

Paper for Adding an External Enclosed Staircase to Facilitate Patients in Hospital to Move Up and Down in Staircase to Access All Floors of Hospitals Without Taking Lift

Ir Dr Assoc Prof Samuel KP Lip

Proprietor of Lordray Holding Group, Hongkong

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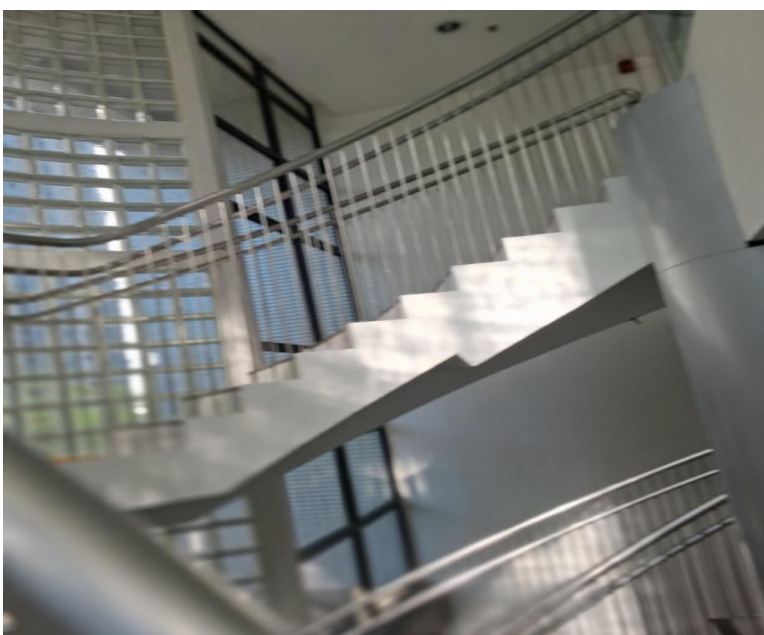
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ABSTRACT

While in hospital eg in Caritas Hospital, facilities are provided in different floors, very ssoften patients are asked to go to another floor. The exit stairs normally are locked with heavy fire door, patients must take lift unnecessary, even to go up or down one storey.

Staircase is escape route, must be enclosed with fire door to prevent fire smoke spread from each floor to staircase escape route, cause suffocation of people escaping in staircase. Use this design of fire shutter in lieu of fire door, the staircase is open to access for patients to walk to other floors, no need to take lift. And can get FSD approval, no need to enclosed staircase with fire doors.

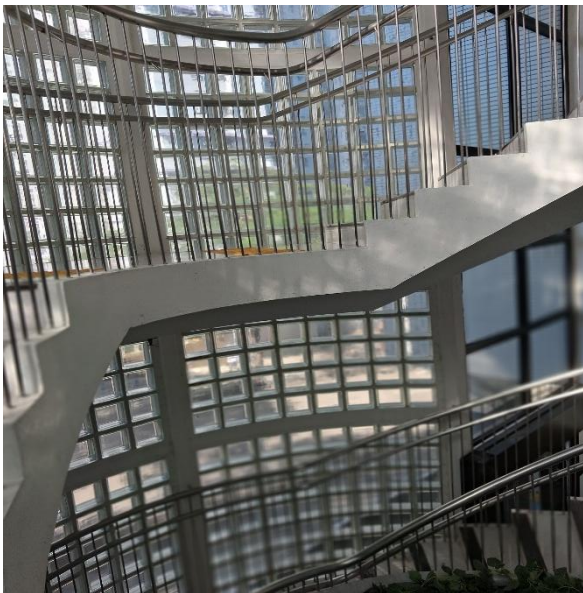
For existing hospital, can add an external enclosed staircase, as per my previous paper to add more units in public housing estate, linking domestic units at floor corridor to existing staircase. Simple A&A work, that link up all floors of hospital. No need to take lift to just 1 or 2 floors, also fire door is heavy, elderly find it hard to push open it. Use this design, open stairs for patients to walk to any floor. This shutter is like commercial complex fire shutter, normally shutter is withheld at top, when in fire, the smoke detector adjacent to fire shutter will detect smoke and drop down the fire shutter to prevent fire spread in big commercial; complex area. Use this shutter to replace fire door to open access to all floors. Must be designed by experienced fire engineer consultant who can get approval from FSD for this initiative. Compliment to the consultant fire engineer good initiative, See below site photos for details



Above photo-External stair enclosed with cubicle glass wall, rigid not need additional support like curtain wall, external case can access all floors, staircase inside with MVAC



Above photo -External stair enclosed with cubicle glass wall, rigid not need aditonal support like curtain wall



