

A BILL

FOR AN ACT TO ESTABLISH A BOARD OF INSPECTORS FOR STEAM VESSELS AND
STEAM BOILERS AND TO PROVIDE FOR LICENSING ENGINEERS OF STEAM
ENGINES.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF IOWA:

SECTION 1. There shall be appointed by the governor a board of inspectors consisting of
2 one from each of the several judicial districts of the state, whose duty it shall be to inspect all
3 steam boilers in use within his district, not subject to inspection under the laws of the
4 United States, and to examine and grant certificates of license to all steam engineers
5 entrusted with the care and management of steam boilers within the said district. Said
6 inspectors shall hold their offices for two years from the date of the appointment, unless
7 removed for cause by the governor.

SEC. 2. No person shall be eligible to hold office of inspector of boilers who is either
2 directly or indirectly interested in the manufacture or sale of boilers or steam machinery, or
3 any patent article required to be used or of general use in the construction of steam boilers or
4 engines, or who is not of good moral character, a practical engineer, and suitably qualified by
5 experience in the construction of steam boilers, or such experience in their manufacture as to
6 enable him to perform the duties of the office, and no person shall enter upon or perform any
7 of the duties of inspector who has not taken and subscribed an oath, and filed the same with
8 the secretary of state, that he will faithfully and impartially perform the duties of his office.

SEC. 3. Said inspectors shall in May next after the passage of this act, and each year
2 thereafter meet as a board at Des Moines, Iowa, and establish such rules and regulations for
3 the inspection of the hulls, machinery, boilers, steam connections, fire apparatus, life-saving
4 appliances, and equipments of all steamers, propelled in whole or in part by steam, and navi-
5 gating the inland waters of the state. They shall also designate the number of passengers
6 that each steam vessel may safely carry, and it shall be unlawful for any master or owner of any
7 steam vessel herein provided for to carry a greater number of passengers than is allowed by
8 the inspector's certificate, and such regulations, when approved by the governor, shall have
9 the force of law.

SEC. 4. Every owner, lessee or other person having charge of steam boilers of any boat,
2 or boat propelled in whole or in part by steam, not subject to inspection under the laws of

3 the United States, shall cause the same to be inspected at least once every year by the inspect-
4 ors herein provided for, and every such owner, lessee or other person having charge of such
5 boilers or steam vessels who shall raise steam and operate such boilers and machinery with-
6 out such inspection shall be subject to a penalty of fifty dollars (\$50), said amount to accrue
7 to the state.

SEC. 5. The said inspectors shall, in addition to their duties as inspectors of steam
2 vessels, inspect all boilers or steam generators before the same shall be used, and at least in
3 each year thereafter they shall subject all boilers to hydrostatic pressure, and shall satisfy
4 themselves by a thorough examination inside and out, and by hammer test after hydrostatic
5 pressure, that the boilers are well made of good and suitable material; that the openings for
6 the passage of steam and water respectively, and all pipes and tubes exposed to heat are of
7 proper dimensions and free from obstructions; that the flues are circular in form; that the
8 friction (fire line) of the furnace is at least two inches below the prescribed minimum water
9 line of the boilers; that the arrangements for delivering the feed water are such that the
10 boilers cannot be injured thereby, and that such boilers and their steam connections may be
11 safely employed without peril to life. They shall also satisfy themselves that their safety
12 valves are of suitable dimensions, sufficient in number and properly arranged, and that the
13 safety valve weights and springs are properly adjusted, so as to allow no greater pressure in
14 the boilers than the amount prescribed by the inspection certificate; that there is a sufficient
15 number of gauge cocks properly inserted, suitable gauges that will correctly record the press-
16 ure of steam; and that a fusible plug is properly inserted, so as to fuse by the heat of the fur-
17 nace whenever the water falls below its prescribed limits in the boiler, and that adequate and
18 certain provisions for an ample supply to feed the boilers at all times, so that in high pressure
19 boilers the water shall not be less than four inches above the top of the flues, and that means
20 for blowing out are provided, so that the mud and sediment may be removed while the boiler
21 is under pressure of steam. In subjecting to hydrostatic tests, boilers usually designated as
22 high pressure, the inspector shall assume one hundred and twenty-five pounds to the square
23 inch as the maximum pressure allowable as a working pressure for new boilers of forty-two
24 inches in diameter, made in the best manner, of plates one-fourth of an inch thick, of good
25 materials; but the inspector shall rate the working power of all high pressure boilers accord-
26 ing to their strength compared with this standard, and in all cases the test applied shall
27 exceed the working power allowed, in the ratio of one hundred and sixty-five to one hundred
28 and ten. In subjecting to the hydrostatic test boilers usually designated as low pressure, the
29 inspector shall allow as a working power for each new boiler a pressure of only three-fourths
30 the number of pounds to the square inch to which it has been subjected by the hydrostatic
31 test.

32 Should the inspector be of the opinion that any boiler, by reason of its construction or
33 material, will not safely allow so high a working pressure as herein provided, he may, for
34 reasons stated specially in his certificate, fix the pressure of such boiler at less than three-
35 fourths of the test pressure. No boiler or steam pipe, nor any of the connections therewith,
36 shall be approved which is made in whole or part of bad material or is unsafe from any cause.
37 Nothing herein shall be construed to prevent the use of any boiler or steam generator which
38 may not be constructed of riveted iron or steel plates, when the board of directors have satis-
39 factory evidence that such boiler or steam engine is equal in strength and safe from explosion
40 as boilers of the best quality constructed of riveted iron or steel plates.

