

## **Lift and Escalator Installations**

### **Building Works Requirements**

The design and construction of buildings and building works accommodating lift and escalator installations are governed by regulation 9A of the Building (Construction) Regulation which specifies performance requirements in broad terms. Detailed technical standards for meeting the aforesaid requirements are promulgated in the “Code of Practice for the Design and Construction of Buildings and Building Works for the Installation and Safe Use of Lifts and Escalators 2011” (the 2011 Lift Code) issued by the Building Authority (BA).

2. Other standards may also be accepted if proven to the satisfaction of the BA as being capable of achieving equivalent performance. If other standards are to be applied, it will speed up the processing of plans if the full background to such standards and their suitability for local conditions are clearly explained.

### **Adequacy of Fixing Details**

3. Buildings with lift and escalator installations shall be designed and constructed so as to provide adequate structural strength for the safe operation, maintenance and inspection of the lifts and escalators. In this regard, Authorized Persons and Registered Structural Engineers are reminded to pay particular attention to the relevant fixing details, including their layout, specification of structural materials, anchor and load distribution; and to ensure that the machine and pulley rooms as well as liftwells are so constructed to withstand the loads and forces to which they will normally be subjected. Typical examples of such fixing details include those between the supporting building structure and the following components:

- (a) guide rail mounting bracket;
- (b) lift machine; and
- (c) deflector sheave (pulley) bracket.

## **Electrical, Mechanical and Operational Requirements**

4. Requirements for the electrical, mechanical and operational aspects of lifts and escalators are laid down in the “Code of Practice on the Design and Construction of Lifts and Escalators” and the “Code of Practice for Lift Works and Escalator Works” issued by the Director of Electrical and Mechanical Services (DEMS) under the Lifts and Escalators Ordinance, Cap. 618 (LEO).

### **Works Required by the DEMS in Connection with an Application for Permission to Put Lifts or Escalators into Service**

5. Authorized Persons are reminded to ensure that all essential building and lift/escalators works as well as works associated with the lift or escalator installations collectively referred to as the associated works are completed before submitting application to the DEMS under the LEO for permission to put the lifts or escalators into service. A list of the associated works often found incomplete for a lift installation during compliance inspections is attached at Appendix A and that for an escalator installation is at Appendix B for reference.

### **Liftwell Inspection and Emergency Doors**

6. To guard against inadvertent entry, liftwell inspection and emergency doors should be equipped with dual key-operated locks requiring the simultaneous operation of two designated keys for opening from the outside. Operation by a master key is not acceptable.

7. A single locking device operated by a designated key is acceptable if the design and disposition of liftwell inspection and emergency doors can reduce the likelihood of inadvertent entry. Typical examples are where lift landing doors are served as the liftwell inspection and emergency doors, or where the sill of a liftwell inspection and emergency door is 1 m or more above the adjoining floor.

8. Except for lift landing doors, a permanent figure-type warning sign as shown below of size not less than 100 mm high should be provided immediately above or next to a keyhole of an liftwell inspection and emergency door.



9. For alteration works to existing liftwell inspection and emergency doors, the requirements mentioned in paragraphs 6 to 8 above should be complied with.

10. To promulgate the requirements in paragraphs 6 to 8 above, an addendum to the 2011 Lift Code is issued at Appendix C.

(HUI Siu-wai)  
Building Authority

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**List of Associated Works Often Found Incomplete by DEMS  
for a Lift Installation  
Upon an Application for Permission to Put the Lift into Service Was Submitted  
(the list is not exhaustive)**

1.	Permanent doors to machine and pulley room opening outwards, fitted with self-closing devices and proper locking devices. Permanent warning notices on the outside face of the door.
2.	Clear and safe access to machine and pulley rooms.
3.	Adequate railings of suitable height to machine platforms. Appropriate steps or stairways where there was a level difference.
4.	Liftwells, machine and pulley rooms completely enclosed and all unnecessary holes sealed up.
5.	Permanent and adequate lighting for liftwells, machine and/or pulley rooms and/or machine platforms.
6.	Protective guards to ventilating fans. Cross-ventilation through the machine room. Wind guards to ventilation louvers.
7.	Provision of adequate electricity supply by permanent cables.
8.	Proper isolation switch with permanent identification label for each lift, easily accessible from an entrance of the machine room.
9.	MCB and proper isolation switches with permanent identification labels for lighting and/or socket outlets of lift cars, wells or pits, machine and/or pulley rooms.
10.	Unnecessary holes in lift wells, machine and pulley rooms filled up.
11.	Surplus/protruded iron bars inside liftwells all removed.
12.	Inspection doors, emergency doors and inspection traps, where required, with proper locking devices and clear and safe access.
13.	Required partition between lift ways in common liftwells.
14.	Lift pits completely enclosed and waterproofed.
15.	Cat ladders with suitable hand holds for access to pits.

