

**GOVERNMENT OF WEST BENGAL
OFFICE OF THE DIVISIONAL FIRE OFFICER
WEST BENGAL FIRE & EMERGENCY SERVICES**

Memo No : IND/WB/FES/20202021/58928

DATE: 05/03/2020

From :
Divisional Fire Officer
Fire Prevention Wing,
West Bengal Fire & Emergency Services.



To :
Mr. Nirmal kumar Mondal
Bhiringi, Ward no, 19, Durgapur,
R.S Plot no.1402, 3064,
L.R Plot no. 2284, 2285,
J.L no. 119, Mouza- Faridpur,
F.S. Durgapur., P.S. Durgapur,
Dist. Paschim Burdwan-713213.

Sub : Fire Safety Recommendation for the occupancy of an Proposed construction of B+ G + 5 storied building under group residential, at the premises no.- Bhiringi, Ward no, 19, Durgapur, R.S Plot no.1402, 3064, L.R Plot no. 2284, 2285, J.L no. 119, Mouza- Faridpur, F.S. Durgapur., P.S. Durgapur, Dist. Paschim Burdwan-713213.

This is in reference to your Application No. IND/WB/FES/20192020/58928, dated 05/03/2020, regarding the Fire Safety Measure for a Proposed construction of B+G+5, storied building under group Residential at the premises no.- Bhiringi, Ward no, 19, Durgapur, R.S Plot no.1402, 3064, L.R Plot no. 2284, 2285, J.L no. 119, Mouza- Faridpur, P.S. Durgapur, Dist. Paschim Burdwan-713213..

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 is issuing Fire Safety Recommendation in favour of the afore said building subject to the compliance of the following fire safety measure.

Recommendation:

1.CONSTRUCTION:

- The whole construction of the Existing building shall be carried out as per approved plan drawings conforming the relevant building rules of local Municipal Body.



- The floor area exceeds 750 m² shall be suitable compartmented by separation walls up to ceiling level having at least Two hours Fire resisting capacity.
- The interior finish decoration of the building shall be made of low flame spread materials conforming to I.S. specifications.
- Provision of ventilation at the crown of the central core-duct of the building shall be provided.
- Arrangements shall have to be made for sealing all the vertical & horizontal ducts by the materials of adequate Fire resisting capacity & the doors of service ducts / shafts of 2hr. Fire rating.

OPEN SPACE & APPROACH:

- The open spaces surrounding the building shall conform the relevant building rules as well as permit the accessibility and maneuverability of Fire Appliances with turning facility.
- The approach road shall be sufficiently strong to withstand the load of Fire Engine weighting up to 45 M.T.
- The width and height of the access gates into the premises shall not be less than 4.5 and 5 M respecting abutting the road.

STAIRCASE:

- The staircase of the building shall be enclosed type. Entire construction shall be made of bricks / RCC type having Fire Resisting Capacity not less than 4 hours.
- The staircase of the building shall have permanent vents at the top and open able sashes at each floor level in the external wall of the building.
- The width of the Staircase shall be made as shown in the plan. Corridors and the exit doors shall conforming the relevant building rules and well as rules of the cinematograph act. With up to date amendments.
- All the staircases shall be extended up to terrace of the building and shall be negotiable to each other without entering into any room.
- Fire & Smoke doors at the entrance of all the staircase enclosures as shown/marked in the plan at each floor level shall be provided. The F.C.D. shall be of the least one two hours Fire resisting Wire Glass Window fitted with self closing type operable in the direction of escape.

BASEMENT

- 1.The basement shall be adequately ventilated.



2.The basement shall be protected with Auto Sprinklers system, hydrant and hose reel system etc.

3.Mechanical extractor for Smoke Venting system from basement levels shall also be provided. The system shall be of such design as to operate on actuation of heat/smoke detector or sprinkler. It shall also have an arrangement to start it manually.

