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Government of Gujarat

ENERGY AND PETROCHEMICALS DEPARTMENTS

**THE GUJARAT LIFTS AND ESCALATORS
RULES, 2001**



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Notification

Energy and Petrochemicals Department,

Sachivalaya, Gandhinagar.

Dated the 16th June, 2001.

The Gujarat Lifts and Escalators Act, 2000.

No. GU/2001/ 33 /GAL-11-2000-5404-K

In exercise of the powers conferred by section 24 of the Gujarat Lifts and Escalators Act, 2000 (Guj- 4-of 2000), the Government of Gujarat hereby makes the following rules, namely :-

CHAPTER-1
PRELIMINARY

1. **Short title and commencement** :- These Rules may be called the Gujarat Lifts and Escalators Rules, 2001.

2. **Definitions** :- (1) In these rules, unless the context otherwise requires:-

(a) "Act" means the Gujarat Lifts and Escalators Act, 2000;

(b) "Annexure" means an annexure appended to these rules;

(c) "automatic control" means a method of operation by which a momentary pressure on a push button sets the car in motion and causes it to stop automatically at any required lift landing;

(d) "bottom car clearance" means the clear vertical distance from the pit floor to the lowest structural or mechanical part, equipment or device installed beneath the car platform, except the girders, shoes, rollers, safety jaw blocks and platform aprons or guards located within three hundred millimeters, measured horizontally from the side of the car platform when the car rests on its fully compressed buffers;

(e) "bottom car runby" means the distance between the car buffer striker plate and the striking surface of the car buffer when the car is in level with the bottom terminal landing;

(f) "bottom Counterweight runby" means the distance between the counterweight buffer striker plate and the striking surface of the counterweight buffer when the car floor is in level within the top terminal landing;

(g) "bottom over-travel" means the distance provided for the car floor to travel below the level of the bottom lift landing when the lift car is stopped by the normal terminal stopping device;

(h) "buffer" means a device designed to stop a descending car or counter weight beyond its normal limit of travel by storing or by absorbing and dissipating the kinetic energy of the car or counterweight;

(i) "call Indicator" means a visual and audible device in the car to indicate to the attendant the lift landings from which calls have been made;

(j) "car apron" or "landing apron" means a protective screen attached to the under-side of the car platform or lift landing as the case may be, to prevent an object from being trapped between the car platform and the lift landing;

(k) "car-door electric contact" means an electric device the function of which is to prevent operation of the driving machine by the normal operating device, unless the car door is in the closed position;

(l) "car body work" means the enclosing body work of the lift car which comprises the sides and roof and is built upon the car platform;

(m) "car frame" means the supporting frame or sling to which the platform of the lift car, its safety gear, guide shoes and suspension ropes are attached;

(n) "car platform" means the part of the car which forms the floor and directly supports the load;

(o) "car switch control" means a method of control whereby the movement on the lift-car is directly under the lift operator by means of a switch in the lift car;

(p) "control" means the system governing starting, stopping direction of motion, acceleration, speed and retardation of moving member;

(q) "collective control" means automatic operation by which calls made by pressing push buttons in the car and at lift landings are registered and answered by the car stopping in floor sequence at each lift landing for which calls have been registered, irrespective of the order in which the calls have been made and until all calls have had attention;

(r) "counter weight" means a weight or series of weights to counter-balance the weight of the lift car and part of the rated load;

(s) "deflector sheave" means an idler pulley used to change the angle or the direction of a rope lead;

(t) "door -center opening sliding" means a door which slides horizontally and consists of two or more panels which open from the center and are usually so interconnected that they move simultaneously;

(u) "door -imperforated" means a door which is not having any perforations other than those required for vision panel of maximum size 100 Square centimeter

(v) "door -single slide" means a single panel door which slides horizontally.

(w) "door -two speed sliding" means a door which slides horizontally and consists of two panels, one of which moves at twice the speed of the other.

(x) "door -vertical biparting" means a door which slides vertically and consists of two panels or sets of panels that move away from each other to open and are so inter connected that they move simultaneously;

(y) "door -vertical lifting" means a single panel door which slides in the same plane vertically up to open;

(z) "door-swing" means a swinging type single panel door which is opened manually and closed by means of spring closer when released;

(ab) "door closer" means a device which automatically closes a manually opened door;

(ac) "door operator device" means a door operated device for opening and closing doors;

(ad) "earthed or connected with earth" means connected with the general mass of earth in such a manner as to ensure at all times an immediate discharge of energy without danger.

(ae) "electrical and mechanical Interlock" means an arrangement provided to control the operation of the car;

(af) "electro-mechanical lock" means a device which combines in one unit, electrical and mechanical inter lock arrangement used jointly for the landing and /or car doors;

(ag) "emergency stop push or switch" means a push button or switch provided inside the car designed to open the control circuit to cause the lift car to stop during emergency;

(ah) "floor leveling switch" means a switch for bringing the car to level at slow speed in case of double speed or variable speed machines;

(ai) "floor-selector" means a mechanism forming a part of the control equipment, in certain automatic lift, designed to operate controls which cause the lift car to stop at the required landings;

(aj) "floor stopping switch" means a switch or combination of switches arranged to bring the car to rest automatically at or near any pre-selected landing;

(ak) "gate lock" or "door lock" means a device as defined in clause (af) for application to a lift landing or lift car door or gate, as the case may be and so designed that the door or gate can only be opened when the lift-car is in the landing zone or by a special key;

(al) "gear less machine" means a lift machine in which the motive power is transmitted to the driving sheave from the motor without intermediate reduction gearing and has the brake drum mounted directly on the motor shaft;

(am) "goods lift" means a lift designed primarily for the transport of goods but which may carry a lift attendant or other persons necessary for the loading or unloading of goods;

(an) "guide rails" means the members used to guide the movement of a lift car or counter weight in a vertical direction;

(ao) "guide rails bracket" means the part of a guide fixing which carries the guide seating or bolts and guide clips, and serves to secure them to building or structure;

(ap) "guide rails fixing" means the complete assembly comprising the guide rails bracket and its fastenings;

(aq) "guide rails shoe" means an attachment to the car frame or counter weight for the purpose of guiding the lift car or counter weight frame;

(ar) "geared machine" means a machine in which the power is transmitted to the sheave through worm, or worm and spur reduction gearing;

(as) "hospital lift" means a lift normally installed in a hospital, dispensary, clinic and designed to accommodate one number bed/stretcher along its depth, with sufficient space around to carry a minimum of three attendants in addition to the lift operator.

(at) "landing call push" means a push button fitted at a lift landing, either for calling the lift car, or for actuating the car indicator;

(au) "landing door" means the hinged or sliding portion of a lift well enclosure, controlling access to a lift car at a lift landing;

(av) "landing zone" means a space extending from a horizontal plane 40 centimeters below a landing to a plane 40 centimeters above the landing;

(aw) "leveling device of a lift car" means any mechanism which either automatically or under the control of the operator, moves the car within the leveling zone towards the landing only, and automatically stops it at the landing;

(ax) "leveling zone" means the limited distance above or below a lift landing within which the leveling device may cause movement of the car towards the landing;

(ay) "lift landing" means that portion of a building or structure used for the reception and discharge of passengers or goods or both into or from a lift car;

(az) "lift machine" means the part of the lift equipment comprising the motor (s) and the control gear therewith, reduction gear (if any), brake (s) and winding drum or sheave, by which the lift car is raised or lowered;

(bc) "lift pit" means the space in the lift well below the level of the lowest lift landing served;

- (bd) "lift well" means the unobstructed space within an enclosure provided for the vertical movement of the lift car (s) and any counterweight (s) including the lift pit and the space for top clearance;
- (be) "lift well enclosure" means any structure which separates the lift well from its surroundings;
- (bf) "lifting beam" means a beam, mounted immediately below the lift machine room ceiling, to which lifting tackle can be fixed for raising or lowering parts of the lift machine;
- (bg) "operation" means the method of actuating the control of lift machine;
- (bh) "operating device" means a car switch, push button or other device employed to actuate the control;
- (bi) "overhead beams" means the members, usually of steel, which immediately support the lift equipment at the top of the lift well;
- (bj) "over speed governor" means a device which brings the lift car and /or counterweight to rest by operating the safety gear in the event of the speed in a descending direction exceeding a predetermined limit;
- (bk) "passenger lift" means a lift designed for the transport of passengers;
- (bl) "position and /or direction indicator" means a device which indicates on the lift landing or in the lift car or both the position of the lift car in the lift well or the direction or both in which the lift car is travelling;
- (bm) "rated load" means the maximum load which the lift car is designed and installed to carry safely at its rated speed;
- (bn) "rated speed" means the maximum speed attained by the lift car in the upward and downward direction with rated load in the lift car;
- (bo) "retiring cam or retiring ram" means a device which prevents the landing doors from being unlocked by the lift car unless it stops at a landing;
- (bp) "roping multiple" means a system of roping where in order to obtain a multiplying factor from the machine to the car, multiple falls of rope are run around sheaves on the car or counterweight or both. It includes roping arrangements of 2 to 1, 3 to 1 etc.;
- (bq) "safety gear" means a mechanical device attached to the lift car or counterweight or both, designed to stop and to hold the car or counterweight to the guides in the event of free fall, or, if governor operated, of over-speed in the descending direction;
- (br) "safety gear- instantaneous" means a mechanical device in which the action on the guide rails is effected by means of serrated rollers or cams or wedges applied instantaneously in an emergency;
- (bs) "safety gear- progressive" means a mechanical device in which the action on the guide rails is effected by means of serrated rollers or cams or wedges applied progressively in an emergency;
- (bt) "section" means a section of the Act;
- (bu) "service lift" means a lift with a car which moves in guides in vertical direction, has net floor area of one square meters, total inside height of 1.25 meters, whether or not provided with fixed or removable sheaves and capacity not exceeding 250 Kilograms and is exclusively used for carrying materials and shall not carry any person;
- (bv) "sheave" means a rope wheel, the rim of which is grooved to receive the suspension ropes but to which the ropes are not rigidly attached and by means of which power is transmitted from the lift machine to the suspension ropes;
- (bw) "slack rope switch" means switch provided to open the control circuit in case of slacking of rope (s);

(bx) "stroke of buffer" means the distance, the contact end of the spring can move under a compressive load until the spring is compressed solid;

(by) "suspension ropes" means the ropes by which the car and counterweight are suspended;

(bz) "terminal slow down switch" means a switch to cut off the energizing current for release so as to bring the car automatically to stop from over runs at high speeds or a switch provided for double speed machine to cut off the supply of relays controlling the high speed at terminal landings;

(cd) "terminal stopping device- normal" means a device for cutting all the energizing current in case of car traveling beyond the top or bottom landings or a device which cuts off the energizing current so as to bring the car to a stop at the top and bottom level;

(ce) "terminal stopping device- final" means a device which automatically causes the power to be discontinued to an electric lift driving machine motor and brake, independent of the functioning of the normal terminal stopping device, the operating device or any emergency terminal stopping device, after the car has passed a terminal landings;

(cf) "top car clearance" means the shortest vertical distance between the top of the car cross head and the nearest part of the overhead structure or any other obstruction when the car floor is in level with the top terminal landings;

(cg) "top counterweight clearance" means the shortest vertical distance between top most part of the counterweight structure and the nearest part of the overhead structure or any other obstruction when the car is in level with the bottom terminal landing;

(ch) "travel" means the vertical distance between the bottom and top lift landings served in case of lift and the vertical distance between bottom terminal landing and the top terminal landing in case of an escalator;

(ci) "trailing cable" means a flexible cable providing electrical connection between the lift car and a fixed point or points:

(2) All other words and expressions used herein and not defined shall have the meanings respectively assigned to them in the Act:

CHAPTER-II

GENERAL REQUIREMENTS

3. Permission for installing lift or escalator or for making additions or alterations to the installed lift or escalator. (1). Every Owner of a place intending:-

(i) to install a lift or an escalator in such place, or

(ii) to make additions or alterations to a lift or an escalator already installed at such place, shall make an application in form set out in Annexure-I, in case of a lift and in form set out in Annexure II, in case of an escalator to the officer authorized under sub section (1) of Section 3 before any work in connection with the installation of the lift or escalator or additions or alterations there to is started. Every such application shall be accompanied by three copies of drawings of the installation, or as the case may be, of the additions and alterations duly signed by the applicant and a declaration in form set out in Annexure-III from the person to whom the applicant proposes to entrust the work of installing the lift or escalator, or as the case may be of additions and alternation there to.

(iii) Drawing shall be submitted with the following particulars in case of a lift, namely :-

- (a) Layout of the lift installation,
- (b) Plan,

- (c) Sectional elevation,
- (d) Arrangement of doors,
- (e) Lift well enclosure,
- (f) Size and position of the machine room relating to the lift well,
- (g) Position of hoisting machines,
- (h) Number of floors to be served and total travel,
- (i) Wiring diagram of the lift well enclosure, machine room, control panel and lift equipment,
- (j) Position of main switches,
- (k) Details of earthing.

NOTE : The scale of the drawing shall not without the special permission in writing of the Chief Inspector, be less than 20 millimeters to a meter for the plan, and 10 millimeters to a meter for elevation.

iv) Drawing shall be submitted along with the following particulars in case of an escalator namely :-

- (a) Layout of the escalator installation,
- (b) Plan,
- (c) Sectional elevation,
- (d) Angle of inclination of the escalator with the horizontal;
- (e) Width of the escalator,
- (f) Vertical rise of the escalator
- (g) Arrangement of track and trusses or girders;
- (h) Position of top and bottom landings;
- (i) Size and position of the machine room with respect to the escalator;
- (j) Position of the escalator machine;
- (k) Details of complete step treads and complete assemblies;
- (l) Wiring diagram of the machine room, control panel and escalator equipment;
- (m) Position of main switches,
- (n) Details of earthing.

NOTE : The scale of the drawing shall not, without the special permission in writing of the Chief Inspector, be less than 4 centimeter to a meter;

(2) On receipt of an application under sub-rule (1), the officer authorised under sub section (1) of section 3 shall, after making such enquiry and requiring the applicant to furnish such information as may be necessary, forward the application with his remarks to Chief Inspector. The Chief Inspector may there upon either grant or refuse the permission to erect the lift or escalator.

(3) The regulations of the concerned local authority or urban development authority relating to providing the lift or escalator, as the case may be, shall be complied with by the owner making the application under sub rule (1).

4. Licence to use lift or escalator:-(1) The owner of a place who is permitted to install a lift or an escalator in such place shall within one month after the lift or escalator is installed, make an application to the officer authorised under sub section (1) of section 4 for a licence for operating the lift or escalator. The notice and the application shall be in form set out in Annexure-IV and shall be accompanied by a declaration in form set out in Annexure-V from the person who has installed the lift or escalator.

(2) Every such application shall be accompanied by a challan showing the payment of the necessary fee as proscribed in Rule 16.

(3) On receipt of a report from such officer given after due inspection to the effect that the lift or escalator installation conforms to the requirements of the Act and the rules made there under, the Chief Inspector may grant the licence to work the lift in form set out in Annexure VI in case of a lift and in form set out in Annexure-VII, in case of an escalator and it shall be subject to the terms and conditions set out therein.

5. Application for licence in case of existing lifts and escalators. Every owner of a place in which a lift or escalator has been installed before the date of the commencement of the Act shall, within three months from such date, apply in form set out in Annexure VIII for a licence in case of a lift and in form set out in

Annexure IX, in case of an escalator for operating such lift or an escalator and shall also furnish further information as may be required in this behalf by the Chief Inspector.

6. Grant of licence in case of existing lifts and escalators.-On receipt of an application under rule 5, the Chief Inspector, after making or causing to be made such enquiry as he may deem necessary, may grant a licence in form set out in Annexure- VI in case of lift and in form set out in Annexure-VII, in case of an escalator on such terms and conditions as may be prescribed.

7. Restrictions on granting licence for operating lifts or escalators.-No licence for operating a lift or an escalator shall be granted unless the requirements laid down in Chapter III or IV, as the case may be, have been complied with in respect of such lift or escalator;

Provided that a lift or an escalator, which has been installed before the commencement Act, for which the requirement of the rules in Chapter-III or IV, as the case may be, can not, in the opinion of the Chief Inspector, be strictly complied with within reasonable expenditure and with all reasonable efforts, may be granted licence not withstanding the deficiencies, if the Chief Inspector is satisfied that the working of the lifts or escalator is not likely to cause danger to any person.

8. Renewal of licence.-Every licence for operating a lift or an escalator shall be renewable at an interval of every three years. Application for renewal of the licence in the form set out in Annexure X together with the licence, the challan showing the payment of the renewal fee as prescribed in rule 16 and a report made under section 16 shall be submitted to the Chief Inspector not less than thirty days before the date on which the period of validity of the licence is due to expire. In the event of the holder of a licence failing to renew the licence in the said manner and before the date of its expiry, the licence shall become void and a fresh licence shall have to be obtained.

9. Terms on which lift or escalator shall be operated.-Every lift or escalator shall be operated subject to the following terms and conditions:

(a) It shall be the responsibility of the owner to get his lift or escalator maintained through a person holding the authorization under rule 11. Declaration of the person accepting the same shall be furnished in the prescribed form set out in Annexure XI within one month from the date of grant of licence or its renewal.

(b) It shall be the responsibility of the owner to get his lift or escalator inspected and tested as per the periodicity prescribed in section 16 by a person authorized under section 13 and submit such inspection and test report to the Chief Inspector;

(c) It shall be responsibility of the owner of the lift or escalator to maintain the lift or escalator and its installation in accordance with the requirement laid down in these rules;

(d) The owner shall forthwith report to the officer authorized under sub section (1) of section 10 any defect noticed in the operation of the lift or escalator;

(e) The owner shall not carryout any additions or alternations to a lift or escalator installed without obtaining permission in that behalf from the officer authorised under section 9;

(f) The owner shall not operate or cause the lift or escalator to be operated which is not in safe working condition;

(g) Every person entrusted with work of maintenance of the lift or escalator and its installation by the owner under rule 11 shall satisfy himself that all the safety devices are functioning properly while the lift or escalator is in use and report to such owner any defect noticed in the installation;

(h) If any part, enclosure gate or fastening of a lift or escalator is damaged or broken, the owner shall immediately get it repaired and put it in satisfactory working condition. The owner shall be responsible to keep the safety gears and over speed governors in good order and all parts of the lift or escalator free of dust or dirt. The owner shall not weld any broken or damaged parts which are subject to tension, torsion, or bending or parts on which the lift car or escalator is supported;

(i) The owner shall forthwith replace all controlling, lifting and balance weight ropes chain and wires, which indicate excessive wear or splintering;

(j) The owner shall record details of every repair made to the lift or escalator in a log book, which shall be maintained for each lift or escalator installation separately;

(k) The owner shall remedy immediately every defect noticed in the lift or escalator installation reported by the lift attendant or any other person;

(l) The owner shall see that the following work is carried out by an authorized person appointed by him under these rules at least once in a month and the results are recorded by such person in the log book, namely;

(a) For lifts

- (i) Cleaning and lubricating the guides,
- (ii) Examining the ropes and their attachments,
- (iii) Examining the safety devices,
- (iv) Examining and lubricating the door locks,
- (v) Examining the moving parts and
- (vi) Examining all electrical connections including lighting, plug point and earthing,

(b) For Escalators

- (i) Cleaning of escalator pit,
- (ii) Cleaning and lubricating all moving parts;
- (iii) Examining the balustrade and their attachments;
- (iv) Examining the safety devices,
- (v) Examining and lubricating all the parts of machinery which require lubrication,
- (vi) Examining the worm and gear, the track, the trusses, the step treads and landings,
- (vii) Examining all electrical wiring controlling devices and earthing of the entire machineries with controlling switches,

(m) Whenever the lift or escalator is out of order, the owner shall see that the machine room and all the landing gates or doors are securely locked and the users of the lifts or escalators informed by a notice affixed at any conspicuous place at each floor that the lift or escalator is out of order.

(n) It shall not be possible to control the car from any other position and the car shall not move until all safety devices are in position;

(o) No person shall willfully interfere with any mechanism of the lift or escalator installation.

(p) Whenever the lift or escalator is under maintenance, the owner shall see that indicating boards to this effect are affixed in the lift car and at every floor in case of lift and in conspicuous positions in case of escalator.

10. Order for repairing the lift or escalator and prohibiting the use thereof:- An order under sub section (2) of section 10 shall be issued as early as possible in the form set out in Annexure-XII and shall be served on the owner, agent or occupier of the premises or other person responsible for the working of the lift or escalator and the person on whom the order is served, shall comply with the order within the time as may be specified therein and shall report the compliance in writing to the officer by whom the order is served.

11. Authorization for erection, maintenance and inspection of lifts or escalators:-

(1) No person shall be authorised under section 13 of the Act to carry out erection and maintenance of lifts or escalators unless such person fulfills the requirements as contained in Annexure XIII;

(2) No person shall be authorised under section 13 of the Act for the maintenance of lifts or escalators unless such person fulfills the requirements as contained in Annexure XIV;

(3). No person shall be authorized for the inspection and testing of lifts or escalators under section 13 unless such person fulfills the requirements as contained in Annexure XV;

(4). Person desirous of carrying out the work of erection and maintenance, maintenance or inspection and testing of escalators shall be required to obtain separate authorization for each purpose;

(5) The authorization granted under this rule shall be valid for the calendar year during which it is granted and shall be renewable every year subject to compliance of terms and conditions prescribed for the purpose;

12. Appointment of lift attendant :- A lift attendant for a passenger and hospital lift operating in every premise other than residential premise shall be appointed in writing by the owner of such lift and such attendant shall be on duty for the whole period during which the lift is put into use. No person shall be eligible for appointment as a lift attendant unless he possesses the education up to 4th standard, is mentally and physically fit and is conversant with the proper operation of the lift as well as rescue operation in case of emergency and has attained the age of 18 years. The name of such attendant shall be reported to the officer authorised in this behalf by the State Government from time to time:

Provided that in case of lift operating in a residential premise, the appointment of such lift attendant shall be necessary only when the lift is put into attendant mode.

