

FSD Connects with the Construction Industry

Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment (September 2022)

21 July 2022





CODES OF PRACTICE
FOR
MINIMUM FIRE SERVICE INSTALLATIONS
AND EQUIPMENT
AND
INSPECTION, TESTING AND MAINTENANCE OF
INSTALLATIONS AND EQUIPMENT

April 2012

Review of Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment

April 2012



CODES OF PRACTICE
FOR
MINIMUM FIRE SERVICE INSTALLATIONS
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INSTALLATIONS AND EQUIPMENT

April 2012

Content

Code of Practice for Minimum Fire Service Installations and Equipment

Part I to IV SStnOYIM Kin-wai (New Projects Division)

Part V Ir CHAN Wai-lam (Fire Service Installations Division)

Code of Practice for Inspection, Testing and Maintenance of Installations and Equipment

Part I to III SStnO CHIN Ka-ho (Fire Service Installations Task Force)

FSD Circular Letter 2/2022



CODES OF PRACTICE
FOR
MINIMUM FIRE SERVICE INSTALLATIONS
AND EQUIPMENT
AND
INSPECTION, TESTING AND MAINTENANCE OF
INSTALLATIONS AND EQUIPMENT

September 2022

- Issued on 15.7.2022
- Promulgation of the Codes of Practice (September 2022)
- w.e.f. 1.9.2022
- FSD Website

The screenshot shows the Fire Services Department website. The header includes the department logo, name, and contact information. A search bar is present. The main content area features a banner for 'Fire Protection' and a navigation menu. The 'Code of Practice' section is highlighted with a red box, showing the title 'Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment [September 2022 revision] (Current Edition)'. The breadcrumb trail reads: Home > Fire Protection > Circular Letters / Code of Practice / Notice / Guidance / Checklist > Code of Practice.

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消防總部大廈七樓



FIRE SERVICES DEPARTMENT
FIRE SAFETY COMMAND

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15 July 2022

To: Recipients of FSD Circular Letters

Dear Sirs/Madams,

FSD Circular Letter No. 2/2022
Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment (September 2022)

This Circular Letter announces the promulgation of the *Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment (September 2022)*.

Subsequent to a comprehensive review, which extensively engaged relevant professional bodies, trades and government departments, the new Codes of Practice have recently been finalized. The structure and arrangement of the publication are maintained in the new edition in view of their user-friendliness and the fact that they have been well adapted throughout years of implementation. The new Codes of Practice incorporate, inter alia, various new and revised requirements promulgated in the FSD Circular Letters (listed in **Appendix I**), as well as well adopted practices on inspection, testing and maintenance of installations and equipment. For easy reference, a summary of amendments is at **Appendix II**.

The new Codes of Practice shall be put into general use with effect from 1 September 2022. In relation to submission of building plans, the following types of building plans received by this Department on or after the effective date shall observe the provisions of the new Codes of Practice:

- (i) new submission of building plans for new building; and
- (ii) new submission of building plans for existing building of which not less than one half measured by volume is rebuilt or which is altered to such an extent as to necessitate the reconstruction of not less than one half of the superficial area of the main walls, or where a new occupation permit shall be issued.

Notwithstanding the above, voluntary compliance with the new Codes of Practice is welcome. In particular, the well adopted practices on inspection, testing and maintenance of installations and equipment should be continued before transition to the effective date.

/...2

REF. NUMBER AND DATE SHOULD BE QUOTED IN REFERENCE TO THIS LETTER
凡提及本信時請引註編號及日期

Structure



CODES OF PRACTICE
FOR
MINIMUM FIRE SERVICE INSTALLATIONS
AND EQUIPMENT
AND
INSPECTION, TESTING AND MAINTENANCE OF
INSTALLATIONS AND EQUIPMENT

September 2022

- Preserve the original format
- Common language among stakeholders
- Well-established

Date	
February 1964	Initial Version
March 1966	1st Edition
August 1970	2nd Version
April 1977	3rd Version
November 1979	4th Version
November 1980	5th Version
August 1982	6th Version
March 1987	7th Version
September 1990	8th Version
March 1994	9th Version
June 1998	10th Version
July 2005	11th Version
April 2012	12th Version
September 2022	13th Version

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4.15 Commercial buildings—high rise

REQUIREMENTS—SYSTEMS/INSTALLATIONS/EQUIPMENT FOR:

- Audio/visual advisory system
- Automatic actuating devices
- Automatic fixed installation other than water
- Emergency generator
- Emergency lighting
- Exit sign
- Fire alarm system
- Fire control centre
- Fire detection system
- Fire hydrant/hose reel system
- Fireman's lift
- Portable hand-operated approved appliance
- Pressurization of staircase
- Sprinkler system
- Static or dynamic smoke extraction system
- Ventilation/air conditioning control system

EXTENT

- Required for any part or parts of building where the area occupied by any one single occupancy on any one floor exceeds 2 000 square metres AND where the occupants, due to their transient presence either as shoppers, audience or guests, are exposed to risks to require additional advice through such systems.
- As required by that equipment which needs to be automatically actuated.
- To be provided to areas where the use of water is undesirable for the occupancy or trade.
- An independently powered generator of sufficient electrical capacity to meet the fire service installations and fireman's lifts it is required to provide.
- Emergency lighting shall be provided throughout the entire building and all exit routes leading to ground level.
- Sufficient directional and exit signs to ensure that all exit routes from any floor within the building are clearly indicated as required by the configuration of staircases serving the building.
- One actuating point and one audio warning device to be located at each hose reel point. Visual alarm signals shall be provided where necessary in accordance with current Design Manual: Barrier Free Access. This actuating point shall include facilities for fire pump start and audio/visual warning device initiation.
- Minimum of one, additional to be provided according to the complexity of the building.
- To be provided in areas not covered by automatic fixed installations.
- There shall be sufficient hydrants and hose reels on each floor to ensure that every part of the building can be reached by a length of not more than 30 m of Fire Services hose and hose reel tubing.
- As required by the Code of Practice for Fire Safety in Buildings.
- As required by occupancy.
- Required where:
 - natural venting of staircase is not provided;
 - the aggregate area of openable windows of the rooms/units of the building does not exceed 6.25% of the floor area of those rooms/units, calculated on a floor by floor basis;
 - the cubical extent of the building exceeds 28 000 cubic metres; and