4.Mechanical extractors shall have an alternative source of power supply

LIFT :--

- The walls of the lift enclosure shall be at least two hours Fire Resisting type.
- Collapsible gate shall not be permitted.
- One of the lifts shall be designed for Fire Lift. The word "Fire Lift" shall conspicuously be written at ground floor.
- In case of failure of normal electric supply, it shall automatically trip of alternate supply and also shall have manually operated change over facility. Alternatively, the lift shall be so wired that in case of power failure, it comes down at ground level stands still with door open.
- All other requirements shall confirm the I.S. specification including the communication facility in the lift cars connecting with the Fire Control Room of the building.
- One of the lift car of the building shall be large enough to accommodate standard ambulance stretcher and medical attendants.

FIRE FIGHTING WATER:--

- Underground water reservoir having water capacity of 200000 Ltrs. and O.H.W.R. 20000 ltrs capacity exclusively for firefighting purpose shall be kept full at all time.
- The Fire water reservoir shall have overflow arrangement with the domestic water reservoir as well as to avoid stagnancy of water.
- Provision of necessary manhole shall be made on the top of this reservoir as per specification.
- Provision of replenishment at the rate of at least 2000 lts./min. from two spate source of water supplies shall be made.
- The deep tube wells for the replenishment of the reservoir shall be incorporated with auto starting facility with actuation of auto detection and suppression arrangement of the premises and shall also be connected with dual power supply units.



- Provision of placing Fire Appliances on the underground water reservoir to be made to draw water in case of emergency.

WATER LAYOUT SYSTEM:--

- The building shall be provided with wet riser with 150mm. internal diameter Pipe Line with provision of Hose Reel Hose at the Staircase landings / half landings. The system shall be so designed that shall be kept charged with Water all the time under pressure All other requirements shall conforming I.S. 3844 – 1989.
- Provision for Hose Reel units on swiveling drum in conjunction with Wet Riser shall be made near each lading valves.
- Ring Main Hydrant with provision of adequate numbers Hydrant shall be installed surrounding the building in accordance with relevant I.S. specifications.
- One fire service inlet near the entry or exit of the premises facing to the abutting road shall have to be provided.
- All commercial floors shall have to be provided with Auto sprinklers System.

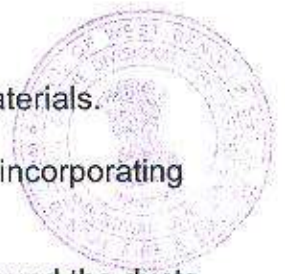
FIRE PUMP:--

Provision of the Fire Pump shall have to be made to supply water at the rate-designed pressure and discharge into the Water based system, which shall be installed in the building. One such pump shall always be kept on stand-by be of diesel driven type.

Provision of Jockey Pump/Stand by Pump shall also have to be made to keep the Water based system under pressurized condition at all the time. All the pumps shall be incorporated with both manual and auto starting facilities. The suction of pumps shall preferably of positive type or in case of negative suction the system shall be wet riser-cum-down comer with suitable terrace pump with overhead tank.

AIR CONDITIONING SYSTEM (if any) :-

- The A.H.U. shall be separated for each floor with the system .Air ducts for individual floors.
- Arrangement shall be made for isolation at the strategic locations by incorporating auto dampers in the air conditioning system.
- The system of Auto shut down of A.H.U. shall be incorporate with the auto detection and alarm system.
- Escape route like staircase, common corridors lift lobby etc. shall not be used as return air passage.



- The A.H.U. room shall not be used for storage of any combustible materials.
- Arrangements shall be made for isolation at the strategic location by incorporating auto dampers in the Air Conditioning System.
- Wherever the ducts pass through Fire Wall of Floors, the opening around the ducts shall be sealed with fire resisting materials such as asbestos etc.
- The metallic ducts shall be used even for the return air instead of space above the false ceiling.
- The material used for insulating the duct system (inside or outside) shall be of noncombustible materials. Glass wool shall not be wrapped or secured by any materials of combustible nature. If the air handling unit serve more than one floor, the recommendation given above shall be complied with in addition as below:---
 - (a) proper arrangement by way of automatic fire dampers working on fusible link for isolating all ducts at every floor from main riser shall be made.
 - (b) The vertical shafts for treated fresh air shall be of masonry construction.
 - (c) The air filter for A.H.U. shall be of non-combustible materials.
 - (d) The A.H.U. room shall not be used for storing any combustible material.
 - (e) Inspection panel shall be provided in the main trunk to facilitate the cleaning of ducts of accumulated dust and to obtain access for maintenance of fire dampers.