13. Intimation of accidents :- Where any accident occurs in the operation of any lift or escalator which results or is likely to have resulted in loss of human life or injury to any person, the owner or any agent appointed by the owner under sub section (1) of section 14, shall inform the Inspector immediately about the occurrence of the event of accident and a detailed report in the form set out in Annexure XVI be submitted within 48 hours of knowledge of occurrence of fatal and all other accidents.

14. Unused lifts or escalators :- (1). Where a lift or an escalator installed at any place ceases to be used as lift or escalator, the owner or his agent, if any, shall forthwith give a notice thereof in writing to the Inspector and shall either remove it or maintain it in such safe condition so as to prevent any danger to the persons after disconnecting it entirely from all sources of power.

(2) All gates and doors in case of such unused lift shall be efficiently locked so as to prevent the entry of unauthorized persons to the lift well and the owner or his agent shall, if ordered by the Inspector so to do, take such other precautions as are considered necessary by the Inspector to prevent the danger from such unused lift or escalator.

15. Change of name in the licence and issue of duplicate thereof :- (1) The change of name in the licence may be allowed on an application for the purpose to the Chief Inspector along with the payment of fee as prescribed in Rule 16.

(2) A duplicate licence may be issued on application made for the purpose to the Chief Inspector along with payment of fees as prescribed in Rule 16. Necessary proof may be submitted as may be required by the Chief Inspector.

16. Fees for licencees, inspection and authorization :

(1) Fees for obtaining licence for operating the lift or escalator.

(a) For lift having the speed upto 0.63 meter per second Rs. 500/-

(b) For lift having the speed in excess of 0.63 meter per second but upto 1.00 meter per second Rs. 800/-

(c) For lift having the speed in excess of 1.00 meter per second Rs. 1000/-

(d) For escalator Rs. 5000/-

- (2) (a) Fee for renewal of licence Rs. 300/-
- (b) Fee for change of name in the licence Rs. 500/-
- (c) Fee for grant of duplicate licence Rs. 100/-

(3) Fees for Initial inspection -

- (a) For lift having the speed upto 0.63 meter per second Rs. 500/-
 - (b) For lift having the speed in excess of 0.63 meter per second but upto 1.00 meter per second Rs. 800/-
 - (c) For lift having the speed in excess of 1.00 meter per second Rs. 1000/-
 - (d) For escalator Rs. 5000/-
- (4) Fees for periodical inspection carried out by the officer authorised in this behalf by the State Government.

- (a) For lift having the speed upto 0.63 meter per second Rs. 200/-
- (b) For lift having the speed in excess of 0.63 meter per second But upto 1.00 meter per second Rs. 300/-
- (c) For lift having the speed in excess of 1.00 meter per second Rs. 500/-
- (d) For escalator Rs. 2500/-

(5) Fees for the issue of certificate for authorization.

- (a) For erection and maintenance of the lifts Rs. 3000/-
- (b) For erection and maintenance of escalators Rs. 5000/-
- (c) For maintenance of lifts Rs. 2000/-
- (d) For maintenance of escalators Rs. 4000/-
- (e) For inspection of lifts Rs. 1000/-
- (f) For inspection of escalators Rs. 2000/-

(6) Fees for renewal of authorization

- (a) For erection and maintenance of lifts Rs. 1500/-
- (b) For erection and maintenance of escalators Rs. 2500/-
- (c) For maintenance of lifts Rs. 1000/-
- (d) For maintenance of escalators Rs. 2000/-
- (e) For inspection and testing of lifts Rs. 500/-
- (f) For inspection and testing of escalators Rs. 1000/-

(7) Fees for grant of duplicate certificate of authorization

- (a) For lifts Rs. 500/-
- (b) For escalators Rs. 1000/-

(8) Fee for the inspection made at the request of the owner of the premises to whom licence for working of the lift or escalator has been granted (i) For lifts Rs. 500/- (ii) For escalators Rs. 2500/-;

(9) In the case of second or subsequent inspection, examination or test made due to the neglect or failure of the owner or the agent to carry out within the stipulated time any work specified in any written order of the officer authorized in this behalf by the State Government or a breach of any of the provision of the Act or rules, the fees at one half of the rates prescribed in the sub rule (3) or (4), as the case may be, shall be levied;

(10) The fees in respect of licence or the certificate of authorization payable under this rule shall be paid along with the application for the purpose, whereas the fee for the inspection payable under this rule shall be paid prior to or at the time of inspection or within ten days from the date of such inspection. The demand of the inspection fee shall be made in form set out in Annexure XVII;

(11) The fees leviable under this rule shall be paid by way of challan under the appropriate head of account prescribed from time to time and the original challan shall be forwarded to the Chief Inspector.

17. Conformity with the Indian Standard Specifications.- All materials, fittings, appliances, etc., used in lift or escalator installations shall conform to the relevant specifications of the Bureau of Indian Standard wherever they exist. In cases of materials for which Indian Standard do not exist, the materials shall be of approved workmanship and quality. The various guide lines prescribed by the Bureau Indian Standard in this regard shall also be followed by the person to whom they are applicable.

18. Conformity with National Building Code.-The provisions of the National Building Code of India relating to the installation of the lifts and escalators shall be followed.

19. Installation, operation and maintenance of lifts or escalators.- Every lift or escalator shall be of sufficient mechanical strength for the purpose for which it is intended and shall be installed, protected, operated and maintained in such manner so as to prevent danger.

20. Conformity with Indian Electricity Act and Rules :- All electrical works in connection with installation of electrical lifts or escalators shall be carried out in accordance with the provisions of The Indian Electricity Act, 1910 and the Indian Electricity Rules, 1956.

21. Factor of safety.-The factor of safety for any fabricated part of the lift or escalator shall not be less than five. Higher factor of safety for various other mechanical parts shall be applicable wherever specified by the Bureau of Indian Standards.

22. Instructions for restoration of persons suffering from electric shocks :- Instructions in English or Hindi and Gujarati for the restoration of persons suffering from electric shock, shall be affixed by the owner or his agent in a conspicuous place in the lift or escalator machine room in which the electricity is used.

23. Initial and periodical inspection and testing of lifts or escalators.-(1) Every lift or escalator installation shall be inspected by the officer authorized in this behalf by the State Government. i) before the grant of licence and ii) Once every three years as provided in sub-section (1) of section 16. Form set out in Annexure XVIII for initial as well as periodical inspection of the lift, and form set out in Annexure XIX for initial as well as periodical inspection of the escalator with such variations as the circumstances of each case require, be used for the purposes of this sub-rule.

(2) The owner of the every lift or escalator shall at an interval of every six month from the date of grant of licence under section 4 get his lift or escalator inspected and tested by a person authorised under section 13 of the Act and submit the report to the Chief Inspector regarding the condition of the lift or escalator in the form set out in Annexure-XX or XXI, as the case may be:

(3) In the event of the failure of the owner or his agent of any lift or escalator installation to rectify the defects in its lift or escalator installation informed by the Chief Inspector or the Inspector in the form set out in Annexure -XII and within the time indicated therein, the non use of lift or installation shall be ordered under sub-section(2) of Section 10 after giving to the owner or his agent of such installation 48 hour's notice

in writing of doing so and such installation shall not be put to reuse until Chief Inspector or the Inspector is satisfied that the defects having been removed and the approval in writing for the purpose is given.

Provided that such lift or escalator installation shall not be put into non use if on an appeal made under sub-section (2) of section 11, the appellate authority has suspended such order.

(4) Notwithstanding the provisions of these rules, the owner or his agent or occupier shall at all times be solely responsible for the maintenance of his lift or escalator installation in such condition as to be free from danger.

Provided that when it is proved that the poor maintenance is attributable to any neglect on the part of a person holding the authorization issued under rule 11, such person shall also be held liable along with the owner.

24. Quiet operation of lift or escalator :- Every precaution shall be taken with lift or escalator to ensure the quiet operation of the lift or escalator, doors and machinery.

25. Separate electrical connection - A separate electrical connection or a separate independent circuit, as the case may be, shall be provided exclusively for the use of lift or escalator.

CHAPTER III LIFTS

26. Lift wells :- (1) Every lift well intended for the installation of the lift or any equipment necessary for its maintenance shall be exclusively reserved for that purpose and shall not be used for any other purpose;

(2) The inner sides of a lift well shall, so far as practicable, form a smooth, continuous flush surface devoid of projections or recesses. Where any projections extending inwards from the general surface of the enclosure at or near openings or landing cannot be rendered flush, then they shall be leveled on the underside to an angle of not less than 60 degree from the horizontal by means of metal plates, cement rendering, or other suitable fire resisting materials;

(3) Where there is more than one lift in common well, minimum allowance of 100 millimeters for separator beam shall be made in the widths shown in tables 1 to 4 of rule 43;

(4) Where there is more than one lift in common well, a suitable separator screen through out the whole height of lift well having adequate strength shall be fixed in the lift well to protect the person working in the lift well or in the lift car, from accidental contact with counter weights and other lift car at any stage of their travel;

(5) No room, passenger way or thoroughfare shall be provided under any lift well except in case of the lift having counter weight fitted with over speed governor safety device;

(6) Where a lift car leveling device is operative with the lift car gate opening such interior surfaces shall always form a smooth flush surface below each landing level for a depth to at least the depth of the car leveling zone plus distance through which the lift car may travel of its own momentum when power is cut off;

(7) Sufficient space shall be provided between the guides for the car and the side walls of the lift well enclosure to allow safe and easy access to the parts of the safety gear for their maintenance and repairs;

(8) A notice with the word "lift" shall be placed on the outside of each landing door.

27. Lift well enclosures - (1) Except as provided in sub-rule (2) every lift well shall be protected by a substantial fire resisting enclosure extending on all sides and fitted with gates or doors. The enclosure shall

be so constructed that no person may fall down in the lift well or come into contact with any moving part of the lift when the gates of doors are shut;

(2) Where fire-resistance construction cannot be provided, the lift well shall be enclosed to a height of not less than 2.00 meters or such greater height as may be recommended by the Chief Inspector;

(3) Where wire grill or similar construction is used, the mesh or opening shall not be greater than 3 centimeters, and the lift well enclosure shall be of sufficient strength to resist accidental impacts by users of the staircase or adjoining floors, and in the case of goods lift, by movements of materials in the vicinity;

(4) Where the clearance between the inside of an open type lift well enclosure and any moving or movable part of the lift equipment or apparatus is less than 5 centimeters, the openings in the enclosure shall be further protected by netting of square mesh not greater than 10 millimeters, and of wire not smaller than 1 millimeter or in a manner approved in writing by the Chief Inspector;

(5) There shall be no opening in the lift well enclosure permitting access to the lift car by passing under the counterweight;

(6) In the construction of lift well enclosure glass shall not be used. However condition may be relaxed in case of specially designed, well protected, fully transparent laminated type, sandwich safety glass construction or poly carbonate material sheet construction as may be permitted by the Chief Inspector. A certificate from the qualified structural engineer regarding the proper fixation in respect of such type of construction shall be submitted along with the application for renewal of licence;

(7) Lift wells and wells for the counterweight, if located independently of the lift well, shall be adequately protected by means of suitable enclosure work which shall be extended on all sides from floor to ceiling;

(8) In all counter-weight wells located independently of the main lift well, suitable access shall be provided for the inspection, maintenance and repairs to counter-weights, wire ropes and their anchorages, guides and guide supports;

(9) All such doors giving access to such counter-weight wells shall be provided with electro-mechanical locking devices;

(10) No counter weight shall be allowed to travel in any lift well or part of any lift well other than that to which it belongs;

(11) The lift well enclosure on the sides facing any lift car entrance shall so far as is practicable, be not more than 25 millimeters from the edge of the lift car platform;

(12) The walls enclosing lift well in the buildings having height more than 30 meters shall have fire resistance of not less than two hours. The lift well shall have permanent vents immediately under the machine room not less than 0.2 square meter in clear area;

(13) The lift well for fire lift (a lift to enable fire brigade personnel to get to the upper floors with the minimum delay and to be used exclusively by firemen in an emergency and directly accessible to every landing on every floor), in the building having more than 30 meters height shall be segregated from the other lift wells by means of brick masonry or R.C.C. wall of a fire resistance of not less than two hours;

(14) Fire lift in a building having more than 24 meters travel, shall work at or above the speed of 1.0 meter per second so as to reach the top floor from ground level within one minute;

(15) Thickness of the lift enclosure wall shall be of minimum 150 millimeters for R.C.C structure or 250 millimeters for brick construction;

(16). Capsule lifts as well as glass lifts shall not be allowed to be installed "open to sky". Whenever installed in house, following provisions shall apply.

(a) lift well enclosure of this type of lifts shall have partial covering on one side in which capsule lift protruding structure moves. The area immediately beneath this side of the lift enclosure shall be declared as no man area and shall be provided with adequate guarding.

(b) In case of glass lift, one side of the lift enclosure shall have laminated glasses of minimum 8 millimeters thickness. The area beneath this side of the lift enclosure shall be declared as no man area and shall be provided with adequate guarding.

28. Lift pit :- (1) A pit of adequate depth shall be provided for every lift below the level of its lowest landing;

(2) The lift pit shall be so constructed as to be capable of withstanding the impact of the lift car with the rated load or the impact of the counter-weight when either is descending at rated speed or at governor tripping speed in case governor operated safety gear is used;

(3) Where the pit depth exceed 2 meter, suitable access shall be provided by a ladder or any other suitable device and light point with a switch along with a car control switch at entrance level shall also be provided for facility of maintenance and repair work.

29. Bottom and top car clearances:-(1) Bottom car clearance :- When the car rests on its fully compressed buffer, there shall be a vertical clearance of not less than 600 millimeters between the pit floor and the buffer striker plate or the lowest structural or mechanical part, equipment or device installed. This clearance shall be available beneath the whole area of the platform except for guide shoes or rollers, safety jaw blocks, platform aprons, guards or other equipment located within 300 millimeters measured horizontally from the sides of the car platform; and compensating sheaves :

Provided that in all the cases, including small cars, a minimum clearance of 600 millimeters is available over a horizontal area of 800x 500 millimeters:

Provided also that in all the cases, when the car rests on its fully compressed buffers, there shall be a horizontal clearance of not less than 50 millimeters. between any part of the car and any obstruction of device mounted in the pit.

(2) Top car clearance :- The vertical clearance between the car cross head and the nearest overhead obstruction within 500 millimeters measured horizontally to the nearest part of the cross head when the car platform is in level with the top landing, shall be not less than the sum of the following;

- (a) The bottom counter - weight runby :
- (b) The stroke of the counter -weight buffer used :
- (c) One half of the gravity stopping distance based on :
- (d) 115 percent of the rated speed where oil buffers are used and no provision is made to prevent the jump of the car at counter weight buffer engagement , and.
- (e) Governor tripping speed where spring buffers are used.

Note:-The gravity stopping distance based on the gravity retardation from any initial velocity be calculated according to the following formula :

$$S = 5/V^2 (V \text{ square})$$

Where

S= free fall in millimeters (gravity stopping distance), and

V= initial velocity in meter per second

(d) 600 millimeters.

Where there is a projection below the ceiling of the well and the projection is more than 500 millimeters, measured horizontally from the center line of the cross head, but over the roof of the car, a minimum

vertical clearance not less than that calculated above shall be available between the roof of the car and the projection:

Provided that the vertical clearance between any equipment mounted on top of the car and the nearest overhead obstruction shall be not less than the sum of the three items (a), (b) and (c) as calculated above plus 150 millimeters.

30. Bottom runby for cars and counter weights:- (1) The bottom runby of cars and counterweights shall be not less than the following:

- (a) 15 centimeters where oil buffers are used,
- (b) Where spring buffers are used:
 - (i) 15 centimeters where variable speed drive is used; and
 - (ii) Not less than the following where constant speed drive is used:

RATED SPEED	RUNBY
Meter per second	Centimeters
Upto 0.125	07.5
0.125 to 0.25	15.0
0.25 to 0.50	22.5
0.50 to 1.00	30.0

- (2) Maximum bottom runby :- The maximum bottom runby shall not exceed the following :
 - (a) 60 centimeters for cars, and
 - (b) 90 centimeters. for counter weights.

31. Top Counter weight Clearances:- The top counter weight clearance shall not be less than the sum of the following four items :

- (a) The bottom car runby;
- (b) The stroke of the car buffer used
- (c) 15 centimeters; and
- (d) One -half the gravity stopping distance based on :
 - (i) 115 percent of the rated speed where oil buffers are used ; and
 - (ii) Governor tripping speed where spring buffers are used.

32. Landing doors.- (1) The landing doors of all lifts other than goods lift shall be imperforate

(2) All landing openings in lift well enclosure shall be protected by doors which shall extend the full height and full width of the landing opening. The top track of a landing door shall not obstruct the entrance to the lift car;

(3) The distance between the lift well side of the car door and the lift well side of the landing door shall not exceed 13 centimeters; where the car door or the landing door consists of two or more panels, the 13 centimeters dimensions shall apply to the door panel nearest to the side edge. The distance between the car and the landing sills shall not exceed 30 millimeters;

(4) The opening for the landing doors shall be not wider than that of the width of lift car. Minimum landing door opening width and height shall be 0.7 m and 2m respectively;

(5) Landing doors and their tracks shall be capable of withstanding a thrust of 345 N applied normally at any point, excepting any vision panel, without causing permanent deformation and without the doors being sprung from their tracks;

1

[1 N (newton) = ----- Kgms]

9.81

(6) In the case of manually operated landing doors and car doors, a vision panel, with maximum 225 millimeters x 125 millimeters in size shall be provided. Any projection on or recesses (including vision panels) in sliding car doors shall be kept to a minimum in order to avoid finger trapping between sliding parts of the door and any fixed part of the structure;

(7) Hangers and tracks for doors together with their fixings shall be of adequate strength to withstand stresses specified in sub-rule (5). Means shall be provided to prevent hangers for all landing sliding doors from jumping the tracks or jamming, and suitable stops shall be provided to prevent the hanger carriage from leaving the end of the track;

(8) The landing doors shall be securely fixed. The landing doors which are self closing shall be equipped with safety devices fitted on lift door to prevent persons while entering or leaving the lift car;

(9). Swing doors may be used where hoist way width is not enough to accommodate sliding doors. The distance between swing door and the lift car door shall not exceed 7.5 centimeters upto a height of 600 millimeters from the bottom of the door;

(10) Entrance frame of the swing door shall be designed to support in place the panel with its hinges or pivots, door closer if attached to the frame and interlock. It shall withstand the forces referred to in Sub-rule (5) and the forces resulting from the normal opening of the door or normal attempts to open it when locked in the closed position;

(11) All collapsible type landing doors provided in case of lifts installed prior to the commencement of these rules and for goods lift used on industrial premises shall be of a close picket type and no openings shall exceed 5.5 centimeters in width between the vertical members of the doors when it is fully extended;

(12) Automatic fire door or shutter which operates by means of a fusible link or otherwise, due to the action of heat, shall not be allowed in any landing, opening or in the lift-well enclosure of any lift if such opening provides an access for exit from the building;

(13) In swing type doors the vision panels shall be so located that lift operator can have convenient vision when opening the door from the lift car side;

(14) A door open alarm shall be provided to draw attention when a car or landing door which has been left open in passenger lift ;

(15) For the lift in buildings having travel of more than 30 meters;

(i) The landings doors shall have fire resistance of not less than one hour; and

(ii) The landing door for fire lift shall be power operated, automatic closing and opening type, and the words 'FIRE LIFT' shall conspicuously be displayed in radium paint on lift landing doors on each floor.

33. Locking devices for landing doors : - (1) Every landing gate or door shall be fitted with locking device which shall comply with the following requirements, unless otherwise permitted in writing by the Chief Inspector;

(a) Suitable means shall be provided so that it shall not be possible to open the gate or door from the landing side unless the lift car is in the landing zone pertaining thereto;

Provision shall be made so that landing gate or door may be opened in case of an emergency or for inspection by the Inspector or by any authorized person, by means of a special key or other suitable device, irrespective of the position of the lift car.

(b) No lift car shall be started or kept in motion, unless all landing gates or doors pertaining to the lift are in the closed position;

(2) The electrical and mechanical parts of all locking devices for gates or doors, shall be sufficiently strong so that reasonable wear may not cause an unsafe condition;

(3) Every electro-mechanical lock shall be suitably encased and the removal of any detachable cover fitted to such casing must not affect the operation of the locking device. Where springs are used in locking devices, they shall be of compression type only and properly supported;

(4) The contacts of locking devices for landing gates or doors shall be opened positively;

(5) The locking devices for landing doors shall be so designed that the lock contact is not closed until the door is closed, and the circuit shall not be completed until the leading edge of the door is within 5 millimeters of the nearest face of the door-jamb or when the leading edges of the center opening door are within 50 millimeters contact of each other:

Provided that the locking device shall not prevent the operation of the lift whilst the emergency release push is in temporary use, or when the lift car is being moved under the control of the leveling device.

(6) Contact shall be of solid type pivoted, hinged on sliding and of sturdy construction;

(7) Provision shall be made on lift operated from the car and landings to prevent the opening of any landing door when the car is passing that zone in response to a call from another landing;

(8) The levers operating the mechanical part of the locking device shall be protected from interference from the landing side of the lift enclosure;

(9) Locking devices used with multiple panel doors shall lock all panels of the doors or only one panel provided that the interconnecting mechanism of door panels is so arranged that the locking of one will prevent the movement of all panels, notwithstanding the breakage of chain or rope used for interlocking the panels.