Content

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Textual Refinement

Update of Definition

FSD Circular Letter

International Standard

Other Amendment

- Local application
- Agreed items in liaison meetings/conference

Part I



Para.	Original Context	Amended Context	Remarks
1.2	Definitions	(To be added) "Fail-safe" means Systems or equipment revert to the status serving the intended purpose in condition of loss of any form of electric power.	Update of definition
1.7	Provision of closed circuit television system, emergency power points, fireman's communication system and pedestrian cross over facility	(To be revised) Provision of closed circuit television system, emergency power points, fireman's communication system, fireman's emergency switch and pedestrian cross over facility	According to FSD C/L 4/2020
1.8	Source of Electrical Supply Where an electrical installation is required to comply with this Code, a primary and secondary source of supply shall be provided to the satisfaction of the Director of Fire Services and all such installations shall be fed from both the primary and secondary source of supply.	(To be revised) Source of Electrical Supply Where an electrical installation is required to comply with this Code, a primary and secondary source of supply shall be provided to the satisfaction of the Director of Fire Services and all such installations shall be fed from both the primary and secondary source of supply. All primary power supply to fire service installations should be originated from the load side of the main isolating device for the building and should be independent of other non-fire service circuits from the main supply switchboard.	According to international standard

Part II


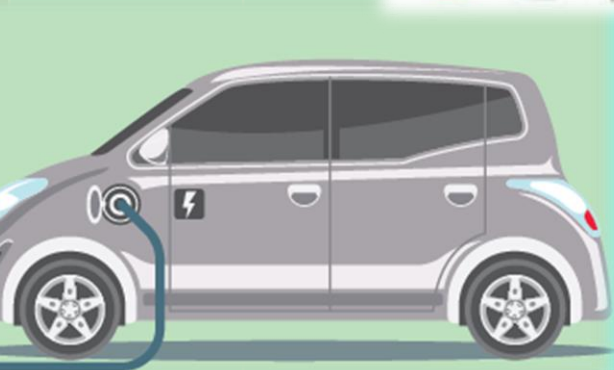


Para.	Original Context	Amended Context	Remarks
2.1	<p>Table</p> <p>Fire detection system Fire hydrant/hose reel system</p>	<p>(To be added under "Table")</p> <p>Fire detection system Fireman's emergency switch Fire hydrant/hose reel system</p>	According to FSD C/L 4/2020
2.2	<p>Definition</p>	<p>(To be added under "Definitions")</p> <p>"Fireman's emergency switch" means</p> <p>A switch designed and installed to be used by firemen to cut off electric power supply to circuit concerned in the event of a fire/emergency.</p>	According to FSD C/L 4/2020
2.2	<p>Definition</p> <p>"Automatic actuating devices" means</p> <p>Building components such as doors, shutters, dampers, fire curtains, roof vents, etc., and the devices for automatically controlling their movement in the event of fire.</p>	<p>(To be revised)</p> <p>"Automatic actuating devices" means</p> <p>Devices that are capable of providing signals, in the event of fire, to initiate the operation of other fire service installations or building components such as doors, shutters, dampers, fire curtains, roof vents, etc.</p>	Update of definition
2.2	<p>Definition</p> <p>"Dynamic smoke extraction system" means</p> <p>A mechanical ventilating system capable of removing smoke and products of combustion from a designated fire compartment, and also supplying fresh air in such a manner as to maintain a specified</p>	<p>(To be revised)</p> <p>"Dynamic smoke extraction system" means</p> <p>A mechanical ventilating system capable of removing smoke and products of combustion from a designated fire compartment, and also supplying make-up air in such a manner as to maintain a specified</p>	Textual Refinement

Part II

Para.	Original Context	Amended Context	Remarks
2.2	<p>Definition</p> <p>“Static smoke extraction system” means</p> <p>A smoke extraction system utilizing smoke reservoirs; localised ducting; and permanent openings and/or automatic opening of windows, panels or external louvres actuated by smoke detectors; to remove, on the principles of natural ventilation, smoke and products of combustion from a designated fire compartment.</p> <p>Static smoke extraction system may be provided, as the alternative to the dynamic smoke extraction system if ALL of these three conditions are satisfied:</p> <p>(a) — smoke reservoirs each not exceeding 500 square metres in area can be provided under the ceiling by fixed or automatically operated smoke screens to the specifications as contained in Part V, and</p> <p>(b) — the horizontal distance between the perimeter of any smoke reservoir and the external wall of the building where windows, panels or external louvres functioning as smoke outlets are installed, does not exceed 30 metres and that one side of the reservoir shall abut the external wall, and</p> <p>(c) — the aggregate area of windows, panels or external louvres functioning as smoke outlets is not less than 2% of the floor area this system serves, and that at least half of these outlets are operable by automatic actuating devices.</p>	<p>(To be revised and relocated to Part V)</p> <p>“Static smoke extraction system” means</p> <p>A smoke extraction system utilizing smoke reservoirs; localised ducting; and permanent openings and/or automatic opening of windows, panels or external louvres; to remove, on the principles of natural ventilation, smoke and products of combustion from a designated fire compartment.</p>	Textual Refinement