SEC. 6. Every person who constructs a boiler or steam pipe of iron or steel plates, known
2 to be faulty or imperfect, or who drills any rivet hole to make it come fair, or who delivers
3 any such boiler for use, knowing it to be imperfect in its flues, flanges, riveting, bracing or any
4 other of its parts, shall be fined one hundred dollars (\$100), one-third for the use of the informer.

SEC. 7. In addition to the annual inspection, it shall be the duty of each inspector to
2 examine at any time, when in his opinion such examination shall become necessary, all such
3 boilers within his district as shall become unsafe from any cause and to notify the owners or
4 persons using such boilers of any defect, and what repairs are necessary in order to render
5 them safe; and it shall be the duty of the person operating or owning any such boiler to cease
6 to use the same until such repairs are made; and in case of failure to comply with the require-
7 ments of said inspector, the person owning or operating any such boiler shall be liable to a
8 fine not exceeding fifty dollars (\$50) and liable to any damage to person or property resulting
9 therefrom.

SEC. 8. Every steam boiler shall be provided with a fusible plug of good Banca tin;
2 inserted in the flues, crown sheet or other part of the boiler most exposed to the heat of the
3 furnace when the water falls below the prescribed limits.

SEC. 9. It shall be the duty of owners or managers of steam boilers, mentioned in this
2 act, to allow said inspector free access to the same, and it is hereby made the duty of the engi-
3 neer operating the same, to assist the inspector in his examination and to point out any defect
4 they may know in the boiler or machinery in their charge.

SEC. 10. No person shall be entrusted with the operating of any steam boiler or steam
2 machinery who has not been examined by an inspector and found competent to perform
3 his duties as an engineer, except he has had two years' experience in operating steam boilers
4 or steam machinery prior to the time in which this act takes effect, and receives from such
5 inspector a written or printed license to so act. Engineers shall be divided into three classes,
6 viz: Chief engineer, assistant engineer and special engineer. No license shall be granted to
7 any person to perform the duties of chief engineer whose knowledge of steam machinery and
8 experience as an engineer is not such as to justify the belief that he is competent to take

9 charge of all classes of boilers and machinery. No license shall be granted to any person to
10 act as an assistant engineer unless his knowlege of steam machinery and habits of life are
11 such as to warrant the belief that he can safely be entrusted to take the charge of all classes
12 of boilers and machinery.

13 Special engineers may be licensed to operate steam thresher engines and engines of
14 kindred class, when found on examination to be sufficiently acquainted with the duties of an
15 engineer to warrant the belief that he can safely be entrusted to perform such duties. When-
16 ever complaint is made against an engineer holding a license from a state inspector that he
17 has through negligence, want of skill or inattention to duty, permitted his boiler to burn or
18 otherwise to become in bad condition, it shall be the duty of the inspector, upon satisfactory
19 proof of such negligence, to revoke the license of such engineer; and no engineer shall run his
20 engine longer than seven days without cleaning out the boiler, under the penalty of this act.

SEC. 11. An engineer running a stationary engine, shall keep his license in a public
2 place in the engine room, which license shall be subject to inspection by any inspector or
3 other public official. Engineers running engines and boilers other than stationary ones, shall
4 keep their certificates with them and subject to examination by any inspector or public official
5 or other person interested therein. Any person employing any one to operate a steam
6 boiler or engine who does not have a certificate as provided in this act, shall be guilty of a
7 misdemeanor and fined not to exeed one hundred dollars (\$100), or imprisoned in the county
8 jail not to exceed one year, or both such fine and imprisonment as the court may deem advis-
9 able. The license of chief and assistant engineers shall be good for the time issued in any
10 part of the state, but special license shall be good only in the judicial district where granted,
11 and in case of removal to another district, a new license must be taken out in said district,
12 and a failure or neglect to do so will incur the penalty in paragraph 2 of this section.

SEC. 12. In making the inspection of boilers, steam machinery or steam vessels, herein
2 provided for, the inspectors may act jointly or separately, but the inspector or inspectors
3 making such inspection, shall in all cases subscribe and make an oath to the certificate of
4 inspection; any inspector who shall wilfully certify falsely regarding any steam boiler or
5 attachments, or the hull and equipments of any steam vessel, or grant license to incompetent
6 persons to act as engineers, or grant a license to any person better than the grade he should
7 have, shall, on conviction thereof, be punished by a fine not exceeding four hundred dollars
8 (\$400) or imprisonment not exceeding one year in the state prison, or both, at the discretion
9 of the court.

SEC. 13. Each inspector shall be authorized to charge a fee of four dollars (\$4) for the
2 inspection of each single boiler and its steam connections, within his district, and two dollars
3 (\$2) for each additional boiler when connected, said fee being payable at time of delivery of
4 the inspector's certificate of approval. The fee for the examination of engineers and for the

5 issuing of a licensing certificate shall be two dollars (\$2) and for the annual renewal of the
6 same, fifty (50) cents, said amounts to be the property of the inspector, who shall receive no
7 other compensation for his services.

SEC. 14. This act shall not apply to railroad locomotives nor to boilers owned or controlled
2 by railway companies, unless used upon steam vessels navigating the inland waters of the
3 state; nor shall engineers employed by the railroad companies be required to procure a license
4 from the state board of inspectors, but the penalties herein provided for shall not obtain any
5 case prior to the time the inspector or inspectors have notified the persons affected that they
6 are ready to make inspection as herein provided for.

SEC. 15. No inspector shall act as agent for any machinery manufacturer in the sale of
2 machinery, under the penalty of removal by the governor.

SEC. 16. All acts or parts of acts inconsistent with this act are hereby repealed.

SEC. 17. This act being deemed of immediate importance shall take effect and be in force
2 from and after publication in the Iowa State Register and the Des Moines Leader, newspapers
3 published in Des Moines, Iowa.