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FIRE PROTECTION HISTORY-PART 162: 1921 (PORTABLE FIRE EXTINGUISHER CLASSIFICATIONS-NFPA/UL)

By Richard Schulte

In 1910, a patent for a portable fire extinguisher using carbon tetrachloride as the fire extinguishing agent was filed by the Pyrene Manufacturing Company. While carbon tetrachloride (CCl_4) was the first halogenated agent to be used for fire extinguishment purposes, the downside of this extinguishing agent is that it decomposes when heated and phosgene ($COCl_2$), a gas used as a chemical weapon to great effect in World War I, is formed. Not only are the thermal decomposition products of carbon tetrachloride toxic, but carbon tetrachloride itself is also a toxic material.

While carbon tetrachloride was used as a fire extinguishing agent through and after World War II, the hazards of using carbon tetrachloride as a fire extinguishing agent began to be recognized in the 1950's and the use of this chemical as an extinguishing agent was discontinued. In 1921, however, the hazards of carbon tetrachloride were unrecognized.

The following is an excerpt from the Report of Committee on Field Practices presented at the twenty-fifth Annual Meeting of the National Fire Protection Association held in 1921 addressing the ratings assigned to carbon tetrachloride fire extinguishers:

"***Discussion.***

Mr. Gorham Dana: Under the classification of First Aid Fire Appliances I would like to call attention to the fact that one quart special tetrachloride extinguishers are given a rating of two (2), that is, two one quart extinguishers make a unit. Now, a unit is, in general, a 21/2-gallon extinguisher. It seems to me no one-quart extinguisher should be given a rating of two (2) under those conditions. Further, the 11/2-quart device is given the same rating. I would, therefore, move that the one-quart extinguisher be given a rating of 3 instead of 2, allowing the 11/2 quart to remain 2, which would be its equivalent in actual capacity. Of course, tetrachloride is a magic name to some people, but to me it is simply so much extinguishiug material, and I cannot see any logic in saying that 2 quarts of tetrachloride can be considered the equivalent of five 12-quart pails or one 21/2-gallon extinguisher. I think the classification is otherwise excellent, but I certainly trust there will be a change in that particular item.

Mr. Stewart: I would like to explain that this classification of First Aid Fire Appliances is the classification adopted by Underwriters' Laboratories, which we are proposing to utilize in connection with these rules for installation, maintenance and use. For that reason, it would hardly be in order for us to change this report, inasmuch as we have appropriated this from the Laboratories. This is the standard which has been adopted by the Fire Council of the Underwriters' Laboratories.

Mr. F. E. Cabot: Mr. President, did I understand Mr. Stewart to say that the Underwriters' Laboratories is going to presume to tell the National Fire Protection Association what we are going to accept in such matters? That is entirely too much latitude. I am, personally, for one, not prepared for that.

Mr. Stewart: I assume it may be proper for this Association to say whether it wants to utilize this work of the Laboratories or not. Perhaps a motion might be in order to confer with the Laboratories respecting the advisability of changing any point in the classification.

Mr. Dana : I move that the Committee be asked to confer with Underwriters' Laboratories with reference to the rating of one-quart fire extinguishers.

The President: You have heard Mr. Dana's motion. Is it seconded?

Mr. Cabot: I will second that motion.

The motion was adopted."

The discussion above is of interest in particular because of the question regarding whose responsibility it is, the Laboratories' or the Committee's, to determine the ratings of the various types of fire extinguishers.

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Source: "*Proceedings of the Twenty-fifth Annual* [NFPA] *Meeting*", San Francisco, California, 1921.