

**LEGISLATIVE COUNCIL**

**PANEL ON DEVELOPMENT**

**Follow-up Actions Arising from the Discussion  
at the Special Meeting on 19 April 2017**

Regarding the Special Meeting of Legislative Council Panel on Development on regulatory control over lift and escalator safety on 19 April 2017, the Administration provides responses to the following issues:-

**Progress of implementation of the recommendations made by the Director of Audit in his Report No. 66**

2. The Electrical and Mechanical Services Department (EMSD) has implemented all the recommendations made by the Director of Audit in his Report No. 66 in relation to the work of the EMSD in monitoring the safe operation of lifts and escalators. The Administration reported the EMSD's implementation details to the Public Accounts Committee through the Government Minute on 2 November 2016. The relevant part of the Government Minute in relation to the EMSD's implementation details is attached in **Appendix 1**.

**Statistics about the lift/escalator industry over the past three years**

3. The EMSD carries out survey exercise regularly to monitor the manpower situation of the lift/escalator for ensuring the sufficiency of manpower supply to meet the service demand for maintenance works for lifts and escalators. The survey results on number of workers and engineers, averaged salary of workers and engineers, number of lifts/escalators and the calculated ratio on number of lifts and escalators to team of two workers for

each registered lift/escalator contractor over the past three years is attached in  
— **Appendix 2.**

**Development Bureau**  
**Electrical and Mechanical Services Department**  
**May 2017**

44. As at 19 October 2016, among the 52 Audit's recommendations, actions have been taken for 36 of them, and the rest are being actively pursued. Details of the progress made are set out at Enclosure 5.

Encl. 5

### **Chapter 6 – Monitoring of safe operation of lifts and escalators**

45. The Government attaches great importance to the safe operation of lifts and escalators, and is committed to strict enforcement of the Lifts and Escalators Ordinance (Cap. 618) (the Ordinance) to ensure the provision of safe and reliable lift and escalator services for the public. The Ordinance was put into full operation on 17 December 2012 to replace the repealed Lifts and Escalators (Safety) Ordinance (Cap. 327). The Ordinance introduces new and enhanced regulatory control measures on lift and escalator safety. The application of the Ordinance is extended to the Government and the Housing Authority in addition to the private sector. Besides lifts/escalators (L/Es) owners, management companies of buildings and management staff of an organization who have the management or control of L/Es are also regarded as responsible persons (RPs) who share the responsibilities of ensuring the safety of L/Es under their management or control.

46. The Government agrees to the recommendations of the Audit on monitoring of safe operation of L/Es. The Government has implemented Audit's recommendations so as to continuously enhance enforcement.

#### ***Monitoring work of registered persons***

47. The Electrical and Mechanical Services Department (EMSD) has strengthened the monitoring of Registered Contractors (RCs). The EMSD has taken measures to carry out quarterly review of cases of convicted RCs and RCs which have received three or more warning letters within the past 12 months, in order to decide whether the related RCs should be referred to the Development Bureau for disciplinary hearing. EMSD will also review biannually the administrative system for monitoring the performance of RCs, i.e. Performance Assessment Scheme, with a view to according Performance Monitoring (PM) points on significant non-compliance acts.

48. Since November 2013, the EMSD has implemented a new administrative initiative of conducting surveillance audits on each RC in a targeted two-year cycle, aiming at promoting better RC performance on top of their statutory responsibilities. The EMSD has strengthened actions to closely monitor the implementation of RC surveillance audit to ensure completion of the audit cycle within a two-year period. Moreover, the EMSD has been closely monitoring RCs' progress on implementation of improvement measures arising from the surveillance audits.

49. Regarding Audit's recommendations on monitoring Registered Engineers' (REs') work, the EMSD has been monitoring the situation of changes in examination schedules by REs and will issue advisory letters to REs who repeatedly change their planned examination dates in the electronic submission platform without promptly notifying the EMSD. Furthermore, the EMSD has increased the proportion of surprise inspections carried out outside the EMSD office hours and will review the enforcement effectiveness to adjust the proportion from time to time.

50. The EMSD has issued guidelines on the maximum number of L/Es to be examined and certified by an RE on a single day and will take follow-up actions on REs not following the guidelines.

