

LCQ14: Safety, repair and maintenance of lifts

Following is a question by the Hon Ho Kai-ming and a written reply by the Secretary for Development, Mr Michael Wong, in the Legislative Council today (May 30):

Question:

Several incidents of lift failures causing casualties have happened in recent months, arousing concerns about issues relating to the safety, repair and maintenance of lifts. In this connection, will the Government inform this Council:

- (1) of the current total number of lifts in Hong Kong, with a breakdown by age of lifts (in age groups of five years each);
- (2) of the number of lift incidents causing casualties in each of the past three years, and among such incidents, the number of cases in which the registered lift contractors (contractors) concerned were prosecuted for alleged breaches of the Lifts and Escalators Ordinance (Cap. 618) (broken down by age of lifts);
- (3) of the current ratio of the number of lifts to the number of registered lift/escalator workers (L&E workers) in Hong Kong; whether it knows the average daily number of lifts the repair and maintenance works for which that each of such workers has to attend to;
- (4) as quite a number of L&E workers have relayed that when carrying out regular maintenance works for lifts, they are often redeployed by their employers to go elsewhere for undertaking emergency lift repair work, thereby affecting the quality of regular lift maintenance work, whether the authorities will consider (i) setting a standard on the minimum number of hours spent on regular lift maintenance work, and (ii) requiring contractors to assign different workers to carry out emergency repair work and regular maintenance work for lifts;
- (5) as quite a number of lifts of old models are not installed with a rope-gripping device which prevents unintended lift movement, whether the authorities will consider (i) amending the legislation in the short run to require contractors to retrofit this device in such lifts, and (ii) subsidising property owners who have financial difficulties in carrying out such works; and
- (6) whether the authorities will, in the long run, consider launching a subsidy scheme to help property owners to replace lifts which are 30 years old or above, with a view to minimising the occurrence of lift incidents?

Reply:

President,

The operation of lifts in Hong Kong is regulated by the Lifts and Escalators Ordinance (Cap. 618) (the Ordinance), which was put into operation on December 17, 2012, to replace the repealed Lifts and Escalators (Safety) Ordinance (Cap. 327). The Ordinance introduces a series of new and enhanced regulatory measures including stipulating clearly the responsibilities of the Responsible Person (i.e. owner of the lift/escalator and any person who has the management or control of the lift/escalator), the Registered Contractor, the Registered Engineer and the Registered Worker. Since the Ordinance has come into operation, the average annual number of incidents (Note) involving failure of lift and escalator equipment has remarkably reduced as compared with that before the Ordinance was put into effect, with a reduction of 72 per cent from an average of 28 cases per year in 2010 to 2012 to an average of 7.8 cases per year in 2013 to 2017. The Electrical and Mechanical Services Department (EMSD) will continue to strictly enforce the Ordinance and is committed to introducing various measures to enhance the safety of aged lifts, so as to ensure that the public can enjoy safe lift services.

Our reply to the question raised by the Hon Ho is as follows:

(1) As of the end of 2017, there were totally 66 291 lifts in Hong Kong. Their age (years that the lift has been put into service) distribution is shown below:

Age (Years)	Number of lifts
>=51	3 557
46-50	1 844
41-46	3 475
36-40	5 617
31-35	5 937
26-30	7 545
21-25	7 304
16-20	10 855
11-15	7 631
6-10	5 598
<=5	6 928
Total	66 291

(2) The number of lift incidents involving equipment fault and causing passenger casualty reported to the EMSD from 2015 to 2017 is shown below:

Year	2015	2016	2017
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Number of lift incidents involving equipment fault and causing passenger casualty	10 (Injury) 0 (Death)	9 (Injury) 0 (Death)	7 (Injury) 0 (Death)
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In the above incidents, no registered lift contractor was prosecuted for contravention of the Ordinance.

