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HEALTH AND FAMILY WELFARE (E2) DEPARTMENT

Letter (Ms).No.138, Dated 25.04.2022

திருவள்ளூர் ஆண்டு-2053, சுபகிருது, சித்திரை-12

From
Dr.J.Radhakrishnan,I.A.S.,
Principal Secretary to Government.

To
All Heads of Departments, Health and Family Welfare Department,
Chennai. (with a request to communicate to their subordinates).
The Secretary, National Medical Commission, New Delhi-77.
The Secretary, Housing and Urban Development Department, Chennai-09.
The Member Secretary, Chennai Metropolitan Development Authority, Chennai-8.
The Director, Directorate of Town and Country Planning, Chennai-102
The Director, Tamil Nadu Fire and Rescue Services, Chennai-6
The President, Indian Medical Association, Perundurai Road, Erode-638009.
Tamil Nadu Nurses and Midwives Council, Chennai-04
Tamil Nadu Dental Council, Chennai-107.
The Chief Engineer and Engineer in Chief (Buildings), Chepauk, Chennai-05.
The Chief Commissioner for Persons with Disabilities,
Ministry of Social Justice and Empowerment , New Delhi-1
✓ All Private Hospitals (through Director of Medical and Rural Health Services,
Chennai-6).

Sir,

Sub : Hospital Buildings – Guidelines for fire safety arrangements in
Hospital Building – Revised Guidelines issued.

- Ref :
1. Interim Orders of Hon'ble High Court of Madras in W.P.No.30367 of 2015, dated 21.04.2016.
 2. Government letter (Ms) No.185/E2/2016, Health and Family Welfare Department, dated 15.07.2016.
 3. Government letter (Ms) No.211/E2/2016, Health and Family Welfare Department, dated 30.08.2016.
 4. Interim Orders of Hon'ble High Court of Madras in W.P.No.30367 of 2015, dated 07.04.2017.
 5. G.O.(Ms).No.118, Health and Family Welfare Department, dated 20.04.2017
 6. G.O.(Ms).No.328, Health and Family Welfare Department, dated 03.08.2018.


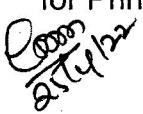
I am directed to state that in the reference second and third cited, guidelines for fire safety arrangements in hospital buildings have been issued.

2. Based on the orders of Hon'ble High Court of Madras in the reference fourth and fifth cited, the State Level Expert Committee on Fire Safety Arrangements

in Hospitals was constituted to inspect and monitor the fire fighting arrangements in Hospitals and Medical centers both Government and Private in the State of Tamil Nadu. The Committee has submitted its final report and have recommended certain general and specific guidelines to be adopted in all the hospitals.

3. The Government, after examining the recommendations of the State Level Expert Committee on Fire Safety Arrangements in Hospitals have decided to revise the guidelines for fire safety arrangements in hospital buildings already issued in the reference second and third cited and accordingly issues the fresh guidelines as annexed with this letter for strict compliance.

Yours faithfully,


for Principal Secretary to Government.


Copy to:-

All Sections, Health and Family Welfare Department, Chennai-09.

The Health and Family Welfare (DC) Department, Chennai-09.

Stock File / Spare Copy.