*Site inspections and other regulatory actions*

51. The EMSD has issued internal guidelines specifying the criteria for issuing improvement orders and advisory letters to RPs for unsatisfactory items found during an EMSD site inspection of L/Es. All items in improvement orders are closely followed up by the EMSD. Also, the EMSD has classified issues stated in advisory letters which might develop into situations affecting the safe operation of L/Es and will monitor the rectification of such situations by RCs.

52. The EMSD has enhanced the administrative computer system and issued internal guidelines to –

- (a) record the dates and details of EMSD's requests made to RPs/RCs on rectification of defects and submission of additional information before issuing use permits and resumption permits;
- (b) record written notifications on L/E suspensions;
- (c) keep the serving date and effective date of prohibition orders; and
- (d) record dates of occurrence and submission of incident reports of reportable incidents.

53. Regarding Audit's recommendations of monitoring of non-reportable incidents, the EMSD has kept records of those significant non-reportable incidents posing safety risk to passengers for close monitoring. Incident analysis is conducted quarterly to review if there is any type of non-reportable incidents posing safety risk to passengers that warrants being classified as reportable incidents taking into account factors such as the consequences and occurrence frequency of such incidents.

54. Regarding the monitoring of submission of incident reports for reportable incidents, the EMSD will review the monitoring result on submission status on a monthly basis and PM points will be accorded to RCs for late submission of incident reports. Further actions, such as issuing warning letters and/or prosecution action, would be considered if continued non-compliance is noted.

55. Audit has recommended that actions on completing major retrofitting works for government lifts should be expedited. In this connection, EMSD has coordinated with concerned government departments and RCs to expedite the retrofitting works for government lifts. In addition, the EMSD has been closely monitoring the project work progress regularly on a monthly basis. Besides, planning is underway to expedite the retrofitting of the remaining lifts. Furthermore, the EMSD has offered advice to concerned departments on all lifts requiring minor retrofitting. The EMSD will continue to monitor the progress and offer technical assistance as necessary.

#### ***Management information system***

56. The EMSD has taken measures to enhance the system to generate management reports on: (i) RCs having been issued with a large number of warning letters and (ii) L/Es having no RCs responsible for maintenance work for prolonged periods. The EMSD will continue to enhance the system to generate adequate management reports to alert the EMSD management of significant issues having impact on the safe operation of L/Es. The EMSD has also implemented measures to ensure all inspection records are kept in the system and has been continuously inputting the model number and manufacturer names of L/Es into the system.

#### ***Way forward***

57. The EMSD has promulgated guidelines on retrofitting new safety devices for escalators after consultation with the trade.

58. Regarding Audit's recommendation on the impartiality of REs in examining and certifying the safe operation of L/Es, the EMSD has implemented various measures to promote the independence of REs, such as engaging independent REs to inspect government lifts, promoting the sample contract for engagement of independent REs for lift maintenance audit, etc. The EMSD will continue to take measures to enhance and promote REs' impartiality.

### ***Progress made in implementing Audit's recommendations***

Encl. 6 59. A summary of the progress in implementing Audit's recommendations is at Enclosure 6. As all the recommended measures have been completed or will be implemented on an on-going basis, we recommend that this part should be deleted from the next progress report.

### **Chapter 7 – Dedicated Fund on Branding, Upgrading and Domestic Sales**

60. The Government generally accepts the recommendations made by the Director of Audit regarding the Dedicated Fund on Branding, Upgrading and Domestic Sales (BUD Fund) in his Report No. 66. The Commerce and Economic Development Bureau (CEDB) and the Trade and Industry Department (TID), with the support of the Hong Kong Productivity Council (HKPC), have been taking appropriate follow-up actions to implement the recommendations. The progress is set out below.

#### ***Overall Management***

61. CEDB, TID and HKPC as the Secretariat for implementing the Enterprise Support Programme (ESP) have been closely monitoring the number of applications received under the BUD Fund and have undertaken a wide range of robust promotion efforts and support measures with a view to encouraging more applications.

62. On the ESP, HKPC launched the "ESP Easy-Simplified Application Track" (ESP Easy) in August 2015 in order to attract more applications. The feedback from the trade has been positive. As at June 2016, a total of 294 ESP Easy applications have been received in four batches. The ESP Secretariat has also continued its efforts in assisting applicants in submitting applications with a view to improving the quality of applications.

