

## **Fire Safety Standard Advisory Group (FSSAG)**

### **Matters Discussed in the 47<sup>th</sup> FSSAG Meeting held on 31 March 2016**

#### **1. Review of PPA 104 (Issued under cover of FSD Circular Letter No. 1/2006)**

The revised draft PPA/104 and PPA/104(A) (5<sup>th</sup> Revision) were passed to members of the FSSAG for comment on 18 February 2016. In regard to relaxing the upper operating voltage limit of the central battery DC supply system for emergency lighting from 120 volts to 220 volts, no further request had been received from members of the FSSAG. In the circumstances, the original operating voltage limit of 120 volts was confirmed to be retained.

#### **2. Review on fire resisting cable requirements for fire service installations**

It was noted that two cable standards adopted in the draft FSD Circular Letter for the minimum fire resisting cable requirements for fire service installations, i.e. BS EN 50200:2006 and BS 7846:2009 would soon be superseded by their 2015 versions in September 2016 and December 2016 respectively. Therefore, a Sub-working Group (SWG) meeting would be arranged to review these two updated standards and amend the draft FSD Circular Letter accordingly.

#### **3. Enhancement on Application procedure for Approval/Acceptance of Fire Service Installations and Equipment (FSI) and other Products**

The enhancement programme was in Phase 5 (Final stage). The revised Fire Protection Notice No.15 would be launched in due course, and the enhancement would be announced formally through Circular Letter.

#### **4. Review of the Requirements for Emergency Lighting**

The 2<sup>nd</sup> SWG meeting was held on 11.9.2015 while the 3<sup>rd</sup> meeting was scheduled for 27.4.2016. The meeting minutes of the 2<sup>nd</sup> SWG meeting were issued to SWG members on 16.3.2016.

## 5. Review of Clean Fire Extinguishing Agents including Novec 1230

After review of the existing FSD Circular Letters (CL) regarding clean agent fire extinguishing systems, the findings and suggested actions were summarized as follows:

(a)	Pages VIII.5 to VIII.7 and Appendix E of Part VIII of FSD CL No. 4/96	Pages VIII.5 to VIII.7 were superseded by FSD CL No. 12/97 and FSD CL No. 1/2011 while Appendix E was added by FSD CL No. 12/97. All contents will be updated in the proposed CL.
(b)	FSD CL No. 9/97 “Fixed Sprayer Units (NAFS-III)”	This CL was superseded by FSD CL No. 1/2011
(c)	FSD CL No. 12/97 “Clean Agent Fire Extinguishing System”	This CL updated the pages VIII.5 to VIII.7 of Part VIII of FSD CL No. 4/96 and added the Appendix E to this Part. proposed CL will supersede this CL completely.
(d)	FSD CL No. 3/2009 “Arrangement upon the Import Banning of Fire Extinguishers Containing Scheduled Substances”	This CL announced the arrangements for the sale, supply and approval of fire extinguishers containing ozone depletion substances. The delisting exercise was implemented by issuing FSD CL No. 1/2011. It is suggested that this CL should be maintained to record the whole story of FSD addressing the stringent control on ozone depletion substances used for fire extinguishers.
(e)	FSD CL No. 1/2011 “Delisting of Fire Extinguishers Containing Scheduled Substances from the Government Gazette”	This CL announced the delisting arrangement for fire extinguishers containing scheduled substances from the government gazette, superseded FSD CL No. 9/97 and replaced pages VIII.5 to VIII.7 of Part VIII of FSD CL No. 4/96. The attached pages VIII.5 to VIII.7 will be superseded by the proposed CL.

Upon completion of internal technical vetting of the draft FSD CL for Clean Agent

Fire Extinguishing Systems, it would be submitted to FSSAG's members for final comment. The purpose of the proposed FSD CL was to update pages VIII.5 to VIII.7 of Part VIII of FSD CL No. 4/96 and Appendices A to E to inform the trades of the clear requirements for clean agent fire extinguishing systems used for new building projects.

**6. Implementation of BS 5839: 2013 “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”**

Members of the SWG were still reviewing the requirements of BS 5839-1: 2013 and FSD Circular Letter No. 1/2009 adopting BS 5839-1: 2002 + A2: 2008 with modifications.

**7. Provision of securing devices to prevent the Gate Valve of FS tank from being tampered or inadvertently turned off**

The draft FSD Circular Letter had been submitted to the management of FSD for deliberation.

**8. Emergency Power supply for Lift Homing**

As homing of non-fireman's lifts was considered as a non-FSI load, a separate application for connection such load to emergency generator shall be submitted for FSD's prior approval according to the Code of Practice for Minimum Fire Service Installations and Equipment. The meeting discussed the issue and agreed that the most effective and efficient way to address the issue was to have the design of the project to be approved by FSD at the early stage so that no major change would take place at the later part of the project.

**9. Provision of Sprinkler Inlet**

As the flow requirements for sprinkler inlets were confirmed in the previous meeting and no further discussion was required for the issue, the meeting agreed to delete the item in the next meeting.

