

By post and by email at [rfs@hkfsd.gov.hk](mailto:rfs@hkfsd.gov.hk)

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Mr LEUNG Wai Lok  
Assistant Director (Fire Safety)  
Fire Safety Command Headquarters  
7/F North Wing  
Fire Services Headquarters Building  
1 Hong Chong Road  
Tsim Sha Tsui East, Kowloon

Dear Mr LEUNG

**Views from The Hong Kong Institution of Engineers  
regarding the draft Code of Practice for Registered Fire Engineers  
under the Proposed Registered Fire Engineer Scheme**

On behalf of the Institution, I am pleased to present to you our views and suggestions as set out in the enclosure for your consideration on the captioned subject.

The Institution welcomes the opportunity to work with the Government and offer our expertise and experience on the area of concern if and when it is needed.

Thank you.

Yours sincerely



Ir Peter SI  
Director

AS/PS/SS

## Enclosure

### **Views from The Hong Kong Institution of Engineers on the draft Code of Practice for Registered Fire Engineers under the Proposed Registered Fire Engineer Scheme**

The Hong Kong Institution of Engineers (HKIE) is pleased to acknowledge the proposal of Fire Services Department (FSD) to introduce a third-party fire safety certification scheme, known as the Registered Fire Engineer (RFE) Scheme, to enable RFEs to deliver fire risk assessments and certification services, which are currently exclusively provided by the FSD.

2. While we recognise the potential advantages of the RFE Scheme in enhancing business operations and optimising the use of professional and qualified human resources within the industry, we would like to present the following perspectives and suggestions from the standpoint of professional engineers for the FSD's consideration.

3. Regarding the eligibility criteria of an RFE, it is stated in LC Paper No. CB(2)1761/16-17(03) that one of the possible routes through which an applicant may register as an RFE is as a Registered Professional Engineer (RPE) under Cap. 409 in a discipline relevant to fire safety risk assessment or compliance checks of fire service installations or ventilating systems.

4. In this connection, we are obliged to draw attention to FSD's specification, in its Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment (September 2022 version), that Mechanical Engineering is one of the three engineering disciplines to which an RPE responsible for the designs and endorsements involved in the pressurisation of staircase, smoke extraction system, water mist system etc. may belong. In addition, under Merchant Shipping (Local Vessels) Ordinance Cap. 548 and Merchant Shipping (Safety) Ordinance, RPEs in the Marine and Naval Architecture (MNA) discipline are qualified and responsible for the inspections, assessments, and certifications of fire service installations on marine vessels. It is also noted that, in such operations, standards equivalent to those specified in the aforementioned Codes of Practice are complied with.

5. In view, therefore, of the established fact that mechanical engineers, marine engineers, and naval architects constitute a substantial portion of practitioners in Fire Service Installation and Ventilation System, the HKIE recommends that RPEs in the discipline of Mechanical Engineering and MNA, given the relevant working experience, be eligible for registration as RFE(FSI) and RFE(VS).

6. On the specific formulations of the draft Code of Practice, the HKIE would like to offer comments as follows:

#### ***Part 3: Duties of Registered Fire Engineers***

Paragraphs	3.2 and 3.3
Pages	19 – 21
Proposed details	<p>It is stated in the proposed scheme that part of the Registered Fire Engineer (Risk Assessment)’s (“RFE(RA)”) duties is</p> <p><i>“(a) to conduct inspection personally or by <u>another person who is under the direct and proper supervision of the RFE(RA)</u> at the scheduled premises to which the specified application relates;</i></p> <p><i>(b) to carry out a fire risk assessment personally or by <u>another person who is under the direct and proper supervision of the RFE(RA)</u> at the scheduled premises to which the specified application relates ...”</i></p> <p>It is also stated that part of the Registered Fire Engineer (Fire Service Installation)’s (“RFE(FSI)”) duties is</p> <p><i>“(a) to conduct personally or by <u>another person who is under the direct and proper supervision of the RFE(FSI)</u> at the scheduled premises to which the specified application relates—</i></p> <p style="padding-left: 40px;"><i>(i) an inspection of the scheduled premises to verify if the premises have complied with the FSR (other than those in relation to the VS) issued by the D of FS, or by an RFE(RA); and</i></p> <p style="padding-left: 40px;"><i>(ii) a testing of any FSI (other than those in relation to the VS) installed in the scheduled premises ...”</i></p>
Comments	<p>The HKIE recommends that the requirement for “another person who is under the direct and proper supervision of the RFE(RA)/RFE(FSI)” should ideally be fulfilled by a qualified individual, preferably a member of the HKIE in the Building Services, Fire, Mechanical, MNA, or Structural Disciplines.</p> <p>Similar comments and recommendations should be extended to other relevant paragraphs, as deemed appropriate.</p> <p>Separately, it is necessary to review and revise the wording of the clause to clearly specify whether the “another person” needs to be supervised by the RFE(RA) in person.</p>

