowed in the ratio of 165 to 110. In subjecting low-pressure boilers to hydrostatic tests, he shall allow as a working power for each new boiler a pressure of only three-fourths the number of pounds to which it has been so subjected. If any inspector is of opinion that any boiler will not safely allow so high a working pressure, he may, for reason specially stated in his certificate, fix the pressure at less than the test pressure. No boiler or steam pipe, nor any of the connections therewith, which are made wholly or partly of bad material, or of cast iron, or which are unsafe from any cause, shall be approved. This shall not be construed to prevent the use of any boiler or steam generator not constructed of riveted iron or steel plates, when the inspector is satisfied by evidence that such boiler or generator is equal in strength to and as safe from explosion as boilers of the best quality, constructed of riveted steel or iron plates.

[R. L. s. 2176] (5482)

183.47 IMPERFECT CONSTRUCTION. Every person who shall construct a boiler or steam pipe or iron or steel plates known to be faulty or imperfect, or shall drift any rivet hole to make it come fair, or who shall deliver any such boiler for use, knowing it to be imperfect in its flues, flanging, riveting, bracing, or in any other of its parts, shall be guilty of a gross misdemeanor, and punished by a fine of \$200.00, one-half of which shall be paid to the informer.

[R. L. s. 2177] (5483)

183.48 SPECIAL EXAMINATION. In addition to the annual inspection, the inspectors at any time, when in their opinion such examination shall be necessary, shall examine all boilers which have become unsafe, and notify the owners or operators of any defect, and what repairs are necessary; and such a boiler shall not thereafter be used until so repaired. Every person operating any such boiler who fails to comply with the inspector's requirements shall be guilty of a misdemeanor and liable for damages to persons or property resulting therefrom.

[R. L. s. 2178] (5484)

183.49 FUSIBLE PLUG. Every steam boiler shall be provided with a fusible plug, of good Banca tin, inserted in the flues, crown sheet or other parts of the boiler most exposed to the heat of the furnace when the water falls below the prescribed limits.

[R. L. s. 2179] (5485)

183.50 INSPECTION OF STEAM BOILERS. Every owner or manager of a steam boiler shall allow inspectors full access to the same, and every engineer operating the same shall assist the inspector in his examination, and point out any known defects in the boilers or machinery in his charge. No person shall be entrusted with the operation of any steam boiler or steam machinery who has not received a license of such grade as to cover said steam boiler or steam machinery, which license shall be renewed annually. Every person who shall violate any of the provisions of this section shall be guilty of a misdemeanor. It shall be the duty of the inspector in the county where any such offense was committed to file a complaint in court for the prosecution of the offender.

[R. L. s. 2180; 1919 c. 240 s. 3; 1939 c. 399] (5486)

183.51 EXAMINATIONS FOR CLASSIFICATIONS AND QUALIFICATIONS. Engineers shall be divided into four classes: (1) chief engineers; (2) first-class engineers; (3) second-class engineers; (4) special engineers.

To entitle engineers to licenses they shall make written application, on blanks furnished by the inspector, and shall successfully pass an examination for such grade of license as applied for.

(1) A chief engineer 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 steam machinery; 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 and machinery.

(2) A first-class engineer 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 steam machinery of not more than 300 horse-power. 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 and machinery.

(3) A second-class engineer 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 steam machinery of not more than 100 horse-power. 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 and machinery.

(4) A special engineer, upon examination, shall be sufficiently acquainted with the duties of an engineer as to justify the belief that he can be safely entrusted with steam boilers and steam machinery of not more than 30 horse-power.

[R. L. s. 2181; 1919 c. 113 s. 1; 1919 c. 240 s. 4] (5487)

183.52 REVOCATION OF LICENSE. When complaint shall be made by any person against an engineer holding a license that, through negligence, want of skill, inattention to duty, or violation of any provision of sections 183.38 to 183.58, he has permitted his boiler to burn or otherwise to become in bad condition, the inspector who granted his license, upon satisfactory proof of such negligence, shall revoke the same. Any engineer aggrieved by such revocation may appeal to the board of inspectors, whose decision in the case shall be final.

[R. L. s. 2182] (5488)

183.53 FALSE CERTIFICATE. In making the inspection of boilers, machinery, or steam vessels, the inspectors may act jointly or separately, but shall in all cases verify the certificate of inspection. Every inspector who shall wilfully certify falsely regarding any steam boiler or its attachments, or the hull and equipments of any steam vessel, or who shall grant a license to any person to act as engineer, master, or pilot contrary to the provisions of sections 183.38 to 183.58, shall be guilty of a felony, and be punished by a fine of not less than \$50.00, nor more than \$500.00, or by imprisonment in the state prison for not more than one year, or by both. In addition to such punishment, he shall forthwith be removed from office.

