

Fire Safety Standards Advisory Group (FSSAG)
Matter Discussed in the 65th Meeting held on 27 May 2021

1. *Review of the Requirements for Emergency Lighting*

- ***Routine Inspection & Tests for Self-contained Emergency lighting System***
- ***Review of PPA 104 (Issued under cover of FSD Circular Letter No. 1/2006)***

Subsequent to the endorsement of the Technical Guidance (TG) for BS 5266-1:2016 and BSEN 1838:2013, the relevant FSD Circular Letter 4/2021: Specification for Emergency Lighting was issued on 25 May 2021. The implementation date of the FSD Circular Letter 4/2021 would be 1 January 2022 which meant that the standards stated in the TG would be applicable for initial submission of building plans received by FSD on or after 1 January 2022.

Subsequent to the endorsement of the 5th Revision of the PPA104 and PPA104(A), the relevant FSD Circular Letter No. 5/2021: Fire Safety Requirements for Emergency Lighting Systems in Licensed/Registered Premises was issued on 25 May 2021. The implementation date of the new requirement would be 1 June 2022.

In order to allow the trades and practitioners concerned to get prepared for the changes involved in the revision of fire safety requirements, the two revised sets of fire safety requirements would be imposed on licensed/registered premises for all submissions of applications received by respective licensing authority or by FSD with effect from 1 June 2022. The aforesaid circular letters were uploaded onto the FSD website.

Since the relevant circular letters were issued and no further enquires had been received, the meeting agree to delete this item in the next meeting.

2. *Implementation of BS 5839: 2017 “Fire Detection and Fire Alarm Systems for Buildings – Part 1: Code of Practice for Design, Installation, Commissioning and Maintenance of Systems in Non-domestic Premises”*

Subsequent to the endorsement of Technical Guidance (TG) for BS 5839-1:2017 together with revised Testing and Commissioning Checklist (TCC), the relevant Circular Letter was being prepared and would be issued shortly.

The implementation date of the new requirement would be stated in the relevant Circular Letter which was expected to be issued in June 2021.

3. *Automatic Operated Total Flooding Systems complying with NFPA Standard 2001*

Following the discussions in the 64th FSSAG Meeting, it stated that:

- (a) For test reports of fan door tests for A&A works, as no further view was received since last meeting, it might conclude that regardless of the scale of the A&A works, the test reports should be counter-signed by the RFSIC undertaking the A&A works with a view to satisfying the standard and the Code requirements.
- (b) For the arrangement of fan door test for enclosure in annual inspection by RFSIC, FSICA had reviewed the standard and proposed the adoption of declaration form signed by the system owner/occupier for verifying the maintenance of the related enclosure integrity which was deemed compliant with the standard.

The representative of FSICA explained a proposal which summarizing the requirements on fan door test for different certification processes in detail on the requirements on room integrity test for premises protected by agent fire extinguishing systems according to NFPA 2001:2018. Members had no comments on the proposals.

It was concluded that taking into account that the proposals of FSICA had already covered new installation, existing installation, annual inspection and alternation and addition work to enclosure in occupied premises and that members had no comment on the proposal, the meeting would proceed to adopt the direction of these proposals. Nevertheless, the detail of the Declaration Form should be further discussed. Relevant contractor might also submit proposals for discussion. In this aspect, FSICA undertook to prepare some proposals for discussion in the next FSSAG meeting.

4. *Inspection, Maintenance, Modification and Repair of Fire Service Installations and Equipment with Moving Parts*

The introduction of AI checklist for sprinkler system was promulgated via FSD Circular Letter No. 8/2020 on 15.12.2020. Moreover, the Chinese version of the AI checklist for sprinkler system was also introduced via FSD Circular Letter No. 3/2021 on 7.4.2021. To allow more time for the trade to acquaint themselves with the new arrangement and practice, the AI checklist for sprinkler system would take effect on 1 June 2021.

Besides, the AI checklist for Water Supplies was being devised and under consultation.

Meanwhile, the AI checklist for FH/HR system and Supplies Tank was under review and comments from FSICA were being studied.