Part IV


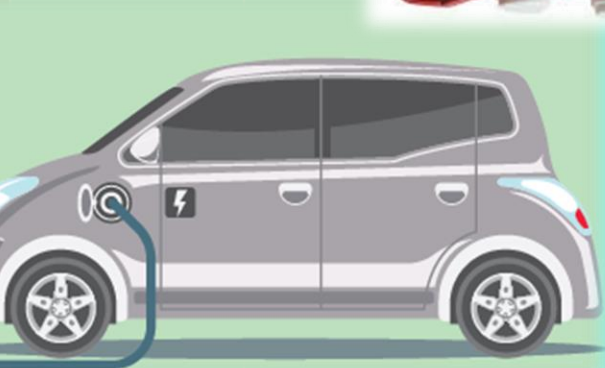
Para.	Original Context	Amended Context	Remarks
4.9	<p>Car Ports</p> <ul style="list-style-type: none"> (i) Emergency lighting (ii) Exit sign (iii) Fire alarm system (iv) Fire hydrant/hose reel system (v) Fireman's lift (vi) Portable hand-operated approved appliance  	<p>(Requirements and Extent to be added and renumbered)</p> <ul style="list-style-type: none"> (iv) Fire Detection System <p><i>EXTENT</i></p> <ul style="list-style-type: none"> (iv) Heat or multi-sensor detectors shall be provided: <ul style="list-style-type: none"> (a) in entire car ports with a total floor area not exceeding 230m² installed with electric vehicle charging facilities but not covered by sprinkler system; and (b) In car parking areas installed with electric vehicle charging facilities of car ports with a total floor area exceeding 230m² but not covered by sprinkler system. <p>A direct line connection to the Fire Services Communications Centre is not required if the car ports are situated in domestic buildings where the provision of direct line connection is not mandatorily required.</p> <ul style="list-style-type: none"> (vi) Fireman's emergency switch <p><i>EXTENT</i></p> <ul style="list-style-type: none"> (vi) To be provided for car ports installed with electric vehicle charging facilities. The switch shall be provided at vehicle entrances, fire control centre or other locations as considered acceptable by the Director of Fire Services. <ul style="list-style-type: none"> (viii) Portable hand-operated approved appliance <p><i>EXTENT</i></p> <ul style="list-style-type: none"> (viii) As required by risk. For car ports installed with electric vehicle charging facilities, additional dry powder or carbon dioxide type fire extinguisher shall be provided at each hose reel point on the floors with electric vehicle charging facilities. <p>Note: The additional requirements for car ports installed with electric vehicle charging facilities as stipulated in para. (iv, vi & viii) above shall not be applicable to the car port of a single-family domestic building up to and including three storeys in height, except a car port situated in basement.</p>	<p>According to FSD C/L 4/2020</p>

Part IV



Para.	Original Context	Amended Context	Remarks
4.12	<p>Cold storage areas (Group I) major (of and over 140m³ capacity)</p> <p>(i) Automatic fixed installation using water</p> <p><i>EXTENT</i></p> <p>(i) Dry sprinkler or sprinkler installation operating in dry mode to be provided in the cold room, as defined by the Loss Prevention Council Rules.</p>	<p>(To be revised)</p> <p>(i) Automatic fixed installation using water</p> <p><i>EXTENT</i></p> <p>(i) Dry sprinkler or sprinkler installation operating in dry mode as defined by the Loss Prevention Council Rules to be provided where the cold storage room is entirely given over to storage in an atmosphere of less than 4°C.</p>	According to international standard
4.13	<p>Cold storage areas (Group II)</p> <p>(ii) Automatic fixed installation using water</p> <p><i>EXTENT</i></p> <p>(ii) In all areas including staircases with the exception of cold storage room which should be provided with a dry sprinklers or sprinkler installation operating in dry mode in accordance with the Loss Prevention Council Rules.</p>	<p>(To be revised)</p> <p>(ii) Automatic fixed installation using water</p> <p><i>EXTENT</i></p> <p>(ii) In all areas including staircases with the exception of and cold storage room which should be provided with a For a cold storage room which is entirely given over to storage in an atmosphere of less than 4°C, dry sprinklers or sprinkler installation operating in dry mode in accordance with the Loss Prevention Council Rules to be provided.</p>	According to international standard
4.23	<p>Domestic buildings – high rise</p> <p>(ii) Emergency lighting</p> <p><i>EXTENT</i></p> <p>(ii) Emergency lighting shall be provided to all staircases, passages and public areas including lift lobbies on all floors and refuge areas.</p>	<p>(To be revised)</p> <p>(ii) Emergency lighting</p> <p><i>EXTENT</i></p> <p>(ii) Emergency lighting shall be provided to all staircases, passages, plant rooms and public areas including lift lobbies on all floors and refuge areas.</p>	According to international standard

Part IV

Para.	Original Context	Amended Context	Remarks
4.26	<p>Garages</p> <ul style="list-style-type: none"> (i) Automatic actuating devices (ii) Emergency lighting (iii) Exit sign (iv) Fire alarm system (v) Fire hydrant/hose reel system (vi) Fireman's lift (vii) Portable hand-operated approved appliance (viii) Sprinkler system (ix) Ventilation/air conditioning control system  	<p>(Requirements and Extent to be added and renumbered)</p> <ul style="list-style-type: none"> (v) Fire Detection System <p><i>EXTENT</i></p> <ul style="list-style-type: none"> (v) Heat or multi-sensor detectors shall be provided in entire garage with a total floor area not exceeding 230m² installed with electric vehicle charging facilities but not covered by sprinkler system. A direct line connection to the Fire Services Communications Centre is not required if the garages are situated in domestic buildings where the provision of direct line connection is not mandatorily required. (vii) Fireman's emergency switch <p><i>EXTENT</i></p> <ul style="list-style-type: none"> (vii) To be provided for garages installed with electric vehicle charging facilities. The switch shall be provided at vehicle entrances, fire control centre or other locations as considered acceptable by the Director of Fire Services. (ix) Portable hand-operated approved appliance <p><i>EXTENT</i></p> <ul style="list-style-type: none"> (ix) As required by risk. For garage installed with electric vehicle charging facilities, additional dry powder or carbon dioxide type fire extinguisher shall be provided at each hose reel point on the floors with electric vehicle charging facilities. <p>Note: The additional requirements for car ports installed with electric vehicle charging facilities as stipulated in para. (iv, vi & viii) above shall not be applicable to the garage of a single-family domestic building up to and including three storeys in height, except a garage situated in basement.</p>	<p>According to FSD C/L 4/2020</p>

