

**Subject-** *Second letter to all Chief Secretaries of State Governments and Union Territories w r t solutions to problems of safety, in High rise Buildings*

1. (a) After incident of failure of slabs in Gurgaon's Chintals' Housing Project, a large section of the population in general, is in fear of occupying high rise buildings. There are many critical areas in such projects to be tackled on priority basis. Suggesting first step only to begin with yet, the Governments need to take steps to expedite retrofitting & rehabilitation of existing high rise buildings with reference to their safety against seismic dangers.

(b) Accordingly Indian Buildings Congress (IBC) had examined this issue through a team of Structural and Buildings experts (all, ex-Presidents of IBC) had formulated a concept letter which was sent to your esteemed offices on 31.03.2022.

2. In continuation of those recommendations, the said committee has examined the plumbing & drainage issues and brings out its recommendations.

Followings suggestions are submitted for an appropriate actions at your level.

**a) PLUMBING**

1) Looking at any building including high rise ones, one can see a vertical line of seepage/leakage which shows up the line of toilets in the building. Main reason of leakage is the sewerage pipe which are embedded in the sunken RCC slabs

2) The leakage mostly takes place because of poor quality of execution and garbage getting entry through the traps. The garbage restricts the flow of sewerage resulting in pin holes getting enlarged and leakage taking place. It becomes extremely difficult to open floors & carry out the repairs. Even if it is done, such leakage reoccurs.

3) The only solution is to abandon the concept of depressing the slabs and lay RCC slabs at one level only and hang the sewerage pipes below the RCC slabs level, with the help of anchors.

4) If overhung sewage pipe is an issue of aesthetics, these can be covered with water proof, removable false ceiling.

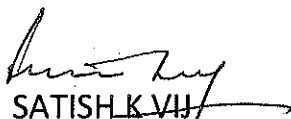
5) The concept of using GI (Galvanized Iron) pipe in water supply needs to be abandoned , as at multiple places there is alkaline ground water resulting in reduced life of GI pipe to even less than 10 years , resulting in leakages too. A time has come to use more innovative and sound durable material.

## B) DRAINAGE


1. In many of the buildings there is a leakage of water from the roof top. Slope of 1 in 80 is not being followed in tile terracing as per the specifications . The only solution is to have a proper slope and not to increase the dead load on the roof slab. The solution lies in erecting shuttering of roof slab at a slope , followed by laying the concrete slab. Concrete fillet be provided above fan and electrical boxes kept in the RCC slab.

2) It is also generally seen that DPC/floor level are not being made 60 cm to 90cm above highest flood level. Keeping the floor level or DPC of buildings low, results into rise of water by capillary action, backflow of sewerage & attack by termites, resulting in perpetual problems in the building. Accordingly it is advised that DPC/floor level be kept 60 cm to 90 cm above highest flood level(HFL) and in case HFL is not available, then keep DPC/floor level 90 cm above the road / highway in front of building or above the ground level.

3. In order to eradicate another leakage and sore view ,an appropriate shaped trap inclined with the external vertical drainage pipe at an angle of 100-110 degrees be provided in place of T-shaped trap at the junction with the vertical drain pipe.

  
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27/6/22

  
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