



Government Of West Bengal
Office Of The Director General
West Bengal Fire & Emergency Services
13D, Mirza Ghalib Street, Kolkata - 16

Memo no.:IND/WB/FES/20182019/24629

Date: 20-04-2023

From: 0
Director
Fire Prevention Wing,
West Bengal Fire & Emergency Services

To: Prithwiraj Mukherjee
164/1, Maniktala Main Road, Kolkata - 700054

Sub: Revised Fire safety Recommendation in respect of proposed 2B+G+XXXXIV storied (Tower 2) under group Residential Building along with 2 storied CESC Distribution Station building at the Premises No.: 42B, Chowringhee Road, Kolkata: 700071.

This is in reference to your application no. 0125188228700298 dated 05-12-2022 regarding the Revised Fire safety Recommendation in respect of proposed 2B+G+XXXXIV storied (Tower 2) under group Residential Building along with 2 storied CESC Distribution Station building at the Premises No.: 42B, Chowringhee Road, Kolkata: 700071.

The plan submitted by you was scrutinized and marked as found necessary from Fire Safety point of view. In returning one set of plan with recommendation, this office is issuing **Revised Fire Safety Recommendation** in favor of the aforesaid building subject to the compliance of the following fire safety measure.

Recommendation:

A) Construction part:

- i) The whole construction of the building shall be carried out as per approved plan and conforming by the relevant building rules of local authority.
- ii) All the compartment walls up to ceiling level having at least four hours fire resisting capacity.
- iii) All construction materials should be of four hrs. fire resisting capacity.
- iv) Doors and windows should be of at least two hrs. fire resisting type.
- v) The interior finish decoration of the building shall be made low flame spread materials conforming IS specification.
- vi) The roads and Side Open Spaces are to be minimum 45 MT withstand capacity.

B. Staircases:

1. All Staircases shall be pressurized including the Fire Shaft with a positive pressure of 50 pa. Shall be maintained inside in case of Fire Situation. The mechanism for pressurising the staircases shall be operated automatically with fire alarm in accordance with I.S. 941:1985.

C. Lifts :

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1. Collapsible gates shall not be permitted with the lift cars & shall have solid doors.
2. Lift & escalator cannot be used as a means of escape during fire situation.
2. All the Lifts including "Fire Lift" shall be pressurized with a positive pressure of 25-30 Pa inside the lift lobbies shall be maintained. The mechanism for pressurising the staircases shall be operated either manually or automatically with fire alarm in accordance with I.S. 941:1985.

3. Fire lift

Fire lift shall be provided & in case normal power failure, it shall automatically trip over to alternate power supply. The word "fire lift" shall be conspicuously displayed in fluorescent paints on lift landing door at each floor level.

D. Service ducts/ shaft :

Service ducts & shaft shall be enclosed by walls of 2 hrs. & door 1 hr fire rating. All such ducts shall be properly sealed & fire stopped .at all floor level, vent opening at the top of the service ducts shall also to be provided .

E. Refuge area :

The refuge area shall be built as shown in the plan on the periphery of the floor or preferably on a cantilever projection from the Pressurised Fire Fighting Shaft & open to the air protected by FCD and emergency lighting arrangement. Sufficient space shall be available underneath the Refuge area. Automatic sprinkler suppression system and emergency lighting arrangement shall be provided in FRP.

F. Electricity :

1. The electric distribution cable/ wiring shall be laid in separate duct .The duct shall be sealed at every floor with non combustible materials.
2. Telephone lines, water mains, gas pipes or any other service lines shall not be laid out in the duct for electrical cables /wires.
3. The electrical installation including Transformer, switch gear, main & meter of the premises shall be provided in separate enclosures apart from main building in accordance with IS 1946:1982.
4. Separate circuit for fire fighting, fire lift, stairs case & corridor lighting & blowers for pressurization system shall be provided.
5. All electrical installation shall be protected by auto detection and suppression system either water based or inert gas based.
6. All electrical cables shall pass through Fire resistant conduit and shall be sealed at each floor level with suitable detection system,

G. Alternative power backup system :

A stand by diesel generator of suitable capacity shall be installed to supply powers to staircases & corridor lighting , fire lifts ,illuminating escape routes , stand by fire pump, pressurization fans /blowers ,smoke extraction system & damper system in case of normal power failure

H. Central air conditioning system.(if any) :

1. A.H.U. & air duct shall be separated for each floor.
2. Escape routes like staircases, common corridors, lift lobbies etc. shall not be used as return air passages.
3. The path way of ducts to floor & openings around the ducts shall be sealed properly with fire resistant materials.
4. Fire dampers & air handling unit will automatically be switched off when the auto fire alarm systems operates.

I. Alarm & Detection system :

1. The entire Building shall be protected with sufficient addressable smoke detectors integrated with auto fire alarm panel.
2. M.C.P connected with Hooter shall be installed near staircases, escape route and at all strategic locations.