**Annexure to Government letter (Ms). No.138, Health and Family Welfare
Department, dated 25.04.2022.**

Guidelines for fire safety arrangements in hospital buildings

General Guidelines:-

- i) Provision of ramp, wherever possible, subject to availability of space, structural stability of the building etc may be provided.
- ii) Wherever there are multiple buildings (Group Developments) in one campus, provision of ramp in one building with connecting corridors to the other buildings, leaving enough head room for snorkel, subject to availability of space, structural stability of the building etc may be provided.
- iii) The minimum width of ramp can be allowed above 1.5 metre (ideally 2.1 metre) and minimum gradient of ramp can be 1 in 8 wherein the gradient of 1 in 12 is ideal.
- iv) Wherever possible, subject to availability of space etc provision of setback / space all around the building with access to outlets / windows for fire fighting vehicles to operate may be provided.
- v) If provision of setback as stated above is not possible, minimum of two gates with approach roads on opposite sides of the building have to be provided, wherever possible, taking into account the location of the building etc for easy movement of vehicles during an emergency. Emergency / fire exits which are already existing has to be periodically monitored to ensure free movement at any time.
- vi) Wherever possible, fire service lifts with alternate power supply outside the building is to be provided. If possible, one of the existing lifts can also be converted as Fire service lift.
- vii) Wherever possible, pressurization of existing staircases may be provided.
- viii) Wherever the fire safety methods mentioned above cannot be provided due to practical difficulties, alternate fire fighting arrangements as suggested by the Fire Service Department, based on the requirement of a particular hospital building, to be provided. The institutions may consult the fire service department in such circumstances.
- ix) Minimum of two large, 'Louvered Windows' (with adequate safety provision) may be provided in each floor wherever the building is fully glassed, for easy evacuation of persons, wherever possible.
- x) Fire fighting training may be given for selected employees. This can be made mandatory. The hospital administration must approach the Fire Service Department for imparting such training.
- xi) Regular mock drills to be conducted every six months and this has to be made mandatory.
- xii) All Government/ private Hospitals shall display in various places declaration enlisting the fire safety measures and escape routes provided in the hospital. This declaration should be displayed on a board in Tamil and English. This provision is to be made mandatory.

- xiii) The material used for partitions, false roofing and interior decorations etc., may be of fire resistant and non combustible nature.
- xiv) Computer main Server room should have total flooding system with clean agent for fire suppression. In respect of UPS battery backup rooms, they shall be properly ventilated by means of mechanical ventilation.
- xv) Diet kitchen department should be properly ventilated with proper exhaust hoods
- xvi) Fire Safety / emergency Care contact Numbers should be displayed in all wards like Fire Station, nearby police Station etc.
- xvii) For hospital building above Ground+2, the hospital management concerned has to do a self appraisal annually with respect to the preparedness in the eventuality of disaster.
- xviii) Disaster Management plan should be kept ready by every hospital and skill training from certified/authorized agencies for Disaster Management has to be imparted to all hospitals.
- xix) The Hospital authorities shall ensure the presence of local Fire Officer with team during mock and evacuation drills. It is compulsory as per the National Building Code of India Part – IV Fire and Life Safety.
- xx) Since in-built Fire Safety systems like Portable Fire Extinguishers, Hose reels, Down Comer, Wet riser, Automatic sprinklers & Detectors, Manual Call Points and Yard Hydrant systems are all made up of Iron and need to be tested and maintained periodically (weekly, monthly, bi-months etc.,) the need for Tamil Nadu Fire and Rescue Services Department personnel conducting inspection at least once in a year is crucial and should be done at each renewal.
- xxi) Terrace floor be not allowed for any other activity since it has to be kept vacant. It is also a pathway for easy evacuation of patients in case of any fire or any other emergency in the intermediate floors.
- xxii) The fire command / disaster management cell is to be made in all the institutions so as to rise upto the occasion in case of emergencies. The fire command cell shall have the main fire alarm panel with suitable Public address system. Details of all floor plans along with the details of fire fighting equipments and installations shall be maintained in this centre.
- xxiii) The provision of hand rails, use of anti-skid tiles and reflector strips, may be advised at the time of issuing planning permission itself.
- xxiv) Vulnerable sections like Operation theatre, Intensive care units, Critical care units, Paediatric Units, Neo-Natal ward, Trauma Care, Geriatric, Gynaecology and Labour Wards may be placed in lower level of multi storied hospital buildings for easy evacuations during emergency.
- xxv) Diesel Generator, Central Stores, Central Sterile Supply Department, Steam Autoclave Machines, Laundry with boiler, Diet Kitchen with gas cylinders may not be kept in basement.

Because of practical limitations in respect of existing hospitals, the Department of Fire and Rescue services may decide and suggest the best way possible to ensure fire safety in those hospitals where space is a constraint.