Part IV



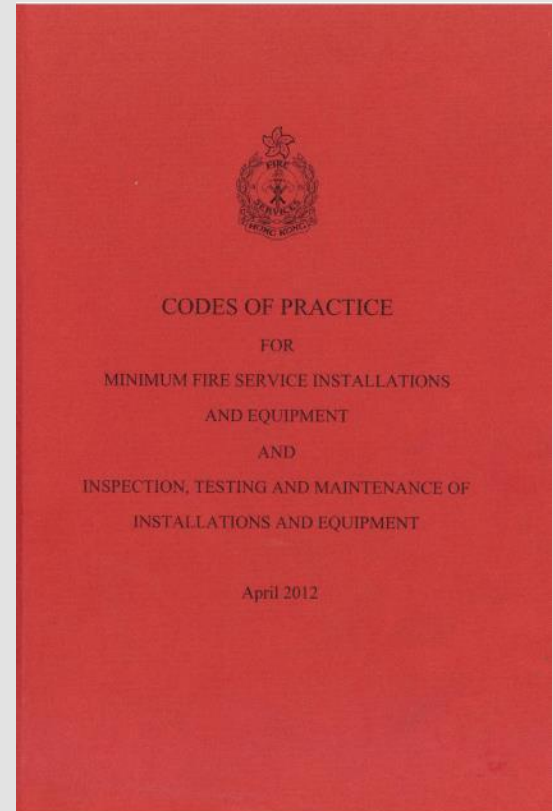
Para.	Original Context	Amended Context	Remarks
4.27 4.28 4.31 4.32	<p>Hotels – low rise Hotels – high rise Institutional buildings – low rise Institutional buildings – high rise</p> <p>Fire detection system</p> <p><i>EXTENT</i></p> <p>(a) To be provided in area not covered by automatic fixed installations;</p> <p>(b) a smoke detection system to be provided for the entire floor excluding toilets, bathrooms and staircases which are covered by sprinkler system, if any part of that floor is used for sleeping accommodation. Heat detection system would be acceptable in electrical/mechanical rooms and kitchens; and</p> <p>(c) All smoke detectors provided in guestrooms shall be integrated with proprietary made sounder bases.</p>	<p>(To be revised)</p> <p>Fire detection system</p> <p><i>EXTENT</i></p> <p>(a) To be provided in area not covered by automatic fixed installations;</p> <p>(b) smoke detectors or multi-sensor detectors to be provided for the entire floor excluding toilets, bathrooms, staircases and open-sided corridors/balconies which are covered by sprinkler system, if any part of that floor is used for sleeping accommodation. Heat detectors would be acceptable in electrical/mechanical rooms and kitchens; and</p> <p>(c) All smoke detectors or multi-sensor detectors provided in guestrooms shall be integrated with proprietary made sounder bases.</p> <p>Note:</p> <p>(i) Other installations for the purpose of smoke detection as approved by the Director of Fire Services are acceptable.</p> <p>(ii) Open-sided corridors/balconies shall have open side above safe parapet height on at least 50% of the wall/side facing external air.</p>	Local Application

Part IV

Para.	Original Context	Amended Context	Remarks
4-35	<p>Mechanical plant rooms (Group I)</p> <ul style="list-style-type: none"> • • • • • 	<p>(To be added and renumbered)</p> <p>Lifts not discharging to protected means of escape</p> <p>(i) Automatic actuating devices</p> <p>EXTENT</p> <p>(i) (a) Smoke detectors or multi-sensor detectors as automatic actuation devices shall be installed outside all lift door openings not discharging to protected means of escape as defined in paragraph 1.2 of this Code;</p> <p>(b) To be provided to buildings except:-</p> <ul style="list-style-type: none"> (i) Sprinkler protected buildings; or (ii) Domestic buildings up to and including three storeys in height. 	According to FSD C/L 1/2017
4.42	<p>Road tunnels</p> <p>(vii) Exit sign</p> <p>EXTENT</p> <p>(vii) To be provided to indicate the locations of pedestrian cross over facilities.</p>	<p>(To be revised)</p> <p>(vii) Exit sign</p> <p>EXTENT</p> <p>(vii) To be provided to indicate the locations of pedestrian cross over facilities and passageways for evacuation.</p>	Textual Refinement
4.42	<p>Road tunnels</p> <p>(x) Fire hydrant/hose reel system</p> <p>EXTENT</p> <p>(x) For twin-tube tunnels, there shall be sufficient hose reels to ensure that every part of the tunnel can be reached by a length of not more than 30 m of hose reel tubing. Hose reels shall be provided at 50 m intervals. Fire hydrants shall be provided at 100 m intervals. The hydrant shall have twin outlets fitted with instantaneous couplings capable of delivering not less than 4 000 litres per minute (66.7 litres per second) at a minimum running pressure of 170 kPa with two outlets operating simultaneously.</p>	<p>Road tunnels</p> <p>(x) Fire hydrant/hose reel system</p> <p>EXTENT</p> <p>(x) For twin-tube tunnels, there shall be sufficient hose reels to ensure that every part of the tunnel can be reached by a length of not more than 30 m of hose reel tubing. Hose reels shall be provided at 50 m intervals. Fire hydrants shall be provided at 100 m intervals. At each hydrant point, one twin-outlet hydrant or two single-outlet hydrants shall be provided. The hydrants shall be have twin outlets fitted with instantaneous couplings capable of delivering not less than 4,000 litres per minute (66.7 litres per second) at a minimum running pressure of 170 kPa with two outlets operating simultaneously.</p>	Local Application

Review of Minimum Fire Service Installations and Equipment - Specification

**Fire Service Installations Division
Engineer
Ir. CHAN Wai-lam**



Part V



Para.	Original Context	Amended Context	Remarks
5.1 Audio/visual advisory system	<p>VISUAL A system of flashing lights with directional signs, which may be incorporated to the exit signs and directional signs as required under paragraph 5.10 and supplemented by low level directional signs to indicate:</p> <ul style="list-style-type: none">(a) the floors and/or areas to be evacuated by operating the flashing lights with directional signs at the corresponding floors and/or areas,(b) the evacuation routes by following the low level directional signs. <p>(continue on next slide)</p>	<p>VISUAL A system of flashing directional signs and flashing exit signs as required under paragraph 5.10 and supplemented by low level directional signs to indicate:</p> <ul style="list-style-type: none">(a) the floors and/or areas to be evacuated by operating the flashing directional signs and flashing exit signs at the corresponding floors and/or areas and exits,(b) the evacuation routes by following the low level directional signs. <p>(continue on next slide)</p>	To suit for the local practice as agreed on FSSAG Meetings No. 56 item 6

Part V

Para.	Original Context	Amended Context	Remarks
5.1 Audio/visual advisory system (cont.)	<p>High level flashing lights with directional signs shall be positioned between 2 m and 2.5 m above finished floor level measured to the base of the flashing lights. Low level directional signs shall be installed with the lower edges not higher than 200 mm from the finished floor level.</p> <p>Low level directional signs shall be of self luminous types and conform to British Standard 5499: Part 10 or, alternatively, shall be of photoluminous types and conform to DIN 67510 Part 4 or equivalent.</p>	<p>High level flashing directional signs shall be positioned between 2 m and 2.5 m above finished floor level measured to the base of the directional signs. Low level directional signs shall be installed with the lower edges not higher than 200 mm from the finished floor level.</p> <p>Low level directional signs shall be of internally illuminated types conforming to British Standard 5499: Part 4 or, self-luminous signs to British Standard 5499: Part 4 or other standards acceptable to the Director of Fire Services.</p> <p>Synchronization of flashing directional signs and flashing exit signs shall be required in each compartment/unit.</p>	To suit for the local practice as agreed on FSSAG Meetings No. 56 item 6



