

Minutes of the 19th Meeting of
the Lift and Escalator Safety Advisory Committee (LESAC)

Date : 5 May 2022 (Thursday)
Time : 2:30 p.m.
Venue : Room 7102, 7/F, EMSD Headquarters, 3 Kai Shing Street,
Kowloon Bay

Present:	Mr KO Chi-wai, Gary	Chairman
	Ms CHIU Chi-san, Angela	Member
	Ms CHAN Nga-yan	Member
	Ms CHAN Wing-yan	Member
	Mr HO Sau-chiu	Member
	Mr KUOK Hoi-sang	Member
	Mr KWOK Wing-yin	Member
	Mr LAI Ka-kui	Member
	Mr LEE Man-kwong	Member
	Mr LEE Ling-kit, Anka	Member
	Mr LEUNG Chun-pong, Maverick	Member
	Ms LEUNG Wai-chun, Karmen	Member
	Ms MAN Wing-po	Member
	Mr POON Kwok-ying, Raymond	Member
	Mr THONG Wang-fai, William	Member
	Mr TSE King-wa	Member
In attendance:	Mr WONG King-wai	Secretary/EMSD
	Mr CHOW Hau-keung, Vincent	EMSD
	Mr LAU Lik-kee	EMSD
	Mr LAM Ping-wai	EMSD
	Mr CHAN Chun-wai	EMSD
	Mr LI Kwan-chi, Simon	Mr LAU Chun-ming's representative
Absent with apologies:	Mr CHAN Wai-tung, Tony	Member

Action**1 Welcoming Members of the Lift and Escalator Safety Advisory Committee**

- 1.1 The Chairman welcomed attendees to the 19th meeting of the Lift and Escalator Safety Advisory Committee (the Advisory Committee).

2 Committee Members, Terms of Reference and Operation Arrangements of the Advisory Committee (Agenda Item 1)

- 2.1 The Chairman introduced members who were appointed from different sectors. The fifth term of the Advisory Committee comprised a total of 17 members who represented the lift and escalator trade, professional bodies, training institutions, the property and facility management sector, responsible persons (RPs) for lift and escalator, consumers, the general public, and government departments, etc.

- 2.2 The Chairman introduced the terms of reference of the Advisory Committee and explained its main operation arrangements. Members to the Advisory Committee were to be appointed for a term of not more than two years and might be reappointed upon expiry of the term. Members were to attend the meetings in their personal capacity, and the required quorum was eight non-official members. The Chairman was empowered to set the procedure and rules of the meeting. In addition, working groups might be set up by the Advisory Committee and conveners appointed for the working groups. The quorum for working group meetings was three non-official members.

- 2.3 The Chairman introduced the arrangements for information disclosure based on the operation of the Advisory Committee in the last term:

(i) The terms of reference, membership list, agenda and discussion items, and minutes of meeting of the Advisory Committee would be published on the website of the Electrical and Mechanical Services Department (EMSD);

(ii) Views expressed by members would be recorded anonymously;

(iii) Except for names and represented trades, other personal information of the members would not be disclosed; and

(iv) Closed-door meetings would be held to allow free expression of opinions on sensitive issues.

The Advisory Committee agreed to continue with the above arrangements for information disclosure.

3 Confirmation of Minutes of the Last Meeting (Agenda Item 2)

- 3.1 Members did not raise any amendment to the minutes of the 18th meeting. The Chairman declared the minutes of the 18th meeting confirmed.

4 Matters on Declaration of Interests (Agenda Item 3)

- 4.1 The Chairman invited the Secretary to explain the principles and mechanism for declaration of interests to members. The Advisory Committee confirmed to put in place the one-tier reporting system. If a member became aware of an actual or potential conflict of interests over a matter to be discussed, he/she should, as soon as practicable, make disclosure of his/her interests involved to the Chairman. The Chairman should decide whether the member might speak or vote on the matter, remain in attendance as an observer, or should temporarily withdraw from the meeting. If the Chairman had a conflict of interests over a matter to be discussed, the chairmanship might be temporarily taken over by another member during the course of discussion of that matter. As members usually came from different sectors, they were not required to declare their interests if a matter to be discussed only involved the overall interests of the sector. If a conflict of interests had been declared by a member, the Secretary could cease to distribute the relevant documents to him/her. If the member had already received a document for discussion, he/she must immediately inform the Secretary and return the document. All cases related to declaration of interests must be recorded in the minutes.