Paragraphs	3.2(d) & €
Page	19
Proposed details	<p>It is the proposed duties of RFE(RA)</p> <p><i>(d) to submit the duly completed Fire Risk Assessment Report to D of FS for endorsement before issuing FSR;</i></p> <p><i>€ subject to subsection (d), to issue FSR for the scheduled premises to the Applicant.</i></p>
Comments	The proposed duties have created unclear responsibilities between the RFE(RA) and the Applicant.

The primary deliverable of the RFE(RA) towards the Applicant consists of a comprehensive “Fire Risk Assessment Report” and a set of “Fire Safety Requirements (FSR).” Once endorsed by the FSD, these requirements hold legal binding upon the Applicant.

At this stage, the role of the RFE(RA) is more aligned with para-enforcement, acting on behalf of the FSD, rather than solely serving as a fire safety advisor to the Applicant. It is important to note that the Code of Practice (CoP) does not provide provisions for the RFE(RA) to actively assist the Applicant in complying with the FSR. The RFE(RA) is not empowered or obligated to signify to any party whether the FSR requirements have been met or not. Additionally, neither the Applicant nor the Authorities could hold the RFE(RA) responsible for ensuring compliance, regardless of the stage of the licensing application.

Even if the RFE(RA) is registered as RFE(FSI) and RFE(VS), and eventually certifies those aspects of the application, the “risk assessment” component remains somewhat detached. In contrast, the CoP dedicates an entire section, Part 5, to “Risk Assessment,” making the absence of a final declaration of compliance in this regard seem incongruous.

To address these concerns, it is recommended that the duties of the RFE(RA) should encompass signifying compliance with all identified risks. If a certificate is deemed inappropriate, an alternative approach could involve renaming the initial Fire Risk Assessment Report as a “Fire Risk Assessment Checklist,” which essentially captures its purpose. The final confirmation of compliance can then be documented in a separate report, such as a Fire Risk Assessment Report or Compliance Certificate, as applicable and appropriate to the situation.

Separately, RFE(RA) encounters situations where access to various areas of the scheduled premises or their surroundings, such as plant rooms, electrical rooms, dangerous goods stores, staircases, and roof areas, is often restricted or locked. It is important to note that the RFE’s registration card does not grant them the delegated power of entry. In cases where entry cannot be obtained and certain parts of the report remain incomplete, the RFE(RA) may be held accountable for missing information in the Fire Risk Assessment Report.

To address this issue, it is recommended that a proper justification for any missing information in the Fire Risk Assessment Report be provided, enabling subsequent actions to be taken before final approval.

