

CHAPTER IX

FIRE RESISTANCE AND FIRE PRECAUTIONS

90. **Stand Pipe Equipments**

- a. For the purpose of the prevention and fire extinguishments, every building shall be equipped with stand pipes as under:-
 - (1) From four to eight storeys in height shall be equipped with not less than 2.5 inch dia pipes; and
 - (2) Over eight storeys in height shall be equipped with not less than four inch dia stand pipes.
- b. The number of standpipes shall be such that all parts of every floor area are at a maximum distance of one hundred and twenty feet from the stand point.
- c. Insofar as practicable, standpipes shall be located with outlets within stairway enclosures, but if these are not available, the standpipes shall be located in a common corridor. In any case atleast one shall be located in the main.
- d. The construction of standpipes be of galvanized iron.
- e. Stand pipe risers shall extend from the lowest to the top most storey of the building or that part of the building which they serve.
- f. When more than one stand pipe is required, they shall be interconnected at their bases by pipes equal in size to that of the largest riser.
- g. Every standpipe or stand-system in case of interconnected stand-pipes, shall be equipped with a fire department approved in-let connection of corrosion resistant metal (e.g. gunmetal) located on an outer building face nearest to street approximately twenty to thirty feet above finished ground and suitably marked "fire department connection-standpipe."
- h. Standpipes shall be provided in every storey with a one and half inch dia flexible base not less than one hundred feet long, with a half inch nozzle, being in an approved rack or cabinet.
- i. The standpipe shall be fed by an overhead water tank reserved solely for this purpose. The minimum capacity of this tank shall not be less than five thousand gallons, with a minimum of seven feet head above the highest discharge point.

91. **Automatic Sprinkler System.** Automatic sprinkler system shall be provided in:-

- a. Every institutional building which serves restrained or handicapped persons;

- b. Covered car parking areas in building of which upper storeys are designed for other uses when such parking area exceeds five thousand square feet;
- c. Out garages or terminals for passengers serving more than four buses at a time;
- d. Each floor of mercantile and industrial buildings which is more than one storey high and which exceed two thousand square feet covered area;
- e. All building compartments used to manufacture, display or sale of combustible materials and products which are more than seven thousand and five hundred square feet in covered area;
- f. All areas of theaters except auditorium, music hall and lobbies; and
- g. All building areas used primarily for storage of goods, and materials including areas clearly specified for storage of incombustible materials and goods, which are more than one thousand square feet in area; and
- h. Sprinkler provision shall be made in the immediate vicinity of generators or any electrical equipment.

92. **Construction of Sprinkler System.** Sprinkler pipes, hangers and sprinkler heads shall be protected from corrosion.

- a. Every sprinkler system shall be equipped with a fire department approved inlet connection located on an outer building face nearest to street approximately twenty to thirty feet above finished ground and suitably marked "Fire department connection-Automatic sprinklers".
- b. Automatic sprinkler system shall be fed by overhead water tank reserved solely for this purpose. The tank shall be capable of supplying twenty five percent of the sprinkle heads for twenty minutes but the minimum capacity of any tank shall not be less than five hundred gallons. There shall be minimum head of 1.05 kg-cm² above the highest discharge point.
- c. Automatic sprinkler system shall set off automatic alarm system simultaneously.
- d. Every sprinkler system shall be provided with a readily accessible outlet valve to control all sources of water supply.

93. **Portable Fire Extinguishing in Public Buildings.** There shall be provided:-

- a. Two extinguishers in stage area, in each dressing room and one immediately outside each entry in theaters;

- b. One extinguisher in each two thousand and five hundred square feet of area of public assembly buildings, but not less than one on each occupied floor, and not less than one in each lab, workshop or vocational room; and
- c. At least one extinguisher on each floor at stairway landing and in corridor at each lift or group of lifts in residential and commercial buildings.

94. **Interior Fire Alarm System and Signal Stations.** Interior fire alarm system shall be installed in all: -

- a. Hotels, motels, dormitories and similar buildings with a capacity of fifty or more occupants above the ground level;
- b. Hospitals, asylums, nursing houses, and similar institutional buildings accommodating more than twenty occupants above the ground floor;
- c. School buildings, with provision of more than thirty students above the ground floor;
- d. Mercantile buildings with more than two thousand square feet above the first floor;
- e. Factory buildings exceeding two storeys in height and with more than four thousand square feet area above the first floor;
- f. Office buildings more than five storeys in height and with occupancy area of more than ten thousand square feet above the ground floor; and
- g. Cinemas, theaters and similar places of public assembly.
- h. At least one signal station shall be located in each storey in accessible location in the natural depth of exit way or escape.
- i. Every signal station shall be so located that no point on any floor or the building is more than fifty meter from such station

95. **Emergency Fire Exits.** Emergency fire exits of non-combustible material shall be provided in all commercial buildings.