

## Precautions against freezing of fire extinguishing appliances

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Résumé de l'article

Dans notre pays où les écarts de température sont grands, les précautions à prendre contre le gel sont importantes. C'est en songeant à cela que nous reproduisons ce document venu de la National Fire Association. On y verra avec quel souci du détail, on passe en revue les choses à faire pour assurer le fonctionnement des appareils au froid et pour empêcher que la gelée ne mette hors d'usage un matériel délicat ou très exposé.

## **2 - Precautions against freezing of fire 145 extinguishing appliances**

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Unless extreme vigilance is exercised the very best installation of fire appliances may suffer temporary disablement from frost. Automatic sprinkler systems, hydrants and all appliances using water for fire extinguishment naturally require special care and attention in winter. The following precautions should be taken, inspections being thorough, with nothing taken for granted :

### **Sprinkler Equipment**

Be sure that engineer or supervising employee is fully posted as to the purpose and intention of every valve and pipe. It is also essential that the night watchman should understand the operation of all valves and the importance of giving proper and prompt alarm.

### **Buildings**

1. See that all portions of buildings are properly heated at all times to prevent freezing in any of the sprinkler pipes, particular attention being given to exposed places such as hallways, entries, stair towers, elevator shafts, show windows, shipping rooms, attics, roof monitors and skylights, and spaces between ground and first floor and under sidewalks.

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Entire systems have been rendered inoperative through neglect of such locations. To be safe from freezing a temperature of at least 40 degrees Fahrenheit should be maintained.

### **Tanks and Fittings**

2. Examine tanks and all pipes, fittings and valves, whether for steam heating, general water service, or fire protection. See that none is frozen, and that they are all in operative condition ; and where there is any liability of freezing, provide the necessary protection.

Besides seeing that tank heaters are in proper order it is important to make certain that they are of adequate capacity for the tanks they serve. Both heaters and circulating pipes should be cleaned of any rust or sediment.

Tanks should be cleaned and tank supports properly painted.

3. Examine carefully and provide suitable boxing around any pipe lines which may be in exposed locations (either between ground and first floor, between buildings, or near windows, etc.). Make frequent tests during the winter in order to make sure the piping is free from frost.

Open points or gaps in the boxing are a prolific source of trouble. It is essential that all such defect be discovered and remedied forthwith. Joist channels and tank platforms are places of special danger in this respect.

### **Dry Valves**

4. See that sprinkler dry valves are in working order, not leaking, and that alarm connections and gong are in operative condition. Should a valve trip and, without giving an alarm, admit water into the pipes where it may remain undiscovered, freezing is liable to occur with disastrous results.

5. Make sure that piping in dry systems is thoroughly drained and that the system holds air pressure well. All pipes should drain back to the dry valve. In cases where this is impossible drip valves should be installed at low points, and these should be carefully watched during cold weather. Drip valve outlets should be plugged as a safeguard against leaking or tampering.

6. Dry-pipe valve closets should be properly constructed and permanently heated, preferably by steam, electric heater, or gas heater with flame properly protected. Lanterns and oil stoves, if used in emergency, should receive constant and careful supervision; the hazard of heaters of this character is intensified if the closet is not provided with a fire-resistive lining.

#### **Supply Valves**

7. See that all supply valves are open, and try water outlets to ascertain if all pipes are free and ready for service.

#### **Fire Department Connections**

8. See that fire department connections drain properly and that caps are in place and well lubricated.

#### **Extra Sprinklers**

9. Have on hand, for emergency use, a supply of extra sprinklers; also (to facilitate repairs) extra fittings and plugs, together with a special sprinkler wrench.

#### **General**

10. When it becomes necessary to close a sprinkler valve during working hours, a competent man should be stationed at the valve, so that water can be turned on immediately in case a fire occurs.

11. In case of extensive changes in branch piping, have the sprinkler pipe plugged where disconnected. The pipe should not be unplugged until the branch piping is entirely re-arranged and the workmen are ready to make the final connection. By following this procedure, instead of having the water shut off at the post indicator valve while the work is going on, normal water pressures can be maintained on all but the disconnected sections of a system.

12. When changes or repairs are made in the system the inspection department having jurisdiction should be notified before water is shut

off, and care should be taken to see that the least possible portion of the equipment is out of commission at one time. The city fire department should be informed whenever a system is out of commission.

*Note. The wise property owner will avail himself, not merely during periods of emergency but at all times, of the advice and cooperation of the inspection department with a view to the maintenance of his equipment at the highest degree of efficiency.*

### Fire Pumps

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13. Ascertain by tests that pumps are in condition for immediate service. Every pump should be started at least once a week, and water discharged through relief valve or other outlet.

14. In the case of steam pumps, see that steam connections and traps are in perfect order. Ample steam should be maintained at all times.

15. In the case of electric pumps all wiring and connections should be thoroughly examined and tested.

16. Give special attention to the heating of pump rooms. The temperature in these rooms must not be allowed to fall to a point at which there will be danger of freezing.

17. Examine the ends of suction pipes to see that leaves or other refuse matter have not clogged holes in strainers. The capacity of a pump may be greatly reduced by this condition. Clean suction wells and examine intake pipes to well.

18. See that there is a good supply of lubricating oil on hand.

(à suivre)