63. On the Organisation Support Programme (OSP), TID has stepped up promotion efforts by sending promotional letters more frequently, outreaching to industrial and trade organisations (ITOs) which have not applied before, and adopting a more targeted approach to discuss with applicants with rejected applications in order that proposals can be revised and resubmitted quickly. In this regard, TID sent promotional letters in January 2016 to over 480 ITOs to promote the OSP, and made follow-up calls to them to explain further details about the OSP and propose arranging promotion seminars for individual ITOs.

**Monitoring of Safe Operation of Lifts and Escalators  
Progress of Implementing Audit's Recommendations  
(as at 19 October 2016)**

Item No.	Para. No.	Audit's Recommendations	Progress to date
<b>Part 2: Monitoring Work of Registered Persons</b>			
1	2.34(a)	The EMSD should take measures to ensure that all convicted registered contractors (RCs) and RCs having been issued with three or more warning letters within a 12-month period are reviewed by the Disciplinary Action Review (DAR) Panel in a timely manner to decide whether the related RCs should be referred to the Development Bureau (DEVB) for disciplinary hearing.	<p>Since February 2016, the DAR Panel has been carrying out quarterly review of cases of convicted RCs and RCs which have received three or more warning letters within the past 12 months, in order to decide whether the related RCs should be referred to DEVB for disciplinary hearing.</p> <p>Since EMSD has taken follow-up action and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>
2	2.34(b)	EMSD should periodically review the Performance Assessment (PA) Scheme with a view to including all significant RC non-compliance issues in the Scheme.	<p>EMSD will review the PA Scheme biannually with a view to according performance monitoring (PM) points on significant RC non-compliance acts to better reflect RCs' work performance which is updated and announced quarterly in EMSD's website for reference by the public. Upon completion of the last review, the revised PA Scheme has been implemented since February 2016. The next review of PA Scheme will be conducted by December 2017. In addition, the PA scheme will also be updated once critical and urgent need is identified.</p> <p>Since EMSD has taken follow-up action and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>

Item No.	Para. No.	Audit's Recommendations	Progress to date
3	2.34(c)	EMSD should strengthen actions with a view to meeting EMSD target on conducting surveillance audits on all RCs within a two-year period as far as possible.	<p>EMSD has been closely monitoring the established surveillance audit timetable to ensure that the audit is completed within a two-year period. EMSD will continue to monitor the progress on a monthly basis.</p> <p>Since EMSD has taken follow-up action and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>
4	2.34(d)	EMSD should keep in view implementation of improvement measures arising from EMSD surveillance audits and consider taking appropriate follow-up actions in warranted cases.	<p>EMSD has prepared a summary table to monitor RCs' progress on implementation of improvement measures arising from EMSD surveillance audits. EMSD will continue to monitor the progress on a monthly basis and will take appropriate follow-up actions in warranted cases.</p> <p>Since EMSD has taken follow-up action and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>
5	2.34(e)	<p>EMSD should:</p> <p>(i) request RCs taking over lifts/escalators (L/Es) maintenance work to highlight safety-related defects and monitor rectification of such defects; and</p> <p>(ii) take enforcement actions on L/Es having safety-related defects.</p>	<p>A circular letter was issued to all RCs in September 2016 specifying requirements on L/E maintenance work changing-over, and notification of safety-related issues. EMSD will take enforcement actions on L/Es having safety-related defects where appropriate.</p> <p>Since EMSD has taken follow-up action and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>

Item No.	Para. No.	Audit's Recommendations	Progress to date
6	2.49(a)	EMSD should monitor changes of registered engineer (RE) examination dates and consider issuing advisory letters to REs who repeatedly change their examination dates without promptly notifying EMSD.	<p>EMSD has been monitoring the changes of examination dates by REs and issuing advisory letters on a quarterly basis to REs repeatedly found not showing up during EMSD's surveillance inspections on site. The monitoring is further enhanced by issuing advisory letters to REs who repeatedly change their planned examination dates in the electronic submission platform without promptly notifying EMSD.</p> <p>Since EMSD has taken follow-up action and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>
7	2.49(b)	EMSD should increase the proportion of EMSD surprise inspections of RE examinations outside EMSD office hours.	<p>EMSD has increased the proportion of surprise inspections carried out outside EMSD office hours to about 5% since late 2015. EMSD will review the enforcement effectiveness to adjust the proportion from time to time.</p> <p>Since EMSD has taken follow-up action and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>
8	2.49(c)	EMSD should issue guidelines on the maximum number of L/Es to be examined and certified by an RE on a single day, and take follow-up actions on REs not following the guidelines without acceptable justifications.	<p>EMSD has issued guidelines on the maximum number of L/Es to be examined and certified by an RE on a single day. EMSD will follow up with those REs found not following the guidelines.</p> <p>Since EMSD has taken follow-up action and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>

