

Optimum escape routes designs and specification for high-rise buildings

Abstract :

In Malaysia, high-rise buildings built for residential purposes are a common phenomenon especially in urban areas. This is due to the high demand for residential flats in town areas, which has motivated private and the Semi-Government Companies to build more high-rise residential buildings. This trend was driven due to the limited land availabilities and the high land value in town area. Due to the number of occupants in high-rise residential buildings, an optimum escape routes specification is essential to be analysed to ensure that every one in the buildings can safely evacuate the building during fire emergency. It is difficult to change human behaviour but the building specifications can be changed more easily. In this regard, the building element best known as escape route, that is escape stairs, corridors and fire doors, should be designed and constructed to serve the occupants the best they can by not allowing any further delay in the evacuation process. The design and construction of escape routes needs to consider not only the evacuation time but also the construction time, economics, construction method and space utilization factors