Specific guidelines in respect of high rise buildings:-

Upto G+3 or Stilt + 4F	<p>Provision of ramp in case of availability of space to be considered taking into consideration of setback space and building stability. If there is no space for new construction of ramp, then alternate Fire safety measures such as Fire Hydrant system are to be in place as per specifications of the Department of Fire and Rescue services.</p> <p>One of the lifts can be made stretcher and fire lift with 4 hours fire rating with alternative power supply.</p> <p>One of the staircases should be pressurized and also Large Louvered Windows shall be provided on each floor abutting the road side wherever possible.</p>
G+4 F and above	<p>Provision of Ramp has to be considered. If no space is available or the building stability is in question, other arrangements like Fire Hydrant with Sprinklers system and other fire fighting arrangements have to be made. Advise and directions to be sought from Department of Fire and Rescue services on a case to case basis.</p> <p>One of the lifts can be made stretcher and fire lift with 4 hours fire rating with alternative power supply.</p> <p>One of the staircases should be pressurized and also Large Louvered Windows shall be provided on each floor abutting the road side wherever possible.</p>

NOTE:

- High Rise Building - A building 15 m or above in height (irrespective of its occupancy)
 - Any changes in travel directions in ramp shall be preceded by landings of 1.5 meter x 1.5 meter size.
 - No external staircase shall be inclined at an angle greater than 45 degrees from the horizontal.
- a. High rise buildings (Permissible maximum height for Hospitals is 45 metres) and buildings with floor space more than 300 sq.m per floor should be allowed to operate only after getting prior Compliance Certificate from Department of Fire and Rescue services and Completion Certificate from Chennai Metropolitan Development Authority / Directorate of Town and Country Planning.
 - b. In case of other High Rise Building category, Department of Fire and Rescue services has to issue Planning Permission /No Objection Certificate and Fire licence.
 - c. In Non-High Rise Building - Jurisdictional District Officers of Fire and Rescue Services may issue Planning Permission /No Objection Certificate / and Fire Licence.

BASEMENTS IN THE CASES OF HIGH RISE HOSPITAL BUILDINGS:

In respect of High rise Hospital buildings, the provisions contained in Development Control Rules and General BIS requirements of National Building Code of India, 2016 may be taken into account. The provisions states as follows :

- The basement shall not be used for residential purposes.
- The construction of the basement shall be allowed by the Authority in accordance with the laid use and other provisions specified under the development control rules.
- The following uses shall be permitted in the basements.
 - a. Storage of household or other goods of ordinarily non-combustible material.
 - b. Strong rooms, bank cellars etc.,
 - c. Air conditioning equipment and other machines used for services and utilities of the building and
 - d. Parking spaces

The Authority may also consider permitting mercantile occupancy as well as institutional occupancy for medical, health care services involving radiation facilities in the first basement subject to compliance of all requirements for fire safety, in accordance with 'Fire and Life Safety' of the Code and necessary measures for required lighting, ventilation and water supply, drainage and sanitation.

The basements can be permitted below the ground and beyond the building lines at ground level, subject to a clear minimum front margin of 4.5 metre, and side and rear margins of 3 metre, and further subject to non-habitable uses and provision for mechanical ventilation and all safety provision and drainage. However, it is essential that the basement top slab below the external circulation at ground level should be designed for fire fighting vehicular loads.

The Basement shall have the following requirements:

- a) Every basement shall be in every part at least 2.4 metre in height from the floor to the underside of the roof slab or ceiling.
- b) Adequate ventilation shall be provided for the basement. The ventilation requirements shall be the same as required by the particular occupancy. It may be met by providing adequate mechanical ventilation in the form of blowers, exhaust fans, air conditioning systems, etc.,
- c) The height of the ceiling of any basement shall be minimum 0.9 metre and the maximum 1.2 metre above the average surrounding ground level. However, in case of parking, mercantile or business occupancy at ground floor, minimum height of the ceiling of the basement may be 0.3 metre above the average surrounding ground level subject to mechanical ventilation, being provided.
- d) Adequate arrangement shall be made such that, surface drainage does not enter the basement
- e) The walls and floors of the basement shall be watertight and be so designed that the effects of the surrounding soil and moisture, if any, are taken into account in design and adequate damp proofing treatment is given.