When a door locking device is used on one panel of vertically biparting landing door reliance shall not be pressed on gravity to keep the other panel closed.

34. Guide rails:- (1) Car and counter weight guide rails shall be of steel in all cases except where the nature of the processes carried on in the building render them unsuitable due to acid fumes for similar causes. In such cases prior approval of the Chief Inspector shall be obtained;

(2) For passenger and goods lifts having rated speed of more than 0.50 meter per second, the car guide rails shall have their working surfaces machined;

(3) For passenger and goods lifts having a rated speed of more than 1.5 meter per second the counter weight guide rails shall have their working surface machined;

(4) Round guide rails and cast iron guide rails shall not be used. "T" section to be adopted shall be one of the sizes specified in relevant Indian Standard or any other alternative section, provided they have adequate section modulus, moment of inertia and sectional area to withstand the forces resulting from the application of the car or counterweight safety devices;

(5) Guide rails shall be continuous throughout the entire length of the lift well, and shall be so jointed and fixed to their brackets which shall be of iron or steel so that the guides shall not deflect by more than 6 millimeters under round the clock operation. Wood blocks, plugs or similar methods shall not be used for fixing guide brackets;

(6) Guide rails shall be of such length that it shall not be possible for any other car or counter weight shoes to run off the guide rails;

(7) Guide rails and their fixings shall be so arranged to withstand the action of safety gear when stopping a counter weight or a fully loaded car;

(8) Guide rails shall be held to their fastening by clips of such design that any rotary movement of the clip will not release the guide rails;

(9) The clips used for fastening the guide rails shall be of forged steel, formed steel or malleable iron or machined mild steel. The fasteners used shall conform to the relevant Indian Standard;

(10) If the guides are attached to overhanging stairs, the method of fixing shall be such that no vertical stress is transferred from the guides to the stairs;

(11) Guide brackets and shims if any, shall be of steel and shall not be directly supported and fastened to the lift well enclosure wall unless such wall is of such construction and strength so as to adequately withstand the thrust imposed on the guides under all conditions of the lift service. The fastenings shall be by means of bond blocks built in to the wall or expansion bolts or through bolts with metal plates of such thickness and size so as to adequately distribute the load on the wall.

35. Buffers :- (1) Buffers of spring or oil shall be fitted under the lift car directly or on the pit floor with suitable concrete or steel foundation. Oil resistant rubber buffers may be used for lift having a rated speed not exceeding 0.25 meter per second;

(2) Buffers shall be located symmetrically with reference to the vertical center line of the car frame within a tolerance of 50 millimeters;

(3) Spring or oil buffers shall be used with lift having rated speed in excess of 0.25 meter per second and up to and including 1.5 meter per second. Oil buffers shall be used with lift having rated speed in excess of 1.5 meter per second;

(4) The stroke of the spring buffer for car shall be equal to or greater than the following :

Car Speed Meter per second	Stroke millimeters
0.5 or less	40
0.51 to 0.75	65
0.76 to 1.0	100
1.1 to 1.25	160
1.26 to 1.5	250

(5) Spring buffers shall be capable of supporting a static load equivalent to two times the weight of car and its rated load for car buffers and two times the weight of counter weight for counter weight buffers without being compressed solid;

(6) Spring buffers shall be compressed solid with a static load three times the weight of the car and its rated load for car buffers and three times the weight of counterweight for counterweight buffers;

(7) The minimum stroke of oil buffers shall be such that the car or the counter weight on striking the buffer at 115 percent of rated speed shall be brought to rest with an average retardation of not more than 10 meter per second per second;

(8) Oil buffers shall develop an average retardation not in excess of 10 meter per second per second shall develop no peak retardation greater than 25 meter per second per second having a duration exceeding 1/25 of a second with any load in the car from rated load to a minimum load of 68 Kilograms when the buffers are struck with an initial speed of not more than 115 rated speed for buffers conforming with sub rule (7);

(9) Oil buffers shall be provided with means for determining that the oil level is within the maximum allowable limits. Glass sight gauges shall not be used;

(10) Oil buffers shall be self resetting type.

36. Counter weights :- (1) All Counterweights sections (filler weights), metal or non metal, shall be carried in a steel frame. Means shall be provided to retain counterweight sections in place and prevent displacement. In case of non metallic filler weights, the counter weight sections shall be totally enclosed in a metallic covering. Where tie rods are used, minimum two shall be provided, passing through all sections. The factor of safety of steel frame members and tie rods shall not be less than 5.

(2) All counterweights shall travel between rigid guide rails;

(3) Counterweights shall withstand the effect of buffer impact;

(4) Every counterweight shall travel in juxtaposition to its car in the same lift well;

(5) At least four replaceable guide shoes with renewable lining or set of roller guides shall be provided, two at the top and two at the bottom of the counter weight;

(6) The guide shoes of counterweight shall be fixed and adjusted so that the play in the direction of the width of the counterweight does not exceed 5 millimeters;

(7) If an independent lift car counterweight is used, it shall not be of such weight as will cause undue slackening of any of the suspension ropes during acceleration or retardation;

(8) The travel-way of the counterweight in the lift pit shall be protected by means of a suitable enclosure work up to a height of 2 meters from the floor of the pit. Provided that a gap of 30 centimeters or up to the top of the counterweight buffer, whichever is higher may be kept from the floor of the pit.

37. Lift cars :- (1) Lift cars shall be enclosed on all sides by means of car body and doors or gates and such enclosures shall be at least 2 meter clear in height. A roof solid or perforated, capable of supporting 2 persons, that is, 2 X 68 kilograms shall be provided. Perforations shall be sufficiently close in mesh and shall reject a ball of 25 millimeters diameter to provide reasonable protection against falling articles on any person traveling in the car. The car floor shall be of a flat non-slip surface or checkered surface.

(2) Where car leveling devices are used, substantial aprons of sufficient depth shall be fitted to the car floor to ensure that no space more than the running clearances is permitted between the threshold and the landing while the car is being leveled to a floor;

(3) Where the lift car has solid enclosure and doors, provisions shall be made for a fan and for adequate ventilation. To permit switching off the power supply to the lift without switching of the fan and light, a separate circuit with control in machine room shall be provided for fan and light. Ventilation openings shall be provided in the enclosure walls above 1.8 m level and below 0.3 level. The total area of openings shall be not less than 0.035 square meter for each square meter of area of the car floor divided suitably between the top and the bottom levels. Any opening provided by a ventilating fan may be regarded as forming part of the ventilation area in that part of the car in which it is fitted;

(4) The car enclosure and doors, including their tracks of every lift car shall withstand a thrust of 345 newton applied normally at any point, excepting any vision panel, without permanent deformation

1 Newton = 1/9.81 Kilograms

(5) A three-pin plug socket with switch for a hand lamp shall be fitted on roof of the lift car for use by persons working thereon;

(6) Lift car platforms shall be of framed construction and designed on the basis of rated loads evenly distributed. Platforms for cars for goods lifts shall be designed to suit the particular condition of loading. The minimum factor of safety shall be 5 for steel and 8 for timber;

(7) Glass shall not be used in lift car except for the following purposes;

- (a) As covers for certificates,
- (b) For lighting fixtures,
- (c) For appliances used in connection with operation of car and,
- (d) For mirrors

(The glass if used shall be of laminated or sandwich type.)

The glass used for any of the said purposes shall not be more than 930 square centimeters in dimension.

However, conditions may be relaxed in case of glass or capsule type lifts and specially designed, well protected, fire resistance, fully transparent, laminated type, sandwich safety glass construction or polycarbonate material construction as may be permitted by the Chief Inspector;

(8) Car operating panel of every lift shall be provided with emergency stopping device operated by a push button in the car and it shall be clearly marked in red;

(9) Each lift car entrance shall be provided with a gate or door which shall cover the full height and width of the car opening. The top track of the gate or door shall not obstruct the car entrance

(10) The car doors shall be imperforated. The door shall when closed, guard the full opening except in the case of vertical opening car doors of goods lift, which may be limited to 2 meter and each door shall be equipped with an electric contact which shall prevent the movement of the car and the circuit shall not be completed until the leading edge of the door is within 5 millimeters of the nearest face of the door-jamb or when the leading edges of the centre opening doors are within 50 millimeters of contact of each other. The contacts shall be opened positively, independent of gravity. The electric contact shall be situated or protected so as to be reasonably inaccessible from inside the car;

(11) Goods lift used in industrial premises may use collapsible door or vertically sliding car doors and these may be in mesh or perforated panel form. The dimensions of the mesh or perforations shall not exceed 10 millimeters horizontally and 60 millimeters vertically. Collapsible door for car shall be of close picket type and no openings exceeding 55 millimeters in width shall be permitted between the vertical members of the doors when they are fully extended;

(12) Each lift car gate or door shall be provided with an electric switch which will prevent the lift car from being started or kept in motion unless the car gates or doors are closed. Provided that slow speed leveling of the lift car will be permitted from a position of 38 centimeters above or below the landing level with the gates or doors open;

(13) Every lift car controlled by an attendant shall be operated by a removable handle or key which shall remain at all times in the possession of the attendant. The handle or key shall automatically return to the off position when power is cut off. Landing gates of such lift cars shall also be opened only by a similar removable handle or key;

(14) Every lift car shall be fitted with a suitable light for adequate illumination of the car and the light shall be kept on during the whole time the lift is available for use;

(15) Every lift car shall be provided with an emergency alarm signal which can be operated by a push button in the lift car and shall be clearly audible outside the lift well in order that assistance may be obtained in case of a breakdown or failure between the floors. Every such button shall be clearly marked;

(16) A battery operated unit for lift car light and emergency alarm signal shall be provided to provide assistance in case of failure of power;

(17) The approach to the landing gate on each floor shall be kept lighted during the whole time the lift is available for use at night, and during the day time, if the situation so requires;

(18) In the case of lift cars having more than one entrance, the lift car gates shall be provided with electro mechanical interlocking device so that the gate can be opened only at the landing at which access to the lift car is provided;

(19) For the lift in buildings having height of more than 24 meters

(a) lift car for fire lift when provided shall have floor area of not less than 1.4 square meters. It shall also have loading capacity of not less than 544 Kilograms (8 persons)

(b) lift car door shall have fire resistance of one hour.

(c) lift car for fire lift shall have power operated automatic closing and opening doors synchronized with landing doors while at landing level;

(20) When the lift car is having automatic doors, it shall be possible to open the same manually from inside, in case of power failure.

38. Load Plate :- (1) A load plate giving the rated load of the lift shall be fitted in each lift car in a conspicuous position. For passenger lift, the rated load shall be given in persons and kilograms. For goods lift, the rated load shall be given in kilograms or other convenient units and in persons. For the purpose of this clause, a person shall be regarded as weighing 68 kilograms;

(2) The minimum rated load of a passenger lift corresponding to the net inside car area shall be as per table given below

TABLE
MAXIMUM NET CAR AREAS FOR VARIOUS RATED LOADS

RATED LOAD Kilograms	MAXIMUM NET INSIDE CAR AREA Square meters
-------------------------	--

272	0.77
340	0.95
408	1.12
476	1.28
544	1.45
612	1.60
680	1.76
748	1.91
816	2.05
884	2.20
1000	2.43
1500	3.38

2000
2500

4.22
4.99

39. Lift car frame. - (1) The car of every passenger or goods lift shall be carried in a steel frame which shall be sufficiently rigid and of adequate strength to withstand the operation of the safety gear without permanent deformation.

(2) The deformation of the lift car frame cross-head and the members carrying the lift car platform shall not exceed 1/1000 of their span under static conditions with the contract load on the lift car platform;

(3) Replaceable guide shoes with renewal linings shall be provided at the top and bottom of both the sides of the lift car frame;

(4) The factor of safety of the component parts of the lift car frame and their connections shall be not less than 5 based on the ultimate strength of the material and the static load imposed on them.

40. Safety gears :- (1) Every lift shall be provided with one or more car safety devices, attached to the lift car frame and located preferably at the lower part of the car. The safety devices shall be capable of stopping and sustaining the lift car with full rated load in the car at governor tripping speed;

(2) Every lift having a travel exceeding 5.5 meter shall be equipped with an over speed governor device which operates to apply the safety gear in the event of the speed of the lift car in the descending direction exceeding a predetermined limit;

(3) The application of the safety device shall not cause the lift car platform to become out of level in excess of 3 centimeters measured in any direction;

(4) When the safety gear is applied, no decrease in the tension of the governor rope or motion of the car in the descending direction shall release the safety gear;

(5) When a safety gear comes into operation, it shall automatically open the operating circuit, but it shall be possible for responsible person to release the safety gear, after a thorough inspection of the equipment and after taking any necessary precautions, by reversing the direction of the motion of the machine or by any other equally suitable means;

(6) The safety gear shall operate to stop and sustain the lift car in the event of failure of the suspension ropes, or in the event of the lift exceeding a pre-determined maximum over speed in the descending direction when a speed governor is fitted;

(7) Every safety gear shall operate positively and mechanically independent of any springs used in its construction;

(8) Any levels or dogs operated by shafts shall be keyed to such shafts by keys conforming to relevant Indian Standard;

(9) The design of the safety gear shall provide for its application to both guide rails, equally and simultaneously;

(10) Any additional rope used solely for purpose of operating the safety gear shall be led over independent pulleys, running on independent shafts;

(11) Bearings in safety gears and of the safety operating mechanism shall be of corrosion-resistant construction with one or both members of a bearing made of, or electroplated/coated with a corrosion-resistant material;

(12) Car and counterweight safety devices shall be actuated by separate governors. Provision shall be made to cause the application of counterweight safety gear, but at not more than 10 percent in excess of that at which the lift car safety gear applies;

(13) Slack rope safety gear of the instantaneous type may be used on counterweights within the limits specified in Table below

TABLE FOR SLACK ROPE SAFETY GEARS

RATED SPEED	MINIMUM WEIGHT OF COUNTERWEIGHT
Meter per second	Kilograms
1.25	900
1.0	1350
0.75	1800
0.5	2250

(14) No safety gear shall be permitted to stop an ascending lift car or counter weight. If any ascending car is to be stopped on account of over speed, a safety gear shall be fitted to the counterweight for this purpose. The governor may, however, open the motor circuit and apply the brake in the event of over speed in the ascending direction;

(15) Any drive to the car governor rope shall be effected from the car frame;

(16) Any connecting device between a governor rope and car frame (or counter weight) that is intended to be released when the safety gear is applied shall be retained in its normal position by a spring loaded device;

(17) No safety gear shall depend on the completion or maintenance of an electric circuit for its operation. All safety gears shall be applied mechanically;

(18) The gripping surfaces of the car or counterweight safety gears shall not be used to guide the lift car or counterweight but shall run free of the guide rails during normal operation of the lifts;

(19) Vibration of the lift car shall be restricted to the extent that safety gear is not operated;

(20) Safety gear, designed to stop the lift car or counterweight in a distance related to car counterweight speed, shall stop the lift car with rated load or the counterweight from governor tripping speed within the range of stopping distances given in Table below sub rule (23). The stopping distance shall mean the actual slide as observed from the markings on the guide rails made by the safety gear;

(21) The motor-control and the brake - control circuit shall be opened automatically before or at the time the safety gear is applied;

(22) In case of a safety gear actuated by means of a rope unwinding from a drum, the rope shall have at least three complete turns on the drum after the safety gear has been applied and the lift car has stopped. The minimum diameter of such drum shall be 13 centimeters. The device for holding the safety rope or rod in position during normal operation shall be fixed to the steel frame work of the lift car and not to the body work of the lift car. The ends of the governor rope shall be held by cleaves or other similar means, which shall effect its purpose by friction. The cleaves or other holding device shall be supported by or from the steel frame work of the car and not fixed to the body work of the lift car;

(23) Safety gears shall be of the following types :

(a) Safety gears shall be of the instantaneous type and may be used on lift car having a rated speed not exceeding 1 meter per second.

(b) Safety gears of the instantaneous type be used on counterweight having rated speed not exceeding 1.25 meters per second.

(c) Where the contract speed exceeds 1 meter per second, safety gears of the following types shall be used:

- (1) Gradual wedge clamp type, with gradual increasing retarding force.
- (2) Flexible guide clamp type, with constant retarding force.

The maximum stopping distance of lift car with safety gear of gradual wedge clamp, and flexible guide clamp types and the minimum stopping distance shall be as per the table given below :

TABLE

STOPPING DISTANCES FOR GRADUAL WEDGE CLAMP AND FLEXIBLE GUIDE CLAMP TYPE SAFETY GEARS

Sr. No.	Governor Tripping speed	Stopping Distance	
		meter per second	millimeters
(1)	(2)	(3) maximum	(4) minimum
1	0.88	368	161
2	1	401	173
3	1.25	483	202
4	1.5	582	237
5	1.75	700	278
6	2	836	326
7	2.25	990	380
8	2.5	1162	441

Note :- The stopping distance shall mean the actual slide as measured by the marks on the guides.

NOTE :- The following formula shall be used to determine the maximum and minimum stopping distance for gradual wedge clamp and flexible guide clamp type safeties for car and counterweight for all intermediate speeds:

$$S1 = 145 V^2 + 256$$

$$S2 = 51 V^2 + 12$$

Where

- S1 = Maximum stopping distance in millimeters
 S2 = minimum stopping distance in millimeters, and
 V = Governor tripping speed meter per second

(d) Combination of instantaneous and oil buffer safety gear for speed not exceeding 2.5 meter/second.

(e) Any other type as may be approved by the Chief Inspector

41. Governor. - (1) Governor shall be placed where it is not struck by the lift car or counter weight in the event of over run;

(2) Governors for car safety gears shall be adjusted to actuate the safety gear at the following speeds:

(a) For rated speeds up to 1 Meter per second maximum governor tripping speed shall be either 140 percent of rated speed or 0.88 meter per second, whichever is higher.

For rated speed above 1 meter per second, maximum governor tripping speed shall be 115 percent of the rated speed plus 0.25 meter per second

(b) Minimum governor tripping speed shall be 115 percent of the rated speed;

(3) Any governor for a counterweight safety gear shall be adjusted to trip at a speed greater than, but not more than 10 percent above the tripping speed of the car governor;

(4) Each governor shall be marked with its tripping speed in meters per second.

(5) Where safety device other than the instantaneous type are provided, a switch, operated by the over speed action of the governor, shall be provided on it to open the motor control and brake control circuits at the following speeds before or at the time the governor trips;

(a) In the down direction at not more than 90 percent of the speed at which the governor is set to trip in the down direction, and

(b) In the up direction at not more than 100 percent of the speed at which the governor is set to trip in the down direction;

(6) Governor ropes shall be not less than 6 millimeters in diameter and shall be of iron, steel or phosphor-bronze and of suitable construction. When replacement of original governor ropes becomes necessary, these shall be normally of the same size, material and capacity as the ropes originally supplied by the makers of the lift. Before replacement by any other kind of rope, the suitability of such rope shall be tested to the satisfaction of the Chief Inspector;

(7) Governor ropes shall run clear of the governor jaws during normal operation of the lift;

(8) The area of contact made by the governor rope and the governor sheave shall, in conjunction with the rope tension device, provide sufficient tractive effort to cause proper operation of the governor;

(9) Governor jaws and their mounting shall be so designed that any cutting, tearing or deformation of the rope resulting from their application shall not prevent proper operation of the safety gear;

(10) Governor gears should have self-lubricating bearings which do not require frequent attention;

(11) The motor control circuit and the brake control circuit shall be opened before or at the time the governor trips.

42. Machine room. - (1) All lifts shall have machine rooms immediately over the lift well, and this shall be arranged whenever possible without restricting the overhead distance required for normal safety precautions. Where the machine room is immediately over the lift well there shall be permanent and direct access from the top of lift landing.

Alternative machine positions may be permitted by the Chief Inspector when there are special reasons justifying the same.

(2) All machine rooms shall be provided with adequate ventilation to dissipate the heat generated by the lift equipment. For most single and double installations, a high and low louvered convection ventilation arrangement shall be provided. For groups of three or more lift in one machine room, increased ventilation is necessary and forced ventilation shall be provided;

(3) All machine rooms shall be considered as plant space, and conditions provided to permit reliable operation of electrical switch gear and space around the machine shall in no case be less than 60 centimeters;

(4) Lighting shall be provided to give at least 200 lux around the controller and machine. The machine room walls, ceiling and floor shall be faced in dust-resisting materials, tiles, etc., or painted to stop dust circulation;

(5) The machine room shall be of strong construction. The floor of the machine room shall be capable of carrying the load of the lift machinery and other equipment housed therein. Whenever a water tank is required to be constructed above or adjacent to the machine room, there shall be a minimum separation of 400 millimeters between the wall or slab of the machine room and the water tank;

(6) The machine room shall be provided with reasonable access for the entry or removal of the equipments therein or of any part thereof. The height of the machine room shall be sufficient to allow any part of the equipment to be accessible and removal for repairs and replacement and in no case the height shall be less than 2.6 meters clear from the floor or the platform for machine elevator whichever is higher;

(7) The machine room shall be provided with access doors opening outwards;

(8) If the floor or platform of any machine room does not cover the entire lift well, the open sides shall be provided with hand rails or shall be guarded by other suitable means;

(9) The machine room shall not be used as a store room or for any purpose other than housing the lift machineries and its associate apparatus and equipment. No inflammable or explosive material shall be kept in the machine room;

(10) The machine room shall be kept locked which shall be accessible only to authorized persons. The key of the machine room shall be kept in the custody of the owner or his agent and shall be made readily available for repairs, maintenance or inspection;

(11) The machine room shall be provided with an insulated portable hand lamp for examining the machinery;

(12) Thickness of machine room wall shall be of minimum 150 millimeters for R.C.C. structure or 250 millimeters for Brick construction;

(13) The instructions in English or Hindi and Gujarati for the rescue of persons traveling in the lift by manual operation of brake in case of failure of lift motor or power shall conspicuously be affixed in the machine room.