Item No.	Para. No.	Audit's Recommendations	Progress to date
<b>Part 3: Site Inspections and Other Regulatory Actions</b>			
9	3.12(a)	EMSD should consider taking measures to enhance the Lifts and Escalators Ordinance (LEO) System to keep records on dates and details of EMSD requests made to responsible persons (RPs)/RCs on rectification of defects and submission of additional information before issuing use permits and resumption permits.	<p>EMSD has enhanced the LEO System to keep records of requests made to RPs/RCs on outstanding issues or documents. Internal guidelines for keeping such records in handling use permits and resumption permits applications have also been issued.</p> <p>Since EMSD has taken follow-up action and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>
10	3.12(b)	EMSD should issue guidelines on the criteria for issuing improvement orders and advisory letters, and to address unsatisfactory conditions which might develop into situations affecting the safe operation of L/Es.	<p>EMSD has issued internal guidelines specifying the criteria for issuing improvement orders and advisory letters. All items in improvement orders are closely followed up by EMSD. Also, EMSD has classified issues stated in advisory letters which might develop into situations affecting the safe operation of L/Es and will monitor the rectification of such situations by RCs.</p> <p>Since EMSD has taken follow-up action and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>
11	3.31(a)	EMSD should take measures to ensure that written notifications on L/E suspensions are recorded in the LEO System.	<p>EMSD has enhanced the LEO System and issued internal guidelines for keeping written notification records and telephone response records on L/E suspensions in the System.</p> <p>Since EMSD has taken follow-up action and will continue to do so on an on-going basis, we recommend</p>

Item No.	Para. No.	Audit's Recommendations	Progress to date
			deleting this item from the next progress report.
12	3.31(b)	EMSD should take follow-up action to ascertain the reasons for not keeping records on the serving dates of four prohibition orders and on the effective dates of five prohibition orders.	<p>EMSD investigated and found that the missing records were due to omission of inputting information of prohibition orders into the LEO System, and the lack of a mechanism in the System to highlight omission of data.</p> <p>EMSD has enhanced the LEO System to check omission of inputting information on prohibition orders.</p> <p>Since EMSD has taken follow-up actions and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>
13	3.41(a)	EMSD should consider keeping in view whether some significant non-reportable incidents posing safety risk to passengers warrant classifying them as reportable incidents, and taking necessary improvement measures.	<p>EMSD has kept records on and closely monitored those significant non-reportable incidents posing safety risk to passengers. Incident analysis is conducted quarterly to review if there is any type of non-reportable incidents posing safety risk to passengers that warrants being classified as reportable incidents taking into account factors such as consequences and occurrence frequency of such incidents.</p> <p>Since EMSD has taken follow-up action and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>

Item No.	Para. No.	Audit's Recommendations	Progress to date
14	3.41(b)	EMSD should consider taking measures to make enhancements to the LEO System for provision of reports showing the dates of occurrence and dates of submission of incident reports of reportable incidents.	<p>EMSD has enhanced the LEO System to record the dates of occurrence and dates of submission of incident reports of reportable incidents. Reports showing such information can be generated from the LEO System.</p> <p>Since EMSD has taken follow-up action, we recommend deleting this item from the next progress report.</p>
15	3.41(c)	EMSD should consider conducting a review of incident reports to ascertain the extent of non-compliance with the seven-day incident reporting requirement.	<p>Submission status is reviewed on a monthly basis. EMSD has been taking appropriate actions for those warranted cases since February 2016. EMSD will continue to monitor the situation of non-compliance with the seven-day incident reporting requirement and will take appropriate actions if the situation warrants.</p> <p>Since EMSD has taken follow-up action and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>
16	3.41(d)	EMSD should consider taking appropriate actions against RCs for not complying with the seven-day incident reporting requirement.	<p>Submission status is reviewed on a monthly basis. PM points are accorded to RCs for late submission of incident reports. Further actions, such as issuing warning letters and/or prosecution action would be considered if continual non-compliance is noted.</p> <p>Since EMSD has taken follow-up actions and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>