- f) The access to the basement shall be separate from the main and alternative staircase providing access and exit from higher floors. Where the staircase is continuous in the case of buildings served by more than one staircase, the same shall be of enclosed type serving as a fire separation from the basement floor and higher floors.

The Exit requirements in basements shall comply with the provisions of 'Fire and Life Safety' of the Code.

- Basement shall not be used to store flammables or for pathological or other laboratories, particularly those involving usage of chemicals.
- Aisles, corridors, ramps, etc, through which patients are moved, shall have a minimum width of 2.4 metre throughout. Aisles, corridors and ramps in other areas not intended for the housing, treatment or use of inpatients shall be not less than 1.5 metre in width.

FIRE EXIT PLAN:

Fire exit plan shall meet the requirements of National Building Code of India under Fire and Life Safety.

- a. Fire safety measures and escape routes provided in the Government Hospitals/Private Hospitals should be displayed in various places in both Tamil and English.
- b. Every exit, exit passage way and exit discharge shall be continuously maintained free of all obstructions or impediments so as to put in full use in case of fire or other emergencies.
- c. A common path of travel is desirable in exit access which leads to two independent directions to separate exits.
- d. The minimum required number of exits in a building shall be determined based on occupant load and the width required per person as per National Building Code Norms.

Hospital Lift:

National Building Code of India (part 8) in Building services discusses about hospital lift.

Hospital lift: – A lift normally installed in a hospital, dispensary or clinic and designed to accommodate one bed or stretcher along its depth, with sufficient space around to carry a minimum of three attendants in addition to the lift operator.

This shall be read with "Fire protection Requirements for lifts" prescribed in National Building Code of India (part 8), Building services – and the same shall be adopted in Hospital lifts in consultation with lifts Licensing Authority. The code prescribes the Fire protection requirements of Lifts in High Rise Buildings as follows:

Buildings of Height 15 metre and above:

- a) All materials of constructions in load bearing elements, stairways and corridors and facades shall be non – combustible.
- b) The interior finishing materials shall be of very low flame spread type.
- c) Walls of the lift bank well enclosure for a lift, or group of lifts shall have a fire rating of 120 min. The lift well shall have a vent at the top, of area not less than 0.2 m² per lift.

- d) Landing doors – Lift landing doors shall be imperforate. Collapsible doors shall not be permitted. Lift landing doors provided in the lift enclosure shall have a minimum fire resistance rating of 60 min.
- e) Lift car door – Lift car doors shall be imperforate. Collapsible car doors shall not be permitted.
- f) Telephone or other communication facilities shall be provided in the lift car and the lift main lobby. Communication system for lifts shall also be connected to the Fire control room of the building if provided.
- g) Photo luminescent safety signs shall be posted and maintained on every floor at or near the lift indicating that in case of fire, occupants shall use the stairs unless instructed otherwise. The sign shall have the plan of the respective floor showing location of the stairways. The plan shall also indicate the direction to and the level of refuge area. All signs posted and maintained on every floor of buildings open to and used by the public shall comply with the requirements of accessible signage given in 13 of Part 3 'Development Control' Rules and General Building Requirements' of the Code.
- h) All lifts (fireman's lifts / non fireman's lifts) shall be provided with phase I operation as per 7.1.1 (k)(x) (grounding operations)
- i) The grounding operations may be initiated by individual switches for lifts or a common switch for a group of lifts or by a signal from fire alarm system of the building if available.
- j) Fireman's lift – The fireman's lift is provided in a building for the purpose of aiding fire fighters in evacuating trapped persons in the building and to take the requirement for fighting fire to upper levels with minimum delay. Some lifts out of all the lifts shall be identified as fireman's lifts.