43. **Outline dimensions of electric lift:-** (1) The outline dimensions of machine room, pit depth, total headroom, overhead distance and sill for following four classes of lifts shall be provided as specified in Tables 1 to 4 and as indicated below :

Passenger lift	Table 1
Goods lift	Table 2
Hospital lift	Table 3
Service lift	Table 4

Table -1 Dimension of Passenger Lifts.

<u>Load</u> Persons Kilograms	<u>Car inside</u> Area in Square meters	<u>Lift well</u> Area in Square meters	<u>Entrance</u> Width in millimeters	<u>Machine Room</u> Area in Square meters
4 272	0.77	2.47	800	12.92
6 408	1.10	3.04	800	13.94
8 544	1.43	3.61	800	14.96
10 680	1.75	3.99	800	15.64
13 884	2.20	5.25	900	18.40
16 1088	2.20	5.25	1000	18.40
20 1360	3.10	6.00	1000	19.60

NOTE-1 : The total head room has been calculated on the basis of car height of 2.2 meter. Total maximum head room shall be 4800 Millimeters up to speed of 1.5 meter per second and 6700 Millimeters up to speed of 2.5 meter per second.

NOTE-2: In case of manually operated doors, clear entrance will be reduced by the amount of projection of handle of the landing door.

NOTE-3: Four and six passenger lift shall be limited to a speed of 1 meter per second.

NOTE-4 : The total minimum depth of the pit shall be 1600 millimeters to a speed upto 1.5 meter per second and 2600 millimeters to a speed up to 2.5 meter per second.

Table -2 Dimension of Goods Lifts.

<u>Load</u> Kilograms	<u>Car inside</u> Area in Square meters	<u>Lift well</u> Area in Square meters	<u>Entrance</u> Width in millimeters	<u>Machine Room</u> Area in Square meters
500	1.32	2.85	1100	13.60
1000	2.52	4.83	1400	17.48
1500	3.40	5.98	1700	19.68
2000	4.25	7.28	1700	21.73
2500	5.00	8.12	2000	23.32
3000	6.00	9.57	2000	25.52
4000	7.50	11.22	2500	28.42
5000	9.00	13.26	2500	31.36

NOTE-1 : The total headroom shall be calculated on the basis of car height of 2.2 meter Total minimum head room shall be 4800 millimeters.

NOTE-2: Clear entrance width "E" is based on vertical lifting car door and vertical bi-parting landing doors. For collapsible mid-bar doors the clear entrance width will be reduced by 200 millimeters (maximum 1800 millimeters)

NOTE-3: The total maximum depth of the pit shall be 1600 millimeters.

Table -3 Dimension of Hospital Lifts.

Load Persons Kilograms	Car inside Area in Square meters	Lift well Area in Square meters	Entrance Width in millimeters	Machine Room Area in Square meters
15 1020	2.78	5.10	800	20.35
20 1360	3.12	6.60	1200	23.10
26 1768	3.84	7.05	1200	23.92

NOTE -1: The total head room has been calculated on the basis of a car height of 2.2 meter.

NOTE-2: In case of manually operated doors, clear entrance will be reduced by the amount of projection of handle on the landing door.

NOTE-3: Although 15 persons capacity lift is not a standard one, this is included to cover lift of smaller capacity which can be used in small hospitals.

NOTE-4: The total minimum depth of the pit shall be kept 1800 millimeters

Table -4 Dimension of Service Lifts.

Load Kilograms	Car inside Area in Square meters	Lift well Area in Square meters	Entrance Width in millimeters	Machine Room Area in Square meters
100	0.49	1.08	700	13.80
150	0.64	1.30	800	14.90
200	0.81	1.54	900	16.10
250	1.00	1.80	1000	18.00

(2) PIT :- The pit depth of the lift shall normally accommodate compensating chains. If compensating ropes are required, pit depth shall be increased for all loads and speed.

(3) MINIMUM FLOOR TO FLOOR HEIGHT :- Minimum floor to floor height for horizontally sliding doors is $f + 750$ millimeters and for vertically bi-parting doors shall $1.5 f + 250$ millimeters, where "f" is clear entrance height in millimeters.

44. Sheaves and pulleys. - (1) Sheaves and pulleys shall be of cast iron and free from cracks, sand holes and other injurious defects. They shall have machined rope grooves. The traction sheave shall be grooved to produce proper traction and shall be sufficiently thick to provide for future wear in the groove. The deflector sheave shall be grooved so as to provide a smooth bed for the rope. Deflector or secondary sheave assemblies where used shall be mounted in proper alignment with the traction sheave.

(2) The grooving of a diverter sheave or pulley shall have a radius larger than the radius of the rope by not less than the amount shown in table below and shall extend at least over one third of the circumference of the rope.

TABLE
FLANGE AND DIVERTER SHEAVE OR PULLEY GROOVES

Rope Diameter	Minimum difference between radius of groove and rope radius.
millimeters	millimeters
(1) Up to 16	(2) 0.75
18 to 22	1.25
24 to 27	1.5
31 and above	2.5

(3) The diameter of sheave or pulley shall be not less than that obtained from the following:

<u>Class of rope</u>	<u>Diameter of sheave or pulley</u>
Round Strand	
6 X 19 (12/6/1)	
6 X 19 (12/6/1) Plus 6 filler wires	D (2.95 S + 37) with a minimum of 40 D
8 X 19 (12/6/1) Plus 6 filler wires	
8 X 19 (9/9/1) scale	

Note :- D = diameter of rope in centimeters, and
S = Rope Speed in meter per second

(4) Overhead pulleys and the allied machinery shall be so fixed and enclosed as will allow safe and convenient access to them and will enable their maintenance and repairs to be carried out with safety;

Where the platform or floor of the enclosure does not extend to the full area of the lift well, suitable guard rail or similar fitting shall be provided to ensure safety. Provision shall also be made for adequate lighting and ventilation of the space.

(5) Where the driving sheave or drum is connected through worm gear, the worm gear shall be of non reversible type.

45. Lift machine :- (1) No friction gearing, belt, chain, clutch or chain driven mechanism shall be used for connecting the main driving gear to the traction sheaves;

(2) The motor of each lift machine or the worm shaft shall be arranged so as to provide hand winding facilities and shall be suitably marked for the direction of up and down travel of the lift.

(3) Electric lift machine shall be provided having brakes released electrically;

(4) Traction machines for lift shall be equipped with the brakes applied automatically by means of springs in compression only or by gravity when the operating device is in the "off" position or in the event of the power being cut off due to any cause;

(5) No single earth fault, short circuit or counter electromotive force shall prevent the brake from being applied during normal operation;

(6) The brake shall be designed to have a capacity sufficient to hold the car at rest with 125 percent of its rated load;

(7) No toggle or other device which is dependent upon impact operation shall be used to hold off the brake;

(8) Brake of passenger and goods lift shall have at least two brake shoes and the lining used shall be of incombustible material;

(9) Means of releasing the brake in emergency shall be provided and the re-application of the brake ensured. It shall be ensured that hand winding of lift, by releasing the brake is done only by trained persons;

(10) No brake shall be released in normal operation until power has been applied to the motor;

(11) Any emergency release device fitted to a brake shall not be capable of holding the brake in the "off" position during normal operation;

(12) The sheave, drum, worm wheel or spur gear of any lift machine shall be fixed to its shaft or driving unit either by means of sunk keys or splines according to Indian standards or shall be secured to a flange forming an integral part of the shaft or driving unit by means of turned tight fitting bolts. No set screw fastenings shall be used in lieu of keys or other positive connections.

(13) All machines, pulleys, over speed governors and similar units shall be so supported and held as to prevent any of these machineries or parts thereof from becoming loose or displaced affecting their safe working. Supporting beams shall be of steel or reinforced concrete.

46. Suspension :- (1) Chains shall not be used for the suspension of a lift. Not less than three independent suspension ropes shall be used for car or counterweight of any lift with traction drive;

(2) The minimum diameter of ropes for cars and counterweights of passenger and goods lift shall be 10 millimeter;

(3) The factor of safety of the suspension ropes shall not be less than as prescribed below.

Rope Speed in meter per second	Factor of safety
Upto 2.0	10
3.0	11
7.0	12

In the case of traction drive, the factor of safety shall be based on static contract load plus the weight of the lift car and accessories. In case of drum type drives, the factor of safety shall be calculated with dynamic conditions.

For the purposes of these rules, the factor of safety shall be as under :

$$F \times n \times k$$

—
w

Where

F = minimum breaking strength of one rope;

n = number of separate suspension ropes under load;

k = roping factor, that is 1 for 1:1, 2 for 2:1 roping: and

w = maximum static load imposed on all car ropes with the car and its rated load at any position in the lift well, in the same units as F

(4) (i) The car and counterweight ends of the suspension ropes shall be fastened by spliced return loops or clipped return loops or individual tapered babbitted sockets. Loops shall not hold directly on their fixings, but shall be lined with proper thimble eyes or equal protection. In all cases the fastenings shall be capable of sustaining a load not less than 80 percent of the minimum breaking strength of the suspension ropes;

(ii) A data plate indicating the following shall be fixed on the cross head of the car frame:

- (a) Diameter of rope
- (b) Number of ropes, and
- (c) Manufacturer's rated breaking strength of rope in kilograms.

(5) All ropes anchored to a winding drum shall have not less than one complete and one half turns of the ropes on the winding drum when the lift car or counter weight has reached the extreme limit of its over travel;

(6) Every lift car or counter weight rope shall be free from joints;

(7) Rope compensation shall be used for any travel but it shall be necessary for travels over 30 meters;

(8) The winding drum and the lift car and counterweight suspension ropes shall be properly secured by clamps on the inside of the drum;

(9) Means shall be provided for adjusting the lengths of the ropes to equalize the load on the individual suspension ropes;

(10) (a) The material, quality, construction and the fixing of ropes shall, as far as possible, conform to Indian standards and methods pertaining to the same;

(b) The suspension ropes shall conform to relevant Indian standard;

(11) Tensioning devices for compensation ropes, governor ropes and the like shall be protected against damage due to falling objects;

(12) Each suspension rope shall be separately and independently fixed to the car and to the counterweight. The simple suspension of the lift car or the counter weight by means of a sheave or the like shall count as one suspension only.

47. Controllers and operating devices.- (1) A manually operated mains disconnecting switch shall be installed in the main circuit cables of electric lift machines or motor generator sets. This switch shall be placed close to and visible from the machine or motor generator set controls.

(2) When there are more than one lift machine in machine room, each machine shall have a separate disconnecting switch. These switches shall be numbered to correspond to the number of the driving machine which they control and they shall be conveniently situated with respect to the driving machine;

(3) When any type of contact is used on the controller switches, for disconnecting the main circuit, at least two independent current breaks shall be incorporated in the design. In the event of an earth fault with any door open, the lift shall not work;

(4) Operation of a spring or springs in tension or the completion of another electric circuit shall not depend on to break the circuit to stop the lift at terminal landings;

- (5) The interruption of the electrical circuit shall stop and prevent the movement of the car;
- (6) Each lift machine operated by a poly-phase A.C. motor shall be protected against phase reversal or failure. This protection shall be extended to motor generator set driving D.C. or A.C. motor;
- (7) All control circuits shall be independently protected by fuses or miniature circuit breaker;
- (8) The voltage of any controller operating circuit shall not exceed 250 volts. The control circuit shall be suitably protected independent of the main circuit and it shall be so arranged that an earth fault or open circuit shall not create an unsafe condition;
- (9) It shall not be possible to start the lift car under normal operation unless every landing door and car door is in the closed position;
- (10) In case of lift with car switch control, the handle of the car switch shall be so arranged as to return to stop position automatically when released;
- (11) Following requirements shall be complied with when the lift is put in "inspection mode";
- It shall not be possible to control the car from any other position;
 - The car will travel only at a speed of 25% of the rated speed subject to a maximum of 1.0 meter per second.
 - The car shall not move until all safety devices are in position.
- (12) Every lift having winding drum machine shall be provided with a switch or device of adequate capacity which shall automatically cut off electric supply and shall stop the machine in the event the lifting ropes of the lift car become slack either due to any obstruction of the lift car in its travel in the descending direction or due to any other cause whatsoever;
- (13) Emergency stop switches for short circuiting the landing door lock circuit shall be prohibited;
- (14) An emergency stop switch, of manually opened and closed type, shall be provided on the top of every lift car and in the lift pit and shall be marked conspicuously;
- (15) Drum drive machine shall not be used for speed exceeding 0.5 meter per second;
- (16) All lift traveling at a speed of 1 meter per second and above shall be provided with floor leveling device;
- (17) Signal bells or similar apparatus, which can be operated from any floor in connection with an indicator in the lift car, shall be provided on all lift operated by lift operators;
- (18) The operation of the fire lift in building having more than 30 meters height, shall be a simple toggle or two button switch situated in a glass box painted with red color adjacent to the lift at entrance level on the ground floor. When the switch is 'ON', the landing call points shall become inoperative and car shall report to the ground floor and the same shall remain on car control only. When the switch is "OFF", the lift shall return to normal working;
- (19) Floor position indicator shall be provided in the lift car as well as at every landing;
- (20) Car top shall be provided with a suitable wire mesh guard to provide safety to persons working thereon for maintenance of lift.

48. Terminal stopping and final limit switches:- (1) Every electric lift shall be provided with upper and lower normal terminal limit switches arranged to stop the car automatically within the limits of top car clearance and bottom runby (over travel) from any speed attained in normal operation. Such limit switches shall act independently of the operating device, the ultimate or final limit switch and the buffers;

(2) Normal terminal limit switch shall be fitted in the lift car or in the lift well or in the machine room, and such switches shall be brought into operation by the movement of the lift car;

(3) When terminal limit switches are situated in the machine room, they shall be mounted on and operated by stopping device mechanically connected to and driven by the lift car without friction. An automatic safety switch shall be provided to stop the machine in case of failure of tape, chain, rope or other similar device;

(4) Electric lifts shall be provided with ultimate or final limit switches arranged to stop the car automatically within the top and bottom clearances independent of the normal operating device and the terminal limit switches. The switches and the oil buffer shall be so arranged that the opening of the switch and the engagement of the buffer shall be as nearly simultaneous as possible. When spring buffers are employed, the switch shall open before the buffers are engaged;

(5) Final limit switches shall act to prevent movement of the lift car under power in both directions of travel and shall, after operation, remain open until the car has been moved by a winding to a position within the limits of normal travel;

(6) Final limit switches shall not be mounted on the lift car and shall be operated by the movement of the lift car in the lift well;

(7) Final limit switches shall not control the same switches on the controller as those controlled by the normal terminal limit switches unless two or more separate and independent switches are provided;

(8) All normal terminal stopping switches whether mounted on the lift car or in the lift well shall be of enclosed type and shall be securely mounted. The contacts of all terminal stopping devices shall be opened positively and mechanically by the movement of the lift car.

Note:-In the case of electric lift using floor controller or other similar devices for automatic stopping at the floor landing, only one set of floor stopping contacts shall be necessary for each terminal landing provided these contacts and the means of operating them comply with the requirements for terminal stopping devices;

(9) Every lift having a winding drum machine shall have two final terminal stopping devices, one being operated by the machine and the other by the movement of the lift car.

49. Electrical wiring and apparatus :- (1) The electric supply line and apparatus of the lift shall be of sufficient ratings of power, insulation and estimated fault current and of sufficient mechanical strength for the duty which they may be required to perform. Over current protection for power and control circuits, shall be provided;

(2) Each lift shall be capable of being isolated from the main supply by suitable locking arrangement;

(3) For banks of interconnected lifts, a separate sub circuit is required for the common supervisory system, in order that any one car may be shut down without isolating the supervisory control of the remainder;

(4) Machine rooms enclosing lift equipment shall be provided with adequate illumination controlled by a switch fixed adjacent to its the entrance. At least one socket outlet, suitable for lamps or tools, shall be provided in this room;

(5) The supply to the car light shall be from a separate circuit, and controlled by an independent switch located in the machine room. For multiple lifts with a common machine room a separate supply shall be provided for each car. The car lighting shall be independent of the power supply mains;

(6) Three pin sockets with switch and a light point shall be provided on each floor. The power supply for this shall be controlled by a switch provided in the lift well and accessible from the terminal floor entrance;

(7) When the alarm system is connected to a transformer or trickle charger, the supply shall be taken from the machine room lighting or when available, from the building fire alarm system;

(8) All electric supply lines and apparatus in connection with the lift installation shall be so constructed, installed, protected and maintained so that there may be no danger to persons therefrom;

(9) A battery operated telephone shall be provided in the lift car and for the purpose, a cabinet shall be fitted in the car and wiring shall be provided from car to terminal box adjacent to the lift well. Such telephone shall be receivable at the ground floor;

(10) All metal casings or metallic coverings containing or protecting any electric supply lines or apparatus shall be efficiently earthed;

(11) No bare conductor shall be used in any lift car as may cause danger to persons;

(12) A danger notice in Hindi or English and Gujarati with a sign of skull and bones shall be affixed on the i) door of the machine room, ii) lift motor and iii) lift controller.

50. Testing at site :- (1) The lift shall pass the following tests when carried out at site and before it is put into normal service. The necessary test weights and instruments shall be provided by the person authorised under section 13 for erection, and the power at the declared voltage and frequency required for adjusting and testing shall be supplied by the owner.

(a) Test to determine that the insulation resistance between power and control lines and earth is not less than 0.5 megohms when measured with a DC voltage of 500 volts shall be carried out with the conductors so connected together as to ensure that all parts of every circuit are simultaneously tested;

(b) Test to determine that the earthing of all conduit, switch, casings and similar metal work is continuous and of low resistance. Tests shall be made from all terminal points by means of a substantial current to ensure that the resistance of earth path is sufficiently low to enable fuses or circuits to operate under faulty conditions;

(c) Test to determine that the motor, brake, control equipment and door locking devices and limit switches function correctly. Brake to be tested at 125 percent of the rated load;

(d) Test to determine that the lift car raises and lowers at rated load;

(e) Test to determine that the lift car achieves the rated speed;

(f) The car safety gear shall be tested as under;

(i) The rope driving the over speed governor shall be removed;

(ii) The governor shall then be connected with separate rubber belt or other flexible connection to the off load over speed governor testing kit specially designed for the purpose. The testing set up shall be capable of increasing or decreasing the speed of the governor manually and shall be capable of measuring the speed of the over speed governor to which it is connected.

(iii) Calibration of the over speed governor shall then be checked. The tripping speed shall be confirm with that specified in rule 41;

NOTE :- The safety gear of a lift having an AC motor driven machine shall be tested by manually tripping the governor with the speed attained by a loaded lift car descending, with brake released, is insufficient to operate the governor.

(2) A lift is designed to operate and transport the rated load at the required duty cycle, and shall not, by intention, or habitually, be used to carry overloads. During test, as a safeguard to cover variable supply and temperature conditions, a lift shall be checked for the car to complete one round trip with rated load plus 10 percent at nominal supply voltage and nominal ambient temperature;

(3) No new lift shall be brought into use unless the lift has been tested to determine whether its safety gear, brakes, terminal stopping devices, buffers, over-speed governor, etc. operate satisfactorily;

(4) The person authorised under section 13 for erection of a lift shall certify in writing that all the tests specified in these rules are carried out by him to determine the suitability of the lift for normal and regular service, and if required by the Inspector, such tests may also be carried out by him.

51. Other precautions :- (1) Adequate precaution shall be taken to guard against any possibility of a lift being operated by unauthorized persons. Precautions shall also be taken to prevent a lift from being operated by any person when it is not intended for use;

(2) No person shall remain in the pit while the lift is working. Adequate precautions shall be taken to protect persons working in the pit from accidental contact with counterweight;

(3) While a lift is under examination or repairs, suitable steps shall be taken to ensure that the lift is not operated inadvertently by any person working in the lift;

(4) No explosive or other inflammable material shall be carried in the lift car as may cause danger to the safety of persons.

CHAPTER IV

ESCALATORS

52. Angle of inclination.- The angle of inclination of an escalator shall normally be not in excess of 30 degrees from the horizontal. In exceptional circumstances, it may be permitted up to 35 degrees but vertical rise in any case should not exceed 6 meters;

53. Width of escalators.- The width between balustrades shall be measured on the incline at a point 68.5 centimeter vertically above the nose line of the steps, and shall not be less than the width of the step. It shall not exceed the width of the step by more than 33 centimeter with a maximum of 16.5 centimeter on either side of the escalator.

54. Balustrading.-(1). Escalators shall be provided on each side with solid balustrading. On the step side the balustrading shall be smooth and substantially flush except for protective moulding parallel to the run of the steps and properly bevelled vertical mouldings projecting not more than 6.5 millimeters, that cover joints of panels;

(2). Glass panels when used in balustrade shall be laminated;

(3) There shall be no abrupt changes in the width between the balustrading on the two sides of the escalator. Where a change in width is unavoidable, such change shall not exceed 8 percent of the greatest width. In changing the direction of the balustrading resulting from a reduction in width the maximum allowable angle of change in balustrading shall not exceed 15 degree from the line of escalator travel;

(4) The clearance on either side of the steps between the steps and the adjacent skirt guard shall not be more than 5 millimeters and the sum of the clearance on both sides shall not be more than 6 millimeters;

(5) A solid guard shall be provided in the intersecting angle of the outside balustrade (deck board) and the ceiling of soffitt except where the intersection of the outside balustrade (deck board) and the ceiling of soffitt is more than 60 centimeters from the centre line of the handrail;

The vertical face of the guard shall project at least 36 centimeter horizontally from the apex of the angle;

The exposed edge of the guard shall be rounded to eliminate shear hazard. Guards may be of shatter proof glass.