With a view to materializing the benefits derived from the FSD Connects, a corpus-based Guide for the trade practitioners and stakeholders was compiled. The Guide outlined the general points to note regarding the design, installation, acceptance and maintenance of FSIs at various stages, specified the DOs and DON'Ts for compliance with FSD's requirements, included useful checklists in the appendices and contained extracts from previous FSD Connects. The Guide had been uploaded onto FSD website and promulgated via Circular Letter No. 2/2021 on 24.2.2021.

5. *FSI Provisions for Car Parking Facilities with Automated Parking System (APS)*

Comment on the Information Paper from a department was still pending. Further development on the FSI provisions for Car Parking Facilities with APS would be reported in the next meeting.

6. *Demarcation and Extent of Fire Resisting Cables for FSI and interfacing with other Building Services Installations*

The cables requirements for FSI systems except VAC had been discussed and should follow the requirement stated in FSD Circular Letter No.2/2017. In addition, the requirements for cables used for all parts of the critical signal paths should refer to the recommendation given under Clause 26.2 of British Standard 5839: Part 1:2002+A2:2008 and FSD Circular Letter No.1/2009.

For the cable requirements for VAC control, a diagram had been proposed by FSICA on various control methods as attached (Appendix I). Member's agreement was sought on the schematic diagram.

Since members did not have comments on the diagram, it was confirmed that the schematic diagram (Appendix I) was agreed by the meeting.

7. *Spacing of Smoke Detectors (Actuation Devices) and Cross Zone Arrangement for Gas Flooding System*

As mentioned in the last meeting, the smoke detectors should, as far as practicable, be installed according to the siting requirements in British Standard 5839, Part 1 in each detection space. In addition, proper cross zone arrangement was also required. In this

regard, FSICA had provided an updated diagram for members' discussion and agreement in the meeting.

Members shared their views on the issue and discussed the scenarios. It was summarized that the proposed scenarios could not cover all designs. To ensure maximum protection provided by the detectors/system, members were reminded to follow the standard and requirements in BS 5839. It was also reminded members that in each area, such as inside ceiling void, under false ceiling or inside floor void, both zone 1 and zone 2 should be provided to cover the whole area.

Attention was drawn to clause 4.3.1.1 of NFPA 2001:2018 relating to the requirements of installation of smoke detection system for actuation of clean agent fire extinguishing systems, it specified that detection and actuation systems should be installed in accordance with NFPA 72-National Fire Alarm and Signaling Code. As BS 5839-1 was the current standard adopted locally instead of NPFA 72, the design and installations of smoke detection system for actuation of clean agent fire extinguishing system should be in line with the relevant spacing requirements of full coverage instead of 250m² per smoke detector mentioned in section 5.27 of the current FSI Code and clause 1.10 of Part IV of FSD Circular Letter No. 4/96.

8. ***FSICA 's views and clarifications on PRV By-pass provisions as per FSD Circular Letter 9/2020 (FSICA)***

Representative of FSICA briefed the meeting on the issue.

It was reaffirmed that the FSD Circular Letter No. 9/2020 served as a reminder of the requirement that fire hydrant/ hose reel (FH/HR) systems, including pressure reducing valves (PRVs) fitted to the systems, shown on the record drawings of fire service installations and equipment (FSIs) submitted to the Director of Fire Services should be maintained in good order and condition at all time.

- (a) Where PRVs were installed, a bypass arrangement might be incorporated to enable isolation of any defective PRVs for necessary repair or replacement. **Under no circumstances** should the bypass under such arrangement be used as a permanent means of water supply for the FH/HR systems.
- (b) During annual inspection, RFSICs should pay attention to the piping and components of the FH/HR systems, as well as the valve positions of the PRVs. Besides, the moving parts of the PRVs and the control valves, particularly

those having been installed for a long time, should be inspected, cleaned, tested, recalibrated and lubricated where appropriate.