The number of required fireman's lifts and their locations in a building will vary depending on the size, design, complexity of the building. Some considerations are as follows:-

- It is advisable to have at least one fireman's lift per building
- If there are multiple wings in the building there can be at least one fireman's lift per wing
- If there are multiple banks of the lifts in the building there can be at least one fireman's lift per bank of lifts.
- If the building height is up to 45 metre and it is zoned height wise and it does not have single fireman's lift serving every floor of the buildings, then there shall be at least one fireman's lift per zone which shall serve the main level / fire access level and shall serve all the landings in the respective zone.
- If the building height is more than 45 metre and it does not have any single fireman's lift serving all the floor, that is, it has all lifts only in respective zones the fireman's lift shall be provided in each zones separately, serving all landings in respective zone, with a transfer landing for transferring from one zone to another.
- Considering all the above, the fireman's lifts shall be identified on the building plan and duly displayed in the Fire Command Centre.

To be effective in fire fighting operation, the fireman's lift shall have following requirements.

- i) The fireman's lift may be used by the occupants in normal times.
- ii) The fireman's lift shall be provided with fireman's switch. The switch shall be a two position (ON / OFF) switch fixed at the evacuation floor (normally main entrance floor) for enabling the lift to be put into fireman's mode. The switch shall be situated in a glass – fronted box with suitable label and fixed adjacent to the lift at the entrance level. When the switch is on, landing call – points shall become inoperative and the lift shall be on the car control only or on a priority control device. When the switch is off, the lift will return to normal working.
- iii) The fireman's lift shall be provided with an audio and visual signal in the car.
- iv) The fireman's lift shall have a floor area of minimum 1.43 m². It shall have loading capacity of not less than 544 kg (8 persons lift).
- v) The fireman's lift shall be provided with power operated (automatic) doors of minimum 0.8 m width.
- vi) The speed of the fireman's lift shall be 1.0 m/s or more such that it can reach the top floor from main floor / fire fighter access level within 1 min. In case the building is zoned, the fireman's lift shall operate from the lowest served landing to the topmost served landing in 1 min.

Note – Notwithstanding the above, the speed of lifts shall be established based on (iv).

- vii) Reliable alternative source of power supply should be provided for all fireman lifts through a manually / automatically operated change over switch. The route of wiring shall be safe from fire.
- viii) Suitable arrangements such as providing slope in the floor of lift lobby shall be made at all the landing, to prevent water used during fire fighting from entering the lift shafts.
- ix) The words 'Fireman Lifts' shall be conspicuously displayed in fluorescent paint on the lift landing.
- x) Operational requirements of fireman's lift – The lift shall be provided with the following operational controls, phase I and phase II.
 - a) Phase I – Return to evacuation floor shall start when the fireman's switch at the evacuation floor is turned to the 'ON' position or the signal from smoke detector (if provided by the Building Management System) is on. All lifts controlled by this switch shall cancel all existing car calls and separated from landing calls and no landing or car call shall be registered. The audio and visual signal shall be turned on. All heat and smoke sensitive door reopening devices shall be rendered inoperative.

If the lift is travelling towards the evacuation floor, it shall continue driving to that floor.

If the lift is travelling away from the evacuation floor, it shall reverse its direction at the nearest possible floor without opening its doors and return non-stop to the evacuation floor.

If the lift is standing at a floor other than the evacuation floor, it shall close the doors and start travelling non-stop to the evacuation floor.

When at the evacuation floor, the lift shall park with doors open.

The continuous audio signal is turned off after this return drive.

Note – If the building is designed for alternative evacuation floor, in case of fire at main floor the lifts shall park at the alternative evacuation floor with doors open.

- b) Phase II – Operation of the lift shall be as defined below – The phase-II is started after phase I, if the fireman's switch is 'ON'.

If the lifts are grounded by the smoke detector signal, for phase II to being it shall be necessary to turn the fireman's switch 'ON'.

The lift does not respond to landing calls but registers car calls. All heat and smoke sensitive door reopening devices are rendered inoperative.

When the car call button is pressed, the doors start closing. If the button is released before the doors are fully closed, they re-open. The car call is registered only when the doors are fully closed.

After registered a car call, the lift starts driving to the call. If more than one car call is registered, only the nearest call is answered and the remaining calls will be cancelled at the first stop.