55. Hand rail:- (1). Each balustrade shall be provided with a hand rail moving in the same direction and at substantially the same speed as the steps.

(2). Proper arrangement shall be made to prevent trapping of an object between the handrail and the balustrading or between the steps and the balustrading;

(3). Each moving handrail shall extend at normal handrail height not less than 30 centimeters beyond the line of points of the comb plate teeth at the upper and lower landings;

(4). Hand or finger guards shall be provided at the point where the hand rail enters the balustrade;

(5). The horizontal distance between the centre lines of the two hand rails, measured on the incline, shall not exceed the width between the balustrades by more than 15 centimeters with a maximum of 7.5 centimeters on either side of the escalator.

56. Step treads and landings:- (1). Step frame shall be made of incombustible material. Step treads shall be horizontal and made of incombustible material and shall afford a secure foothold.

(2) If the landing is of concrete, it shall have edge insertions of metal, wood or other anti slip material;

(3) The depth of any step tread in the direction of travel shall be not less than 40 centimeters and the rise between treads shall be not more than 22 centimeters. The width of a step tread shall be not less than 40 centimeters and not more than 102 centimeters;

(4) The maximum clearance between step treads on the horizontal run shall be 4 millimeters;

(5) The tread surface of each step shall be slotted in a direction parallel to the travel of the steps. Each slot shall be not more than 6.5 millimeters wide and not less than 9.5 millimeters deep and the distance from centre of adjoining slots shall be not more than 9.5 millimeters.

57. Comb plates.- (1) There shall be a comb plate at the entrance and at the exit of every escalator.

(2). The comb plate teeth shall be meshed with and set into slots in the tread surface so that the points of the teeth are always below the upper surface of the treads;

(3). Comb plates shall be adjustable both horizontally and vertically. Sections forming the comb plate teeth shall be readily removable without the use of special tools in case of emergency;

58. Trusses or girders.-(1) The factor of safety based on the static loads shall be atleast as follow:

(a) For trusses and all structural members including tracks -five.

(b) For driving machine parts.

(i) Where made of steel or bronze -eight.

(ii) Where made of cast iron or other materials -ten.

(c) For power transmission members -ten

Step change composed of cast steel links which, if thoroughly annealed shall be permitted with a factor of safety of twenty.

(2). The escalator truss or girders shall be designed to safely sustain the steps and running gear in operation. In the event of failure of the track system it shall retain the running gear in its guides.

59. Track arrangement.- Step wheel track shall be so designed as to prevent displacement of the steps and running gear if a step chain breaks.

60. Capacity and loading.-The rated load in kilograms on an escalator shall be computed as follows:

Rated load = 2.7 WA

Where W = The width in centimeter between the balustrades and

A = The horizontal distance between the upper and lower comb plate teeth in meter.

61. Limits of speed:-The rated speed of the escalator shall not be more than 38 meters per minute

62. Application of power, driving machine, motor and brake.-(1)The driving machine shall be connected to the main drive shaft by toothed gear, a coupling, or a chain;

(2)An electric motor shall not drive more than one escalator;

(3) Each escalator shall be provided with an electrically released, mechanically applied brake capable of stopping the up or down travelling escalator with any load upto rated load. This brake shall be located either on the driving machine or on the main drive shaft;

(4) Where a chain is used to connect the driving machine to the main drive shaft, a brake shall be provided on this shaft. If an electrically released brake is provided on the driving machine, it may not be necessary of electrically released type.

63. Chain.-All chains shall have a factor of safety not less than ten. Material requiring periodical heat treatment shall not be used for chains.

64. Safety Devices:-(1), Where starting pushes or switches are within reach of the public they shall be either be the key-operated type or be enclosed in a box provided with a lock and key and shall be located within sight of the escalator steps.

(2). (a) An emergency "Stop" push or switch conspicuously marked "STOP PUSH" or STOP SWITCH and accessible to the public shall be fixed at the top and bottom landings of each escalator;

(b)The operation of a stop push or switch shall open a circuit and cause the power supply to the escalator to be disconnected. It shall not be possible to start the escalator by means of such pushes or switches;

(c)Any escalator operating the ascending direction shall be equipped with means to cause the power supply to the escalator to be disconnected and the brake applied in the event of accidental reversal of direction of travel

(3). A speed governor shall be provided, the operation of which shall cause the interruption of power to the driving machine should the speed of the steps exceed a predetermined value which shall be not more than 40 percent above the rated speed.

Provided that the over speed governor is not required where a low slip alternating current squirrel cage induction motor is used and the motor is directly connected to the driving machine.

(4). A broken step chain device shall be provided which shall cause the interruption of power to the driving machine if a step chain breaks and where automatic chain tension device is not provided, it shall cause the interruption if excessive sag occurs in either of the step chain;

(5). Where the driving machine is connected to the main drive shaft by a chain, a broken drive chain device shall be provided to cause the application of the brake on the main drive shaft of the drive chain parts;

(6). Stop switch in machinery area:- (A) A stop switch shall be provided around machinery area where means of access to the space is provided. This switch, when opened, shall cause electric power to be cut off from the escalator driving machine motor and brake. The stop switches shall be-

(a) Of the manually opened and closed type;

(b) Conspicuously and permanently marked STOP and;

(c) Positively opened mechanically and their opening shall not be solely dependent on springs;

(B) Escalators driven by polyphase motor shall be protected against phase reversal or phase failure;

(7). An electrically released brake shall automatically stop the escalator when any of the safety devices required under sub rules (2), (3), (4), and (5) of this rule come into operation.

65. Machine room.-(1) A machine room of suitable size and construction shall be provided for the housing of the escalator machines, and associated apparatus and equipment.

(2) The machine room shall be of sound construction, weather proof and dry and shall be properly ventilated to prevent any undue rise in temperature inside the room. Necessary means shall also be provided to maintain a reasonable temperature in the machine room. The floors of the machine rooms shall be capable of carrying the load of the escalator machinery and other equipments housed therein;

(3) The machine room shall be arranged to allow reasonable access to and the removal of the equipments therein or of any part thereof. The height of machine room shall be sufficient to allow any part of the equipment to be accessible and removable for repairs and replacement;

(4) Safe and convenient access to machine room entrances shall be provided with access doors opening outwards;

(5) The machine room shall not be used as store room or for any other purpose other than housing the escalator machine and associated apparatus and equipment. No inflammable or explosive material shall be kept in the machine room;

(6) The machine room shall be kept locked, which shall be accessible only to an authorized person. The key of the machine room shall be kept in the custody of the owner or his agent and shall be made readily available for repairs, maintenance or inspection. A danger notice in Hindi or English and Gujrati with sign of skull and bones shall be affixed on the outside of the door and in a conspicuous position near the machinery.

66. Lighting of step treads.-Step treads shall be illuminated throughout their run. The light intensity on the tread surfaces shall be not less than 20 Lux. The illumination shall preferably be of uniform intensity and it shall not contrast materially with that of the surrounding area.

67. Access to interior of escalator.-Reasonable access to the interior of the escalator shall be provided for inspection and maintenance.

68. Tests.-(1) No new escalator shall be brought into use unless the escalator has been tested as follows.

(a) Site tests of escalators :- Each type and size of escalator shall be tested for the rated load that is designed to carry;

(b) Over speed test;-The application of the over speed safety device shall be obtained by causing the escalator to travel at the governor tripping speed as specified in sub rule (3) of rule 64. With escalators driven by alternating current motors, the governor may be tripped by hand with the escalator traveling at its normal speed;

(c) Reversal test;-The accidental reversal device as provided in Sub-rule (2) (c) of rule 64 shall be made to function by manually operating or attempting to operate the escalator in the reversal direction.

(d) Broken chain test.-The application of the broken chain safety device as provided in Sub-Rule (4) of Rule 64 may be obtained by operating the device by hand. Broken drive chain device operation of the broken drive chain device required by sub rule (5) of rule 64, where a device chain is used, shall be tested by operating the actuating device by hand.

(e) Stop buttons :- The emergency stop buttons required by sub rule (2) (a) of Rule 64 operated in each direction of the travel;

(2) The person authorized under section 13 for the erection of the escalator shall certify in writing that all the tests specified in these rules are carried out by him to determine the suitability of the escalator for the normal and regular service and if required by the Inspector such tests may also be carried out by him.

69. Other precautions.-(1) Adequate precautions shall be taken to guard against any possibility of an escalator being operated by un-authorized persons. Precautions shall also be taken to prevent an escalator from being operated by any person when it is not intended for use.

(2) An attendant shall be on duty in the premises where an escalator is installed during the whole period the escalator remains in use;

(3) Where an escalator is under examination or repairs suitable steps shall be taken to ensure that the escalator is not operated inadvertently by any person in such a manner which may endanger the safety of persons working in the escalator;

(4) Explosive or other inflammable materials shall not be carried in the escalator as may endanger the safety of persons;

(5) The escalator machine room shall be provided with a suitable fire extinguisher;

(6) Escalator pit pans shall be periodically cleaned of oil and refuse;

(7) All parts of the machine and equipment requiring lubrication shall be lubricated at regular periodical intervals with lubricants of standard grade;

(8) The sides and undersides of escalator trusses and machinery area shall be enclosed in fire resistive materials. Means shall be provided for adequate ventilation of the driving and driven machine and control spaces;

(9) Floor openings for escalator shall be protected against the passage of flame, smoke or gases in the event of fire.

CHAPTER - V MISCELLANEOUS

70. Relaxation of rules : - (1) The Chief Inspector may by order in writing, and subject to such conditions as he may think fit to impose, relax the provisions of any of these rules to such extent as, in his opinion, may not be applicable to such lift or escalator;

(2) In case of lift or escalator operated by power other than electricity, the Chief Inspector may, by order in writing, relax the provision of these rules to such extent as, in his opinion are inconsistent or are not applicable to such lift or escalator. Such lift or escalator must, however, comply with such instructions as may be issued in this behalf by the Inspector with the approval of the Chief Inspector;

(3) Every relaxation so directed shall be reported forthwith to, and shall be subjected to disallowance or revision by the State Government;

71. Responsibility of the owner of lift or escalator, agent and authorized person. - Where any person is responsible for the observance of any of these rules, every agent and the person authorized under section 13 shall also be responsible for such observance in respect of matters under their respective controls.

72. Mode of entry. - All persons entering in pursuance of the Act or these rules, any building which is used as a human dwelling or a place of worship, shall in making such entry have due regards so far as may be compatible with the exigencies of purpose for which such entry is made, to the social and religious usage of the occupants of the building entered.

73. Repeal and Saving. - On the commencement of these rules, the Bombay Lifts Rules, 1958 in its application to the State of Gujarat shall stand repealed.

Provided that such repeal shall not affect the previous operation of the said rules and any thing done or action taken by or under the provisions of the said rules, in so far as it is not inconsistent with the provisions of these rules be deemed to have been done or taken under the corresponding provisions of these rules and shall continue in force unless and until superseded by anything done or any action taken under these rules.

ANNEXURE I

(see rule 3)

**Application for permission to install lift or
for making additions or alterations to the installed lift.**

(To be submitted to the Inspector of Lift and Escalators)

1. Full name and permanent address of the owner/ applicant. _____
2. Name and address of the local agent of owner, if any. (appointed under section 14) _____
3. Address of the premises where the lift is to be installed * or additions or alterations are proposed. _____
4. Whether a lift has been previously erected and a licence has been granted. (Details to be given) _____
5. Name and address of the person (authorised under section 13) who will install the lift or make additions or alterations _____
6. Type and make of lift proposed to be erected _____
7. Number of lift required _____
8. Rated Load : number of persons
_____ Kilograms _____
9. Rated speed
meter per second. _____
10. Travel in meters _____
11. Serving
floors
entrances
12. Method of control _____
13. Position and details of machine room with distance of machine from the walls of machine room. _____
14. Position and details of counter weight. _____

15. Construction, design and finish of car body work

16. Bottom car run by (in millimeters)

17. Bottom counter weight run by (in millimeters)

18. Details of Buffer

19. Details of call Indicator

20. Details of car frame, platform, internal size of car.

21. Details of bottom and top counter weight clearance.

22. Details of car and counter weight guide rails, brackets with its fastenings and shoe.

23. Details of car and landing doors with its opening device and locking arrangements.

24. Details of emergency stop switch , floor leveling switch , floor selectors and car gate switch

25. Details of lift pit, lift well enclosure and lifting beam.

26. Type of lift operation with its devices.

27. Details of over speed governor.

28. Details of retiring cam/ retiring ram

29. Details of safety gear.

30. Details of sheave and diverter pulley.

31. Details of slack rope switch.

32. Details of terminal slow down switch.

33. Details of terminal stopping device normal.
34. Details of terminal stopping device final.
35. Distance of total head room.
36. Details of gear machine
37. Travel distance
38. Details of fire man switch when required.
39. Details of main switch and wiring in machine room, lift well and lift pit with position and controlling switches.
40. Details of over current protection
41. Details of bottom and top car clearance.
42. Details of alarm system
43. Details of earthing
44. Details of emergency signal or telephone.
45. System of roping. The number and description, weight and size of the supporting cables.
46. Details of lift well dimensions.
47. Details of power and lighting cables to half way points in lift well.
48. Details of main switch(es) and fuse (s) or circuit breaker(s) in machine room and main switches and fuses for isolating main cables to machine rooms(s)
49. Details of the construction of the overhead arrangement with the weight and sizes of the beams.
50. Proposed date for commencement of work

51. Proposed date for completion
of work.

Signature of the person
referred to at Serial Number. 5 of above

Signature of the Applicant

Authorization Number.

Date :

APPENDIX-II**(Form 3)**

Application for permission to install escalator or making additions or alterations to the installed escalator.

(To be submitted to the Inspector of Lifts and Escalators)

1. Full name and permanent address of the owner/ applicant.
2. Name and address of the local agent of the owner, if any (appointed under section 14.)
3. Address of the premises where the escalator is to be installed or additions or alterations are proposed.
4. Whether an escalator has been previously erected and a licence has been granted (Details to be given)
5. Name and address of the person (authorized under section 13) who will install the escalator or make additions or alterations:-
6. Maker's name and address
7. The rated speed of the escalator
8. The rated load of the escalator in Kilograms
9. The maximum number of persons which the escalator can carry
10. The angle of inclination of the escalator with the horizontal
11. The width of the escalator.
12. The vertical rise of the escalator.
13. The number, description, weight and size main drive chain, handrail drive chain and governor drive chain.
14. Details of construction of the stresses and step treads together with the weight and size of all structural members and supporting beams in connection therewith.
15. Proposed date of commencement of work
16. Proposed date of completion of work

Signature of the person referred
to at Serial number 5 above

Signature of the applicant

Authorization Number.

Date :

ANNEXURE-III
(see rule 3)

Declaration from the person authorized under section 13 for erection of lifts /escalators

We hereby declare and undertake to complete the work of erection of lift / escalator for which permission to install may be granted under the Gujarat Lifts and Escalators Act, 2000. We also undertake the responsibility to see that works of lift / escalator installation is inspected by the Inspector of Lifts and Escalators and defects pointed out by him are duly complied with. The lift / escalator installed by us shall be handed over to the respective owner after the licence to use the lift / escalator is issued under section 4.

Date :

Signature of the authorized person

Authorization number

ANNEXURE IV**[see rule 4]****Application for a licence for operating the lift or escalator.**

To, **The Inspector of Lift and Escalators,**

Sub : Installation of lift / escalator at the

Dear Sir,

With reference to letter No dated of your office granting permission to install a lift /escalator at the above mentioned premises, I/We have to state that the work of Installation of the lift / escalator has been completed on 20.....

I/We therefore request that a licence for operating the lift /escalator may be granted.

The work of erection of the lift /escalator has been carried out in accordance with the provisions of the Gujarat Lifts and Escalators Rules, 2001.

A fee of Rs. in accordance with the rule 16 has been paid and the challan in original is enclosed.

Yours faithfully,

Signature of the owner / applicant

Date

ANNEXURE V
{see rule 4}

Declaration from the person authorised under section 13

To,

The Inspector of Lift and Escalators,

Ref: Our Contract Nodated with Messers lift / Escalator at
.....

Sir,

We ----- having undertaken the work of installation of the lift /escalator at the premises named and having completed the installation of said the lift / escalator hereby certify that the work of installation of the lifts /escalator(s) complies with the provisions of the Gujarat Lift and escalators Rules, 2001. We further certify that the lift / escalator installation is ready for inspection which is required to be made for the purpose of issuing a licence under the Gujarat Lifts and Escalators Act, 2000 for operating the same.

Signature of the authorised person .

Authorization Number.

Date :

ANNEXURE VI
[see rules 4 and 6]
~~ANNEXURE V~~
~~[see rule 4]~~
GUJARAT STATE.

~~Of lifts and escalators installed in premises~~

(This licence is not transferable or assignable to any person or firm or company. This licence is to be renewed at an interval of every three years and must be produced to the Licensing Authority before the prescribed time limit).

License No.

Mr./Messers is/are hereby authorized to use the lift (the particulars of which are given below) installed at the premises owned by and situated at This licence shall remain valid from to and is issued subject to the conditions set out on the reverse.

Having undertaken the work of installation of the lift/escalator at the premises and having complied with the provisions of the Gujarat Lifts and Escalators Act, 2000, the Licensor hereby certifies that the installation of the lift/escalator complies with the provisions of the Gujarat Lifts and Escalators Act, 2000, and the rules made thereunder.

PARTICULARS

- (i) Type of lift ... Passenger/Hospital/Goods/Service
- (ii) Rated load
- (iii) Rated speed.

The day of20

Chief Inspector of Lifts and Escalators,
Gujarat State,
Gandhinagar.

Licence valid upto the date	Initial of the Chief Inspector of Lifts and Escalators

CONDITIONS

1. The lift and its installation shall be operated and maintained in conformity with the provisions of the Gujarat Lifts and Escalators Act, 2000 and the rules made thereunder.

2. If the holder of this licence does not normally reside in the town or village in which the lift has been erected, he shall within one month from the date of this licence appoint an agent who shall be resident in the town or village in which the lift has been installed. The agent so appointed shall be responsible for the operation and maintenance of the lift in conformity with the provisions of the Gujarat Lifts and Escalators Act, 2000 and the rules made thereunder. The name of every such agent shall be communicated to the Chief Inspector. Any change of agent shall be similarly notified.

3. The holder of the licence or his agent, if any, shall, within one month from the date of this licence, appoint a person who is in possession of a valid authorization for maintenance of the lift installation and shall communicate the name of such person to the Chief Inspector. Any change of person so appointed, shall also be similarly notified.

4. No additions or alterations to the lifts and its installation shall be carried out without prior approval of the Chief Inspector.

5. A xerox copy of this licence shall be permanently displayed in the lift car as well as in the machine room of the lift.

6. If the holder this licence desires to have the change of name in the licence once issued he shall apply to the Chief Inspector together with the licence and the challan showing the payment of prescribed fee.

ANNEXURE VII
[see rules 4 and 6]

GUJARAT STATE
licence to use an escalator

(This licence is not transferable or assignable to any person or firm or company. This licence is to be renewed at an interval of every three years and must be produced to the Licensing Authority before the prescribed time limit).

Licence No.....

Mr./Messers is/are hereby authorized to operate the escalator (the particulars of which are given below) installed at the premises owned by..... and situated at This licence shall remain valid from..... to and is issued subject to the conditions set out on the reverse.

PARTICULARS

- (i) Angle of inclination of escalator with the horizontal
- (ii) Width of the escalator
- (iii) Vertical rise of the escalator
- (iv) Rated load
- (v) Rated speed.

The day of 20

Chief Inspector of Lifts and Escalators,
Gujarat State,
Gandhinagar.

Licence valid upto the date	Initial of the Chief Inspector of Lifts and Escalators

CONDITIONS

1. The escalator and its installation shall be operated and maintained in conformity with the provisions of the Gujarat Lift and Escalators Act.2000 and the rules made thereunder.

2. If the holder of this licence does not normally reside in the town or village in which the escalator has been erected, he shall within one month from the date of this licence appoint an agent who shall be resident in the town or village in which the escalator has been installed. The agent so appointed shall be responsible for the operation and maintenance of the escalator in conformity with the provisions of the Gujarat Lifts and Escalators Act, 2000 and the rules made thereunder. The name of every such agent shall be communicated to the Chief Inspector. Any change of agent shall be similarly notified.

3. The holder of the licence or his agent, if any, shall, within one month from the date of this licence, appoint a person who is in possession of a valid authorization for maintenance of the escalator installation and shall communicate the name of such person to the Chief Inspector. Any change of person so appointed, shall also be similarly notified.

3. No additions or alterations to the escalator and its installation shall be carried out without prior approval of the Chief Inspector.
4. A zerox copy of this licence shall be permanently displayed in a conspicuous position near the escalator.
5. If the holder these licence desires to have the change of name in the licence once issued, he shall apply to Chief Inspector together with the licence and the challan showing the payment of the prescribed fee.

ANNEXURE VIII
(see rule-5)

Application for licence for operating a lift installed before the commencement of the Act.