Item No.	Para. No.	Audit's Recommendations	Progress to date
17	3.48(a)	EMSD should expedite actions on completing major retrofitting works for government lifts.	<p>EMSD has coordinated with the concerned government departments and RCs to expedite the retrofitting works for government lifts. In addition, the work progress is closely monitored on a monthly basis. Planning is underway to expedite the retrofitting of the remaining lifts.</p> <p>Since EMSD has taken follow-up action and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>
18	3.48(b)	EMSD should coordinate with and provide necessary technical assistance to B/Ds to complete minor lift retrofitting works as soon as possible.	<p>EMSD has offered advice to concerned departments on all lifts requiring minor retrofitting. EMSD will continue to offer technical assistance to complete minor lift retrofitting works.</p> <p>Since EMSD has taken follow-up action and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>
<b>Part 4: Management Information System</b>			
19	4.7(a)	EMSD should make enhancements to the LEO System with a view to periodically generating management reports to inform EMSD management of significant issues relating to the safe operation of L/Es.	<p>EMSD has enhanced the LEO System to generate management reports on (i) RCs having been issued with a large number of warning letters and (ii) L/Es having no RCs responsible for maintenance work for prolonged periods. EMSD will continue to enhance the LEO System as appropriate to generate more management reports to alert EMSD of significant issues impacting on the safe operation of L/Es.</p>

Item No.	Para. No.	Audit's Recommendations	Progress to date
			<p>Since EMSD has taken follow-up action and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>
20	4.7(b)	<p>EMSD should take measures to ensure that essential information is input into the LEO System.</p>	<p>EMSD has implemented measures to ensure all inspection records are kept in the LEO System, and to ensure that essential information, such as the model number and manufacturer names of L/Es, is input into the LEO system.</p> <p>Since EMSD has taken follow-up action and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>
<b>Part 5: Way Forward</b>			
21	5.14(a)	<p>EMSD should take measures to implement audit recommendations in this Audit Report in a timely manner.</p>	<p>EMSD has taken measures to implement Audit's recommendations.</p> <p>Since EMSD has taken follow-up action, we recommend deleting this item from the next progress report.</p>
22	5.14(b)	<p>EMSD should consider promulgating guidelines for retrofitting new safety devices for escalators.</p>	<p>EMSD has promulgated guidelines on retrofitting new safety devices for escalators.</p> <p>Since EMSD has taken follow-up action, we recommend deleting this item from the next progress report.</p>
23	5.14(c)	<p>EMSD should, taking into account good overseas practices, consider taking measures to enhance the impartiality of REs in examining and certifying the safe operation of L/Es.</p>	<p>EMSD has implemented measures to promote the independence of REs. For example, independent REs were engaged to inspect government lifts and a sample contract for engagement of independent REs for lift maintenance audit was published</p>

<b>Item No.</b>	<b>Para. No.</b>	<b>Audit's Recommendations</b>	<b>Progress to date</b>
			<p>and uploaded onto EMSD website in January 2016 for RP's reference. In addition, EMSD has promulgated, in consultation with Independent Commission Against Corruption, probity guidelines for REs. EMSD will continue to implement measures to enhance the impartiality of REs, including making reference to good overseas practices.</p> <p>Since EMSD has taken follow-up actions and will continue to do so on an on-going basis, we recommend deleting this item from the next progress report.</p>

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**A. List of Registered Lift and Escalator Contractors in last 3 Years**