16.	Supporting frames and reinforced wire mesh provided to the liftwell top vents
17.	Permanent and adequate lighting installations in lift lobbies. (If decoration, false ceilings, etc are to be installed in the lift lobby after permission to use the lift has been granted, such decoration/false ceiling shall not affect or obstruct the permanent illumination of the lift lobby.)
18.	Ventilation of liftwells directed to open air either directly or via ducting/the machine/pulley room.
19.	Permanent and adequate lighting in liftwells and lift pits.
20.	Debris and unrelated materials in liftwells, machine and pulley rooms cleared.
21.	Earth bonding for metallic parts in machine rooms.
22.	Associated works (except those purely for decoration purposes) surrounding the landing entrances.
23.	All necessary instructions and notices in both Chinese and English in the lift cars and on the landings.
24.	The maximum permissible load in both Chinese and English indicated on the lifting beams or hooks.

(12/2011)

**List of Associated Works Often Found Incomplete by DEMS  
for an Escalator Installation  
Upon an Application for Permission to Put the Escalator into Service Was Submitted  
(the list is not exhaustive)**

1.	Permanent machine room doors fitted with self-closing devices, with permanent warning notices and proper locking devices.
2.	Clear and safe access to machine rooms.
3.	Unnecessary holes in machine rooms filled up.
4.	Provision of adequate electricity supply by permanent cables.
5.	MCB and proper isolation switches with permanent identification labels for lighting and socket outlets for each escalator.
6.	Proper protective guards where the clearance between the balustrade exterior paneling and any adjacent guard rail/wall at each landing exceeds 100 mm.
7.	Permanent obstruction guards properly installed at floor intersections, building obstacles and on criss-cross escalators.
8.	Adequate clearance between the outer edges of the handrails and the adjacent walls, criss-cross escalators or other building obstacles.
9.	Clear height above the steps and the required unrestricted area of not less than 2.3 m.
10.	The required unrestricted area for accommodating passengers at both landings.
11.	Permanent and adequate lighting around the escalator including both landings. (If decoration, false ceilings, etc are to be installed around the escalator after permission to use the escalator has been granted, such decoration/false ceiling shall not affect or obstruct the permanent illumination around the escalator including both landings.)
12.	The part of wellway, building obstacles or external wall of adjacent criss-cross escalator facing handrail forming a smooth continuous vertical surface.
13.	The underside of false ceiling at floor intersections or bottom deck of adjacent criss-cross escalator forming a smooth continuous flat surface.

(12/2011)

Addendum to the 2011 Lift Code

Paragraph in the Code	Amendments
3.2.7	This paragraph is amended to delete “Inspection doors, emergency doors and”
3.2.8	<p>This paragraph is amended to:</p> <p>“Inspection and emergency doors shall:</p> <p>(a) be equipped with dual key-operated locks requiring the simultaneous operation of two designated keys for opening from the outside and capable of being reclosed and relocked without a key;</p> <p>(b) be capable of being opened from inside the well without a key even when locked; and</p> <p>(c) except for doors in the form of lift landing doors, bear on its outside face a prominent figure-type warning sign of size not less than 100 mm high and immediately above or next to the keyholes of such doors as shown below-</p> <div style="text-align: center;"> </div> <p style="text-align: right;">”</p>
3.2.9	<p>New paragraph is added:</p> <p>Where the design and disposition of liftwell inspection and emergency doors can reduce the likelihood of inadvertent entry, paragraph 3.2.8(a) is not applicable and a single locking device operated by a designated key is acceptable. Typical examples are:</p> <p>(a) lift landing doors serving as the liftwell inspection and emergency doors; or</p> <p>(b) liftwell inspection and emergency doors with their sills being 1 m or more above the adjoining floor.</p>