Part V

Para.	Original Context	Amended Context	Remarks
5.9 Emergency lighting	<p>SPECIFICATION</p> <p>Emergency lighting shall be backed up by emergency power supply. The emergency power supply shall be either fed from an emergency generator or from self-contained secondary battery.</p>	<p>SPECIFICATION</p> <p>Emergency lighting shall be backed up by emergency power supply. The emergency power supply shall be either fed from an emergency generator OR from self-contained secondary battery.</p> <p>During power supply failure, any emergency lighting for the means of escape shall be switched on automatically without interruption by lighting switches or other control devices.</p>	<p>To align with the requirement as stated in the clause 8.3.1 of technical guidance for BS 5266-1: 2016 under FSD Circular Letter No. 4/2021</p>



Part V



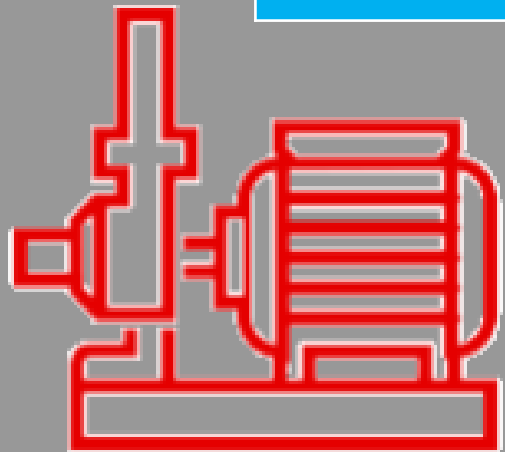
Para.	Original Context	Amended Context	Remarks
5.14 Fire hydrant/hose reel system	<p>(b) HOSE REEL</p> <p>The tubing of every hose reel shall not exceed 30 metres in length and be capable of being wound round a drum of not less than 150 mm in diameter and led around sharp obstructions without kinking. When fitted with hose reel nozzle, the tubing shall be capable of projecting a jet not less than 6 metres in length.</p>	<p>(b) HOSE REEL</p> <p>The tubing of every hose reel shall not exceed 30 metres in length and be capable of being wound round a drum of not less than 150 mm in diameter and led around sharp obstructions without kinking. When fitted with hose reel nozzle, the tubing shall be capable of projecting a jet not less than 6 metres in length. The water supply pressure available at each hose reel shall not exceed 1 200 kPa and the rated working pressure of the hose reel.</p>	Adopted the requirement in EN671-1:2001 Clause 10.2.

Table 2 — Maximum working, test and minimum burst pressure for hose reels

Inside diameter of hose mm	Maximum working pressure MPa	Test pressure MPa	Minimum burst pressure MPa
19	1,2	1,8	3,0
25	1,2	1,8	3,0
33	0,7	1,05	1,75

Extract from BS EN 671-1

Part V

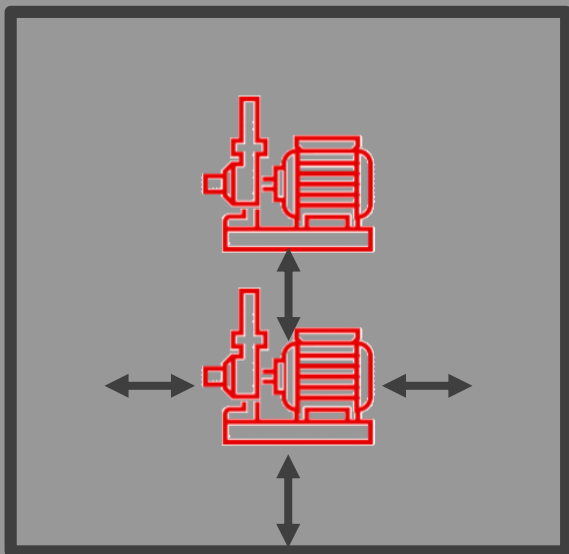


Para.	Original Context	Amended Context	Remarks
5.14 Fire hydrant/hose reel system	<p>(d) FIXED FIRE PUMP All fixed fire pumps shall be housed in suitable enclosures, preferably brick or concrete, designed solely for occupation by F.S. pumps. Such pump enclosures shall lie clear of any exit or normal communication routes through the premises and shall be clearly marked in English and Chinese characters "FIXED FIRE PUMP" (消防泵) and suitably locked to prevent unauthorized tampering of the pumps.</p>	<p>(d) FIXED FIRE PUMP All fixed fire pumps shall be housed in pump room used for no other purpose than housing fire protection water supplies and equipment. The access to the pump room shall be via an exit, exit route and/or required staircase in compliance with the Means of Escape requirements in the Code of Practice for Fire Safety in Buildings. Access via a cat ladder is not acceptable. Such pump room shall be clearly marked in English and Chinese characters "FIXED FIRE PUMP" (消防泵) of at least 50 mm high and suitably locked to prevent unauthorized tampering of the pumps.</p> <p>(continue on next slide)</p>	<ul style="list-style-type: none">- To ease access during emergency and to ease maintenance and up keeping.- To align with sprinkler pump room requirements stated in Circular Letter 5/2020

Para.	Original Context	Amended Context	Remarks
5.14 Fire hydrant/hose reel system (cont.)		<p>The door opening shall be of sufficient dimensions to permit easy access of personnel and the removal and replacement of equipment within the pump room.</p> <p>There shall be sufficient internal clear space and headroom (not less than 2 m floor to ceiling clear height) for carrying out inspection, servicing and maintenance safely. A clear space of not less than 450 mm shall be maintained on two sides of each set of fixed fire pump and driver (excluding transfer pump and jockey pump where provided), i.e. one of the longer sides of the pump and driver, and the side facing the end of driver. If two nos. of fixed fire pumps had been installed closely, the clear space of not less than 450 mm between two fixed fire pumps can be shared.</p> <p>A clear space of not less than 600 mm shall be maintained in front of the pump control panel. The switches, buttons and indicators at the pump control panel shall be installed at a level between 300 mm and 2000 mm above the finish floor level. The pump panel and associated power supply facilities are preferable to be located near the entry.</p>	