(To be submitted to the Inspector of Lifts and Escalators)

1. Full name and address of the applicant.....
 2. Name and address of the local agent, if any.....
 3. Address of the premises where the lift has been erected together with the name of the owner thereof.....
 4. Name and address of the person (authorized under section 13) who is going to maintain the lift.....
 5. Type of lift
 6. The rated load of the lift (in Kilograms).....
 7. The rated speed of the lift (meters/second).....
 8. The total weight of the lift car including the rated load.....
 9. The total weight of the counterweight.....
 10. The number, description, weight and size of the suspension ropes.....
 11. The pit depth.....
 12. Travel and the number of floors served.....
 13. The total head room.....
- Date:20

Signature of the applicant.

Signature of the authorised person .

Authorization Number.

Note

Every application shall be accompanied with the original licence obtained and a challan in original showing the payment towards the fee as prescribed in rule 16.

ANNEXURE IX

(see rule-5)

Application for licence for operating an escalator installed before the commencement of the Act.

(To be submitted to the Inspector of lifts and escalators)

1. Full name and address of the applicant.....
2. Name and address of the local agent, if any.....
3. Address of the premises where the escalator has been erected together with the name of the owner thereof.....
4. Name and address of the person (authorized under section 13) who is going to maintain the escalator.
5. Type of escalator
6. The rated load of the escalator in (kilograms).....
7. The rated speed of the escalator (meters/second).....
8. The maximum number of persons which the escalator can carry.
.....
9. The angle of inclination of the escalator with the horizontal
10. The width of escalator.....
11. The vertical rise of the escalator.....
12. The number, description, weight and size of main drive chain step chain, hand rail drive chain and governor drive chain.....
13. The total head room.....
14. i) Details of construction of the stresses and step treads together with the weight and size of all structural members and supporting beams in connection therewith.
ii) The approximate reaction which has been imposed on the building due to the escalator installation including beams, etc. shall be given as far as practicable.

Date:.....20

Signature of the applicant.

Signature of the authorised person .

Authorization Number.

Note: Every application shall be accompanied with the original licence obtained and a challan in original showing the payment towards the fee as prescribed in rule 16.

ANNEXURE - X
(see rule-8)

Application for renewal of licence of lift/escalator.

To,

The Chief Inspector of Lifts and Escalators.

Sub: Renewal of working licence for the lift/escalator installed at

Sir,

With reference to the above, it is stated that the working licence in respect of lift/escalator installed at is sent herewith for renewal thereof as required under section 6 of the Gujarat Lifts and Escalators Act, 2000 and it is requested to return the same after renewal.

An original challan of Rs..... being the renewal fee and a report as required under section 16 of the said Act are also enclosed.

Date:

Encl: As above

Yours faithfully,

Signature of the owner.

ANNEXURE XI
[see rule 9]

Details of lifts /escalators under maintenance.

To,

The Chief Inspector of Lifts And Escalators,

As required by rule 9 of the Gujarat Lifts and Escalator Rules, 2001 I/We hereby certify that the lift /escalator(s) installed atand owned by..... is under my/our maintenance.

The installation of the aforesaid lift/ escalator satisfies all the requirement as laid down under the Gujarat Lifts and Escalators Act, 2000 and the rules thereunder. I/We maintain log book as required under Rule 9 (j) of the Gujarat Lifts and Escalators Rules, 2001.

Date :

Signature of the authorized person .

Authorization Number.

ANNEXURE XII
(se rule 10)

GUJARAT STATE

Form of order for repairing lift /escalator and prohibiting use thereof.

To,

The Owner of the lift/escalator installation

1. Whereas it appears to me that the lift / escalator in premisesoperating
under licence No..... does not fulfill the requirements as set out hereunder

i)

ii)

iii)

iv)

v)

You are hereby called upon to comply with the aforesaid requirements within a period of.....days from the date of this order and to report compliance in writing to me.

2.I also order that you shall discontinue the use of the lift / escalator with effect from the date of receipt of this order until the repairs or alterations mentioned in paragraph 1 above are made or the cause of the danger is eliminated or the terms, conditions or rules are complied with.

3. If so desired, an appeal may be filed against this order under sub section (2) of section 11 of the Gujarat Lifts and Escalators Act 2000 to the Chief Inspector of Lifts and Escalator within thirty days from the date of this order, but not withstanding such appeal this order must be complied with, unless the appellate authority, on or before the date specified in paragraph 1 above , otherwise directs.

Inspector of Lift and Escalators, Officer duly authorized.....

The day of 20.....

ANNEXURE XIII

(see rule 11)

Authorization of person for erection and maintenance of lifts or escalators.

1. Requirements for authorization

An application for authorization for erection and maintenance of lifts or escalator, as the case may be, under the provisions of Rule 11 of the Gujarat Lifts and Escalators Rules, 2001 may be made in the prescribed form 'T' appended to this annexure along with the prescribed fee by a person fulfilling the following criteria.

- i) shall have the valid electrical contractor's licence from the Gujarat State Licensing Board.
- ii) shall have an independent office premises with an independent telephone connection within the State Of Gujarat.
- iii) shall have to produce a certificate from any nationalised bank to the effect that he is solvent to the extent of rupees eight lacs.
- iv) shall have in his regular employment following minimum staff.
 - (a) At least one engineer possessing (i) a degree in mechanical engineering or its equivalent qualification from the recognized university or institution and having an experience of at least four years in the field of elevators or escalators, as the case may be or (ii) a diploma in mechanical engineering from a recognized Institute and having an experience of at least eight years in the field of elevators or escalators as the case may be.
 - (b) At least one engineer possessing (i) a degree in electrical engineering or its equivalent qualification from a recognized university or institution and having an experience of at least four years in the field of elevators or escalators as the case may be or (ii) a diploma in electrical engineering from a recognized Institute and having an experience of at least eight years in the field of elevators or escalators as the case may be.
 - (c) At least one person possessing a certificate in the trade of electrical or electronics from the Industrial Training Institute or any other recognized Institution approved by the Chief Inspector and having an experience of at least five years in the field of elevators or escalators, as the case may be.
 - (d) One erection pair for every ten new lift or escalators to be erected during any calendar year consisting of one electrician, one fitter and one helper.
 - (e) One maintenance pair for every fifty lifts or escalators under maintenance during any calendar year consisting of one electrician and one helper and
 - (f) Clerk / attendant round the clock having the presence in the service station for responding to the complaint calls from the owners. Provided that the employment of such clerk/ attendant shall not be necessary during night hours if facilities for better communication like mobile phone, pager system etc. are available during such hours:

Provided that when a person applying for authorization under rule 11 is himself a qualified mechanical or electrical engineer with requisite experience, the employment of another mechanical or electrical engineer shall not be necessary.

- (v) Shall have a workshop in his own possession within the State of Gujarat having minimum area of 100 square meters with independent facility and telephone and separate power connection of at least 15 H.P. Such workshop shall be equipped with following minimum machineries and testing instruments either stationary or portable.
 - (a) Lathe machine of minimum 37.5 Centimeters center height and a bed length of at least 120 Centimeters.
 - (b) Drill machine of minimum 3 Centimeters capacity.
 - (c) Welding machine of 5 KVA or above
 - (d) Hacksaw machine
 - (e) Chain pulley block of 3 tonne capacity
 - (f) Standard weight trolley
 - (g) Clipon meter for measurement of voltage, current etc.
 - (h) Techometer

Provided that when the authorised person is having his own manufacturing unit within the state of Gujarat, he shall not be required to have a separate workshop but he shall be required to have the minimum machineries and instruments as mentioned above.

(vi) Shall have necessary safety gadgets, like safety belts and head gears for entire staff engaged in the work of erection and maintenance.

(vii) Shall have suitable independent vehicles in his possession for transportation of material:

Provided that when the number of lifts or escalators under maintenance in a city or town other than the city where the main office is situated exceeds fifty, additional service station shall be established in such city or town having the facilities as required by the Chief Inspector:

Provided further that a staff register and the relevant records related with erection and maintenance work shall be maintained by such person and the same shall be produced for verification as and when directed by the Chief Inspector. The specimen of such staff register as well as the guide lines to be followed for maintaining the records of erection and maintenance shall be prescribed by the Chief Inspector:

Provided further that a person authorized for such erection and maintenance shall not be eligible for obtaining the authorization for inspection and testing under section 13.

Provided also that any person having any business relation in its individual capacity either directly or indirectly with the person authorized for inspection and testing under section 13 shall also be not eligible for obtaining the authorization for erection and maintenance.

2. Grant of certificate of authorization: The Chief Inspector may after such enquiries and tests as may be considered necessary grant a certificate of authorization in form II, in case of lifts and in form III, in case of escalators set out in this annexure to an applicant who fulfill the above requirements.

3. Renewal of authorization.

Every authorization granted under rule 11 shall be valid for a calendar year. The authorization may be renewed on an application made in that behalf to the Chief Inspector along with following documents before 15th December of every year.

- (a) Certificate of Authorization in original.
- (b) A challan in original in token of payment of fee
- (c) Zerox copy of the application made for the renewal of the electrical contractors license.
- (d) A copy of the staff register attested by a gazetted officer.
- (e) A statement indicating the numbers of lifts erected during the period January to October of the year preceeding the year for which the application for renewal is made.
- (f) Number of lifts maintained during the period January to October of the year preceeding the year for which the application for renewal is made.
- (g) A certificate from any nationalized bank to the effect that the applicant continues to be solvent to the extent of Rupees eight lacs
- (h) A copy of the application made, if any, for renewal of the registration granted under the Factories Act, 1948.
- (i) Updated list of machineries, equipments and testing instruments in possession.
- (j) Details of safety gadgets for staff.
- (k) Details of vehicles in possession for transportation of materials.

In the event of the holder of the authorization failing to get the authorization renewed in the said manner before the date of expiry, the authorization shall be come void and a fresh authorization shall have to be obtained.

4. Grant of duplicate certificate of authorization :-

A duplicate of certificate of authorization granted under these rules may be issued on certificate by the applicant of the loss of the original certificate to the satisfaction of the Chief Inspector.

A fee in the manner provided in rule 16 shall be charged for the issue of the duplicate certificate of authorization.

On the issue of a duplicate certificate the original certificate shall be deemed invalid and if found shall be returned to the Chief Inspector for cancellation

5. Suspension or cancellation of the certificate of authorization :-

If the person holding a certificate of authorization under these rules is found to be guilty of negligence, incompetence or the breach of any of these rules or of the conditions of the certificate of authorization, the Chief Inspector, may, after giving the holder of the certificate an opportunity of being heard suspend the certificate for a specific period or cancel the same. The decision of the Chief Inspector in this regard shall be final.

FORM-I
(ANNEXURE-XIII)

Application for obtaining authorization for erection and maintenance of lifts or escalators.

1. Name of the applicant.....
2. Legal status (whether individual firm or company)
(Registration Number, and names of partners or directors to be given in case of firm or company, as the case may be.)
3. Business Address.....
(Details about possession)
4. Whether certificate of authorization was issued in the past in the same name. If so, give number and date of certificate of authorization.
5. Particulars relating to erection or maintenance of lifts/escalators. Details of lifts/escalators erected or maintained to be furnished.
6. Registration Number of electrical contractor's licence.
7. Whether solvency certificate is attached.
8. Details of entire staff employed
9. Details of workshop with machineries.
10. Details of testing instruments.
11. Details of safety gadgets/tools.
12. Details of facilities of vehicles.
13. Details of payment of fee (Challan to be attached)
14. Remarks.

I/We hereby declare that the particulars stated above are correct to the best of my/our knowledge.

Place :

Date :

Signature :

Name :

Designation:

Notes: (1) Any person who makes, procures to be made or assist in making any false statement for the purpose of obtaining for himself or any other person a certificate of authorization for erection and maintenance of lifts/ escalators shall render himself liable to prosecution.

(2) If additional space is required for completing any items, additional sheet may be attached to this form.

FORM-H
(ANNEXURE XIII)
GUJARAT STATE

Certificate of authorization for erection and maintenance of lifts.

(This certificate is to be renewed annually and must be returned to the Chief Inspector at the appropriate time)

Authorization No.

Shri/Messers

.....

is/are hereby authorized to carry out the erection and maintenance of lifts within the State of Gujarat. This certificate of authorization is issued subject to compliance with the conditions set on the reverse.

.....
Chief Inspector of Lifts and Escalators,
Gujarat State,
Gandhinagar.

Theday of20

Authorization valid up to the date	Initial of Chief Inspector of Lifts and Escalators

CONDITIONS

1. It shall be the responsibility of the person authorised to ensure that all materials, fittings, appliances, equipments etc used in the lift which he undertakes to erect conform to the relevant specifications as laid down by the Bureau of Indian Standards, wherever they exist. In case, where such standards do not exist, it shall be of acceptable working standards to the satisfaction of The Chief Inspector.

2. Every contract for erection or maintenance of a lift undertaken by the holder of this certificate of authorization shall be in writing and the holder thereof shall be responsible for the proper erection or maintenance of the lift and its installation for which the contract has been made.

3. The report of periodical inspection and tests of the lift and its installation shall be recorded in a register to be maintained for the purpose of inspection by the holder of the certificate of authorization and every such report shall be duly signed by the person making the inspection and tests.

The report shall contain sufficient details so as to give a clear indication of the condition of the important component parts of the lift installation and of their fitness for safe working of the lift. If required by the Chief Inspector, such report shall be kept in a form approved by him for the purpose.

If as a result of inspection and tests, any defect or breach of rules as may affect the safe working of the lift is found in the lift installation, the owner or agent thereof shall be intimated forthwith about the same by holder of the certificate of authorization and a copy of such intimation shall also be forwarded to the Chief Inspector.

4. The holder of this certificate of authorization shall maintain a register of technical personnel employed by him for erection and maintenance of lifts and register shall be produced for inspection on demand by the Chief Inspector or his any other person authorized by him in this behalf.

5. Any change in the address of the place of business of the holder of this certificate of authorization shall be communicated to the Chief Inspector within two weeks of such change. Any change of agent or manager, if any, shall be similarly notified.

6. At least three persons of the owner of the lift, who ordinarily are the occupants or residents of the premises in which the lift is installed, shall be trained by the holder of this certificate of authorization in respect of the rescue operation in case of power failure.

7. This certificate shall be returned to the Chief Inspector for renewal alongwith the application for the purpose and the original challan of the payment of renewal fee.

8. The holder of this certificate of authorization shall not make any contract for the maintenance of the lift, which is not having the working licence.

9. The occurrence of any fatal or non fatal accident to any of the employees of the holder of this certificate of authorization during erection or maintenance shall be reported in writing to the Chief Inspector within 24 hours of the occurrence of such accident.

**FORM-III
(ANNEXURE XIII)
GUJARAT STATE**

Certificate of authorization of person for erection and maintenance of escalators.

(This certificate is to be renewed annually and must be returned to the Chief Inspector at the appropriate time)

Authorization No.

Shri/Messers

is/are hereby authorized to carry out the erection and maintenance of the escalators within the State of Gujarat. This certificate of authorization is issued subject to compliance with the conditions set on the reverse.

.....
Chief Inspector of Lifts and Escalators
Gujarat State
Gandhinagar

Theday of20

Authorization valid up to the date	Initial of Chief Inspector of Lifts and Escalators

CONDITIONS

1. It shall be the responsibility of the person authorised to ensure that all materials, fittings, appliances, equipments etc. used in the escalator which he undertakes to erect, conform to the relevant specifications as laid down by the Bureau of Indian Standards wherever they exist. In case, where such standards do not exist, it shall be of acceptable working standards to the satisfaction of the Chief Inspector.
2. Every contract for erection or maintenance of escalators undertaken by the holder of this certificate of authorization shall be in writing and the holder thereof shall be responsible for the proper erection or maintenance of the escalator and its installation for which the contract has been made.
3. The report of periodical inspection and tests of the escalator and its installation shall be recorded in a register to be maintained for the purpose of inspection by the holder of the certificate of authorization and every such report shall be duly signed by the person making the inspection and tests.

The report shall contain sufficient details so as to give a clear indication of the condition of the important component parts of the escalator installation and of their fitness for safe working of the escalator. If required by the Chief Inspector, such report shall be kept in a form approved by him for the purpose.

If as a result of inspection and tests, any defect or breach of rules as may affect the safe working of the escalator is found in the escalator installation, the owner or agent thereof shall be intimated forthwith about the same by holder of the certificate of authorization and a copy of such intimation shall also be forwarded to the Chief Inspector.

4. The holder of this certificate of authorization shall maintain a register of technical personnel employed by him for erection and maintenance of escalators and register shall be produced for inspection on demand by the Chief Inspector or his any other person authorized by him in this behalf.

5. Any change in the address of the place of business of the holder of this certificate of authorization shall be communicated to the Chief Inspector within two weeks of such change. Any change of agent or manager, if any, shall be similarly notified.

6. This certificate shall be returned to the Chief Inspector for renewal along with the application for the purpose and the original chalan of the payment of the renewal fee.

7. The occurrence of any fatal or non fatal accident to any of the employees of the holder of this certificate of authorization during erection or maintenance shall be reported in writing to the Chief Inspector within 24 hours of the occurrence of such accident.

8. The holder this certificate of authorization shall not make any contract for the maintenance of the escalator, which is not having working licence.

ANNEXURE - XIV**(see rule 11)****Authorization of person for maintenance of lifts or escalators.****1. Requirements for authorization.**

An application for authorization for maintenance of lifts or escalators, as the case may be, under the provisions of Rule 11 of the Gujarat Lifts and Escalators Rules, 2001 may be made in the prescribed form "I" appended to this annexure along with the prescribed fee by a person fulfilling the following criteria.

- (i) Shall have the valid electrical contractor's licence from the Gujarat State Licensing Board.
- (ii) Shall have an independent office premises with an independent telephone connection within the State Of Gujarat.
- (iii) Shall have to produce certificate from any nationalized bank to the effect that he is solvent to the extent of Rupees Two lacs.
- (iv) Shall have in his regular employment the following minimum staff.
 - (a) At least one engineer possessing (i) a degree in mechanical engineering or its equivalent qualification from the recognized university or Institution and having an experience of at least two years in the field of elevators or escalators as the case may be or (ii) a diploma in mechanical engineering from a recognized institution and having an experience of at least four years in the field of elevators or escalators, as the case may be.
 - (b) At least one engineer possessing (i) a degree in electrical engineering or its equivalent qualification from a recognized university or institution and having an experience of at least two years in the field of elevators or escalators as the case may be or (ii) a diploma in electrical engineering from a recognized institution and having an experience of at least four years in the field of elevators or escalators, as the case may be.
 - (c) At least one person possessing a certificate in the trade of electrical or electronics from the Industrial Training Institute or any other recognized Institution approved by the Chief Inspector and having an experience of minimum five years in the field of elevators or escalators as the case may be.
 - (d) One maintenance pair for every fifty lifts or escalators under maintenance during any calendar year consisting of one electrician, and one helper.
 - (e) Clerk / attendant round the clock having the presence in the service station for responding to the complaint calls from the owners. Provided that the employment of such clerk/ attendant shall not be necessary during night hours if facilities for better communication like mobile phone, pager system etc. are available during such hours.

Provided that when a person applying for authorization under rule 11 is himself a qualified mechanical or electrical engineer with requisite experience, the employment of another mechanical or electrical engineer shall not be necessary.

- (v) Shall have a workshop in his own possession within the State of Gujarat having minimum area of 100 Square meters with telephone and separate power connection of at least 15 H.P. and other service facilities. Such workshop shall be equipped with following minimum machineries and testing instruments either stationary or portable.
 - (a) Lathe machine
 - (b) Lathe machine suitable for re-grooving main sheave and over speed governor sheave
 - (c) Drill machine of minimum 3 Centimeters capacity
 - (d) Hacksaw machine
 - (e) Chain pulley block of 3 tonne capacity
 - (f) Standard weight trolley
 - (g) Clipon meter for measurement of voltage, current etc.
 - (h) Techometer

Provided that when the authorized person is having his own manufacturing unit within the state of Gujarat, he shall not be required to have a separate workshop but he shall be required to have the minimum machineries and instruments as mentioned above.

(vi) Shall have necessary safety gadgets like safety belts and head gears for entire staff engaged in the work of maintenance.

(vii) Shall have suitable independent vehicles in his possession for transportation of materials.

Provided that when the number of lifts or escalators under maintenance in a city or town other than the city where the main office is situated exceeds fifty, additional service station shall be established in such city or town having the facility as directed by the Chief Inspector.

Provided further that a staff register and the relevant records related to maintenance shall be maintained by such person and the same shall be produced for verification as and when directed by the Chief Inspector. The specimen of such staff register as well as the guide lines to be followed for maintaining the records of maintenance shall be prescribed by the Chief Inspector.

Provided also that a person authorized for such maintenance shall not be eligible for obtaining the authorization for inspection and testing under section 13.

Provided also that any person having any business relations in its individual capacity either directly or indirectly with the person authorized for inspection and testing under section 13 shall also be not eligible for obtaining the authorization for maintenance.

2. **Grant of certificate of authorization:** The Chief Inspector may after such enquiries and tests as may be considered necessary grant a certificate of authorization in form II in case of lift and in form III, in case of escalators set out in this annexure to an applicant who fulfills the above requirements.

3. Renewal of authorization.

Every authorization granted under rule 11 shall be valid for a calendar year. The authorization may be renewed on an application made in that behalf to the Chief Inspector along with following documents before 15th December of every year.

- (a) Certificate of Authorization in original.
- (b) A challan in original in token of payment of fee for renewal of authorization
- (c) Zerox copy of the application made for the renewal of the electrical contractors license.
- (d) A copy of the staff register attested by a gazetted officer.
- (e) A statement indicating the numbers of lifts maintained during the period January to October of the year preceding the year for which the application for renewal is made
- (f) A certificate from any nationalized bank to the effect that the applicant continues to be solvent to the extent of Rupees two lacs.
- (g) A copy of the application made, if any, for renewal of the registration granted under Factories Act, 1948.
- (h) Updated list of machineries, equipments and testing instrument in possession.
- (i) Details of safety gadgets for staff.
- (j) Details of vehicles in possession for transportation of materials.

