

## **FIRE PROTECTION HISTORY-PART 51: 1914 (REPORT OF COMMITTEE ON SAFETY TO LIFE/ AUTOMATIC SPRINKLERS)**

By Richard Schulte

The 18<sup>th</sup> annual meeting of the National Fire Protection Association was held in Chicago on May 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup>, 1914. At the meeting, the **Committee on Safety to Life** presented a report on its activities. The following is an excerpt from that report addressing sprinkler protection:

### **“SECTION ON THE AUTOMATIC SPRINKLER.**

*It is to-day an almost unquestioned fact that the automatic sprinkler affords the largest degree of protection of life against fire in practically all cases where there is combustible construction or material, the rapid burning of which is liable to be a menace to the lives of the occupants of buildings. The immense number of fires which have either been promptly extinguished or held in check by the quick operation of the automatic sprinkler definitely demonstrates this when the record is compared with similar fires starting in buildings, which had no sprinkler protection and in which large loss of life has resulted, such as in the factory fires in New York City, Newark and Binghamton, the apartment house in Boston, the clubhouse in St. Louis and the Collinwood School in Cleveland.*

*A study of the record of 14,714 fires of the National Fire Protection Association covering all kinds of properties equipped with automatic sprinklers shows us that in 63 percent of such fires the sprinklers extinguished the fire, and in 32 per cent held it in check; so that in 95 per cent of all fires in buildings having automatic sprinklers the action of these sprinklers prevented the fire from ever becoming serious, and consequently it did not become a menace to the people at that time in the building. Furthermore, these statistics show that of the remaining 5 per cent of fires in sprinklered buildings, which by some are classed as unsatisfactory, very few resulted in serious damage, and in these particular cases there was nearly always some lack of efficiency of the sprinklers which could have been remedied. As a matter of fact, the records actually show that there is almost no case known where a properly put-in sprinkler system, maintained with adequate water supplies, does not do its work, provided other reasonable requirements of building construction and similar details are carried out under engineering supervision in connection with the installation of sprinkler equipment itself.*

*When it is considered that in general, sprinklers have been first installed in hazardous factory buildings, and that these records therefore cover largely this class of property, only one interpretation can be placed on the results, viz., **that a great many lives have been saved by these fires being controlled in their incipiency before they became of sufficient size to endanger the occupants.** As a matter of fact, it may be stated that thirty per cent of all fires open only one sprinkler and eighty-one per cent of all fires under sprinklers do not open more than ten heads. This shows how quickly the fires are extinguished.*

*Each sprinkler covers a maximum area of from 80 square feet to 100 square feet, according to conditions; therefore it will be observed that 81 per cent of the fires above noted did not spread their heat over a space greater than 1,000 square feet in area, and necessarily the actual fire is much more closely confined.*

*Mr. Forster: A thousand square feet space is not a very large space. It is only about 32 square feet. This is, the heat spread in 81 per cent of the fires over an area less than that. In a big factory building with many lives jeopardized by fire this means that the people on other floors than that where the fire broke out, would not know anything had happened. This is a common experience in sprinkler fires.*

[Text Omitted]

*The Boston Manufacturers Mutual Fire Insurance Company reports that during a period of forty years (1874-1913) only twelve lives have been lost in buildings insured by it. Three of these people were killed by going back needlessly into the burning building, evidently to save personal effects at a cotton mill fire in 1907, and four were men in the public fire department who were killed in the performance of their duties at the various mills, thus, only five employees were not able to save themselves in this period. This record may be better appreciated when it is considered that it covers factories employing one and a half million people.*

*The Factory Insurance Association reports that during the twenty-four years it has been in operation there have been over 2,000 fires in which automatic sprinklers operated, which fires varied in size from a small one to the entire destruction of mill property. However, only one employee lost his life, and that was due to an effort to go back into the room to obtain some of his clothing.*

[Text Continues]"

There are two points of interest in the excerpt above. The first is the recognition by the NFPA that the installation of sprinkler protection in buildings promotes not only property protection, but also is capable of providing protection for the building occupants. The second point of interest is that in 1914, the statistics collected by the National Fire Protection Association indicated that the sprinklers either controlled or extinguished fires in buildings 95 percent of the time.

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