

PRIVATE & CONFIDENTIAL.

RULES
FOR
AUTOMATIC SPRINKLER INSTALLATIONS,
ADOPTED BY THE
FIRE OFFICES' COMMITTEE
AND THE
MUTUAL ASSURANCE CORPORATION.

September 1888.

(Note. These are the first Rules issued under the auspices of the Fire Offices' Committee. An earlier set of Rules was issued in 1885 by the Mutual Fire Insurance Corporation Limited.)

Every Insurance on property (Buildings and Contents) protected by Sprinklers is, unless separate sums are insured on each storey, to be subject to the following

SPECIAL CONDITION OF AVERAGE

If the sum insured shall at the breaking out of a fire be less than 70 per cent. of the value of the property insured then the Assured shall be considered as being his own insurer for the difference between the sum insured and the full value of the property insured at the time of the fire, and shall bear a rateable share of the loss accordingly.

RULES

FOR

AUTOMATIC SPRINKLER INSTALLATIONS.

All the non-fireproof portions of any Building fitted with Automatic Sprinklers must be protected by Sprinklers in the manner hereafter described, and except as hereinafter provided, all the non-fireproof portions of every Building communicating therewith otherwise than by Double Fire-proof Doors, or adjoining and not having a party-wall carried up to and through the roof must also be so protected.

When a Mill communicates by any opening not protected by a Fire-proof Door with an adjoining Shed, having a fire-proof floor, in which non-hazardous processes, i.e., any process after spinning, but not including drying by artificial heat, only are carried on, it is not required that such Shed should be protected by Sprinklers in all its parts provided that every such opening be adequately protected by a Sprinkler or Sprinklers placed in the Shed in close proximity to it.

The spaces between the ceilings and roofs of Buildings must be protected. The Sprinklers must in all cases follow the pitch of roofs.

All hoists, elevators, shoots, rope or strap races, and gearing boxes, inside Buildings must be protected by Sprinklers.

Sprinkler heads, which must be of a pattern approved by the Offices, must be fixed in distributing pipes supplied with water, as hereinafter provided. The Sprinklers must be placed not more than 10 ft. apart, and those next to walls and heavy ceiling beams not more than 5 ft. therefrom. In special cases, distances not exceeding 11 ft. between two Sprinklers, and 6 ft. from walls and heavy beams may be allowed, provided there be at least one Sprinkler for every 100 square feet of floor area.

Where the roof or ceiling of a building is divided into bays of less than 10 feet centres, there must be a row of Sprinklers down the centre of each bay, the Sprinklers being fixed at intervals of not more than 10 feet from each other.

Every Sprinkler Installation must be provided with two separate and adequate sources of water supply always available. One of such sources of supply must be practically unlimited, and when the Town's water is accepted as one of the supplies it must, during both day and night, have a pressure at the level of the highest Sprinkler in the building of at least 10 lbs. to the square inch. There must in every Installation be a tank always available for the immediate supply of the Sprinklers, except in cases where one of the sources is the Town's water, when an approved Automatic Pump drawing water from another practically unlimited source may be accepted as the other.

In order that the tank may be accepted as one of the two sources of supply above mentioned, its capacity must be as follows:

(a) Not less than 5,000 gallons when the Sprinklers on any one floor, or on corresponding floors of communicating buildings, do not exceed 150.

(b) Not less than 6,500 gallons when the Sprinklers on any one floor, or on corresponding floors of communicating buildings, do not exceed 200.

(c) Not less than 7,500 gallons when the Sprinklers on any one floor, or on corresponding floors of communicating buildings, exceed 200.

(d) Or not less than 100 gallons per Sprinkler for the greatest number Sprinklers on any one floor, or on corresponding floors of communicating buildings, when the number of such Sprinklers does not exceed 50, but in no case is the Tank to have a smaller capacity than 3,000 gallons.

The other supply of water must be practically unlimited. If a Tank of capacity smaller than that required in the case under the foregoing provisions is used then it cannot be accepted as one of the two sources of supply. Two adequate sources of supply, one practically unlimited, will under such circumstances be required.

If one of the two sources of supply be the Town's water, it must be brought into the Building direct from the street main by a supply pipe leading to the main stop valve, and used only for fire service. If the Town's main be of insufficient size, according to the table appended to Rule 11, it cannot be accepted as an "unlimited" source of supply.

The base of the tank must be not less than 15 feet above the highest Sprinkler.

The tank must always be kept full of water, except when its capacity is in excess of the sprinkler requirements, in which case the excess may be drawn off for other purposes provided the outlet for that purpose be placed at such a height above the bottom of the tank that the quantity of water in the tank can in no case be so reduced through such outlet as to leave less than the specified quantity required for the Sprinklers.

The tank must be fitted with an indicator showing the depth of water therein, and should be cleansed at least once every half-year.

The tank must be covered in, and provision must e made to prevent the water in it from freezing. In Buildings not artificially heated, in which there is any chance of the pipes freezing, the Sprinkler Installation must be erected on an approved dry pipe system.

Where donkey engines or steam pumps are accepted as one of the supplies to the Sprinkler Installation, sufficient steam or other power to drive the pumps must at all times be available, and if the pump is automatic it must be kept always working so as to make one or two strokes a minute. The pumps must be of sufficient capacity for the adequate supply of the Sprinklers, and a warranty must be inserted in the Policy that power sufficient to drive the pumps at an efficient pressure will available at all times throughout the year.

At least two gauges must be fixed to each Installation, to register the pressure of the supply, one to be fixed above the alarm valve, and the other below the alarm and main stop valves.

A main stop valve must be provided, which, when closed, will shut off all supply of water to the Installation. All the water supplies must be connected before passing through the main stop valve, with the exception that where one of the sources of supply is worked by a non-automatic pump, such pump may be connected with the Installation at such point as may render it most readily available. Each supply pipe must be fitted with a back pressure valve. The main stop valve must be placed at or near the ground level, and must be properly protected from being tampered with, but readily accessible to authorised persons. It must be secured open by a riveted or padlocked strap.

Subsidiary stop valves are not allowed on any supply pipes except on the supply pipe from non-automatic pumps.

11. From the main stop valve a main pipe must be fixed to supply the distributing pipes in each room of the Building. The minimum size of the main pipe must be determined by the greatest number of Sprinklers in any one floor, or corresponding floors of communicating Buildings, according to the table below. The size of each of the distributing pipes must be determined, according to the same table, by the number of Sprinklers which it is intended to serve.

Size of Pipe	Sprinklers allowed
$\frac{3}{4}$ inch	1
1 "	3
$1\frac{1}{4}$ "	5
$1\frac{1}{2}$ "	9
$1\frac{3}{4}$ "	14
2 "	18
$2\frac{1}{2}$ "	28
3 "	46
$3\frac{1}{2}$ "	78
4 "	115
$4\frac{1}{2}$ "	125
5 "	150
6 "	200 or more

None of the before-mentioned pipes must be used for any other purpose than to feed the Sprinkler Installation or to test the alarm signal. The diameter of the testing cock should be 1/2" bsp

Where the number of Sprinklers on any one floor exceeds 200 there should be two or more main pipes for their supply, and in the case of very large premises two or more distinct Installations may be necessary.

Every Installation must be fitted with an approved automatic alarm signal to give notice as soon as any Sprinkler is opened. This must be properly protected and tested at frequent intervals.

Automatic Sprinklers are intended to be in addition to, not in substitution for, other Fire-Extinguishing Appliances. Other Fire-Extinguishing Appliances must also be provided and maintained in thorough working order.

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