In the event of the holder of the authorization failing to get the authorization renewed in the said manner before the date of expiry, the authorization shall be ~~compend~~ and a fresh authorization shall have to be obtained.

4. Grant of duplicate certificate of authorization:

A duplicate of certificate of authorization granted under these rules may be issued on certificate by the applicant of the loss of the original certificate to the satisfaction of the Chief Inspector.

A fee in the manner provided in Rule 16 shall be charged for the issue of the duplicate certificate of authorization.

On the issue of a duplicate certificate the original certificate shall be deemed invalid and if found shall be returned to the Chief Inspector for cancellation.

5. Suspension or cancellation of the certificate of authorization :-

If the person holding a certificate of authorization under these rules is found to be guilty of negligence, incompetence or the breach of any of these rules or of the conditions of the certificate of authorization, the Chief Inspector, may, after giving the holder of the certificate an opportunity of being heard suspend the certificate for a specific period or cancel the same. The decision of the Chief Inspector in this regard shall be final.

FORM I**(ANNEXURE-XIV)****Application for obtaining authorization for maintenance of lifts and escalators.**

1. Name of the applicant.....
2. Legal status (whether individual, firm or company)
(Registration No. and names of partners or directors to be given in case of firm or company, as the case may be.)
3. Business Address.....
(Details about possession)
4. Whether certificate of authorization was issued in the past in the same name. If so, give number and date of certificate of authorization.
5. Particulars relating to maintenance of lifts/escalators. Details of lifts / escalators maintained to be furnished.
6. Registration number of electrical contractor's licence.
7. Whether solvency certificate is attached.
8. Details of entire staff employed
9. Details of workshop with machineries.
10. Details of testing instruments.
11. Details of safety gadgets/tools.
12. Details of facilities of vehicles.
13. Details of payment of fee (chalan to be attached)
14. Remarks.

I/We hereby declare that the particulars stated above are correct to the best of my/our knowledge.

Place:

Date :.....

Signature :.....

Name:

Designation:.....

Notes: (1) Any person who makes, procures to be made or assist in making any false statement for the purpose of obtaining for himself or any other person a certificate of authorization for maintenance of lift/escalator shall render himself liable to prosecution.

(1) If additional space is required for completing any items an additional sheet may be attached to this form.

FORM-II
(ANNEXURE XIV)
GUJARAT STATE

Certificate of authorization for maintenance of lifts.

(This certificate is to be renewed annually and must be returned to the Chief Inspector at the appropriate time)

Authorization No.

Shri/Messers

.....
.....
is/are hereby authorized to carry out the maintenance of lifts within the State of Gujarat. This certificate of authorization is issued subject to compliance with the conditions set on the reverse.

.....
Chief Inspector of Lifts and Escalators,
Gujarat State,
Gandhinagar.

Theday of20

Authorization valid upto the date	Initial of Chief Inspector of Lifts and Escalators

CONDITIONS

1. Every contract for maintenance of a lift undertaken by the holder of this certificate of authorization shall be in writing and the holder thereof shall be responsible for the proper maintenance of the lift and its installation for which the contract has been made.

2. The report of periodical inspection and tests of the lift and its installation shall be recorded in a register to be maintained for the purpose of inspection by the holder of the certificate of registration and every such report shall be duly signed by the person making the inspection and tests.

The report shall contain sufficient details so as to give a clear indication of the condition of the important component parts of the lift installation and of their fitness for safe working of the lift. If required by the chief Inspector, such report shall be kept in a form approved by him for the purpose.

If as a result of inspection and tests, any defect or breach of rules as may affect the safe working of the lift is found in the lift installation, the owner or agent thereof shall be intimated forthwith about the same by holder of the certificate of authorization and a copy of such intimation shall also be forwarded to the Chief Inspector.

3. The holder of this certificate of authorization shall maintain a register of technical personnel employed by him for maintenance of lifts and register shall be produced for inspection on demand by the Chief Inspector or his any other person authorized by him in this behalf.

FOR THE
MIXED
INDUSTRIAL

4. Any change in the address of the place of business of the holder of this certificate of authorization shall be communicated to the Chief Inspector within two weeks of such change. Any change of agent or manager, if any, shall be similarly notified.

5. This certificate shall be returned to the Chief Inspector for renewal along with the application for the purpose and the original chalan of the payment of the renewal fee.

6. The occurrence of any fatal or non fatal accident to any of the employees of the holder of this certificate of authorization during maintenance shall be reported in writing to the Chief Inspector within 24 hours of the occurrence of such accident.

7. At least three persons of the owner of the lift, who ordinarily are the occupants or residents of the premises in which the lift is installed, shall be trained by the holder of this certificate of authorization in respect of the rescue operation in case of power failure.

8. The holder of this certificate of authorization shall not make any contract for the maintenance of the lift which is not having the working licence.

FORM-III
(ANNEXURE XIV)
GUJARAT STATE

Certificate of authorization for maintenance of escalators.

(This certificate is to be renewed annually and must be returned to the Chief Inspector at the appropriate time)

Authorization No.

Shri/Messers

is/are hereby authorized to carry out the maintenance of escalators within the State of Gujarat. This certificate of authorization is issued subject to compliance with the conditions set on the reverse.

.....
 Chief Inspector of Lifts and Escalators,
 Gujarat State,
 Gandhinagar.

Theday of20

Authorization valid upto the date	Initial of Chief Inspector of Lifts and Escalators

CONDITIONS

1. Every contract for maintenance of a escalator undertaken by the holder of this certificate of authorization shall be in writing and the holder thereof shall be responsible for the proper maintenance of the escalators and its installation for which the contract has been made.

2. The report of periodical inspection and tests of the escalator and its installation shall be recorded in a register to be maintained for the purpose of inspection by the holder of the certificate of authorization and every such report shall be duly signed by the person making the inspection and tests.

The report shall contain sufficient details so as to give a clear indication of the condition of the important component parts of the escalator installation and of their fitness for safe working of the escalator. If required by the chief Inspector, such report shall be kept in a form approved by him for the purpose.

If as a result of inspection and tests, any defects or breach of rules as may affect the safe working of the escalator is found in the lift installation, the owner or agent thereof shall be intimated forthwith about the same by holder of the certificate of authorization and a copy of such intimation shall also be forwarded to the Chief Inspector.

3. The holder of this certificate of authorization shall maintain a register of technical personnel employed by him for maintenance of escalators and register shall be produced for inspection on demand by the Chief Inspector or his any other person authorized by him in this behalf.

4. Any change in the address of the place of business of the holder of this certificate of authorization shall be communicated to the Chief Inspector within two weeks of such change. Any change of agent or manager, if any, shall be similarly notified.

5. This certificate shall be returned to the Chief Inspector for renewal along with the application for the purpose and the original chalan of the payment of the renewal fee.

6. The occurrence of any fatal or non fatal accident to any of the employees of the holder of this certificate of authorization during maintenance shall be reported in writing to the Chief Inspector within 24 hours of the occurrence of such accident.

7. The holder this certificate of authorization shall not make any contract for the maintenance the escalators, which is not having the working licence.

ANNEXURE -XV
(see rule-11)

Authorization of person for carrying out periodical inspection and testing of lifts or escalators.

1. REQUIREMENTS FOR AUTHORIZATION.

An application for authorization for periodical inspecting and testing of lifts or escalators, as the case may be, under the provisions of Rule 11 of the Gujarat Lifts and Escalator Rules, 2001 shall be made in the prescribed form I appended to this annexure along with the prescribed fee by a person fulfilling the following criteria.

- (i) Shall have an independent office premises within the state of Gujarat with a telephone and necessary ministerial staff.
- (ii) Shall either himself possess a degree in electrical engineering or its qualification from a recognized university or institution and have an experience five years in the field of elevators or escalators or a diploma in electrical engineering from the recognized Institute and have an experience of ten years in the field of elevators or escalators or he shall employ a person having the said qualifications and experience.
- (iii) Shall have to produce a solvency certificate from any nationalized bank to the effect that he is solvent to the extent of rupees one lac.
- (iv) Shall employ the necessary technical staff for the assistance in his work.
- (v) possess the following minimum testing instruments.
 - (a) Clip on meter.
 - (b) Techometer
 - (c) Overspeed governor calibration testing set up.
 - (d) Megger and earthing resistance measuring equipment.

Provided that a staff register shall be maintained by such person and the same shall be produced for verification as when directed by the Chief Inspector. The specimen of such staff register shall be prescribed by the Chief Inspector.

Provided further that a person authorized for such inspection and testing shall not be eligible for obtaining the authorization for erection and maintenance or maintenance under section 13.

Provided also that any person having any business relations in his individual capacity either directly or indirectly with the person authorized for erection and maintenance or maintenance shall also be not eligible for obtaining the authorization for inspection and testing.

2. Grant of Certificate of authorization :- The Chief Inspector may after such inquiries and tests as may be considered necessary grant a certificate of authorization in Form II in case of lifts and in form III, in case of escalators set out in this annexure to an applicant who fulfills the above requirements.

3. Renewal of authorization -Every authorization granted under rule 11 shall be valid for a calendar year. The authorization may be renewed on an application made in that behalf to the Chief Inspector along with following documents before 15th December of every year.

- (a) Certificate of Authorization in original.
- (b) A challan in original in token of payment of fee for renewal of authorization
- (c) A copy of the staff register attested by a gazetted officer.
- (d) A statement indicating the numbers of lifts inspected during the period January to October of the year preceding the year for which the application for renewal is made.

(e) A certificate from any nationalized bank to the effect that the applicant continues to be solvent to the extent of rupees one lac.

(f) Updated list of testing instruments in possession.

In the event of the holder of the authorization failing to get the authorization renewed in the said manner before the date of expiry, the authorization shall become void and a fresh authorization shall have to be obtained.

4. Grant of duplicate certificate of authorization :-

A duplicate of certificate of authorization granted under these rules may be issued on certificate by the applicant of the loss of the original certificate to the satisfaction of the Chief Inspector.

A fee in the manner provided in Rule 16 shall be charged for the issue of the duplicate certificate of authorization.

On the issue of a duplicate certificate the original certificate shall be deemed invalid and if found it shall be returned to the chief Inspector for cancellation.

5. Suspension or cancellation of the certificate of authorization :- If the person holding a certificate of authorization under these rules is found to be guilty of negligence, incompetence or of breach of any of these rules or of the conditions of the certificate of authorization, the Chief Inspector, may, after giving the holder of the certificate an opportunity of being heard suspend the certificate for a specific period or cancel the same. The decision of the chief Inspector in this regard shall be final.

FORM I
(ANNEXURE LXV)

Application for obtaining of authorization for periodical inspection and testing of lifts or escalators.

1. Name of the applicant
2. Legal status : (Whether individual, firm or company. Number of registration and names and addresses of partners or directors to be given in case of firm or company, as the case may be)
3. Office address with details of telephone (Details regarding possession to be given):
4. Whether certificate of authorization was issued in the past in the same name. If so, give number and date of certificate of authorization.
5. Details of technical qualifications and experience. (Attested copies to be attached).
6. Details of technical and ministerial staff employed.
7. Details of payment of fee (chalan to be attached)

I/We hereby declare that the particulars stated above are correct to the best of my/our knowledge.

Place :

Signature :

Date :

Name :

Designation:

**FORM-II
(ANNEXURE - XV)
GUJARAT STATE**

Certificate of authorization for carrying out periodical inspection and testing of Lifts.

(This certificate is to be renewed annually and must be returned to the Chief Inspector at the appropriate time)

Authorization No.....

Shri/ Messers.....

is/ are hereby authorized to carry out the periodical inspection and testing of the lifts within the State of Gujarat. This certificate of authorization is issued subject to compliance with the conditions set on the reverse.

.....
**Chief Inspector of Lifts and Escalators,
Gujarat State,
Gandhinagar.**

Theday of20

Authorization valid up to the date	Initial of Chief Inspector of Lifts and Escalators

Conditions :

1. Holder of this certificate shall follow the provisions of the Gujarat Lifts and Escalators Act 2000, Rules made there under and any direction given by the Chief Inspector.
2. This certificate shall be returned to the Chief Inspector for renewal along with the application for the purpose and the original challan of the payment of the renewal fee.
3. The holder of this certificate shall intimate the owner of the lift about his visit before going for inspection and the inspection shall be carried out during the day time only.
4. The certificate shall be liable to be suspended or cancelled if the performance of the person possessing the same is not satisfactory or any genuine complaint is received from the owner of the lift about the conduct of such person.
5. The occurrence of any fatal or non fatal accident to any of the employees of the holder of this certificate of authorization during inspection and testing shall be reported in writing to the Chief Inspector within 24 hours of the occurrence of such accident.

FORM-III
(ANNEXURE - XV)
GUJARAT STATE

Certificate of authorization for carrying out periodical inspection and testing of escalators:

(This certificate is to be renewed annually and must be returned to the Chief Inspector at the appropriate time)

Authorization No.....

Shri/ Messers.....

is/ are hereby authorized to carry out the periodical inspection and testing of the escalators within the State of Gujarat. This certificate of authorization is issued subject to compliance with the conditions set on the reverse.

.....
Chief Inspector of Lifts and Escalators,
Gujarat State,
Gandhinagar.

Theday of20

Authorization valid upto the date	Initial of Chief Inspector of Lifts and Escalators

Conditions :

1. Holder of this certificate shall follow the provisions of the Gujarat Lifts and Escalators Act, 2000, Rules made there under and any direction given by the Chief Inspector.
2. This certificate shall be returned to the Chief Inspector for renewal alongwith the application for the purpose and the original challan of the payment of the renewal fee.
3. The holder of this certificate shall intimate the owner of the escalator about his visit before going for inspection and the inspection shall the carried out during the day time only.
4. The certificate shall be liable to be suspended or cancelled if the performance of the person possessing the same is not satisfactory or any genuine complaint is received from the owner of the escalator about the conduct of such person.
5. The occurrence of any fatal or non fatal accident to any of the employees of the holder of this certificate of authorization during inspection and testing shall be reported in writing to the Chief Inspector within 24 hours of the occurrence of such accident.

ANNEXURE - XVI

(see rule 13)

Form of reporting accident on lift/ escalator by owner of lift/escalator or his agent

1. Date and time of accident
2. Place of accident
3. Name of owner
4. Details of victim
 - 1) Name
 - 2) Father's name
 - 3) Sex of victim
 - 4) Full postal address
 - 5) Approximate age
 - 6) Fatal / non-fatal
5. In case the victim is an employee of the person authorized under section 13
 - a. Designation of such person
 - b. Brief description of the job undertaken if any
 - c. Whether such person was allowed to work on the job
6. Type of the lift/ escalator (Passenger /hospital/goods/service)
7. Registration number of the licence of lift/escalator along with the name, address and authorization number of the authorized person by whom the lift / escalator is erected or maintained.
8. (a) Describe fully the nature and extent of injuries, e.g fatal/disablement (permanent or temporary) of any portion of the body or burns or other injuries.
(b) In case of fatal accident, was the postmortem performed?
9. Detailed causes leading to the accident
10. Action taken regarding first-aid , medical attendance etc. immediately after the occurrence of the accident (give details)
11. Whether the District Magistrate and Police Station concerned have been notified of the accident (if so, give details)
12. Steps taken to preserve the evidence in connection with the accident to the extent possible
13. Name and designation(s) of the person(s) assisting supervising the person(s) killed or injured.
14. Name and designation of the persons present at and witnessed the accident
15. Any other information/ remarks

Place

Signature

Name

Date

Designation

Address of the person reporting:

ANNEXURE -XVII
(see rule 16)

Notice of remittance of fee

No.
Office of the
Date :

To,

.....
.....
.....

Sub : Remittance of fee for the initial inspection/periodical inspection / re inspection of lift/escalator installed at.....

Sir,

The initial inspection/periodical inspection/ re-inspection of the lift/ escalator installed athas been carried out by this office onand the fee/ re-inspection fee of RS.is leviable for such inspection under rule 16 of the Gujarat Lift and Escalators Rules, 2001. It is, therefore, informed to remit the said amount of fee into the Govt. Treasury or the State bank of India within a period of ten days from the date of this notice under the account head "0043-Taxes and Duties on electricity-800 other receipts, (2) Fees for inspection of Lifts/ Escalators" by challan in triplicate and the original challan be sent to this office.

If the fee is not remitted within a period of ten days as stated above the same shall be re-covered as arrears of land revenue as per the provisions of Section 17 of the Gujarat Lifts and Escalators Act, 2000 which may be noted.

Yours faithfully,

Inspector of Lifts and Escalators.

ANNEXURE XVIII

(see rule -23)

Initial / Periodical Inspection Report of Lift.

Licence No.

Date of Inspection:

Year:

Lift situated at :

Details of machine:

Number of floors:

Name and address of the owner

No. of persons and load:

Type of doors :

Inspection made from the LIFT PIT

Table-I

Fee paid vide challan No:

Dated:

Details of motor

Sr. No.	DESCRIPTION	REQUIREMENT	ACTUALLY PREVAILENT AT THE TIME OF INSPECTION			Remarks
			_____ cms	_____ cms	_____ cms	
1	Dimensions	As per approved plan or as per relevant IS _____ cms _____ cms _____ cms				
2	Clean and dry	Shall be in clean and dry condition	a. Clean and dry	<input type="checkbox"/>		
			b. Clean but not dry	<input type="checkbox"/>		
			c. Dry but not clean	<input type="checkbox"/>		
			d. Neither dry nor clean	<input type="checkbox"/>		
3	Provision of ladder	A ladder shall be provided if height exceeds two meters	a. Height does not exceed two meters	<input type="checkbox"/>		
			b. Height exceeds two meters and a ladder is provided	<input type="checkbox"/>		
			c. Height exceeds two meters but a ladder is not provided	<input type="checkbox"/>		
4	No. of buffers for car	Mention actual numbers and also mention whether it is spring buffer or oil buffer. Oil buffers are required when rated speed of the car is more than 1.5 meters per second.	a. One/two buffer(s) is/are provided.	<input type="checkbox"/>		
			b. Spring/oil buffer(s) is/are provided.	<input type="checkbox"/>		
			c. Oil buffers are not provided even though the speed exceeds 1.5 meters per second.	<input type="checkbox"/>		
5	Number of buffers for counterweight.	Mention actual numbers and also mention whether it is spring or oil buffer. Oil buffers are required when rated speed for the car is more than 1.5 metres per second.	a. One/two buffer(s) is/are provided.	<input type="checkbox"/>		
			b. Spring/oil buffer(s) is/are provided	<input type="checkbox"/>		
			c. Oil buffers are not provided even though the speed exceeds 1.5 meters per second.	<input type="checkbox"/>		
6	Condition of car buffers	Buffers shall not be in bent condition. In case of oil buffers a device for determining the quantum of oil shall be provided.	a. Normal/Bent/Missing	<input type="checkbox"/>		
			b. Device for determining the quantum of oil is provided. (applicable only for oil buffers)	<input type="checkbox"/>		
			c. Device for determining the quantum of oil is not provided. (applicable only for oil buffers)	<input type="checkbox"/>		
7	Condition of Counterweight buffer.	Buffers shall not be in bent condition. In case of oil buffers a device for determining the quantum of oil shall be provided.	a. Normal/Bent/Missing	<input type="checkbox"/>		
			b. Device for determining the quantum of oil is provided. (applicable only for oil buffers).	<input type="checkbox"/>		
			c. Device for determining the quantum of oil is provided. (applicable only for oil buffers).	<input type="checkbox"/>		
8	Clearance between car and buffer	Measure clearance when the car is leveled at bottom most landing cms.		 cms.	
9	Clearance between counter-weight and buffer.	Measure clearance when the car is leveled at top most landing cms.		 cms.	
10	Counterweight guard screen.	shall be provided upto a height of two metres from the floor of the pit except when rope compensation sheave is provided.	a. Guard screen is provided.	<input type="checkbox"/>		
			b. Guard screen is not provided.	<input type="checkbox"/>		
			c. provided but not upto a height of two metres.	<input type="checkbox"/>		
11	Provision of light point under the car.	Shall be provided.	a. Light point provided.	<input type="checkbox"/>		
			b. Light point not provided.	<input type="checkbox"/>		
			c. Light point provided but not in working condition.	<input type="checkbox"/>		

12	Provision of pit switch / provision of pit switch unit with arrangement for lighting the pit.	shall be provided and should be accessible from the lowest landing. When pit depth is more than 2m there should be two pit switches, one accessible from the lowest landing and other from the pit.	a. Pit switch unit is provided <input type="checkbox"/> b. not provided. <input type="checkbox"/>
13	Operation of Pit Switch	The lift shall stop on opening of pit switch.	a. Pit switch is tested & found OK <input type="checkbox"/> b. not found OK. <input type="checkbox"/>
14	Condition of pulley of safety governor rope	It shall have free movement	a. Pulley is having free movement <input type="checkbox"/> b. jammed. <input type="checkbox"/>
15	Condition of pulley of limit switch roller of limit switch.	It shall have free movement	a. Pulley is having free movement. <input type="checkbox"/> b. not having free movement <input type="checkbox"/>
16	earthing of metal parts of lift car.	The metal parts shall be efficiently earthed.	a. Metal part are efficiently earthed <input type="checkbox"/> b. are not efficiently earthed. <input type="checkbox"/>
17	Condition of trailing cable and its termination.	The trailing cable shall be properly terminated so as to avoid detachment from termination box.	a. Condition of trailing cable and its termination in the box is satisfactory. <input type="checkbox"/> b. Unsatisfactory. <input type="checkbox"/>