Part V



Part V

Para.	Original Context	Amended Context	Remarks
5.14 Fire hydrant/hose reel system	(f) RISING MAIN	f) RISING MAIN, PIPES AND VALVE Where pressure reducing valve(s) (PRV) are installed, a bypass arrangement shall be incorporated to enable isolation of any defective PRV for necessary repair or replacement. Under no circumstances shall the bypass be used as a permanent means of water supply. Each PRV shall be equipped with a stop valve, a strainer and a pressure gauge on the upstream side and a stop valve and a pressure gauge on the downstream side.	To clarify PRV requirements, and to improve their reliability. To align with requirements stated in FSD Circular Letter No. 9/2020.



Part V



Para.	Original Context	Amended Context	Remarks
<p>5.21 Pressurization of staircase</p>	<p>A. DESIGN AND SUBMISSIONS</p> <p>A. 1 The designer shall be a registered professional engineer under Cap. 409 in the discipline of building services, fire or mechanical engineering.</p> <p>A. 2 The designer shall be responsible for all submissions to the Fire Services Department and each drawing and all calculations shall be signed by the designer on behalf of the design company/organisation, as having been checked by him, and that they comply fully with the requirements of this Code.</p>	<p>A. DESIGN AND SUBMISSIONS</p> <p>A. 1 The installation shall be designed by a registered professional engineer under Cap. 409 in the discipline of building services, fire or mechanical engineering.</p> <p>A. 2 All submissions to the Fire Services Department shall be certified on each drawing and calculation sheet by a registered professional engineer, that comply fully with the requirements of this Code.</p> <p>A. 3 All testing and commissioning reports shall be witnessed and certified by a registered professional engineer.</p>	<p>To suit for local practice</p> <p>A.2 - To tally with FSD Circular Letter 4/1996</p> <p>A.3 - To tally with the requirement for FSI/501a</p>

Part A : (to be completed by Registered Professional Engineer (if applicable))

I hereby certify that the *staircase pressurization system(s)/dynamic extraction system(s)/water mist system(s)/other system(s) (please specify) _____ listed above and in the attached FSI/501a, which was/were approved by the Fire Services Department (FSD) on _____ (FSD Ref. No. _____), has/have been installed and tested in accordance with the FSD's requirements. I am satisfied that the above systems are operating in accordance with the approved design and the requirements of the FSD.

Full Name: _____ Discipline: _____

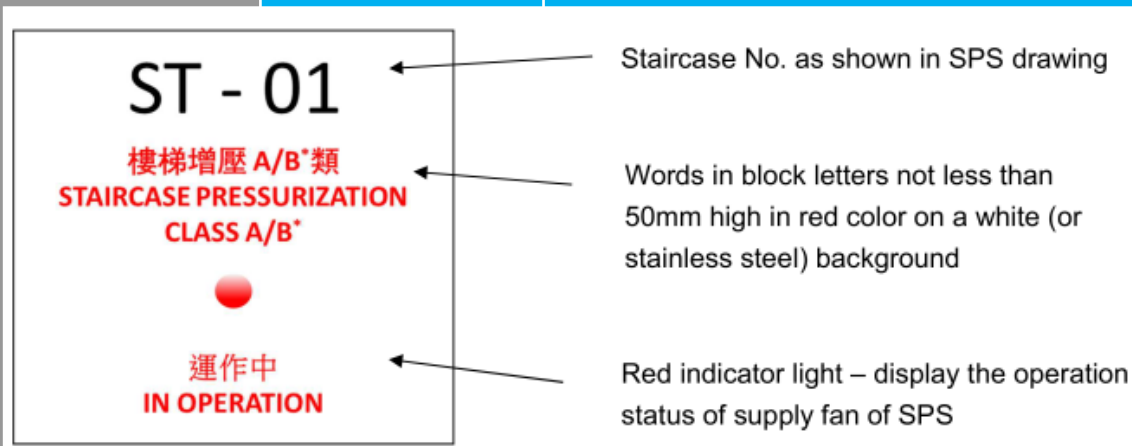
Registered Professional Engineer Number: _____ Date: _____

Signature of Registered Professional Engineer: _____

Extract from Form FSI/501

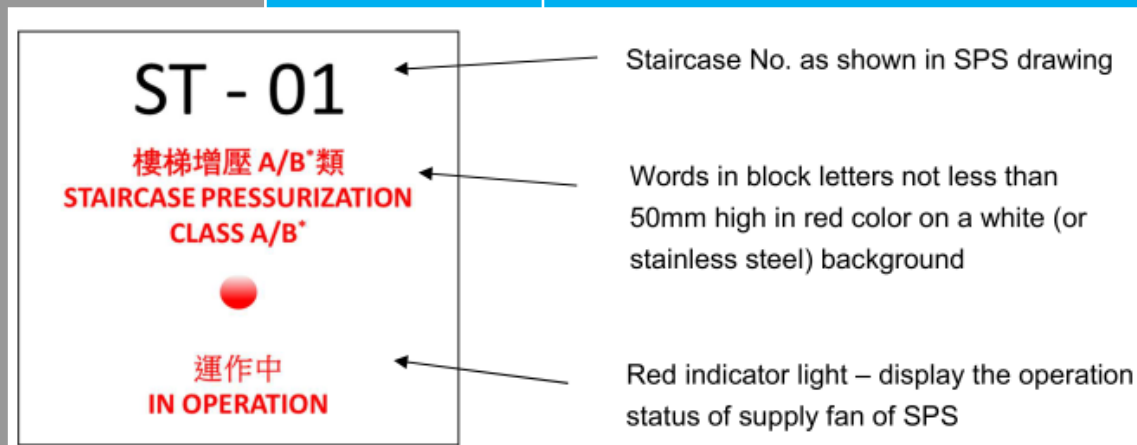
Part V

Para.	Original Context	Amended Context	Remarks
5.21 Pressurization of staircase	C. ARCHITECTURAL AND CONSTRUCTION CONSIDERATIONS	<p>C. ARCHITECTURAL AND CONSTRUCTION CONSIDERATIONS</p> <p>C. 2 Notice plates shall be provided to show the availability and operational status of SPS(s) in the building with specifications as follows:</p> <p>(a) The notice plates shall be bilingual bearing the words “Staircase Pressurization Class A/B*” and “樓梯增壓 A/B類*” with letter height not less than 50 mm as shown in Figure 5. The characters shall be painted in red on a white or stainless steel background.</p> <p>* Specify Class A or B according to the type of SPS installed.</p> <p>(b) The notice plates shall bear a red indicator light (as shown in Figure 5) which shall be on while the supply fan of the SPS protecting the staircase is in operation.</p> <p>(continue on next slide)</p>	To align with the latest requirement as discussed and agreed in FSSAG