The Advisory Committee agreed to continue to adopt the declaration mechanism. All attendees remarked that they did not have any conflict of interests over the matters to be discussed at this meeting.

5 Regulatory Control over Lift and Escalator Safety (Agenda Item 4)

- 5.1 The Secretary briefed members on the background of the Lifts and Escalators Ordinance (LEO) as well as a series of measures introduced by the LEO to enhance regulatory control, including strengthening the registration regime of lift and escalator contractors, engineers and workers; increasing the maximum penalty for offences; extending the scope of application to persons who had management or control over lifts and escalators, and to lifts and escalators owned by the Government; and adopting eight regulatory measures to ensure lift and escalator safety.

6 Formation of Working Groups (Agenda Item 5)

- 6.1 The Advisory Committee agreed to form the following two working groups to enable more in-depth discussion among members on matters

of concern in relation to the lift and escalator trade and RPs respectively:
Working Group on Matters Relating to the Trade; and
Working Group on Matters Relating to Responsible Persons.

The Advisory Committee agreed that Mr HO Sau-chiu should be the convener of the Working Group on Matters Relating to the Trade, whereas Mr LEE Man-kwong, should be the convener of the Working Group on Matters Relating to Responsible Persons. Members could choose to join either working group.

7 Progress Report on Matters Relating to the Trade (Agenda Item 6)

As this was the first meeting of the new term of the Advisory Committee, the Working Group on Matters Relating to the Trade of the current term had yet to start the relevant work. Therefore, the Secretary, on behalf of the Working Group on Matters Relating to the Trade, reported on the work progress of the last term. The discussion on the progress report at the meeting was as follows:

EMSD 7.1 The Secretary reported that as at December 2021, the total numbers of registered lift/escalator workers and registered lift/escalator engineers (REs) under the LEO were 6 111 and 375 respectively. Besides, there were about 2 198 general workers in the trade to assist REs/workers in conducting lift/escalator works. After receiving relevant training and accumulating sufficient experience, these general workers could apply to become registered lift/escalator workers. The total number of lifts /escalators was about 81 000 (including about 71 000 lifts and 10 000 escalators). In general, the ratio of an engineering team (based on a team of two workers) to the number of lifts/escalators remained healthy at 1:18.6.

EMSD 7.2 In attracting new blood, the EMSD collaborated with the trade and the Vocational Training Council (VTC) to establish skill-based professional qualifications, with a view to providing a promotion pathway for registered workers and enhancing their professional standards. The EMSD, Lift and Escalator Contractors Association and VTC had formed a working group in 2019 to design the curriculum and subject content. The programme to be provided by the Technological and Higher Education Institute of Hong Kong would be pitched at level 5 under the Qualifications Framework, with about 400 hours of instruction in total. The programme had been accredited by the Hong Kong Council for Accreditation of Academic and Vocational Qualifications in February 2022 and the enrollment had closed. The first programme was expected to start in the third quarter of 2022.

In addition, some registered contractors were organising certificate programmes in mechanical/electrical engineering accredited at level 2 or

3 under the Qualifications Framework to provide tailor-made content and flexible learning environment, with a view to enhancing the skills and knowledge of the staff to meet the actual needs and working conditions of their companies and the trade. The EMSD would recognise these qualifications for registration as a registered worker.