Year	2016	2015	2014	
<i>(Listed in Alphabetical Order of the Contractor's English name)</i>		AMANTI (HK) LIFT & ESCALATOR ENGINEERING LIMITED <sup>#</sup>		
		ANLEV ELEX ELEVATOR LTD		
		ANTONFIELD ENGINEERING COMPANY LIMITED		
		ASSOCIATED ENGINEERS, LIMITED		
		ASSOCIATION ELECTRICAL ENGINEERING LIMITED		
		BEN FUNG MACHINERIES & ENGINEERING LTD.		
		CHEERWELL ENGINEERING LIMITED		
		CHEVALIER (HK) LTD.		
		CHUN MING ELEVATOR COMPANY LIMITED		
		CHUN MING ENGINEERING CO., LTD.		
		CKP BUILDING SERVICE SYSTEMS LTD.		
		ELEVATOR PARTS ENGINEERING CO., LTD.		
		EUGENE ENGINEERING CO. LTD.		
		FUJITEC (HK) CO., LTD.		
			GROUP CREATION INTERNATIONAL LIMITED <sup>^</sup>	
			HITACHI ELEVATOR ENGINEERING CO., (HK) LTD.	
			HOI FAI LIFT ENG. & SERVICES LTD.	
			HOLAKE (HONG KONG) LTD.	
			HOLAKE HONG KONG LIFTS LTD.	
			HONGKONG INTERNATIONAL TERMINALS LIMITED	
			JEKCO ELEVATORS LTD	
			KONE ELEVATOR (HK) LTD.	
			LIGHTHOUSE ELEVATOR ENGINEERING LTD	
			LOEDIGE ASIA LIMITED	
			MITSUBISHI ELEVATOR HONG KONG COMPANY LIMITED	
			MTR CORPORATION LIMITED	
			NIKKIN LIFTS & ESCALATORS LTD.	
			OTIS ELEVATOR COMPANY (H.K.) LTD.	
			RICH MARK ENGINEERING LIMITED	
			RING HING ENGINEERING SERVICES CO., LTD.	
			RYODEN ELEVATOR COMPANY LIMITED	
			SCHINDLER LIFTS (HK) LTD.	
			SHAN ON ENGINEERING CO., LTD.	
			SIGMA ELEVATOR (HK) LIMITED	
			SUN FAI ENGINEERING & EQUIPMENT COMPANY LIMITED	
			TAIZOOM ELEVATOR COMPANY (HK) LIMITED	
			TAK LEE ELEVATOR ENGINEERING CO LTD	
			TECHFAITH ENGINEERING LIMITED	
			THE EXPRESS LIFT CO., LTD	
			THYSSENKRUPP ELEVATOR (HK) LIMITED	
			TOKI ELEVATOR ENG. LTD.	
			VERTEX ENGINEERING LIMITED	
				WHOLE SAFE LIMITED <sup>^</sup>
<b>Total</b>	<b>40</b>		<b>43</b>	

<sup>#</sup> Registration withdrawn effective from June 2015

<sup>^</sup> Registration withdrawn effective from March 2015

**B. Salary Information of Registered Engineers and Registered Workers in last 3 Years**

	2016		2015		2014	
	Registered Engineers	Registered Workers	Registered Engineers	Registered Workers	Registered Engineers	Registered Workers
Average Basic Salary (HK\$)	44,900	19,300	43,000	18,500	39,200	17,300
Average Total Salary with bonus, allowance and other benefits included (HK\$)	47,300	23,900	45,000	22,500	41,600	21,100

