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September 27, 2005

All Registered Lift Contractors/Engineers

Dear Sirs,

Circular No. 11/2005
Code of Practice on the Design and Construction
of Lifts and Escalators (2000 Edition)
Amendment No. 8

Pursuant to section 27G of the Lifts and Escalators (Safety) Ordinance, Cap. 327, the Code of Practice on the Design and Construction of Lifts and Escalators (2000 Edition) (the Design Code) is to be updated by incorporating requirements for enhanced operational and design features of lifts/escalators and other minor amendments.

The changes have been provided for in Amendment No. 8 of the Design Code, a copy of which is attached herewith for your reference. Please note that the changes covered in Amendment No. 8 forming part of the Design Code shall be effective as from October 1, 2005.

Yours faithfully,



(K. M. WOO)

for Director of Electrical and Mechanical Services

Encl.

c.c. AD/BS, D of Housing (Attn.: TS/2),
D of Buildings (Attn.: CBS/Legislation), D of Fire Services (Attn.: Fire Safety Command),
The Hong Kong General Union of Lift and Escalator Employees
G28/28 SF1 Pt. IV

**Code of Practice
on the Design and Construction of
Lifts and Escalators
(2000 Edition)**

**Amendment No. 8 of 2000 Edition
Requirements for Enhanced Operational and Design Features of Lifts/Escalators and Other
Minor Changes**

(Effective as from October 1, 2005)

<u>Item</u>	<u>Clause</u>	<u>Description</u>
1	Section E Part 1 Clause 1.6	Replace Clause 1.6 by the following: "1.6 Exclusive Use of the Lift Well The well shall be exclusively for the lift. It shall not contain cables or devices, etc., other than for the lift and for telecommunication at the lift car, nor shall it be fitted with any fire sprinklers. "
2	Section E Part 1 Clause 2.1.2	Replace Clause 2.1.2 by the following: "2.1.2 Exclusive Use of Machine or Pulley Room The machine or pulley room shall be used only for accommodating equipment for the operation of the lift, but the following are also permitted in the space: (a) machine for service lifts or escalators; (b) cabling and devices mentioned in Clause 9.7 for enabling telecommunication at the lift cars; (c) equipment for air-conditioning or ventilating these rooms; and (d) fire services installations and equipment as may be required by the Director of Fire Services for these rooms. Fire sprinklers, however, shall not normally be fitted in these rooms. "
3	Section E Part 1 Clause 2.2.3	Replace the last sentence in the 2 nd paragraph of Clause 2.2.3 by the following: " The charger shall be capable of re-charging the batteries fully in not more than 12 hours. "

- 4 Section E Part 1 Clause 3.2.1 Delete the 2nd paragraph of Clause 3.2.1, the clause shall become:
- “3.2.1 Material**
- Doors and their frames shall be constructed in such a way that they will not become deformed in the course of time. To this end, it is recommended that they are made of metal. ”
- 5 Section E Part 1 Clause 3.2.2 Add the following to the end of Clause 3.2.2:
- “ Door panels made of glass shall comply with Clause 7.2.3.3 of EN 81-1.
- The fixing of the glass in doors shall ensure that the glass cannot slip out of the fixings, even when sinking. The glass panels shall have markings giving the name of the supplier/trade mark, type of glass and thickness/configuration.
- Where automatic power operated horizontally sliding doors are made up of glass panels having dimensions greater than stated in Clause 3.6.2, means for minimizing the risk of dragging children’s hands into the gaps between the glass panels and uprights shall be provided. ”
- 6 Section E Part 1 Clause 4.2.4 Replace Clause 4.2.4 by the following:
- “4.2.4 Overload Device**
- Every lift shall be provided with an overload device which shall be of a fail safe design, and be arranged in such a way that the functioning of the device will not be hampered by excessive overloading of the lift car. The overload device shall operate when the load in the car exceeds 110% of the rated load and, upon operation, it shall prevent the power operated doors from closing and the lift car from moving. In addition, it shall give audible and visual signals inside the car. ”
- 7 Section E Part 1 Clause 4.5.1 Replace Clause 4.5.1 by the following:
- “4.5.1 Imperforate Doors and Special Case**
- The car doors shall be imperforate. Doors and their frames shall be constructed in such a way that they will not become deformed in the course of time.
- Special Case: Power operated vertically sliding car doors shall only be permitted in freight lifts and vehicle lifts. These doors may be of mesh or perforated panel construction. The dimensions of the mesh or perforation shall not exceed 10 mm horizontally and 60 mm vertically.

Door panels made of glass shall comply with Clause 8.6.7.2 of EN 81-1.