Paragraphs	3.2(f)
Pages	19
Proposed details	<p>It is stated in the proposed scheme that part of the Registered Fire Engineer (Risk Assessment)’s (“RFE(RA)”) duties is</p> <p><i>“(a) to keep a copy of every FSR, fire risk assessment report and relevant records , such as site photos of the fire safety features for 3 years and produce the records for FSD officer’s inspection on request within 3 working days after the date of the receipt of the request ... ”</i></p>
Comments	<p>To ease the administration and application process for both RFE and FSD, it is recommended that Government Department(s), rather than the RFE(RA), retain copies of every Fire Safety Report, fire risk assessment report, and associated records for a period of 3 years, enabling future reference by other RFEs.</p> <p>The clause should provide clarification regarding the starting point of the “3 years” period. It should specify whether this period begins after the appointment of the RFE, the submission of the FSR for FSD endorsement, or from the FSD endorsement on the FSR.</p> <p>Furthermore, we suggest extending the timeframe for producing these records for inspection by FSD officers from 3 working days to 5 working days after receiving the request. This adjustment will allow for more efficient handling of documentation and facilitate smoother interactions between Government Departments, RFEs and the FSD.</p> <p>Similar comments and recommendations should be extended to other relevant paragraphs, as deemed appropriate.</p>

Paragraph	3.3
Comments	<p>According to the proposed FS(RFE) Regulations, individuals can register as one or more of the three classes of RFE: RFE(RA), RFE(FSI), or RFE(VS). It can be presumed that the registration qualifications and requirements differ for each class. However, allowing an RFE(FSI) to inspect and verify the work of an RFE(RA), especially in cases involving alternative proposals, would create inconsistencies. Please refer to the observations and recommendations made for proposed details in paragraphs 3.2(d) &amp; (e) for further context.</p> <p>Under the current provisions, the RFE(FSI) is only legally empowered to inspect and test installations and equipment. If unsatisfactory results are found, they can only rely on the registered fire service contractor responsible for the work to rectify the issues. However,</p>

	<p>the CoP does not include any provisions that require these contractors to cooperate or comply with such requests.</p> <p>There may be instances where the RFE(FSI) identifies necessary improvements or design/work requirements in the systems but is not given any authority by the CoP to take any action, potentially leading to further discord and unresolved issues.</p> <p>It is therefore recommended to add an additional clause to the procedural requirements for the RFE(FSI), requiring the RFE(FSI) to notify or request the responsible party/parties to undertake rectification or improvement work within a reasonable timeframe. A copy of this communication should also be provided to relevant authorities for their awareness and oversight.</p> <p>Furthermore, there should be provisions in place to handle disputes that may arise during this process. Parties involved should have the option to appeal to an entity designated for final decision-making or settlement, ensuring a fair and impartial resolution of conflicts.</p>
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Paragraph	3.4
Page	22 – 23
Proposed details	<p>It is stated in the proposed scheme that part of the Registered Fire Engineer (Ventilation System)’s (“RFE(VS)”) duties is</p> <p><i>“(a) to conduct personally or by <u>another person who is under the direct and proper supervision of the RFE(VS)</u> at the scheduled premises to which the specified application relates—</i></p> <p style="padding-left: 40px;"><i>(i) an inspection of the scheduled premises to verify if the premises have complied with the FSR in relation to the ventilating system issued by the D of FS, or by an RFE(RA); and</i></p> <p style="padding-left: 40px;"><i>(ii) a testing of the fire safety features with respect to the ventilating system ...”</i></p>
Comments	<p>The HKIE proposes that the individual fulfilling the role of “another person who is under the direct and proper supervision of the RFE(VS)” should possess qualifications in the field of ventilating systems, preferably a member of the HKIE in the Building Services, Fire, Mechanical, MNA, or Structural Disciplines.</p> <p>Similar comments and recommendations should be extended to other relevant paragraphs, as deemed appropriate.</p>
Proposed	Under <i>Procedural Requirements</i> ,

details	“(c) Notification to the D of FS of the material change in circumstances of scheduled premises that may affect the fire safety of the scheduled premises concerned or the implementation of the FSE in the specific form (Annex C of Appendix II) within 3 working days ...”
Comments	This differs from the clause (e) in the duties section, where it was mentioned that the notification should be made within 5 instead of 3 workings days.