At the floor the doors are opened by pushing the door open button. If the button is released before the doors are fully open, they re-close.

The lift returns to normal service when it stands at the evacuation floor with doors open and the switch is turned 'OFF' thereafter.

The operation of fireman's lift shall be by means of a full set of push buttons in the car. Other operating system shall be rendered inoperative.

To sum up, the National Building Code of India part IV Fire and Life Safety prescribes various inbuilt systems depending upon various requirements like water based, powder based, foam based, extinguishing media, gas suppression systems including total flooding system in server rooms, UPS area, Machinery area, Oxygen plant etc., Hence the State Expert Committee to take note of these.

ELECTRICAL INSTALLATIONS:-

The following guidelines should be followed in respect of Electrical installations:-

1. As per Tamil Nadu Electricity Distribution Code Regulation 29 (14)(b), the point of supply shall be within 30 meters from the main gate easily accessible and visible and satisfactory with regards to security aspects.
2. As per Tamil Nadu Electricity Distribution Code Regulation 30 (9), All High Tension installations and their associated medium voltage and low voltage installations will have to comply with the applicable safety and security rules prescribed by Authority / Government / Commission. The High Tension /Extra High Tension service connections were effected only after obtaining the Safety Certificate from Chief Electrical Inspector to Government (CEIG).
3. LT supply for Multi-Storied buildings of more than 15 meters in height at the voltage upto 650V and HT supply for the electrical installations of voltage exceeding 650 Volts including Multi-Storied buildings of more than 15 meters

in height shall be effected only after obtaining inspection certificate issued by the competent authority (inspection certificate from CEIG) in accordance with the G.O.(Ms)No.59 dt.14.08.2014 issued by the Government of Tamil Nadu. For other cases, the CEIG inspection certificate shall not be insisted as per the TANGEDCO letter dated 01.03.2018.

4. TANGEDCO in the letter dated 23.12.2015 has given an advisory to Government departments as follows which is to be noted.
 1. In future, new service connections will be given only if power room/generator room, RMG/RMU, Metering sets and panels are installed only at ground floor level at a higher elevation of atleast 3 feet from ground level in all Domestic, Commercial and Industrial establishments, complexes and multi-storeyed building. Installation of such equipments at basements should be discouraged in the public interests to avoid inconvenience and hardships during rains or floods.
 2. The local bodies and planning authorities are requested to give an advisory to all the Domestic, Commercial and Industrial establishment, complexes and multi-storeyed buildings that in future the power room/generator room, RMG/RMU, Metering sets and panels should only be installed at the ground floor level at a higher elevation of atleast 3 feet above ground level and not at the basement. The concerned authorities shall also ensure that all the consumers comply with this requirements before issue of completion certificate in order to avoid damage to electrical equipments and consequent power interruptions during rains or floods.
 3. As per the Tamil Nadu Electricity Distribution Code Regulation 29 (10), "In all storied buildings irrespective of the number of floors, service connections (whether through overhead wires or through under-ground cables) will be effected normally at the ground floor. In areas that are prone to floods ,the height of the meter shall be raised at a level as may be determined by the Engineer."

OTHER ARRANGEMENTS :

All buildings depending upon the occupancy use and height shall be protected by fire extinguishers, hose reels, wet riser, down-comer, yard hydrants, automatic sprinkler installation, deluge system, high/medium velocity water spray, foam, water mist systems, gaseous or dry powder system, manual/automatic fire alarm system, etc, in accordance with the provisions of various clauses as applicable.

For easy transportation during evacuation process, patient cots have to be provided with wheels (with brake system) especially in high dependency units such as ICU,, IMCU, Post Operative Wards, Orthopaedic wards, Paediatric wards.

1. These fire extinguishing equipments and their installation shall be in accordance with accepted standards. The extinguishers shall be mounted at a convenient height to enable its quick access and efficient use by all, in the event of a fire incidence and shall be maintained periodically so as to ensure their perfect serviceability at all times.
2. **Static Water Storage Tanks and Pump House** - A satisfactory supply of water for the purpose of firefighting shall always be available in the form of underground/terrace level static storage tank with capacity specified for each building with arrangements or replenishment.

