

IND 51

Filed July 29, 1964
11:15 am

STATE OF WISCONSIN)
DEPT. OF INDUSTRIAL COMMISSION) ss.

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:


I, Stephen J. Reilly, Administrative Officer - Secretary of the Industrial Commission of Wisconsin, and custodian of the official records of said Commission, do hereby certify that the attached copy of amendment to Ind 51.24 Fire Alarm Systems was adopted by the Industrial Commission on July 22, 1964.

I further certify that said copy has been compared by me with the original on file in this Commission and that the same is a true copy thereof and of the whole of such original.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the official seal of the department at the Capitol, in the city of Madison, this

29 day of July,

A.D., 1964.


Administrative Officer-Secretary

Pursuant to authority vested in the Industrial Commission of Wisconsin by Section 101.01 - 101.29 Wisconsin Statutes, and pursuant to Chapter 227, the Industrial Commission on July 22, 1964 voted to amend Ind 51.24 Fire Alarm Systems. The amended section is attached.

The amendment shall become effective on the first day of the month following its publication in the Wisconsin Administrative Code as provided in Section 227.

INDUSTRIAL COMMISSION OF WISCONSIN



Stephen J. Reilly
Administrative Officer-Secretary

July 29, 1964

Ind 51.24 Fire alarm systems. (1) Interior fire alarm systems required under Wis. Adm. Code sections Ind 54.16, Ind 56.19 and Ind 57.22 shall be designed and constructed in conformity with the following requirements:

(2) All such alarm systems shall consist of operating stations on each floor of the building, including the basement, with bells, horns, or other approved sounding devices which are effective throughout the building. The system shall be so arranged that the operation of anyone station will actuate all alarm devices connected to the system except in the case of a presignal system. Fire alarms shall be readily distinguishable from any other signalling devices used in the building. A system designed for fire alarm and paging service may be used if the design is such that fire alarm signals will have precedence over all others.

(3) Every fire alarm system shall be electrically operated or activated by non-combustible, non-toxic gas except as provided in section Ind 56.19. Electrically operated systems shall be operated on closed circuit current under constant electrical supervision, so arranged that upon a circuit opening and remaining open or in case of a ground or short circuit in the ungrounded conductor, audible trouble signals will be given instantly. Gas activated systems shall be mechanically supervised and under constant gas pressure, so arranged that in case of a pressure drop an audible trouble signal will be given instantly. Means shall be provided for testing purposes.

(4) In buildings more than 3 stories in height, coded fire alarm systems shall be provided, and the systems shall be so arranged that the code transmitted shall indicate the location and the story of the structure in which the signal originated.

Exception (a) In apartment buildings, non-coded continuous sounding fire alarm systems under constant electrical or gas activated supervision will be approved.

(5) Operating stations shall be prominently located in an accessible position at all required exit doors and required exit stairways. Operating stations shall be of an approved type and shall be conspicuously identified. All such operating stations shall be of a type, which after being operated, will indicate that an alarm has been sent therefrom until reset by an authorized means. (Operating stations having a "Break Glass" panel will be acceptable. On coded systems having a device to permanently record the transmission of an alarm, "Open Door" type stations may be used). The fire alarm operating stations shall be mounted not less than 4 feet nor more than 5 feet above the finished floor as measured from the floor to the center of the box.

(6) All such alarm systems shall be tested at least once a week and a record of such tests shall be kept.

(7) Existing fire alarm systems that are effective in operation will be accepted if approved by the Industrial Commission.

(8) The gas for operation of non-combustible, non-toxic gas activated fire alarm systems shall be supplied from approved pressure cylinders on the premises. The cylinders shall have sufficient capacity and pressure to properly operate all sounding devices connected to the system for a period of not less than 10 minutes. Cylinders shall be removed for recharging immediately after use and shall be replaced by fully charged cylinders.

(9) Spare cylinders shall be kept on the premises at all times for immediate replacement and separate cylinders for testing shall be incorporated in the system.

(10) Tubing in connection with non-combustible, non-toxic gas activated fire alarm systems shall be installed in rigid metal conduit, flexible metal conduit, or surface metal raceways where subject to mechanical injury. Non-corrosive metallic tubing not less than 3/16" in diameter which will withstand a bursting pressure of not less than 500 pounds per square inch shall be used. The maximum length of 3/16" tubing shall not exceed 300 feet between charged cylinders. All tubing and other component parts shall be installed by skilled workmen in accordance with the provisions of this code.

Note: The following sections are taken from the Wisconsin Administrative Electrical Code:

(11) The energy for the operation of electrical fire alarm systems shall be taken from sources suited to the design of the system. Batteries on systems of less than 110 volts shall not be used.

(12) A 3-wire 120-240 volt or 120-208 volt (3 phase 4 wire) service will be accepted for supervised systems provided the operating current is secured from one ungrounded conductor and the neutral, or grounded conductor, and the current for operating trouble signal or signals is secured from the other ungrounded conductor and the neutral or grounded conductor.

(13) Electrical wiring in connection with fire alarm systems shall be installed in rigid metal conduit, flexible metal conduit, electrical metallic tubing or surface metal raceways. Armored cable (metal) may be used where it can be fished in hollow spaces of walls or partitions in apartments or rooming houses not over 3 stories in height. Where the wiring is subject to excessive moisture or severe mechanical injury, rigid metal conduit shall be used. The smallest size conductor to be used in any fire alarm system in a building over 3 stories in height shall be No. 14 AWG or No. 16 AWG for buildings not over 3 stories in height. The wires shall be provided with insulation suitable for use on circuits not exceeding 600 volts. Fire alarm systems shall be connected to the line side of the main service switch or to the emergency feeder through 2 single pole breakers or switches used for no other purpose and arranged so they can be locked in the

"on" position, and under the supervision of a qualified person. The breaker or switches shall be identified by a red color. Two pole breakers shall not be used.