

Our reference 本署檔號 :
(91) in EMSD/LESD 7-2/4 Pt. 4

Telephone 電話號碼 : 2808 3861

Your reference 來函檔號 :

Facsimile 圖文傳真 : 2504 5970

20 October 2011

All Registered Lift Contractors and Engineers

Dear Sirs,

Circular No. 18/2011 (Revision A)
Amendment of Code of Practice on the Design and Construction of Lifts and Escalators – New Requirements for Escalators

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 (2010 Edition) (the Design Code) has been amended by incorporating new requirements for escalators.

The amendments have been provided in Amendment No. 3 of the Design Code, a copy of which is attached herewith for your reference. Please note that the amendments covered in Amendment No. 3 forming part of the Design Code shall become effective as from 1 January 2012 and the new requirements shall be applicable to **escalators** with tendering date on or after 1 January 2012.

Please note that this revised Circular supersedes the Circular No. 18/2011 issued on 11 October 2011.

Yours faithfully,



(W. S. CHUI)
for Director of Electrical and Mechanical Services

- cc. Director of Housing
Director of Architectural Services
The Lift and Escalator Contractors Association
The Registered Elevator and Escalator Contractors Association Limited

The International Association of Elevator Engineers

The Hong Kong General Union of Lift and Escalator Employees

EMSD – CE/AVE, CE/TSCS, CE/P, CE/GES, CE/Mun, CE/HS

Code of Practice
On the Design and Construction of Lifts and Escalators
(2010 Edition)

AMENDMENT No. 3 of 2010 Edition
New Requirements for Escalators

(Effective as from 1 January 2012 and applicable to **escalators** with tendering date on
or after 1 January 2012)

Additional Clauses and revisions marked in **blue** color:

Section E Part 4 Clause	Description
1.1	Enclosure of the Escalator
1.1.1	General Provisions
1.1.1.3	The exterior panels shall withstand a force of 250 N at any point at right angles on an area of 25 cm ² without breakage or deflection resulting in any gap. The fixing shall be designed in that way to carry at least twice the dead load of the enclosure.
1.1.1.4	Any exterior panels which are designed to be opened (e.g. for cleaning purposes) shall be provided with an electrical safety device (see clause 10.4).
1.1.2	Material and Mechanical Strength
1.1.2.4	If glass is used for the interior panel it shall be toughened glass. The minimum thickness of 6 mm shall apply to single layer balustrades. When multi-layer glass balustrades are used, they shall be laminated toughened glass, the thickness of at least one layer shall also be not less than 6 mm.
Clause 1.1.3	Inspection Doors and Trap Doors
1.1.3.6	Inspection covers and floor plates shall be provided with a control device (see clause 10.4).

1.1.5 Balustrades

1.1.5.3 Material and Mechanical Strength of Balustrades

As part of the enclosure of the escalator, the requirements of Clause 1.1.2 shall apply to the balustrades, with the following additional requirements :

- (d) Balustrades shall be designed to resist the simultaneous application of a static lateral force of 600 N and a vertical force of 730 N, both equally distributed over a length of 1 m and acting on the top of the handrail guiding system in the same place.

2.2.2 Lighting and Socket Outlets

2.2.2.1Electrical lighting installation in driving and return stations and machinery spaces ~~machine rooms~~ inside the truss shall be by means of a ~~portable lamp (preferably portable)~~ permanently available in one ~~or~~ ~~all~~ of these places. One or more socket outlets shall be provided in each of these places.

3. Handrail

3.1 General Provisions

The speed of the handrail is permitted to deviate from the speed of the steps, pallets or belt within the limits of 0% to + 2%.

A handrail speed monitoring device shall be provided and shall stop the escalator or passenger conveyor in the event of a hand rail speed deviation of more than -15 % to the actual speed for more than 15 s while the escalator or passenger conveyor is in motion (see clause 10.4).