3. **Automatic Sprinkler Installation** - Automatic sprinklers shall be installed wherever required, throughout the building in accordance with good practice. Automatic sprinklers shall be installed in false ceiling voids exceeding 800 mm in height.
4. Firefighting equipment shall be suitably located and clearly marked by luminous signs.
5. **Institutional Buildings – Major Hospitals**
 - a. Fire Prevention - No combustible material of any kind shall be stored or used in any building or section thereof used for institutional occupancy.
 - b. Principle of progressive horizontal evacuation is of paramount consideration for hospital patients particularly those lacking self preservation.
 - c. All critical patients and those incapable of self-preservation and having physical impairment shall be housed within 30 metre height.
 - d. Other types of patients and occupancies incidental to the hospitals such as consultation rooms, nurses' stations, medical shops, canteens, etc may be housed at heights beyond 30 metre but not more than 45 metre.
 - e. Basement shall not be used to store flammables or for pathological or other laboratories particularly those involving usage of chemicals.
 - f. Operation theatres, delivery rooms, Intensive care units, recovery rooms, etc, that containing patients lacking self preservation in case of emergencies shall be fire/smoke separated (120 min minimum rating) from all the adjoining areas.
 - g. Aisles, corridors, ramps, doors, exits etc, through which patients are moved, shall have a minimum admissible width.
 - h. Floor surface of corridors shall not be inclined at a gradient steeper than 1 in 12 to the horizontal.
 - i. Storage of flammable liquids in laboratories or in any other area shall be not more than 3 litre for every 10m² area.

As per Tamil Nadu Pollution Control Board:

- Tamil Nadu Pollution Control Board enforces the standards prescribed for Diesel Generator sets as per the Environment (Protection) Rules, 1986 and the final guidelines issued by Central Pollution Control Board, dated 25.02.2015
- In case of violation by the hospitals, no penalty is collected. However, legal procedure will be followed and direction for closure and disconnection of power supply will be issued under section 33A of the Water (Prevention and Control of Pollution) Act, 1974 as amended and under section 31A of the Air (Prevention and Control of Pollution) Act, 1981 as amended.

ADVANCED FIRE SAFETY METHODS / ARRANGEMENTS

In addition to conventional fire safety provisions these advanced fire safety methods and systems can also be considered as technological advancements. These advancements may well be put in use considering the superiority in combating emergencies.

Roll on Ramps:

There is no BIS available for this device at present. Further it cannot replace a regular ramp. However, depending upon availability of space best practices, available in few hospitals may be adopted.

Mist Sprinkler system:

The National Building Code of India in 'Fire and Life Safety' prescribes in Automatic Sprinkler system and Water Mist system which are well defined there in and the same are recommended by Tamil Nadu Fire and Rescue Service depending upon requirements.

Automatic Sprinkler system- A system of water pipes fitted with sprinkler head at suitable intervals and height and designed to actuate automatically, control and extinguish a fire by the discharge of water.

Water Mist system – A distribution system connected to a pumping and water supply system that is equipped with nozzles capable of delivering water mist to the part / entire enclosure or area, intended to control, suppress, or extinguish fire and is capable of meeting the specified performance requirements.

Fibre Glass Stretchers:

In other words, Spine Board Stretchers which are latest / modern stretchers are readily available in the market.

Fire Extinguisher Ball:

Fire Extinguisher Ball is a fire suppressant packaged in a compact and lightweight ball that self-detonates in 3 to 5 seconds when it comes into contact with fire and disperses non-toxic chemicals to extinguish the flames in an area with a radius ranging between 86 to 107 square feet. The Fire Extinguisher Ball is an affordable fire extinguishing solution that is user-friendly.

J.RADHAKRISHNAN
PRINCIPAL SECRETARY TO GOVERNMENT

//TRUE COPY//

Dr. D. D. D. D.
SECTION OFFICER
25/4/22