In response to the RFSIC's reviews & clarification of PRVs and bypass, FSD supplemented that for PRVs installed in FH/HR system, a bypass arrangement should be incorporated to enable isolation of any defective PRV for necessary repair or replacement. The PRV should not be considered as a bypass. Under no circumstances should the bypass be used as a permanent means of water supply for the FH/HR systems.

For PRVs installed in Sprinkler system, the requirements had been clearly described in Technical Guidance – Application of LPC rules for automatic sprinkler system installation 2015 incorporating BS EN 12845.

9. *Promotion of Wider Use of Standalone Fire Detectors (FSD)*

The meeting was informed that with a view to enhancing the fire safety in buildings, FSD aimed to promote a wider use of stand-alone fire detectors. Such device was a self-contained battery-powered device that incorporated a fire detector and an alarm. To ensure the quality control of such devices available in the market, they were required to meet international/national standard, such as BS EN 14604 “Smoke Alarm Devices”, UL 217 “Smoke Alarms”, or GB 20517 “独立式感烟火灾探测报警器”, etc. Legislative amendments would be required in order to cope with the measure.

FSD would also publish a set of guidelines and videos advising the public on how to select and purchase the appropriate stand-alone fire detectors available in the markets which met certain established international/national fire safety standards. Such standards were generally adopted in various countries that holistically regulate the standard of stand-alone fire detectors, including their construction, components, performance, manufacturing and production, marking, etc. Compliance of these standards provided a benchmark to ensure the reliability of stand-alone fire detectors. In addition, the guidelines would provide proper procedures of installation and maintaining the efficiency of the detectors through their own checking.

Regarding the selection and purchase of appropriate stand-alone fire detectors, a brief presentation was given in the meeting on the subject with the help of samples.

10. *FSD CoP for Minimum Fire Services Installations and Equipment, 2012 –5.10 Exit Sign (Housing Department)*

Representative of Housing Department briefed the meeting on the issue.

In line with the requirement of power supply for Exit Sign as clearly described in FS Cop Clause 5.10, Exit Sign should be connected to Emergency Generator if the building was equipped with an emergency generator in order to provide the reliable emergency lighting to MOE in case of fire, regardless whether or not the Exit Sign had connected with battery.