Below photo - Exit from one floor to another floor without fire door



Exit to staircae

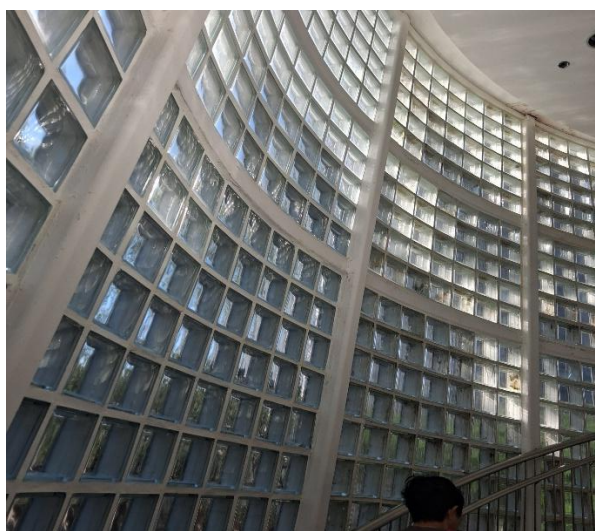


Above photo -Exit from one floor to another floor without fire door

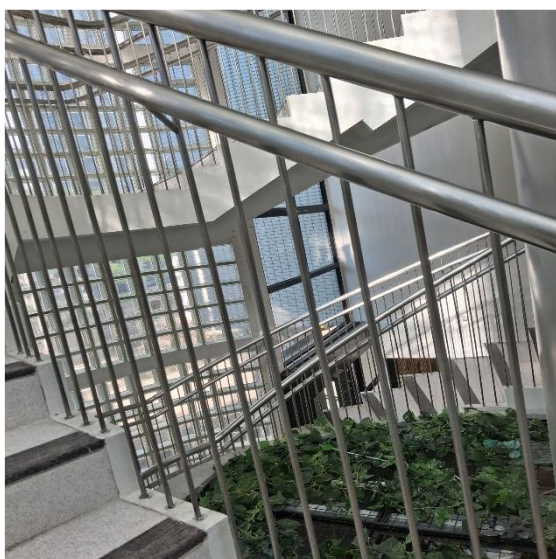
Compliment to Eye Testing Centre at Nam Cheong street/Tai Hang Sai street, Shek Kip Mei, for allowing me to take the site photos to help hospitals

Below photo – staircase merged with columns, staircase platform supported by beam from below. Cubical glass cemented to Iron frames which link to structural columns and reinforcement floor flabs.

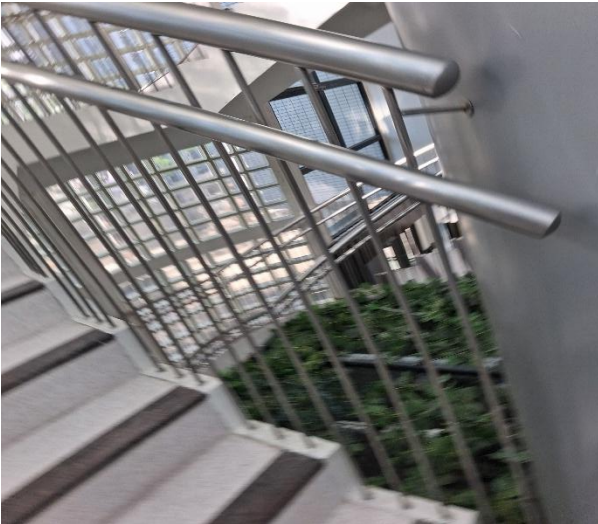




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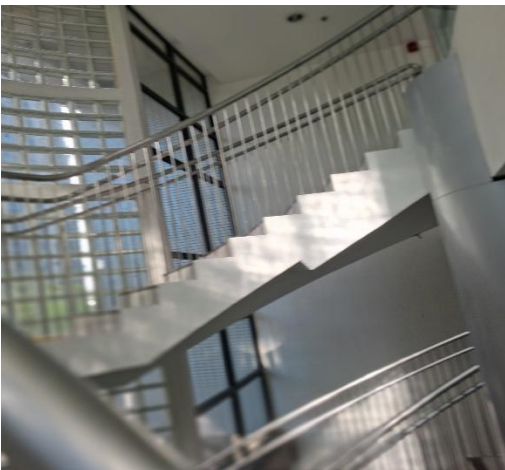


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Exit from each floor to external staircase



Author

Ir Dr Assoc Prof Samuel KP Lip

The author is experienced and knowledgeable consultant fire engineer, CEng MIFireE, RPE MHKIE fire discipline, BD AS (Ventilation). He was Senior Fire Engineer in a famous Fire & Security company, Thorn Security (HK) 2002-2006, worked in HK Airport East Wing extension fire contract and MTR stations smoke extractions (12am-4am).

He has been giving fire training to peers, Graduate Engineers in industry since 2006 for many companies, eg Paul Y (E&M) Engineering Co. Ltd. He has been active as RPE Fire in fire tasks business of his own Lordray Holding Group, viz, fire services/sprinkler/pre action pumps in duty/standby/jockey/ multi stage sprinkler pump design, pipe & pump sizing, water storage tank, AFA, FS hydrant & hose reel design to FSD COP, sprinkler design to EN12845, dynamic & static ventilation to FSD COP, atrium FS design, improvise method with WSD to comply with Cap 572 for providing water to the newly added sprinklers. Hydraulic pressure and flowrate calculation, Ventilation louver size calculation, sprinklers, hose reel, hydrant, calculations in designing deluge in fuel oil storage tank, drencher in refuge floor, Vesda /Novec1230/FM200 in airport & Data Centre, DG store room different category and application for DG license, emergency generator fuel oil storage room FS design. Airport & Data Centre FS design, petrol station foam & sprinkler design. In recent years in smoke extraction to FSD COP & staircase pressurization to BS5588, FS notes, FS314, 501 submissions to FSD & BD, FSD for active fire protection in FSD COP, using tables, established figures in FSD COP, Fire standards BS, UL, FSD circulars to design, BD on passive fire protection BD is for building material to BS 476 on combustion, fire spread, fire resistance, and physical integrity, no collapse in fire, specified as number of FRP hours in integrity, combustion, fire spread in fire label eg 120/120/120 mean 2hr FRP in each fire material requirement, label stick on fire resistant materials eg promat on air duct inside building and durasteel on outside of building, BD also govern MOE, MOA, EVA, fire management, Fire design using 1st principles, as per BD COP in fire in building, adopted when design special FS design not listed in FSD COP, eg moving WSD water treatment plant to inside hill cave

Author Samuel also supervise and check the design fire report, drawings submission to FSD, and attending commissioning audit with FSD inspectors for many fire subcontractors and main contractors in many big construction sites since 2006.