

MAINE STATE LEGISLATURE

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NEW DRAFT

EIGHTY-FOURTH LEGISLATURE

House Document

No. 661

H. P. 1637 House of Representatives, March 14, 1929.

Reported by Mr. Robie from Committee on Manufactures
and laid on table to be printed under joint rules.

CLYDE R. CHAPMAN, Clerk.

STATE OF MAINE

IN THE YEAR OF OUR LORD ONE THOUSAND NINE
HUNDRED AND TWENTY-NINE

AN ACT Relating to Fusible Plugs in Steam Boilers.

Be it enacted by the People of the State of Maine, as follows:

Section twenty-five of chapter twenty-three of the revised
2 statutes is hereby amended by striking out the whole of
3 said section and inserting in place thereof the following:

‘Sect. 25. No person or corporation shall manufacture,
2 sell, use or cause to be used, except as hereinafter provided
3 any steam boiler in the state of Maine unless said boiler
4 is provided with a fusible plug constructed as provided in
5 the following section.

Fusible plugs, if used, shall be filled with tin with a melt-
2 ing point between four hundred and five hundred degrees

3 fahrenheit, and shall be renewed once each year. The
4 following provisions shall not apply to steam boilers carry-
5 ing a pressure in excess of two hundred twenty-five pounds
6 per square inch gage.

The least diameter of fusible metal shall be not less than
2 one-half inch, except for maximum allowable working
3 pressures of over one hundred seventy-five pounds per
4 square inch or when it is necessary to place a fusible plug
5 in a tube, in which case the least diameter of fusible metal
6 shall be not less than three-eighths inch. If a fusible plug
7 is inserted in a tube, the tube wall shall be not less than
8 twenty-two hundredths of an inch thick or sufficient to
9 give four threads.

Each boiler may have one or more fusible plugs, located
2 at the lowest permissible water level as follows:

a. In horizontal—return tubular boilers—in the rear
2 head, not less than two inches above the upper row of
3 tubes, the measurement to be taken from the line of upper
4 surface of tubes to the center of the plug, and projecting
5 through the sheet not less than one inch. When the dis-
6 tance between the uppermost line of tubes and the top of
7 the steam space is thirteen inches or less, the bottom of
8 the fusible plug may come at a lesser distance than two
9 inches above the upper row of tubes but in no case shall
10 the plug be located below the level of the top of the upper-
11 most row of tubes.

b. In horizontal flue boilers—in the rear head, on a line

2 with the highest part of the boiler exposed to the products
3 of combustion, and projecting through the sheet not less
4 than one inch.

c. In traction, portable or stationary boilers of the loco-
2 motive type or star water tube boilers—in the highest part
3 of the crown sheet, and projecting through the sheet not
4 less than one inch.

d. In verticle fire-tube boilers—in an outside tube, not
2 less than one-third the length of the tube above the lower
3 tube sheet.

e. In verticle fire-tube boilers, Corliss type—in a tube,
2 not less than one-third the length of the tube above the
3 lower tube sheet.

f. In vertical submerged-tube boilers—in the upper tube
2 sheet, and projecting through the sheet not less than one
3 inch.

g. In water-tube boilers, horizontal drums, Babcock &
2 Wilcox type—in the upper drum, not less than six inches
3 above the bottom of the drum, over the first pass of the
4 products of combustion, and projecting through the sheet
5 not less than one inch.

h. In Stirling boilers, standard type—in the front side
2 of the middle drum, not less than four inches above the
3 bottom of the drum, and projecting through the sheet not
4 less than one inch.

i. In Stirling boilers, superheater type—in the front
2 drum, not less than six inches above the bottom of the

3 drum, exposed to the products of combustion, and pro-
4 jecting through the sheet not less than one inch.

j. In water-tube boilers, Heine type—in the front course
2 of the drum, not less than six inches above the bottom of
3 the drum, and projecting through the sheet not less than
4 one inch.

k. In Edge Moor boilers, standard type—in the bottom
2 of the steam and water drum, not less than six inches above
3 the bottom of the drum, over the first pass of the products
4 of combustion, and projecting through the sheet not less
5 than one inch.

l. In water-tube boilers, Almy type—in a tube or fitting
2 exposed to the products of combustion.

m. In vertical boilers, Climax or Hazelton type—in a
2 tube or center drum not less than one-half the height of
3 the shell, measuring from the lowest circumferential seam.

n. In Cahall vertical water-tube boilers—in the inner
2 sheet of the top drum, not less than six inches above the
3 upper tube sheet, and projecting through the sheet not less
4 than one inch.

o. In Wickes vertical water-tube boilers—in the shell of
2 the top drum and not less than six inches above the upper
3 tube sheet, and projecting through the sheet not less than
4 one inch; so located as to be at the front of the boiler and
5 exposed to the first pass of the products of combustion.

p. In Scotch marine type boilers—in the combustion

2 chamber top, and projecting through the sheet not less than
3 one inch.

q. In dry-back Scotch type boilers—in the rear head,
2 not less than two inches above the upper row of tubes, and
3 projecting through the sheet not less than one inch. When
4 the distance between the uppermost line of tubes and the
5 top of the steam space is thirteen inches or less, the bottom
6 of the fusible plug may come at a lesser distance than two
7 inches above the upper row of tubes; but in no case shall
8 the plug be located below the level of the top of the upper-
9 most row of tubes.

r. In economic-type boilers—in the rear head not less
2 than two inches above the upper row of tubes. When the
3 distance between the uppermost line of tubes and the top
4 of the steam space is thirteen inches or less, the bottom
5 of the fusible plug may come at a lesser distance than two
6 inches above the upper row of tubes but in no case shall the
7 plug be located below the level of the top of the uppermost
8 row of tubes.

s. In water-tube boilers, Worthington type—in the front
2 side of the steam and water drum, not less than four inches
3 above the bottom of the drum, and projecting through the
4 sheet not less than one inch.

t. Fire engine boilers are not usually supplied with fusible
2 plugs. Unless special provision is made to keep the water
3 above the firebox crown sheet other than by the natural
4 level, the lowest permissible water level shall be at least

5 three inches above the top of the firebox crown sheet.

u. For other types and new designs, fusible plugs shall be
2 placed at the lowest permissible water level, subject to the
3 direct radiant heat of the fire or in the direct path of the
4 products of combustion, as near the primary combustion
5 chamber as possible.

The foregoing provisions shall not apply to locomotive
2 or other boilers under the jurisdiction of the United States,
3 nor to boilers which are insured by standard steam boiler
4 insurance companies, and are inspected by such companies
5 at least once a year, nor to railroad corporations engaged in
6 interstate commerce.'