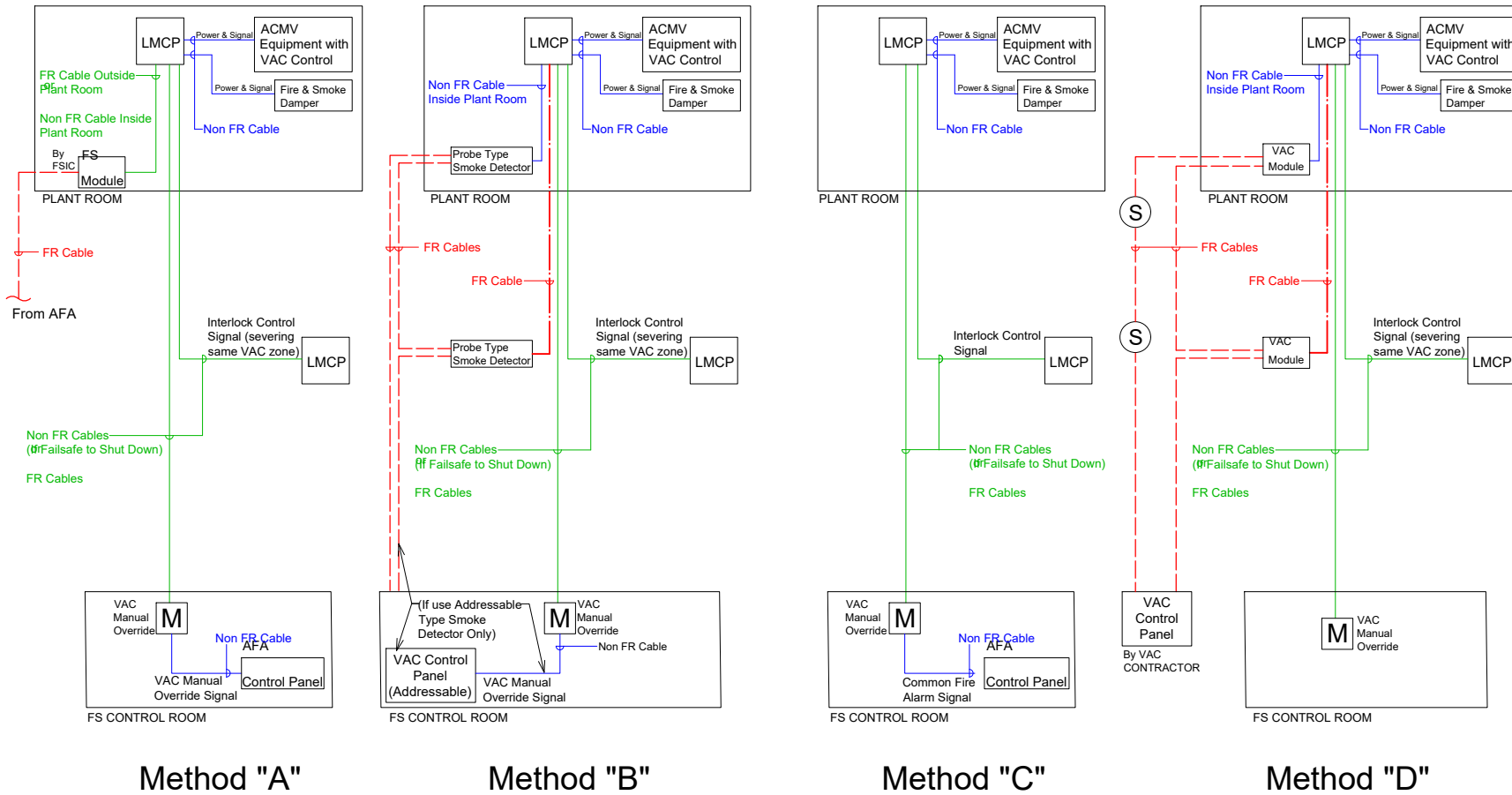
11. Requirement for Staircase Pressurization System with Notices/Indicating Lamps (FSD)

FSD provided the meeting with some background information on the subject issue.

Attention was drawn to the current practice of staircase pressurization system (SPS) installation, i.e. the Indication of SPS operation status was normally displayed on the supervisory panel located in F.S. control room. To provide first-hand SPS operation information of staircases to the frontline firefighter at earliest, additional notice(s) with indicating lamp(s) showing the system operation status repeating from the system control panel were proposed to be provided at both the final exits of pressurized staircase(s) and their roof exit(s).

Detailed discussion was made on the issue. It was summarized that members had shown in-principle support for the proposal from operational point of view. Nevertheless, some technicalities needed to be resolved prior to implementing the proposal through the issue of relevant FSD Circular Letter. FSD would consider members' comments raised in the meeting carefully. Members were welcomed to provide further comments after the meeting for consideration of FSD. The issue would be discussed again in the next FSSAG meeting.

Appendix I (Item 6)



Legends:

- Smoke Detector (For Automatic Actuating Device - AAD)
- VAC Manual Override
- Local Motor Control Panel
- Ventilation Air Conditioning Module
- Fire Damper & Smoke Damper
- Probe Type Smoke Detector (Install Inside Air Duct/ Air Side Equipment)
- Ventilation Air Conditioning Control Panel
- Ventilation Air Conditioning Control Panel (Addressable)
- Air Conditioning and Mechanical Ventilation Equipment with Ventilation Air Conditioning Control
- Non FR Cable Only
- FR Cable Only
- FR Cables Connecting to LMCP
- Cables Type Depend on ACMV Mechanism

Cable Requirement for VAC Control Connection

Notes:

1. Failsafe to Shut Down - Applying to equipment that is required to be shut down and avoid further operation when failure condition detected (e.g. common fire).
2. FSIC - Fire Services Installation Contractor
3. Detail description for tripping method please refer to FSI COP section 5.27