- EMSD 7.3 The ultimate goal of the LEO was to raise the qualification requirements of REs to the registered professional engineer level¹. The EMSD was liaising with the Hong Kong Institution of Engineers (HKIE) to provide appropriate assistance for trade practitioners in obtaining the relevant professional qualifications. The EMSD would also encourage registered contractors to participate in and provide Graduate Scheme "A" Training and review the situation, so as to nurture new blood to be qualified as professional engineers. The HKIE had formed a working group to this end. In particular, the Mechanical Discipline and Control, Automation and Instrumentation Discipline of the HKIE had respectively issued in January 2022 their guidance notes on professional assessment, which were specifically prepared for trade practitioners. Online briefing sessions were also held by the two disciplines respectively to introduce the guidance notes and the professional assessment process. Both sessions were attended by more than 300 participants.
- EMSD 7.4 The EMSD had completed the review on the regulatory regime for REs and launched a number of initiatives to strengthen the regulatory regime, with a view to enhancing the performance and professional standards of REs. Such initiatives included adding new declaration items in the registration renewal application procedures, reviewing the interview content, conducting regular surveys on the employment situation and career development of REs, as well as strengthening the monitoring and analysis of examination data and related information of lifts/escalators.
- The EMSD would conduct inspections on suspicious cases, and issue improvement recommendations to and conduct interviews with REs who continued to perform poorly. If no improvement was made after such interview, the EMSD would consider issuing a warning letter or refusing registration renewal application of the RE concerned.
- EMSD 7.5 The EMSD had revised the Code of Practice for Lift Works and Escalator Works to introduce clear guidance on the definition of obvious negligence and persistent irregularities in maintenance works, with a view to eradicating the recurrence of similar problems. The revised Code of Practice was gazetted on 9 July 2021 and had taken effect on 1 November 2021.

¹ Registered professional engineer – refers to a person whose name is currently entered in a register established under section 7 of the Engineers Registration Ordinance (Cap. 409).

EMSD 7.6 The EMSD had revised the Code of Practice on the Design and Construction of Lifts and Escalators (Design Code) (Part IV-Escalators) with reference to international standards. The revised Code of Practice was gazetted on 31 December 2021 and had taken effect on 1 October 2022.

EMSD 7.7 To assist owners in need to carry out lift modernisation works in order to raise the safety standards of aged lifts, the Government allocated \$4.5 billion to implement the Lift Modernisation Subsidy Scheme (LIMSS) to subsidise modernisation works for about 8 000 lifts in private properties, and commissioned the Urban Renewal Authority to administer the LIMSS.

Since the launch of the LIMSS, about 1 500 lifts had commenced tendering exercises or entered into the tender stage for modernisation works, about 1 100 applications were granted the "Approval-in-Principle Letters" and preparing for tendering. Other applications would be processed by batches in the next few years.

8 Progress Report on Matters Relating to Responsible Persons (Agenda Item 7)

As this was the first meeting of the new term of the Advisory Committee, the Working Group on Matters Relating to Responsible Persons had yet to start the relevant work. Therefore, the Secretary, on behalf of the Working Group on Matters Relating to Responsible Persons, reported on its work progress. The discussion on the progress report at the meeting was as follows:

EMSD 8.1 To raise public awareness on lift safety, the EMSD had introduced new television and radio announcements of public interest and stickers in the first quarter of 2021 to promote safe use of lifts and the correct ways to deal with lift anomalies.

The EMSD had also produced and distributed promotional stickers on "Safe Use of Lifts" to RPs to strengthen the promotional impact.

The ninth issue of the Lift and Escalator Newsletter had been published in December 2021 and its tenth issue was expected to be published in June 2022. The EMSD welcomed members' contributions or suggestions on topics for reference.

EMSD 8.2 Following the recommendations of the Advisory Committee, the EMSD has been releasing the average monthly maintenance contract price figures on the lifts in private residential and commercial premises on its website biannually for public reference since November 2014.

The results of the latest round of maintenance price survey on lifts at private residential and commercial premises was uploaded to the

Responsible Persons' Corner on the EMSD website in November 2021. The results of the next survey was tentatively scheduled to be released in late May 2022.