(3) As of the end of 2017, there were about 66 200 lifts and about 9 300 escalators in Hong Kong. From 2012 to 2017, the total number of lifts and escalators increased from about 69 000 to about 75 600, i.e. an increase of about 10 per cent, while the number of Registered Workers increased from about 4 900 to about 5 700, i.e. an increase of about 16 per cent. In recent years, Registered Contractors have also been actively recruiting general workers in addition to Registered Workers. The number of general workers has increased from about 700 in 2012 to about 1 850 in 2017. After these general workers have received relevant training and accumulated sufficient experience, they can apply to become Registered Workers. Therefore, the total number of workers increased from about 5 600 in 2012 to about 7 570 in 2017, i.e. an increase of about 35 per cent, which was higher than the increase in the number of lifts and escalators during the same period.

In terms of periodic maintenance works, in 2017, there were about 3 430 Registered Workers and about 1 150 general workers engaged in periodic maintenance work and they carried out more than 1.8 million periodic maintenance. Assuming that each worker works 250 days per year on average and two workers work as a team to carry out periodic maintenance works, it is estimated that each team of workers can complete periodic maintenance of about 3.2 lifts or escalators each day on average.

(4) Registered lift contractors will in general assign emergency repair works to appropriate workers based on the manpower and techniques required for and the location of the works. The Ordinance does not require contractors to allocate separate manpower to periodic maintenance and emergency repair works. However, no matter the works are maintenance or emergency repair, registered lift/escalator contractors must ensure sufficient manpower and provide sufficient training and instructions for the workers to ensure that the lift/escalator works concerned are carried out safely and properly. In this regard, the EMSD issued a circular to Registered Contractors in 2014 that if the workers could not complete their maintenance works in progress due to deployment for other emergency works during periodic maintenance, the Registered Contractor should arrange the workers to indicate "suspension of work" and the reason for leaving at the remark column of the logbook. After suspending the maintenance works, the contractor should arrange workers to make up for the unfinished maintenance works as soon as possible, and then indicate "compensative maintenance" or "compensative servicing" at the remark column of the logbook. The EMSD will closely monitor the manpower situation of Registered Contractors and timely review with them their manpower arrangement to ensure that they have sufficient manpower to properly handle emergency repair and periodic maintenance works.

Regarding the working hours for maintenance works, it is relatively difficult to establish unified working hours for maintenance works as the time for maintenance of each lift depends on various factors such as the requirements of the lift manufacturer, its design, number of service floors, designed speed, rated load, and conditions of lift car. In 2014, the EMSD discussed with the trade about the time for maintenance of lifts/escalators. The trade generally agreed that registered lift/escalator contractors should allow sufficient time for workers to carry out the maintenance works properly. In this regard, the EMSD also issued a notice to Registered Contractors in the same year to remind them that if they were to allocate workers to handle maintenance works for more than six lifts/escalators on the same day, they should carefully consider the work allocation and ensure that the relevant work can be carried out safely and properly.

(5 and 6) In general, lifts are safe to use with proper periodic examination and maintenance. Owing to rapid technological advancement in recent years, modern lifts are equipped with more comprehensive safety devices than the aged ones. Therefore, aged lifts have room for improvement and enhancement. In view of this, the EMSD promulgated in 2011 the "Guidelines for Modernising Existing Lifts" which aims at recommending the Responsible Persons install safety devices (including the unintended car movement protection device) for their aged lifts to make the lifts safer, more reliable and comfortable.

As of the end of 2017, there were about 66 200 lifts in Hong Kong, of which about 80 per cent were not equipped with safety devices of the latest standard. Owing to the fact that lift modernisation is carried out on a voluntary basis, modernisation works of different level have been carried out to about 5 200 lifts since 2011. The progress is not remarkable.

In view of the above, the Development Bureau and the EMSD are actively formulating new measures in the short term, medium term and medium-to-long term to enhance the safety of aged lifts, thereby further protecting public safety.

Note: In accordance with the Ordinance, the Responsible Person for a lift must notify the Director of Electrical and Mechanical Services of the following lift incident:

- (i) a person dies or is injured and the death or injury involves a lift or any associated equipment or machinery of a lift;
- (ii) a failure of the main drive system of a lift;
- (iii) a breakage of any suspension rope of a lift;
- (iv) a failure of any brake, overload device, safety component or safety equipment of a lift; or
- (v) a failure of any interlocking device for any door of the lift-way of a lift.

Upon receiving notification of the above lift incidents, the EMSD will arrange on-duty staff for an investigation as far as practicable.