*Note : Salary information of individual contractor is not available.*

**C. Statistics on Installation and Manpower by Registered Contractors in 2016**

Contractor <sup>1</sup>	Number of							Ratio of Number of Lifts & Escalators to Team of Two Workers <sup>3</sup>
	Registered Engineers	Registered Workers	General Workers	Passenger Lifts	Goods & Service Lifts <sup>2</sup>	Total Lifts	Escalators	
<i>Listed in descending order of their ratios of "Number of Lifts and Escalators to Team of Two Workers"</i>	1	7	1	180	0	180	0	45.00
	3	10	0	182	0	182	4	37.20
	3	56	11	730	949	1679	20	36.55
	1	6	1	105	5	110	16	35.29
	12	143	16	2128	22	2150	365	31.50
	20	21	1	246	0	246	89	30.45
	7	92	31	1415	8	1423	333	28.49
	35	416	162	7306	55	7361	868	28.38
	15	262	72	4288	7	4295	398	28.08
	38	524	136	7410	47	7457	1701	27.68
	2	20	11	414	20	434	0	27.35
	4	26	4	407	0	407	0	27.13
	3	36	14	580	1	581	52	25.30
	27	532	147	7666	38	7704	515	24.15
	5	174	31	2043	6	2049	427	24.13
	5	139	73	2366	10	2376	159	23.87
	2	22	1	272	0	272	0	23.65
	1	21	0	195	0	195	38	22.19
	37	712	312	9176	133	9309	2109	22.17
	22	432	136	5300	6	5306	977	22.11
	2	52	5	572	4	576	4	20.28
	8	100	23	1220	6	1226	0	19.89
	1	7	2	89	0	89	0	19.78
	3	25	2	249	0	249	14	19.48
	4	30	3	291	1	292	11	18.33
	30	523	207	5408	45	5453	732	16.88
	2	27	6	247	0	247	17	16.00
	8	110	36	980	20	1000	129	15.33
	1	8	3	72	0	72	9	14.73
	2	18	3	140	27	167	0	14.62
	8	30	4	214	3	217	0	12.68
	1	5	2	38	12	50	0	12.57
2	30	1	174	20	194	9	12.45	
1	40	38	247	0	247	14	6.69	
2	78	95	28	0	28	0	0.32	
1	29	88	15	2	17	0	0.27	
2	5	1	0	0	0	0	0.00	
3	34	10	0	0	0	0	0.00	
13	23	0	0	0	0	0	0.00	
4	68	36	0	0	0	0	0.00	

Note : 1 Without affecting the overall statistics, the contractor's name is omitted to protect the company's business information.

2 In general, goods and services lifts are less complicated and the maintenance time required would be less than a half of passenger lifts.

3 Ratio of Number of Lifts and Escalators to Team of Two Workers = [Number of Passenger Lifts + 0.5 x Number of Goods and Service Lifts + Number of Escalator] / [(Number of Registered Worker + Number of General Worker) / 2].

According to the survey on maintenance time conducted by Vocational Training Council for EMSD in 2015 with on-site inspection and log-book analysis, the manpower level of a contractor for maintenance work is considered acceptable if the aforesaid ratio does not exceed 50.

**D. Statistics on Installation and Manpower by Registered Contractors in 2015**

Contractor <sup>1</sup>	Number of							Ratio of Number of Lifts & Escalators to Team of Two Workers <sup>3</sup>
	Registered Engineers	Registered Workers	General Workers	Passenger Lifts	Goods & Service Lifts <sup>2</sup>	Total Lifts	Escalators	
	1	8	0	209	0	209	0	52.25 <sup>4</sup>
	3	6	3	122	71	193	4	35.89
	3	60	13	739	944	1683	23	33.81
	1	8	0	111	5	116	16	32.38
	5	117	45	2378	2	2380	152	31.25
	11	144	12	2205	29	2234	174	30.69
	13	259	43	4227	8	4235	384	30.56
	3	33	15	651	2	653	59	29.63
	19	19	2	236	0	236	74	29.52
	36	409	156	7195	66	7261	852	28.60
	2	25	4	409	0	409	0	28.21
	33	534	104	7244	58	7302	1638	27.93
	7	97	29	1383	7	1390	347	27.52
	2	19	8	346	0	346	15	26.74
	26	537	124	7574	39	7613	509	24.52
	5	168	28	1856	8	1864	408	23.14
	34	724	252	9103	133	9236	2116	23.13
	2	22	2	272	0	272	0	22.67
	24	450	108	5349	5	5354	946	22.57
	1	22	0	208	0	208	38	22.36
	4	26	1	278	1	279	11	21.44
	3	53	7	590	5	595	4	19.88
	3	16	4	190	0	190	8	19.80
	1	5	2	68	0	68	0	19.43
	1	7	2	87	0	87	0	19.33
	2	21	5	204	0	204	21	17.31
	8	102	28	1114	6	1120	0	17.18
	29	510	178	5103	35	5138	632	16.72
	8	99	27	917	18	935	113	16.49
	1	8	3	77	0	77	9	15.64
	1	12	0	82	20	102	0	15.33
	2	30	1	161	12	173	9	11.35
	8	30	5	191	2	193	0	10.97
	1	41	40	264	0	264	45	7.63
	2	76	74	28	0	28	0	0.37
	1	29	87	15	2	17	0	0.28
	2	3	0	0	0	0	0	0.00
	2	20	36	0	0	0	0	0.00
	14	22	0	0	0	0	0	0.00
	6	50	4	0	0	0	0	0.00
	0	0	0	0	0	0	0	N/A
	0	0	0	0	0	0	0	N/A
	0	0	0	0	0	0	0	N/A