J. Fire Fighting (Protection) :

i) Fire fighting water:

The building shall be provided with 2,00,000 liters capacity of underground water reservoir and 20,000 ltrs. Overhead water reservoir on each block with replenishing arrangement @ 1000 liters per minutes. The underground water reservoir location should be such so that fire service vehicle may get access and draw water from the said reservoir.

ii) Small gears: IS:903-1993:-

Hose box, 15 meter length permoline delivery hose, gunmetal short branch of half inch dia. one set at each pillar hydrants should be installed.

iii) External Hydrant System:- IS-13039:1991-

The whole area of the building is to be protected by adequate no. of pillar type hydrants system or Ring Main Hydrant (at 150 mm internal dia. Pipe line) i.e. one pillar hydrant per 1000 sq. meter of area or as per the vulnerability of the place. The existing Ring-main shall be connected with the proposed external hydrant/ ring-main system.

iv) Internal Hydrant/ Wet Riser System IS-3844:1989:-

The building shall be provided with Wet Riser of 150 mm internal diameter pipeline with provision of landing valves at the staircase landings/ half landings at the rate of one such riser for 1000 Sq.mtr. of floor area. The system shall be so designed that kept charged with water all the time under pressure and capable of discharge 2850 ltrs./min. at the ground floor level outlet and minimum 900 ltrs./ min. at the top most furthest outlet. In both cases the running pressure shall not be less than 3.5 kgs./ Sq.mtr.. All other requirement shall conform I.S. 3844-1989.

v) Hose reel system (IS:844-1985):

The building should be equipped with Hose Reel Hose system as per IS code of practice. The internal dia. of the said hose reel shall be 19 mm to 32 mm and the discharge capacity not less than 22.5 LPM. While the length of the hose reel not more than 36.5 meters. The distance of such installation should be in such a way that no part of floor is more than 6 meters distance from a nozzle when fully extended.

vi) Sprinkler Protection IS- 15105:2002: -

The automatic sprinkler system shall be installed covering all floors including basement car parking area. Alarm gong to be incorporated along with the sprinkler system.

vii) Pumps for fire fighting installation IS-12469:1988:-

- Two electric Main Fire Pumps (one for Hydrant another for Sprinkler) and one diesel driven pump of capacity 2850 litre/min and Two electric pump (Jockey for hydrant and sprinkler) of capacity 180 litre/min should be installed and arranged in such a manner so that it will start automatically due to fall in pressure.
- All pumps shall be designed as Multi- stages and multi outlet so as to supply water 900 LPM at a pressure 3.5 kg/cm² at the furthest point.
- Only Diesel driven arrangement for stand by fire pump shall be ensured.

K) First Aid Fire Fighting System:-

First Aid Fire fighting arrangement in the style of placing suitable type of portable fire extinguisher, Fire buckets etc. in all floors and vulnerable locations (e.g. pump house etc.) of the premises shall be made in accordance with IS 2190-1992.

L) Smoke management system:

The basement shall be installed with Jet fans and electrical/ mechanical smoke extractors for emergency smoke evacuation in order to achieve 12 air changes per hour.

M) Fire Shaft:

Separate fire fighting shaft integrated with pressurised stair and lift lobby shall be provided to facilitate fire fighting during emergency.

N. Smoke Management system:

Emergency smoke venting system by incorporating jet fans and mechanical/ electrical extractors shall be installed in respect of both the basements integrated with CO sensors in order to achieve 12 ACPH in case of Fire.

Special smoke venting system shall be made available on upper floors where restricted ventilation is available.

O. LPG Bank:

1. Construction of LPG bank shall be made as per the relevant IS and specific code of practice (IS: 6044: 2000).
2. Cross ventilation shall be available.
3. Medium Velocity Water Spray Projector system integrated with sufficient LPG sensors shall be installed.

P. General Recommendations :

1. Telephone nos. of all emergency services, fire notice / fire order shall be pasted at all strategic locations on each floor of the building.
2. Floor number & directional sign towards the routes of escape during emergency shall be provided at all conspicuous places on each floor.
3. All Occupants & security staff shall be conversant with the installed fire fighting system & equipments & to operate them efficiently in case of any fire emergency.
4. Mock Fire & Evacuation drill shall be conducted at least twice in a year with the participation of all concerned.
5. Arrangement shall be made for checking, testing & proper maintenance of all inbuilt fire & life safety system & equipments at recommended periodical intervals by competent agency.
6. Good housekeeping to eliminate fire hazards both inside & outside the building shall be strictly maintained. Under no circumstances the corridors, routes of escape, lobbies of staircases and landings be blocked by waste / refused materials in order to ensure easy & smooth evacuation of the occupants as well as free access / movement of fire fighting team during fire emergency.
7. Lightning arrestor shall be installed on the roof top to protect the building from thunder crash.

This shall be treated as Fire Safety Recommendation. On compliance of all the above Fire and Life safety recommendations, the Director General, West Bengal Fire & Emergency Services shall be approached for necessary inspection and testing of the installation, Fire safety Certificate in favour of the occupancy shall be issued on being satisfied with the tests and performances of safety aspects of installation of the building.

N.B.: Any deviation and changes the nature of use of the building in respect of the approved plan drawing, without obtaining prior permission from this office, this Fire safety recommendation will be treated as cancelled.

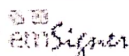
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