The fixing of the glass in doors shall ensure that the glass cannot slip out of the fixings, even when sinking. The glass panels shall have markings giving the name of the supplier/trade mark, type of glass and thickness/configuration.

Where automatic power operated horizontally sliding doors are made up of glass panels having dimensions greater than stated in Clause 4.5.5, means for minimizing the risk of dragging children's hands into the gaps between the glass panels and uprights shall be provided. "

8 Section E Part 1 Clause 9.7 Add the following Clause 9.7 after Clause 9.6.3.4:

"9.7 Telecommunication Cabling and Signal Transmission Devices

9.7.1 Cabling and signal transmission devices enabling telecommunication at the lift car may be installed in the machine room and lift well subject to the following,

- (a) all the cabling and signal transmission devices comply with the "Code of Practice for the Protection of Workers and Members of Public against Non-Ionizing Radiation Hazard from Radio Transmitting Equipment" issued by the Office of the Telecommunications Authority;
- (b) the telecommunication cabling and signal transmission devices, and the electromagnetic signals emanated from them shall not affect safety and operation of the lift(s) within the vicinity; and
- (c) all components of the signal transmission devices requiring frequent inspections and checking are not installed inside the lift well. Where antenna is to be attached to the lift car, it should preferably be placed inside the lift car and above the drop ceiling. "

9 Section E Part 1 Clause 10.2.1.4 Replace Clause 10.2.1.4 by the following:

"10.2.1.4 An output signal emanating from an electrical safety device shall not be altered by an extraneous signal emanating from another electrical device placed further down the same circuit or from telecommunication cabling and signal transmission devices installed in the machine room or lift wells, which would cause a dangerous condition to result. "

- 10 Section E Replace Clause 8.4 by the following:
Part 4
Clause 8.4

“8.4 Braking System

8.4.1 General Provisions

8.4.1.1 Escalators shall have a braking system by means of which they can be brought to rest with a largely uniform deceleration and maintained stationary (operational braking); see also Clauses 10.2.1.6 and 10.2.4. There shall be no intentional delay in the application of the braking system, except under Clause 8.4.1.2(c).

8.4.1.2 The braking system shall operate automatically:

- (a) in the event of loss of the voltage supply;
- (b) in the event of loss of the voltage supply to the control circuits; or
- (c) for an escalator installation equipped with protection devices to enable it to sustain operation (ride through) during power supply voltage dips,
 - (i) at the lapse of 0.2 s of a continuous supply voltage dip of more than 10% of the supply voltage; or
 - (ii) at a voltage dip exceeding 60% of the supply voltage, or
 - (iii) at the failure of the protection device.

8.4.1.3 Operational braking is to be effected by an electro-mechanical brake or by other means.

Where no electro-mechanical operation brake is used, an auxiliary brake in accordance with Clause 8.6 shall be provided.

8.4.1.4 In no circumstances an escalator equipped with the protection devices mentioned in Clause 8.4.1.2(c) shall render its operational jerk greater than that arisen from normal application of brake for the same installation without the devices. “

- 11 Section E Part 4 Clause 10.3.1.1 Replace Clause 10.3.1.1 by the following:
- “10.3.1.1 Automatic Starting and Speed Increasing**
- Escalators which start automatically by the passing of a user shall start to move before the person walking reaches the comb intersection line.
- Escalators which accelerate from crawling to their rated speeds automatically by the passing of a user shall start to accelerate before the person walking reaches the comb intersection line.
- This is, for instance, accomplished by :
- (a) lightrays if they are arranged at least 1.30m before the comb intersection line (see L2 in figure 1, detail X); or
 - (b) contact mats if the outer edge of the contact mat is arranged at least 1.80m before the comb intersection line. The length of the contact mat in the direction of travel shall be at least 0.85 m. Contact mats reacting to weight shall respond before the load reaches 150 N, applied to a surface of 25 cm² at any point.
- Constructional measures shall discourage circumvention of the control elements. ”
- 12 Section E Part 4 Clause 10.3.1.2 Add the word “to” after ‘... entered in the direction opposite’ in the 2nd paragraph of Clause 10.3.1.2.
- 13 Section E Part 4 Clause 10.3.2.2 Replace Clause 10.3.2.2 by the following:
- “10.3.2.2 Normal Stopping or Slowing Down, Automatically Operated**
- It is permitted to design the control in such a way that the escalator is stopped or slowed down to its crawling speed automatically after a sufficient time (at least the anticipated passenger transfer time plus 10 s) after the passenger has actuated a control element described in Clause 10.3.1.1. ”