Part V

Para.	Original Context	Amended Context	Remarks
5.21 Pressurization of staircase		<p>(c) The notice plates shall be either illuminated by emergency lighting or internally illuminated, backed up by emergency power supply.</p> <p>(d) The notice plates shall be provided at every staircase protected by SPS and shall be firmly affixed at a conspicuous position at the following locations:</p> <ul style="list-style-type: none"> i) Outside the final exit; and ii) Both inside and outside the exit on the top floor. <p>(e) For buildings installed with SPSs and refuge floors, notice plates shall also be firmly affixed at a conspicuous position both inside and outside the exit/entrance of the staircase on the refuge floor.</p>	To align with the latest requirement as discussed and agreed in FSSAG





CODES OF PRACTICE
FOR
MINIMUM FIRE SERVICE INSTALLATIONS
AND EQUIPMENT
AND
INSPECTION, TESTING AND MAINTENANCE OF
INSTALLATIONS AND EQUIPMENT

April 2012

Review of Code of Practice for Inspection, Testing and Maintenance of Installations and Equipment April 2012

Part I

Para.	Original Context	Amended Context	Remarks
1.2 General	Applications for initial inspection and testing should be made on the prescribed form to the Director of Fire Services. The form must be signed by both the RFSIC and the Authorized Person.	Applications for initial inspection and testing should be made on the prescribed forms to the Director of Fire Services. The forms must be signed by both the RFSIC and the Authorized Person / Registered Professional Engineer under Cap. 409 in the discipline of building services, fire or mechanical engineering (if applicable) respectively.	According to FSD CL 1/2020
1.3 General	An application should only be submitted by the Authorized Person when the installation and equipment has been installed, completed and certified as being in efficient working order by the RFSIC.	An application should only be submitted by the Authorized Person when the installation and equipment has been installed, completed and certified as being in efficient working order by the RFSIC. The form signed by the RFSIC under the application serves as a certificate under Reg. 9 of the Fire Service (Installations and Equipment) Regulations, Cap 95B. The RFSIC issuing the form which is false or misleading in the material particulars is liable to the offence under Reg. 9 of Cap 95B.	According to FSD CL 1/2020

Part I

Para.	Original Context	Amended Context	Remarks
1.4 General		(To be added) FSIs included in APPENDIX 1 to APPENDIX 7 shall be checked and tested in accordance with the testing and commissioning checklists as laid down at the above appendixes. Besides, RFSIC shall also submit all necessary supporting documents to FSD together with the prescribed form.	According to FSD CL 1/2020

Part I

Para.	Original Context	Amended Context	Remarks
1.13 General		<p>(To be added)</p> <p>For acceptance inspection:-</p> <p>(i) <u>Legible as-built system schematic diagram(s) of FSIs</u> (where audio/visual advisory systems, fixed installations, water-based systems, detection systems, fire alarm systems, smoke control systems, etc. as applicable is/are installed) shall be kept in a conspicuous location inside the <u>fire control centre/F.S. control room or near a status panel at the main entrance/caretaker's counter as applicable of the building when there is no fire control centre/F.S. control room and the diagram(s) shall be laminated or framed.</u> The as-built system schematic diagram(s) shall also be displayed at the corresponding pump room(s) where applicable;</p>	To detail the requirement for acceptance inspection

Part I

Para.	Original Context	Amended Context	Remarks
1.13 (Cont') General		(To be added) (ii) On floors having more than one sprinkler subsidiary stop valves where applicable, a zoning plan shall be fitted adjacent to each sprinkler subsidiary stop valve to indicate the demarcation of sprinkler zones on the same floor; (iii) In fixed installations using water and other water-based systems where applicable, those normally-open stop valves the turning off of which will interrupt water supply for proper functioning of the systems, shall be fitted with padlock and durable warning labels to prevent tampering; and (iv) All pumps shall be fitted with a name plate showing the designed flow rate(s) and pressure(s) .	To detail the requirement for acceptance inspection

Part I

Para.	Original Context	Amended Context	Remarks
1.14 General		<p>(To be added)</p> <p>RFSIC should bear the ultimate responsibility in certifying the FSIs are in efficient working order. The provision and specification of FSIs shall follow:-</p> <p>(i) the appropriate version of Code of Practice for Minimum Fire Service Installations and Equipment applicable to the FSIs installed in the buildings/premises; and</p> <p>(ii) relevant requirements and/or Circular Letters promulgated by the Director of Fire Services applicable to the FSIs installed in the buildings/premises.</p>	To detail the requirement for the inspection, testing and maintenance of FSIs

Part I

Para.	Original Context	Amended Context	Remarks
1.14 (Cont') General		<p>(To be added)</p> <p><u>All inspection, testing and maintenance of FSIs</u> (other than acceptance inspection) shall be conducted in accordance with:-</p> <p>(i) <u>the Code of Practice for Inspection, Testing and Maintenance of Installations and Equipment;</u></p> <p>(ii) <u>relevant Circular Letters promulgated from time to time</u> by the Director of Fire Services; and</p> <p>(iii) relevant requirements in <u>Annual Inspection Checklist(s)</u> promulgated by the Director of Fire Services irrespective of the time of the building plans submission for approval. All appropriate items in the checklist(s), where applicable, shall be inspected/tested/maintained as required.</p>	To detail the requirement for the inspection, testing and maintenance of FSIs

Part I

Para.	Original Context	Amended Context	Remarks
1.14 (Cont') General		(To be added) <u>For inspection, testing and maintenance other than acceptance inspection and annual inspection</u> , the same standard of annual inspection shall be followed. <u>All appropriate items in relevant Annual Inspection Checklist(s)</u> , where applicable, promulgated by the Director of Fire Services shall be inspected/tested/maintained as required.	To detail the requirement for the inspection, testing and maintenance of FSIs