FIRE DAMPER:--

- Fire dampers shall be located in conditional air ducts and return air ducts/passage at the following points:--
 - 1)at the fire separation wall.
 - 2) there ducts/passage enter the central vertical shaft.
 - 3) where the ducts pass through floors.
 - 4) at the inlet of supply air duct and the return air duct of each compartment in every floor.
 - 5) The damper shall operate automatically and shall simultaneously switch off the air Handling fans. Manual operation facilities shall also be provided.
 - 6) Automatic Fire Dampers Shall be so arranged so as to close by gravity in the direction of air movement and to remain rightly closed open operation of a fusible link.

ELECTRICAL INSTALLATION & DISTRIBUTION:



•The electrical installation including transformers, Switch Gears, Main & Meters etc. and the distribution system of the premises shall be made satisfying the code of practice for Fire safety in general building as laid down in I.S. specification 1946 – 1982.

•Electrical distribution system shall conform all the requirements as laid in I. S. 1646-1982.

•The electrical installation shall be adequately protected with automatic CO2/D.C.P.

•All electrical installation viz. Transformer Switch Gear L. T., H. T. rooms shall be protected with both auto detection and suppression systems as per suitability.
Alternative Power Supply :

a. Arrangements shall have to be made to supply power with the help of a generator to operate at least the Fire Pump, Pump for deep Tube-well, Fire Alarm System, etc. and also for illuminating the Staircase, corridors etc. and other places of assembly of the building in case of normal power failure.

DETECTION AND ALARM SYSTEM:

•Manually operated Electrical Fire Alarm system at each floor level with at least three numbers of break glass type call boxes fitted with Hooters along with public address system, at each floor connecting with audio-visual panel board shall be made in Control Room. The Control Room shall be located at the entrance of Ground Floor of the building, other requirements of the system shall be made conforming I.S. 2189 – 1988.

•Hooter will be sounded in such a manner so that an operation of a Detector or Manual Call Point Hooters will sounded on the same floor and immediate alternate floor.

•All commercial floors shall have to be provided smoke detectors as per N.B.C. 2016 and I.S. Specification

Public Address System :-

•Public address system linked between all floors and Control Room shall have to be established.

•Talk back system shall have to be provided at each floor level mainly for residential use.

•BMS shall have to be provided.

FIRSTAID FIRE FIGHTING SYSTEM:

•First Aid firefighting arrangement in the style of placing suitable type of portable Fire Extinguishers, Fire buckets etc. in all floors and vulnerable locations of the premises shall be made in accordance with I.S. 2190-92.

GENERAL RECOMMENDATIONS:

- Disposable type B. A. Musk to be kept always for emergency fire situation.
- Fire Notice for Fire Fighting and evacuation from the building shall be prepared and be displayed at all vulnerable places of the building.
- Floor numbers and directional sign of escape route shall be displayed prominently.
- The occupancy and security staff shall be conversant with installed Fire Fighting equipments of the building and to operate in the event of Fire and Testing.
- Arrangement shall be made for regular checking, testing and proper maintenance of all the Fire Safety installation and equipments installed in the building to keep them in perfectly good working conditions at all times.
- A crew of trained Fireman under an experienced officer shall be maintained round the clock for safety of the building.
- Mock Fire practice and evacuation drill shall be performed periodically with participation of all occupants of building.
- A certificate is to be obtained from the Director General, West Bengal Fire & Emergency Services certifying about the satisfactory services, performance of all the Life and Fire Safety arrangements and installation of the building.

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.

Signature valid

Digitally signed by NITAI
CHATTOPADHYAY
Date: 2020.03.05 18:54:54 IST



Divisional Fire Officer
West Bengal Fire & Emergency Services