**Part 4: Submission of Alternative Proposals/FSAR**

Paragraph	4.3
Proposed details	<p><i>Should the Applicants of the scheduled premises have insurmountable difficulties in complying with the prescribed FSR, the Applicants can submit alternative proposals or adopt the fire engineering approach with the submission of FSAR for FSD’s consideration.</i></p> <p><i>Problems due to deviation from the prescribed FSR shall be analysed and the corresponding alternative proposals or FSAR shall be technically justified and validated on a case-by-case basis according to the types and characteristics of the relevant scheduled premises.</i></p> <p><i>Under the RFES, alternative proposals or FSAR might be compiled and subsequently vetted by the appointed RFE(RA). Such alternative proposals or FSAR shall be submitted by RFE(RA) together with the recommended FSR for the scheduled premises under application to the FSD for endorsement. The D of FS may endorse, on a case-by-case basis, the recommended FSR provided that it shall not provide a level of safety inferior to that provided by the prescribed FSR.</i></p>
Comments	<p>From a fire engineering perspective, the role and responsibility of the (RFE)RA regarding alternative proposals are of utmost importance and should not be underestimated. However, the current arrangement for the submission, vetting, and compliance of alternative approaches, as outlined in paragraph 4.3, appears to lack validity.</p> <p>To address this issue, it is recommended that the wording in paragraph 4.3, which pertains to the adoption of fire engineering approaches, be thoroughly reviewed and incorporated or referenced in relevant sections of the CoP. Specifically, these revisions should be included or referred to in Part 3 (Duties of FRE RA), Part 4 (Application), and Part 5 (Fire Risk Assessment and Fire Safety Requirements) of the CoP.</p>

	<p>Furthermore, even though the immediate need for alternative proposals may not be relevant in the current stage of the RFE exercise, it is crucial to make provisions for this professional functionality now. By doing so, we can avoid extensive amendments to the CoP and save time in the future when the need arises for alternative approaches, ensuring that the CoP remains adaptable and responsive to emerging fire engineering requirements without causing significant disruptions or delays.</p> <p>In addition, it is important to clarify whether the FSAR with fire engineering approach can be prepared by the RFE(RA), who is also the one to vet the FSAR, or it needs to be prepared by another person.</p>
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***Part 5: Fire Risk Assessment and Fire Safety Requirements***

Paragraphs	5.1.1 – 5.1.15
Pages	26 – 37
Comments	<p>It is recommended that relevant Government Department(s) provide the necessary information related to risk assessment, such as building design, gross floor area, occupancies, number of storeys, dangerous goods stores, building height, etc, essential for RFE(RA) to perform such risk assessment duties. It is currently challenging for RFEs to obtain specific details such as sub-paragraphs 5.1.1.1 – 5.1.1.5, 5.1.2.1 – 5.1.2.5, 5.1.5, and other relevant sub-paragraphs. In particular, access to information regarding the Fire Risk Assessment Report in Appendix V is crucial.</p> <p>By ensuring the availability of this information, RFEs will be better equipped to carry out comprehensive risk assessments effectively.</p> <p>Specific to item 5.1.3 (Co-existence and Compatibility of Occupancy”, it is important that the clauses be reviewed and clarified whether the RFE(RA) for the premise is required to review and fulfil those requirements in case when the whole building has special requirements, such as additional fire safety requirements due to FE approach. It should also state clearly whether the FER is required to be updated by the RFE(RA) and re-submitted to BD/FSD for approval.</p>

Paragraph	5.3
Page	39
Proposed amendment	<i>“...Under section 20(5)(c) of the proposed FS(RFE)R, FSD may endorse or refuse to endorse the proposed FSR. The reasons for</i>



	<p><i>refusing to endorse the proposed FSR will be provided in a Fire Risk Assessment Report. Once the endorsement was made by FSD, the endorsed FSR will be returned to RFE(RA).</i></p>
<p>Comments</p>	<p>It is recommended that the FSD establish a clear time frame for the endorsement or refusal of Fire Safety Reports. Providing a specific timeframe will enhance efficiency and facilitate better planning for all stakeholders involved.</p> <p>Additionally, we suggest that Government Department(s) consider keeping a copy of the endorsed FSR for future reference. This will contribute to maintaining accurate records and enable easy access to important documentation for reference purposes.</p>