[R. L. s. 2183] (5489)

183.54 DISTRICT BOILER INSPECTOR TO DELIVER CERTIFICATES; FEES FOR INSPECTION. After examination and tests, if the district 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 the chief boiler inspector shall prescribe, containing a specification of the tests applied and the working pressure allowed, a copy of which the district boiler inspector shall furnish to the owner of the boiler or pressure vessel, who shall post and keep the same in a conspicuous place on or near boiler or pressure vessel. The district boiler inspector is entitled to a fee of \$3.00 for the inspection of each boiler or pressure vessel and its connections, payable on delivery of the certificate. The fee for inspection of tanks or receptacles containing air under pressure is \$1.00. The fee for the examination for an engineer's license is: Chief engineer, \$7.00; first-class, \$5.00; second-class, \$3.00, and special, \$2.00; and for each yearly renewal, \$1.00. 50 per cent of all license fees shall go to create a fund to be known as the boiler inspectors' fund and 50 per cent to the inspector of the district where the examination is held or renewal made. This fee shall accompany the application.

[R. L. s. 2184; 1919 c. 240 s. 5; 1933 c. 257; 1943 c. 340 s. 1] (5490)

183.55 LIMITATION OF EXPENDITURES; ASSISTANTS. The chief boiler inspector may, with the consent of the governor, appoint such additional help as he shall require to carry out the work of his office. At no time shall the salaries and expenses exceed the amount appropriated for carrying out the provisions of sections 183.38 to 183.58. In no event shall the disbursements exceed the fees collected.

[R. L. s. 2185; 1919 c. 240 s. 6] (5491)

183.56 RESIDENCE BOILERS AND RAILROAD LOCOMOTIVES EXCEPTED.

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 not to exceed four families, nor to railroad locomotives, nor to railroad locomotive engineers employed by railroad companies.

[R. L. s. 2186; 1919 c. 240 s. 7] (5492)

183.57 INSURANCE COMPANIES TO REPORT TO CHIEF INSPECTOR.

Subdivision 1. Contents of report. Every insurance company insuring boilers and pressure vessels in this state shall, within 15 days after inspecting any such boiler or pressure vessel, make, in duplicate, a report, in writing, showing the date of such inspection, the name of the person making the inspection, the condition of such boiler or pressure vessel as disclosed by such inspection, whether the same is operated by a licensed engineer, and whether a policy of insurance has been issued by said company with reference to said boiler or pressure vessel. Such insurance company shall, within this period of 15 days, mail one of such reports to the chief boiler inspector and deliver one of such reports to the person, firm, or corporation owning or operating such boiler or pressure vessel.

Subdivision 2. Exemption from other inspection. 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, shall be exempt from other inspection under the provisions of sections 183.38 to 183.58, while the same continues to be insured; provided, the person, firm, or corporation owning or operating the same shall have an unexpired certificate of exemption from inspection, which certificate shall be issued by the chief boiler inspector upon application by the holder of a report of inspection made by the insurance company, as hereinbefore set forth, and showing that a policy of insurance has been issued by such insurance company with reference to such boiler or pressure vessel and the payment to the chief boiler inspector of a fee of 50 cents therefor. Such certificate of exemption shall expire one year from the date of the report of inspection of the boiler or pressure vessel to which it relates. Such certificate shall be posted in a conspicuous place near the boiler or pressure vessel described therein and to which it relates. Every insurance company shall notify the chief boiler inspector, in writing, 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 such cancellation or expiration. Such notice of cancellation or expiration shall show the date of the policy and the date when the cancellation has or will become effective.

Subdivision 3. Failure to comply with section. Any insurance company which shall fail to comply with the requirements of this section shall be deemed guilty of a misdemeanor and fined not more than \$50.00.

[1919 c. 240 s. 8] (5493)

183.58 APPLICATIONS FOR LICENSES; SEALING AUTHORIZED IN CASE OF FAILURE TO MAKE PAYMENT. The chief boiler inspector shall prepare blank applications on which applications for engineers' licenses shall be made under oath of the applicant. Such blanks shall be so formulated as to elicit such information as is desirable to pass on the qualifications of the applicant.

Every applicant for an engineer's license shall make his application to the district boiler inspector of the district wherein the applicant resides, and no license shall be granted by the district boiler inspector of any other district of this state if such applicant's license has been refused.

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, as provided by law, within 30 days from the date of such inspection, the district boiler inspector or the chief boiler inspector, or his deputy, as the case may be, is hereby authorized and empowered to seal the boiler or pressure vessel until the fee is paid, and the owner, lessee, or agent who breaks the seal or operates the boiler or pressure vessel before the fee has been paid shall be guilty of a misdemeanor.

[1919 c. 240 s. 9] (5494)