Part I

Para.	Original Context	Amended Context	Remarks
1.16 General	For any shut-down of building FSI overnight or more than 24 hours continuously, RFSIC shall notify Fire Services Department in accordance with the laid down reporting procedures. RFSIC shall take and advise the residents/occupants/property management company to take preventative measures to mitigate the risk during the works period when any FSI is defective or shut down for inspection, maintenance, modification or repair. A set of procedures and measures to be observed by RFSIC is enclosed at APPENDIX 9	For any shut-down of building FSI, including FH/HR system, sprinkler system, fire alarm system, street fire hydrant system, water spray system, smoke extraction system, staircase pressurization system, dry riser system and fire detection system with sleeping risk, overnight or more than 24 hours continuously, RFSIC shall notify Fire Services Department in accordance with the laid down reporting procedures. RFSIC shall advise the residents/occupants/property management company to take preventative measures to mitigate the risk during the works period when any FSI is defective or shut down for inspection, maintenance, modification or repair. A set of procedures and measures to be observed by RFSIC is enclosed at APPENDIX 9.	According to FSD CL 1/2021

Part I

Para.	Original Context	Amended Context	Remarks
1.17 General	Design engineers and RFSIC should advise the owner of the building, or his agent that any fire service installation or equipment (such as the staircase pressurization system etc.), which would normally be left in idle or standby conditions except in case of fire, should be actuated and checked by the owner or his agent at an interval of not more than three months to ensure that the installation or equipment are functioning and sequencing correctly.	The Authorized Person, Registered Professional Engineer under Cap. 409 in the discipline of building services, fire or mechanical engineering (if applicable) and RFSIC should advise the owner of the installations, or his agent that any fire service installation or equipment (such as the pressurization of staircase etc.), which would normally be left in idle or standby conditions except in case of fire, should be actuated and checked by the owner or his agent at an interval of not more than three months to ensure that the installation or equipment are functioning and sequencing correctly.	Update of definition

Para.	Original Context	Amended Context	Remarks
2.1 - 2.30	(ii) Maintenance	(ii) Inspection, Testing and Maintenance	Update of definition

2.11 Fire alarm system

(i) Acceptance Testing

Manual call points shall be tested together with automatic fire alarm when the whole system is required to be tested in accordance with the appropriate standards as required by the Director of Fire Services. Upon actuation of the manual call points, alarm bells in all or designated zones, other audible/visual alarm signals, direct line connection, and hydrant/sprinkler water pumps etc. shall be activated. Audibility of alarm bell sound shall be checked at hindered locations of the building/premises. A testing and commissioning checklist for testing of fire alarm system is enclosed at APPENDIX 4.

(ii) Inspection, Testing and Maintenance

The system shall be maintained in efficient working order at all times and shall be inspected by a registered fire service installation contractor at least once in every 12 months.

Manual call points should be tested when the whole system is required to be tested in accordance with the appropriate standard.

Attention is drawn to Regulation 38 of the Education Regulations, Chapter 279 in respect of fire alarm testing and fire drills in schools.

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<p>out on the battery of the emergency lighting, and the results should be entered in a register. The on-load voltage of each cell after this test should be not less than 2.01 volts for lead acid and 1.25 volts for nickel cadmium battery.</p> <p>c. Once every twelve months a full rated duration test, should be carried out and the results should be entered in a register.</p> <p>d. The luminaire should be functioning properly to maintain the stipulated lighting level and the normal power supply should be restored after the test.</p> <p>e. If automatic testing devices are used, the above item a – d should be complied with.</p> <p>Emergency Lighting with Self-contained Batteries:</p> <p>a. Once every month a functional test in accordance with BS EN 50172 not longer than 10% of rated duration should be carried out.</p> <p>b. Once every twelve months a full rated duration test, should be carried out and the results should be entered in a register.</p> <p>c. The luminaire should be functioning properly to maintain the stipulated lighting level and the normal power supply should be restored after the test.</p> <p>d. If automatic testing devices are used, the above item a – c should be complied with.”</p> <p>2.10 Exit sign</p> <p>(i) Acceptance Testing</p> <p>Tests shall be carried out in accordance with British Standard 5266: Part 1 or in such manner as may be prescribed by the Director of Fire Services on account of specific features of the equipment.</p> <p>(ii) Inspection, Testing and Maintenance</p> <p>All exit signs shall be maintained in efficient working order at all times and shall be inspected by a registered fire service installation contractor at least once in every 12 months. All exit signs shall be inspected and tested to ensure that they operate properly when the primary power supply is cut off and to ensure the batteries, where provided, are in acceptable condition.</p> <p>Moreover, exit sign should be tested whenever an emergency lighting system is tested.</p> <p>2.11 Fire alarm system</p> <p>(i) Acceptance Testing</p> <p>Manual call points shall be tested together with automatic fire alarm when the whole system is required to be tested in accordance with the appropriate standards as required by the Director of Fire Services. Upon actuation of the manual call points, alarm bells in all or designated zones, other audible/visual alarm signals, direct line connection, and hydrant/sprinkler water pumps etc. shall be activated. Audibility of alarm bell sound shall be checked at hindered locations of the building/premises. A testing and commissioning checklist for testing of fire alarm system is enclosed at APPENDIX 4.</p> <p>(ii) Inspection, Testing and Maintenance</p> <p>The system shall be maintained in efficient working order at all times and shall be inspected by a registered fire service installation contractor at least once in every 12 months.</p> <p>Manual call points should be tested when the whole system is required to be tested in accordance with the appropriate standard.</p> <p>Attention is drawn to Regulation 38 of the Education Regulations, Chapter 279 in respect of fire alarm testing and fire drills in schools.</p> <p>2.12 Fire control centre</p> <p>(i) Acceptance Testing</p> <p>Testing of the fire control panels shall be carried out as part of the testing for various fire service systems in accordance with the appropriate standards or codes as outlined elsewhere in this Code.</p> <p>Visual check on the integrity of room enclosures for compartmentation with respect to fire resistance rating shall be required. Confirmation by the Authorized Person for the fire resistance rating of the materials/structure should be provided during inspection. Check shall be made on the</p>

Q&A Session