EMSD 8.3 To enhance the RPs' capability to manage lifts and encourage them to enhance the safety level, reliability and comfortability of the existing lifts through modernisation measures, the EMSD launched a new Quality Lift Service Recognition Scheme. Qualified RPs would be presented with gold/silver/bronze awards or certificates of excellence/merit. The EMSD received over 140 applications, involving more than 1 000 lifts. The EMSD also held promotional activities in individual districts and invited the awardees to share their insights. The EMSD would produce short films to further promote the scheme.

EMSD 8.4 The EMSD pointed out that the double-deck puzzle-type vehicle parking systems were regulated by the LEO. The Guideline for Implementing Mechanised Vehicle Parking Systems (MVPSS) was published, detailing the regulatory measures and considerations for implementing MVPSSs, with a view to assisting proponents to set up the systems.

The Transport Department was taking forward seven pilot projects on MVPS, among which the MVPS at Hoi Shing Road, Tsuen Wan was opened for public use in November 2021. In addition, the Airport Authority of Hong Kong would set up a large-scale MVPS at Hong Kong-Zhuhai-Macao Bridge Hong Kong Port. The first phase of the MVPS would provide about 1 500 parking spaces and was expected to be completed in the first quarter of 2024.

9 Recent Trade Matters (Agenda Item 8)

The Secretary briefed members on recent trade matters as follows:

EMSD 9.1 The Secretary reported on the numbers of reportable incidents for every thousand lift and escalator incidents from 2016 to March 2022.

The total number of lift and escalator incidents was relatively stable. Data analysis revealed that the incidents were mainly caused by passenger behaviours. The EMSD would strengthen the promotion in the light of the analysis results.

In respect of lift equipment fault incidents, a rising trend of incidents involving uneven levelling of lift cars was seen in recent years. The EMSD had increased inspection frequency in this regard. For escalator equipment fault incidents, incidents involving handrails were on the rise. The EMSD had reminded the industry to pay more attention to the operation of handrails and the related drive components, and would step up inspection in this regard.

EMSD 9.2 To further enhance lift safety, the EMSD had engaged a consultant to

conduct a technical study on the electronic/electrical components with the aim of formulating measures on the inspection and monitoring of the condition of electronic/electrical components and relevant replacement strategies. The scope of study included the service life spans of major electrical parts and components of lifts, such as contactors, relays, fuses and circuit breakers, for understanding the factors affecting the reliability and service life of the parts and components concerned, and the basic requirements for proper maintenance of electrical parts and components. The EMSD had invited contractors to provide necessary information and arrange on-site inspection of the target lift/escalator components. The study had commenced in December 2021 and the study report was expected to be completed and released in the second half of 2022.

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| EMSD | 9.3 | The EMSD reported that over the past six months, 13 summonses were issued in relation to the prosecution of persons/companies that were suspected of having contravened the LEO. The suspected contraventions mainly included allowing passengers to use a lift without a valid use permit, failure to ensure that thorough examination of lift was carried out, submission of a safety certificate with false or misleading content, and failure to ensure that the lift works were carried out properly. |
| EMSD | 9.4 | The EMSD was promoting the application of the “iAM Smart” to enhance the submission process of specified forms related to the LEO on the online platform, so as to make the submission process more convenient. All 16 forms related to licence applications in respect of lifts/escalators were available for online submission using “iAM Smart” since December 2021, the eight remaining forms with lower utilisation rates would be converted into ePDF format and launched in the second quarter of 2022. |
| EMSD | 9.5 | The EMSD had launched the electronic use permit in September 2021. Lift/escalator contractors might choose to receive their use permits via electronic means when submitting the forms online. Upon approval of use permits, contractors could print the use permits on the paper designated for use permits distributed in advance. Each lift or escalator use permit was printed with a QR code for public access of information. |
| EMSD | 9.6 | The EMSD collaborated with a start-up and successfully applied Optical Fibre Bragg Sensing technology and artificial intelligence technology in developing a cost-effective escalator monitoring system, with a view to further enhancing the safety and reliability of escalator operation. The system had been installed at escalators of various brands at different venues, including MTR stations, large shopping centres, outdoor walkways, Government complexes and offices. Through the collection of a vast quantity of real-time data of major components, the system could build an AI model for developing the online predictive fault alarm |

system for escalators. The innovative technological solution was awarded a gold medal at the International Exhibition of Inventions of Geneva in 2022.