4.1 Dimensions

4.1.3 For passenger conveyors with an angle of inclination up to and including 6°, ~~larger~~ widths ~~(see z1 of Fig. 3)~~ up to 1.65 m are

permitted. ~~(see also Clause 8.2.2)~~

5.1 Chain Drive for Steps and Pallets

5.1.3 The chains shall be tensioned continuously ~~and automatically~~. The escalator or passenger conveyor shall be stopped automatically before the tensioning device moves in excess of ± 20 mm (see clause 10.4). Tension springs as tensioning device are not permitted. When weights are used for tensioning they shall be safely caught should their suspension break.

7.1 Clearance between Steps or Pallets

7.1.1 Missing Step or Pallet Device

A missing step/pallet (see clause 10.4) shall be detected and the escalator/passenger conveyor stopped before the gap (resulting from the missing step/pallet) emerges from the comb. This shall be ensured by a device provided at each driving and return station.

8.4 Braking System

8.4.1 General Provisions

8.4.1.1 Escalators shall have a braking system by means of ... except under Clause 8.4.1.2(c).

A device shall be provided to monitor the lifting of the braking system after starting the escalator or passenger conveyor (see clause 10.4).

10.3 Controls

10.3.1 Key Switch Starting and Making Available for Use

10.3.1.1 Automatic Starting and Speed Increasing

Escalators which accelerate from ... to accelerate before the person walking reaches the comb intersection line.

Escalators or passenger conveyors which start or accelerate automatically by the entering of a user (stand-by operation) shall move with at least 0.2 times the nominal speed when the person reaches the comb intersection line and then accelerate less than 0.5 m/s².

NOTE: An average speed for a walking person of 1 m/s should be taken into account.

10.4 Conditions for Use of Electrical Safety Devices

Types of electrical safety devices:

- (a) Safety contacts (Clause 10.2.2);
- (b) Safety circuits (Clause 10.2.3), whatever the type of installation;
- (c) Safety circuits (Clause 10.2.3), authorized by the Director in the case of installations requiring special protection against risks of humidity or explosion; and
- (d) programmable electronic systems in safety related applications in accordance with the requirements of EN 62061 directly disconnecting the supply to the contactors or their relay contactors.

The 'X' in the following table indicates the type of device permitted to be used. If there are several 'X's, there is a choice of devices.

(Table can be referred to last page)

11.1.2 Notices Near the Entrances of Escalators

11.1.2.1 The following notices

Whenever possible, these notices shall be given in the form of pictographs. The minimum size of the pictographs shall be 80 mm x 80 mm or 80 mm diameter. Pictographs shall be used as defined in this part of the Code (See Fig. 8).

Clause	Devices	Type of Electrical Safety Device			
		a	b	c	d
1.1.3.4	Check on closed position of inspection doors and traps doors	X	X		X
1.1.5.5(d)	Check on objects being trapped between skirting and steps	X	X		X
1.2.1.2	Check on stopping of succeeding escalators without intermediate exit	X	X	X	X
1.1.1.3 & 1.1.3.6	Opened inspection cover in the area of the truss and/or removed or opened floor plate	X	X		X
1.2.6	Check on closing of adjacent gates	X	X	X	X
2.2.4.3	Stopping devices in the driving and return station	X			
3.1	Monitoring of hand rail speed deviation of more than -15 % to the actual speed for more than 15 s	X	X		X
3.5.3	Check on operation of the handrail entry guard	X	X		X
3.8	Check on breakage of handrail	X			
4.4	Check on objects being trapped at the point where the steps, pallets or the belt enter the comb	X	X		X
4.5	Check on sagging of any part of the step or pallet or belt	X	X		X
5.1	Check on the tensioning device moves in excess of ± 20 mm	X	X		X
5.1.4 & 5.2.3	Check on breakage or undue elongation of step chains or belt	X	X		X
7.1.1	Check on missing step or pallet	X	X		X
8.3.3	Check on breakage or undue elongation of drive chains	X	X	X	X
8.4.1.1	Check on non-lifting of the braking system after starting the escalator or passenger conveyor	X	X		X
8.5.1	Check on operation of the overspeed governor or speed control devices	X	X	X	X
8.5.2	Check on unintentional reversal of direction of travel of the steps, pallets or the belt	X	X		X
8.6.2	Check on operation of the auxiliary brake	X	X		X
10.3.2.3	Emergency stopping devices at or near to the landings of the escalator	X			