

Written Submission by the Fire Division of the Hong Kong Institution of Engineers

The Fire Division of the Hong Kong Institution of Engineers supports The Fire Services (Amendment) Bill 2016 (“the Bill”) and suggests it should be introduced as soon as possible. However, as building fire safety will inadvertently affect the life risk of residents, visitors and emergency rescuers and damage of property in case of fire, we consider that the registration must be handled with care. Only the competent people who possess the required knowledge, training and experience should be qualified as Registered Fire Engineer (RFE).

2. The Division also supports the use of the name “Registered Fire Engineers”. When examining the contents of fire engineering degree programs in Hong Kong and around the world, fire science, fire safety management, human psychology and physiology, active and passive fire protection systems are well covered in details. Yet professional fire engineers have to be assessed especially in their understanding of local fire regulations before they should be registered. “Registered Fire Engineers” categorically speaks out their role, duties and specialization. Parenthetically, the person responsible for compliance FSI checks in FSD is known as Engineer (FSI) and all its staff have an engineering background.

3. The term of Registered Fire Engineer (RFE) is considered reasonable and appropriate. This term is in line with the common principle adopted by Buildings Department for Registered Structural Engineer (RSE) and Registered Geotechnical Engineer (RGE) for managing respective structural and geotechnical engineering issues, so to spell out what are the most important domains and who will be best professionals to deal with these safety issues. By the same token, Registered Professional Engineers (RPE)ⁱ is also considered as a reasonable benchmark for the minimum qualification for being included in the list of RFE after an appropriate vetting mechanism. On the other hands, there are many possible routes for capable and technically competent professionals under different disciplines or names to be qualified as

RPEs. Hence they do not lose their opportunity to be included in the list of RFE.

4. To carry out a fire risk assessment, one has to be able to identify the fire hazards, understand the properties of combustibles, as well as the conditions that these combustibles will burn or explode. He/she should ascertain the people at risk including the elderly or the disabled, and their behavior and capability to escape in case of fire. To reduce the fire risk, one has to fully understand the functions and limitation of activeⁱⁱ and passive fire protectionⁱⁱⁱ and suggest ways to reduce it, provide an emergency plan and training, and where necessary, review and update the fire risk as required.

5. When looking at the elements of fire risk assessment, the Authority should only register the type of professionals who have received this specialized education, training and acquired such experience. In Hong Kong, fire risk assessments are complicated. In performing a risk assessment for licensed premises, both the on-site and off-site risks may also need to be considered. The compatibility of adjoining occupancies and their associated risks should also be taken into consideration. We understand that currently, only FSD is performing a risk assessment for licensed premises, imposing fire safety requirements and performing compliance checks. If these duties were delegated to the third parties, such people should possess similar knowledge and expertise so that fire safety standards for these licensed premises will not be lowered.

6. Many tragedies were originated from a lack of a proper fire risk assessment. On 21 and 23 June 2016, two fire fighters were died while battling a No. 4 alarm fire in Amoycan Industrial Centre, Ngau Tau Kok, Kowloon. The business operator of the mini-stores appeared to have ignored the fire safety management (outsized compartment, no/blocked window openings, insufficient width of corridors and number of exits) without installed appropriate FSI to control the fire (no sprinkler system) and not providing an emergency plan in case of emergency. A proper fire risk

assessment by a competent fire engineer could have avoided the disaster.

7. Fire engineers in Hong Kong may have come from international fire consulting firms. When performing risk assessment, formulating fire safety requirement or doing compliance checks, they may bring in international perspectives which will interact with the local authority to further improve fire safety in buildings.

8. We understand that there are talented fire engineers taking up jobs in Macau, China or other regions in the world. Similar third-party certification systems are in place in many other parts of the world, and Hong Kong seems to be lacking behind in this aspect.

9. Time means money for business. If defects in the FSI compliance check are found, the re-inspection by FSD has to follow the queue. The delay in business operation may be more than two weeks. If third party certification by RFE is allowed and the rectification is done, the RFE can perform the certification and thus the earlier issuance of a license will certainly benefit the licensee.

10. We support the Authority taking an incremental approach. But in the long run, we wish RFE could be deployed to perform an annual inspection of FSI and amended/new building plans processing. If the time table and road map could be provided, it would certainly facilitate more youngsters to join the RFE business.

11. The Division is also eager in participating in any advisory committees, panels or boards that the Authority establishes for the Bill.

The Hong Kong Institution of Engineers
Fire Division
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ⁱ Registered Professional Engineer registered with Engineers Registration Board of HKIE

ⁱⁱ Active Fire Protection refers to fire service installations and equipment (FSI), such as sprinkler, fire/smoke detector, manual fire alarm, fire extinguisher, fire hydrant & hose reel. The duty of the fire protection system is to extinguish and/or control the fire. Even the same installation has many types, e.g., sprinkler heads have different activating temperature and there are various types of smoke detectors responsive to flaming fires or smoldering fires. The wrong/ without installation of FSI would result in an undesirable situation.

ⁱⁱⁱ Passive Fire Protection attempts to contain or slow the spread of fire/smoke from one room to the next, through the use of fire-resistant rated walls/floors, fire dampers, fire shutters, floors and doors.