In addition, the EMSD collaborated with another start-up and successfully developed a cost-effective elevator movement surveillance device with the use of thermal camera, accelerometer and artificial intelligence technology. The device could analyse the levelling accuracy, unintended car movement and vibration of a lift, and issue early warnings for arranging preventive maintenance. The innovative technological solution was also awarded a gold medal at the International Exhibition of Inventions of Geneva in 2022.

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- 9.7 The EMSD briefed members on the work related to the implementation of the Digital Logbook for Lifts and Escalators. It was expected that the Digital Logbook would be put on trial run at different lifts/escalators in the second quarter of 2022 and officially launched in the fourth quarter of 2022. Members generally expressed support for the Digital Logbook for Lifts and Escalators.

10 Upcoming Work and Outlook (Agenda Item 9)

- 10.1 The Chairman hoped that members would actively participate in the matters relating to lift and escalator safety and provide valuable advice on the long-term development of the trade. He also briefed members on the highlights of the upcoming work as follows:

1. Uplifting the standards and professional image of the trade to attract new blood

While the manpower shortage of the trade had been alleviated in recent years with the efforts of the EMSD and the past four terms of the Advisory Committee, it was crucial to continuously ensure that the trade was adequately staffed and maintained at a good qualification level in order to maintain lift and escalator safety. In the past two years, the EMSD had been implementing a series of manpower training measures, including:

- Providing a progression pathway for registered workers and establishing a skill-based professional qualification framework recognised by the trade and the Qualifications Framework;
- Supporting registered contractors to organise tailor-made certificate programmes in engineering to meet the manpower need of the trade and contractors;
- Promoting the upgrade of qualification requirements of REs from the prerequisite of university degree qualification at present to the level of registered professional engineer and facilitating the relevant

thorough preparation of the trade and practitioners.

2. Proactively introducing new technologies to enhance safety and operational efficiency

With the rapid technological development in recent years, the trade had benefitted from the enhancement of the safety level of lifts and escalators through the application of innovative technologies. The Advisory Committee of this term would continue to promote the application of innovative technologies, such as:

- Various lift and escalator monitoring systems which enable RPs/registered contractors for lifts/escalators to carry out early preventive maintenance with the aid of fault detection, so as to enhance the stability of lifts/escalators.
- The Digital Logbook for Lifts and Escalators which facilitates trade stakeholders' keeping track of the conditions and maintenance records of lifts/escalators.

3. Continuously propagating the message of safe use and proper management of lifts and escalators

As for RPs, publicity and education could convey to the public the message on correct use of lifts and escalators, which could directly reduce accidents caused by passenger behavior, and at the same time disseminate information on lifts and escalators and other measures to RPs to indirectly enhance the safety level of lifts and escalators. The EMSD had done a lot in this respect, such as:

- Producing television and radio announcements of public interest and stickers for publicity and promotion to the public and trade stakeholders;
- Promoting participation in the Quality Lift Service Recognition Scheme, encouraging RPs to carry out lift modernisation and raising their capability to manage and provide quality lift services;
- Providing and updating information related to lifts and escalators, including the maintenance cost information on lifts in private residential and commercial premises and Contractors' Performance Rating, to continuously provide useful information to the public and the property management trade.

4. Promoting modernisation of aged lifts and escalators

Among more than 70 000 lifts at present, about 40 000 lifts were defined as aged lifts. Although aged lifts were not dangerous as long as they were regularly maintained, there was room for improvement in lift safety and it was necessary that trade stakeholders proactively promote lift modernisation works. The Working Group on Matters Relating to Responsible Persons could give advice on the feasibility of

various proposals in relation to the implementation of lift modernisation works, and members of the working group could play a bridging role by relaying the advice of the Advisory Committee to RPs in a timely manner, so that RPs could understand the importance of lift modernisation.

11 Date of Next Meeting

- 11.1 The meeting ended at 4:30 p.m. The date of next meeting was to be confirmed.