Listed in descending order of their ratios of "Number of Lifts and Escalators to Team of Two Workers"

- Note : 1 Without affecting the overall statistics, the contractor's name is omitted to protect the company's business information.
- 2 In general, goods and services lifts are less complicated and the maintenance time required would be less than a half of passenger lifts.
- 3 Ratio of Number of Lifts and Escalators to Team of Two Workers = [Number of Passenger Lifts + 0.5 x Number of Goods and Service Lifts + Number of Escalator] / [(Number of Registered Worker + Number of General Worker) / 2].  
According to the survey on maintenance time conducted by Vocational Training Council for EMSD in 2015 with on-site inspection and log-book analysis, the manpower level of a contractor for maintenance work is considered acceptable if the aforesaid ratio does not exceed 50.
- 4 The contractor was requested to improve the manpower situation and improvement was achieved to reduce the ratio to the acceptable level of less than 50 in 2016.

**E. Statistics on Installation and Manpower by Registered Contractors in 2014**

Contractor <sup>1</sup>	Number of							Ratio of Number of Lifts & Escalators to Team of Two Workers <sup>3</sup>
	Registered Engineers	Registered Workers	General Workers	Passenger Lifts	Goods & Service Lifts <sup>2</sup>	Total Lifts	Escalators	
	17	13	0	238	0	238	71	47.54
	1	5	1	118	5	123	14	44.83
	3	5	6	228	0	228	6	42.55
	1	11	0	229	0	229	0	41.64
	3	87	2	1443	7	1450	357	40.53
	2	60	14	808	997	1805	26	36.01
	5	113	26	2093	1	2094	144	32.19
	36	393	134	7112	66	7178	860	30.38
	2	23	2	379	0	379	0	30.32
	13	153	11	2222	13	2235	177	29.34
	12	263	41	4050	6	4056	352	28.98
	28	548	60	6923	423	7346	1630	28.83
	30	688	133	9029	109	9138	2125	27.30
	21	502	91	7446	37	7483	487	26.82
	2	22	4	313	0	313	17	25.38
	1	21	0	217	6	223	45	25.24
	22	470	35	5275	8	5283	879	24.39
	5	185	17	1712	52	1764	458	21.74
	8	80	25	1134	4	1138	0	21.64
	1	7	3	105	0	105	0	21.00
	2	72	7	764	1	765	59	20.85
	1	20	0	177	0	177	24	20.10
	2	18	0	171	0	171	8	19.89
	4	24	2	234	1	235	17	19.35
	3	27	3	276	0	276	0	18.40
	25	474	185	4929	35	4964	595	16.82
	3	61	3	531	5	536	3	16.77
	2	14	7	157	1	158	16	16.52
	6	107	17	897	16	913	107	16.32
	2	20	3	140	0	140	9	12.96
	1	5	6	64	11	75	0	12.64
	1	10	5	59	0	59	9	9.07
	8	33	8	183	4	187	0	9.02
	1	9	8	0	60	60	0	3.53
	1	5	0	1	0	1	4	2.00
	1	68	51	27	0	27	0	0.45
	1	33	73	19	1	20	0	0.37
	2	4	0	0	0	0	0	0.00
	2	21	45	0	0	0	0	0.00
	16	21	0	0	0	0	0	0.00
	5	52	11	0	0	0	0	0.00
	1	1	2	0	0	0	0	0.00
	1	0	0	0	0	0	0	N/A

Listed in descending order of their ratios of "Number of Lifts and Escalators to Team of Two Workers"

Note : 1 Without affecting the overall statistics, the contractor's name is omitted to protect the company's business information.

2 In general, goods and services lifts are less complicated and the maintenance time required would be less than a half of passenger lifts.

3 Ratio of Number of Lifts and Escalators to Team of Two Workers = [Number of Passenger Lifts + 0.5 x Number of Goods and Service Lifts + Number of Escalator] / [(Number of Registered Worker + Number of General Worker) / 2].

According to the survey on maintenance time conducted by Vocational Training Council for EMSD in 2015 with on-site inspection and log-book analysis, the manpower level of a contractor for maintenance work is considered acceptable if the aforesaid ratio does not exceed 50.