**10. Automatic Actuation Devices for Lifts Not Discharging to Protected Means of Escape (Heading in 46<sup>th</sup> FSSAG Meeting : FSI Requirements for Buildings**

**with Lifts Serving Direct to Occupancy)**

An information paper “Automatic Actuation Devices (AAD) for Lifts Not Discharging to Protected Means of Escape” had been circulated to members of the FSD/AP Liaison Meeting, FSICA Liaison Meeting and FSSAG Meeting on 26.1.2016. A few technical or textual comments were received from the members. Further advice would be sought from the EMSD. Comments received from parties concerned would be incorporated into the revised draft and circulate to members for information.

**11. Fire Alarm Signal and Sounding for AFA System and Sprinkler System for Residential Flats with Open Kitchen**

The arrangement of fire alarm signals for domestic buildings with open kitchen units was as the following table:

Scenario	Alarm of activated sounder-base detector in open kitchen unit	Building fire alarm	CFATS connection
1. Actuation of sounder base detectors in open kitchen units	Yes	No	No
2. Actuation of detectors in common areas	Yes	Yes	Yes
3. Actuation of sprinklers in open kitchen units or common areas	Yes	Yes	Yes

Nevertheless, reference should be made to the endorsed fire safety management plans for the detailed arrangement. In case of domestic building with open kitchen using fire engineering design, details of FSI arrangement should adhere to the fire engineering report and RFSICs were strongly advised to make reference to the approved Fire Safety Management Plan when carrying out FSI maintenance.

For open kitchen design approved after the CoP for Fire Safety in Buildings 2011, relevant FSI provisions should observe Clause C13.4(a) to (c). Provided that the

sound level of the sounder base detector inside the domestic unit with open kitchen had met the performance requirement in the FSI CoP, actuation of other alarm sounder was not required. Apart from the sounder base detector inside the domestic unit with open kitchen, other sources of fire alarm signal (including detectors outside the domestic unit and sprinkler at the open kitchens) would actuate the building's general fire alarm in accordance with the relevant alarm zoning schedule and send fire signal to the FSCC. RFSICs were strongly advised to make reference to the approved Fire Safety Management Plan when carrying out FSI maintenance.

## **12. Sprinkler Installation inside Residential Flats with Open Kitchen**

According to List Item 2.2 of the List Two as appended in FSD Circular Letter (CL) No. 3/2006, the original clause 5.4 of BS EN 12845: 2003 had been replaced by the following texts:

“The concealed space at roof (ceiling) and floor regardless of height shall be sprinkler protected. The protection in the concealed space shall be same as the main hazard class. Should the space be physically not adequate and not feasible for sprinkler installation, this should state clearly in the Fire Service Notes of general building plans submission for FSD's acceptance. However, the concealed space shall not contain any combustible materials.” Therefore, it was clearly stated that FSD's prior acceptance on non-provision of sprinklers inside concealed spaces and a normalized blanket approval was not recommended.

## **13. Clarification on Application of UL or FM Listed Quick Response Sprinkler Head**

The issue was discussed in detail. It was concluded that all fast response type sprinkler heads should be listed to LPCB with RTI not greater than  $50 \text{ (ms)}^{1/2}$ . Regarding the application of UL or FM listed quick response sprinkler heads, FSICA would explore if there were information to prove their equivalent performance.

## **14. Ceiling Sprinkler Protection at High Ceiling Clearance Facilities in Buildings**

Members were advised to note the following:

- (a) Sprinkler provision could not be waived due to high ceiling.
- (b) Sprinkler installation in accordance with prevailing sprinkler rule was deemed to have complied with the prescriptive requirement.
- (c) Due to deviation of CoP for Fire Safety in Building 2011, for atrium exceeding 15m in height (or more than 3 floors interconnected) performance-based fire engineering solution might involve alternative design of sprinkler system.

According to the prescriptive requirements, there was no limitation to the maximum mounting height of sprinklers except for the applications for high hazard storage with ceiling or roof protection only (Please refer to Note 1 in Para. 7.2.2). However, actuation time of sprinklers which was designed by fire safety engineering approach should be duly considered.

## **15. Automatic Sprinkler System Design for Deep Basement**

Since this agenda item was somewhat complicated and contained many technical issues, the meeting agreed that a separate meeting should be arranged with the interest parties and FSD to further discuss the details. The discussion results would be reported in the next FSSAG meeting.

## **16. BS EN 12845 (2015 version)**

As LPC Rules for Automatic Sprinkler Installations incorporating BS EN 12845 (with suitable modification pertinent to Hong Kong), i.e. BS EN 12845: 2003 and all updated Technical Bulletins in February 2004 with local modifications as stipulated in FSD CL Nos. 3/2006 and 3/2012, had been adopted for many years without great issues raised from the trade, the meeting agreed that FSICA and other FSSAG members should study the BS EN 12845: 2015 first and highlight the specific areas that FSSAG would be required to consider the necessity for review by means of setting up a Sub-working Group.