Inspection made from inside of LIFT CAR
Table-2

Sr. No.	DESCRIPTION	REQUIREMENT	ACTUALLY PREVAILENT AT THE TIME OF INSPECTION	Remarks
1	Display of car capacity	Car capacity shall be displayed	a. Car capacity is displayed / <input type="checkbox"/> b. not displayed. <input type="checkbox"/>	
2	Provision of fan	Fan shall be provided.	a. Fan is provided. / <input type="checkbox"/> b. Not provided. <input type="checkbox"/>	
3	Condition of fan	Fan shall be in working order.	a. Fan is tested and found OK/ <input type="checkbox"/> b. not found OK. <input type="checkbox"/>	
4	Provision of emergency alarm bell.	Emergency alarm bell shall be provided.	a. Emergency alarm bell is provided. <input type="checkbox"/> b. Not provided. <input type="checkbox"/>	
5	Condition of emergency alarm bell	Emergency alarm bell shall be in working order.	a. Emergency alarm bell is tested and found OK/ <input type="checkbox"/> b. not found OK. <input type="checkbox"/>	
6	Provision of light point	Light point shall be provided	a. Light point is provided/ <input type="checkbox"/> b. not provided. <input type="checkbox"/>	
7	Condition of light point	Light point shall be in working order.	a. Light point is tested and found OK <input type="checkbox"/> b. not found OK. <input type="checkbox"/>	
8	General condition of the lift car sides, top and flooring.	General condition shall be satisfactory.	a. Condition of lift car is satisfactory <input type="checkbox"/> b. not satisfactory. <input type="checkbox"/>	
9	Provision of natural air ventilation in case of solid car floor and landing doors inside the lift car.	Ventilation shall be adequate.	a. Ventilation is adequate/ <input type="checkbox"/> b. inadequate <input type="checkbox"/>	
10	Condition of car door	condition of the car door shall be satisfactory.	a. Condition of the car door is satisfactory/ <input type="checkbox"/> b. not satisfactory. <input type="checkbox"/>	
11	Sill gap between car sill and landing for up and down direction sill at each landing	Sill gap shall not exceed 25mm in case of lift with speed 0.63 mtr/sec and 30 mm in all other case.	a. Sill gap is normal <input type="checkbox"/> b. Sill gap is abnormal. <input type="checkbox"/>	
12	Landing level of car with respect to landing sill at all landing for up and down direction.	The car shall stop exactly at landing level. The car shall stop at landing level within the specified limits.	a. The car stops at level/ <input type="checkbox"/> b. above landing level/ <input type="checkbox"/> c. below landing level. <input type="checkbox"/> d. The car stops within the specified limits of the landing level. / <input type="checkbox"/> e. The car does not stops within the specified limits of the landing level. <input type="checkbox"/>	
13	Experience of jerk in the car at the time of starting or stopping.	No appreciable jerk shall be noticed at the time of starting/ stopping	a. Appreciable jerk is not noticed at the time of starting/stopping. <input type="checkbox"/> b. Appreciable jerk is noticed at the time of starting/stopping <input type="checkbox"/>	
14	Operation of stop button/switch (Push button type only)	On pressing the stop button/ switch the lift shall stop.	a. Stop button/switch is tested and found OK <input type="checkbox"/> b. Not found OK <input type="checkbox"/>	
15	In case of manually operated car door, open the car door while the lift is moving	On opening the car door, lift shall stop.	a. Lift stops <input type="checkbox"/> b. Lift continues to move <input type="checkbox"/>	
16	In case of power operated car door, while lift is moving, operate the "DOOR OPEN" button.	The car door shall not open.	a. The car door opens/ <input type="checkbox"/> b. does not open. <input type="checkbox"/>	

17	In case of power operated car door, and landing doors when they are about to close at landing operate the "DOOR OPEN" button.	the doors shall open.	a. The doors open/ b. do not open.	<input type="checkbox"/> <input type="checkbox"/>
18	In case of power operated car door, and landing doors when they are about to close at landings, place a round object of a normal finger size in the air	the doors shall open.	a. The doors open/ b. tend to close.	<input type="checkbox"/> <input type="checkbox"/>
19	While inside the car and control is on attendant mode, operate landing side call button.	The lift shall not repond to calls. The lift shall respond to calls as per type of control.	a. The lift responds to calls / b. does not respond to calls.	<input type="checkbox"/> <input type="checkbox"/>
20	Put the control in an automatic mode, enter the lift car, manually close the landing door and the car door.	The lift shall not operate. for four to six seconds after arrival of car at that landing	a. The lift door remains open for.....sec. b. The lift operates instantly	<input type="checkbox"/> <input type="checkbox"/>
21	In case of power operated car doors, while lift is moving, is the floor position correctly displayed?	The floor position shall be correctly displayed.	a. The floor positions isocorrectly displayed / b. is not correctly displayed.	<input type="checkbox"/> <input type="checkbox"/>
22	In case of collective control, press any landing floor button from outside and also register some floors calls from inside the car, during down travel.	The car while going down shall halt on all floors for which call is registered irrespective of sequence of registration of the calls.	a. The car halts as per calls registered. b. The car does not halt as per calls registered.	<input type="checkbox"/> <input type="checkbox"/>
23	In case of operation of Non stop (NS) button in lift car under attendant mode, does the lift car move directly to the desired floor without attending the landing side calls inspite of having selective-collective control?	The car shall move to desired floor.	a. On operation of NS button, the lift car moves directly to desired floor. b. does move directly to desired floor.	<input type="checkbox"/> <input type="checkbox"/>
24	In case of selective collective control, press any landing floor button from outside and also register some floors calls from inside the car during up and down travel.	The car shall attend up calls while going in up direction and down calls while going in down direction.	a. The car attends up calls while going in up direction and attends down calls while going in down direction. b.	<input type="checkbox"/> <input type="checkbox"/>
25	In case of manual operated doors reverse the order of closing the doors by closing the car door and not closing landing door. Operate the floor button from inside the car or from landing side.	The lift shall not operate.	a. The lift operates/ b. does not operate	<input type="checkbox"/> <input type="checkbox"/>
26	In case of goods lifts, when the lift halt either above or below the landing level say by about ± 180 mm, operate the inching device if provided.	The lift shall come to landing level.	a. The lift comes to landing level. b. The lift does not come to landing level.	<input type="checkbox"/> <input type="checkbox"/>

Inspection made from top of the Lift car.

Table-3

Sr. No.	DESCRIPTION	REQUIREMENT	ACTUALLY PREVAILENT AT THE TIME OF INSPECTION		Remarks
			a.	b.	
1	Provision of maintenance switch on car top.	Maintenance switch shall be provided.	a. Provided b. not provided.	<input type="checkbox"/> <input type="checkbox"/>	
2	Testing of maintenance switch in "UP" and "DOWN" DIRECTION.	When maintenance switch is in "ON" position, the calls from the landings shall not get registered when the car traveling in either direction.	a. Tested and found OK/ b. Not found OK	<input type="checkbox"/> <input type="checkbox"/>	
3	Provision of switch board on car top consisting of lamp holders with bulb and a 3 pin plug socket.	Switch board shall be provided.	a. Provided b. not provided.	<input type="checkbox"/> <input type="checkbox"/>	
4	Operation of lever of landing gates locks i.e. pressing the lever from the car top, during travel in "UP" or "DOWN" direction.	The lift shall halt / stop if the gate locks are of such design that the electrical alarm gets open circuited on pressing of lever.	a. Lift halts b. does not halt.	<input type="checkbox"/> <input type="checkbox"/>	
5	Operation of landing gate from the car top ie press the landing gate if it is swing type and try to open the sliding type at every landing during travel of lift in "UP" and "DOWN" direction	The landing gate shall not open.	a. Landing gate does not open/ b. Landing gate opens.	<input type="checkbox"/> <input type="checkbox"/>	
6	Provision of hoistway lighting.	Hoistway lighting shall be provided.	a. Hoistway lighting is provided/ b. not provided.	<input type="checkbox"/> <input type="checkbox"/>	

7	Condition of Hoistway	Hoistway shall be maintained in clean condition.	a.	Hoistway is clean and needs no repair/	<input type="checkbox"/>
			b.	requires plastering or repairs.	<input type="checkbox"/>
8	Observe whether the retiring cam comes in contact with the lever of landing gate locks.	Retiring cam shall not come in contact with the lever of gate locks while the lift is in motion.	a.	Retiring cam comes in contact/	<input type="checkbox"/>
			b.	does not come in contact, with the lever of gate locks.	<input type="checkbox"/>
9	Condition of car guide shoe liners.	The guide shoe liners shall be in good condition and there shall not be any play. The guide shoe liners shall be in good condition and there may be reasonable play, but it shall not be so much as to cause the shoe to jump the rails under any condition.	a.	The guide shoe liners are in good condition	<input type="checkbox"/>
			b.	not in good condition.	<input type="checkbox"/>
10	Condition of counter weight guide shoe liners.	The guide shoe liners shall be in good condition and there shall not be any play. The guide shoe liners shall be in good condition and there may be reasonable play, but it shall not be so much as to cause the shoe to jump the rails under any condition.	a.	The guide shoe liners are in good condition	<input type="checkbox"/>
			b.	not in good condition.	<input type="checkbox"/>
11	Condition of midway junction box.	The wiring shall be properly terminated in midway junction box where installed.	a.	Wiring terminated neatly/	<input type="checkbox"/>
			b.	needs adequate termination.	<input type="checkbox"/>
12	Condition of trailing cable.	The trailing cable shall be in good condition i.e. the insulation shall not get frayed or damaged mechanically.	a.	The trailing cable is in good condition and insulation is not frayed/	<input type="checkbox"/>
			b.	not in good condition. and insulation is frayed.	<input type="checkbox"/>
13	Condition of floor gangway switches on car top	Gang switch shall be in good working condition	a.	Gang switch is in good condition/	<input type="checkbox"/>
			b.	not in good condition.	<input type="checkbox"/>
14	Operation of safety switch on car top.	On operation of safety switch the car shall stop.	a.	The car stops/	<input type="checkbox"/>
			b.	does not stop.	<input type="checkbox"/>
15	Condition of car top.	The car top shall be in good and strong condition.	a.	The car top is in good condition/	<input type="checkbox"/>
			b.	not in good condition.	<input type="checkbox"/>
16	Lubrication of car and counter weight guides. (Roller guide shoes do not require lubrication of rails)	The guides shall be in properly lubricated condition	a.	The guides are in properly lubricated condition.	<input type="checkbox"/>
			b.	The guides are in not properly lubricated condition.	<input type="checkbox"/>
17	Observe whether the counter weight stacks are firmly secured to the frame by tie-rod or other suitable means.	It shall be firmly secured.	a.	Counter weight stacks are firmly secured	<input type="checkbox"/>
			b.	loosely secured.	<input type="checkbox"/>
18	Condition of gathering clips, rope fastening of suspension ropes near counterweight and near car top.	The suspension rope shall be adequately held by means of gathering clips. The suspension rope shall be adequately fastened.	a.	The suspension ropes are properly held by gathering clips	<input type="checkbox"/>
			b.	not properly held by gathering clips.	<input type="checkbox"/>
			c.	The suspension ropes are properly fastened	<input type="checkbox"/>
			d.	not properly fastened.	<input type="checkbox"/>
19	Condition of fascia plates.	M.S.fascia plates shall be provided below each landing to have flushed hoistway if required.	a.	Fascia plates provided /	<input type="checkbox"/>
			b.	not provided.	<input type="checkbox"/>
20	Earthing of landing gate locks, gang switches etc.	Earthing shall be satisfactorily done.	a.	Earthing is efficiently done/	<input type="checkbox"/>
			b.	not efficiently done.	<input type="checkbox"/>
21	Termination of suspension ropes of car and counterweight	The termination shall be firm and with proper clips	a.	Termination is proper /	<input type="checkbox"/>
			b.	not proper.	<input type="checkbox"/>
22	Condition of compensatory link chain /rope.	It shall be in good working condition whenever provided.	a.	Linkchain/rope is in good conditions.	<input type="checkbox"/>
			b.	not in good condition.	<input type="checkbox"/>

Inspection of Lift From MACHINE ROOM

Table-4

Sr. No.	DESCRIPTION	REQUIREMENT	ACTUALLY PREVAILENT AT THE TIME OF INSPECTION	Remarks
1	Locking arrangement of the machine room.	Locking arrangement shall be provided and machine room shall be kept locked.	a. Locking arrangement is provided <input type="checkbox"/> b. not provided <input type="checkbox"/> c. provided but machine room is not locked. <input type="checkbox"/>	
2	Approach to the machine room from the top landing.	There shall be an easy access from the top landing to the machine room	a. there is an easy access/ <input type="checkbox"/> b. inadequate access to the machine room from the top landing. <input type="checkbox"/>	
3	Cross ventilation.	There shall be an adequate cross ventilation preferably with exhaust fan.	a. The cross ventilation is adequate/ <input type="checkbox"/> b. inadequate. <input type="checkbox"/>	
4	Cleanliness in the machine room.	Machine room shall be kept in clean condition.	a. Is kept cleaned. <input type="checkbox"/> b. is not kept cleaned. <input type="checkbox"/>	
5	Provision of light points and their working parts.	Adequate number of light points shall be provided and maintained in working order.	a. Adequate number of light points are provided/ <input type="checkbox"/> b. not provided/ <input type="checkbox"/> c. provided but not working. <input type="checkbox"/>	
6	Provision of separate main switches for power and light.	Separate main switches for power and light are provided.	a. Separate main switches for power and light provided/ <input type="checkbox"/> b. not provided. <input type="checkbox"/>	
7	Provision of three pin plugs	Three pin plugs shall be provided and maintained in working order.	a. Three pin plugs are provided/ <input type="checkbox"/> b. not provided/ <input type="checkbox"/> c. provided but not working. <input type="checkbox"/>	
8	Provision of brake releasing device.	Brake releasing device shall be provided.	a. Brake releasing device is provided. <input type="checkbox"/> b. not provided. <input type="checkbox"/>	
9	Provision of maintenance log book and entries therein.	Log book shall be maintained in upto date condition.	a. Log book is provided/ <input type="checkbox"/> b. not provided. <input type="checkbox"/> c. provided but not upto date. <input type="checkbox"/>	
10	Provision of hand lamp	Hand lamp shall be provided and maintained in working order.	a. Hand lamp is provided/ <input type="checkbox"/> b. not provided. <input type="checkbox"/> c. providing but not working. <input type="checkbox"/>	
11	Operation of phase failure device or phase reversal device.	Phase failure device and phase reversal device shall be maintained in working order.	a. Phase failure device and phase reversal device tested and found OK <input type="checkbox"/> b. not found OK <input type="checkbox"/>	
12	Operation of overload tripping.	Overload device shall be maintained in working order. Overload tripping device for motor when provided shall be maintained in working order.	a. Over load device tested and found OK/ <input type="checkbox"/> b. not found OK <input type="checkbox"/>	
13	Condition of various contacts at the panel.	All contacts shall be in proper condition.	The condition of following contacts are not proper. 1)..... 2)..... 3).....	
14	Earthing arrangement of main switches lift motor, control panel, overspeed governor etc.	The earthing arrangement shall be proper and earth resistance shall not exceed one ohm.	a. Earthing arrangement is tested and found OK/ <input type="checkbox"/> b. not found OK <input type="checkbox"/>	
15	Adjustment of brakes.	The lift shall correctly stop at landing level on application of brakes. The lift shall stop on application of brakes within specified limit.	a. The lift correctly stops/ <input type="checkbox"/> b. does not stop correctly. <input type="checkbox"/> c. The lift stops <input type="checkbox"/> d. does not stop <input type="checkbox"/> within specified limit. <input type="checkbox"/> Limit = mm	
16	Condition of brake shoe liners.	The brake shoe liners shall be in good condition.	a. The condition of brake shoe liners is OK/ <input type="checkbox"/> b. not OK <input type="checkbox"/>	
17	Operation of gear box and its condition	The gear box shall be smooth in operation. There shall not be any oil leakage from gear box (oiling acceptable). The gear box shall be well lubricated.	a. The gear is smooth/no oil leakage does not need lubrication <input type="checkbox"/> b. Noisy in operation/oil leakage/ needs lubrication <input type="checkbox"/>	
18	Operation of motor.	The motor shall be smooth in operation.	a. The motor is smooth in operation <input type="checkbox"/> b. noisy in operation. <input type="checkbox"/>	
19	Condition of grooves of traction sheave and of diverter pulley if used.	The condition of grooves shall be such that the rope does not slip when the lift stops. The condition of grooves shall be such that the rope does not move when the traction sheave stop.	a. The rope moves/ slips <input type="checkbox"/> b. does not move /slips. <input type="checkbox"/> Slipping = mm	

20	condition of main suspension ropes.	The ropes shall not be in frayed condition.	a. The suspension rope is not frayed/ b. is frayed	<input type="checkbox"/> <input type="checkbox"/>
21	Condition of ropes of overspeed governor.	The ropes shall not be in frayed condition.	a. The governor rope is not frayed/ b. frayed.	<input type="checkbox"/> <input type="checkbox"/>
22	Condition of limit switch operating rope when provided.	The rope shall not be in frayed condition.	a. The limit switch rope is not frayed/ b. frayed.	<input type="checkbox"/> <input type="checkbox"/>
23	Condition of wiring at control panel.	The control panel wiring shall be neatly grouped and the insulation of wires shall be more than one mega ohm with 500 volt megger.	a. The control panel wiring is neat and insulation is above one meg. Ohm/ b. below one meg.ohm.	<input type="checkbox"/> <input type="checkbox"/>
24	Operation of up final limit switch.	The lift, when operated on power or manually, from top most landing shall travel in upward direction till the final limit switch cuts off electric supply to motor.	a. Tested and found OK/ b. not found OK	<input type="checkbox"/> <input type="checkbox"/>
25	Operation of down final limit switch.	The lift, when operated on power or manually, from bottom most landing in downward direction shall travel in bottomward direction till the final limit switch cuts off electric supply to motor.	a. Tested and found OK/ b. not found OK	<input type="checkbox"/> <input type="checkbox"/>
26	Operation of overspeed governor.	The over speed governor when operated, shall cut off the electric supply to motor at 15 % of over speed. The governor shall jam the lift in position and prevent any vertical movement of the car when the speed exceeds 25% (A certificate about elibration of governor shall have to be given to the inspector every six months by the person authorised to maintain the lift.)	a. Tested and found OK/ b. not found OK	<input type="checkbox"/> <input type="checkbox"/>
27	Condition of trap door.	The trap door, if provided in machine room shall be in sound condition.	a. The trap door is in sound condition/ b. not in sound condition/ c. missing.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
28	Visual inspection of safety gear	Whether properly attached to the car frame and over speed governor rope	Attached Not attached	<input type="checkbox"/> <input type="checkbox"/>
29	Testing of contract load and speed of the lift	The motor, when the lift car is loaded with half the contract load in kg (taking one person=68kilogram), shall draw same current in all three phases seperately. The motor, when the lift car is loaded with full contract load in kg(taking one person=68kilogram), shall run at a speed (in r.p.s) to satisfy the following relation: Contract speed in metres per second $3.14159 \times \text{Diameter of traction sheave in metre} \times \text{measured r.p.s of motor}$ Gear Ratio	The motor draws current as follows: Down Direction Up Direction R phase Y phase B phase Contract Speed Calculated Speedmtr/secmtr/sec	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Inspection Made From FLOOR LANDINGS
Table-5

Sr. No.	DESCRIPTION	REQUIREMENT	ACTUALLY PREVAILENT AT THE TIME OF INSPECTION	Remarks
1	Provision of delocking arrangement at every landing.	Delocking arrangement shall be provided at every landing.	a. The delocking arrangement is provided. <input type="checkbox"/> b. not provided. <input type="checkbox"/>	
2	Provision of lights at every landing.	Lighting arrangement shall be provided at all landings.	a. The light points are provided. <input type="checkbox"/> b. not provided. <input type="checkbox"/>	
3	Condition of landing doors at every floor.	The landing doors shall be maintained in good operating and sound condition.	a. The landing doors are provided in operating condition. <input type="checkbox"/> b. not provided in operating condition. <input type="checkbox"/>	
4	Condition of hall buttons at every floor	The hall buttons shall be in good condition.	a. The hall buttons are in good condition. <input type="checkbox"/> b. not in good condition. <input type="checkbox"/>	
5	Condition of landing hall buttons.	The hall buttons shall respond to the type of operation of the lift.	a. Tested and found OK/ <input type="checkbox"/> b. not found OK. <input type="checkbox"/>	
6	Condition of floor indicator/in use indicator or direction call registering light.	These shall be in working condition wherever provided.	a. The indicators are working/ <input type="checkbox"/> b. not working. <input type="checkbox"/>	
7	Operation fireman switch and test.	The switch, when made 'ON' shall make the landing calls inoperative and the car shall report to ground floor and shall remain on car control. When the switch is put 'OFF' the car shall return to normal working.	a. Tested and found OK/ <input type="checkbox"/> b. not found OK. <input type="checkbox"/>	
8	Opening of any landing doors while lift is passing through a landing zone to another floor.	The landing door, on pull or sliding, shall not open and the car shall continue movement.	a. The landing doors open/ <input type="checkbox"/> b. do not open. <input type="checkbox"/>	

Inspector of Lifts and Escalators
/Assistant Inspector of
Lifts and Escalators

ANNEXURE - XIX

(see rule 23)

Initial/ periodical inspection report for escalator

LICENCE NO.
DATE OF INSPECTION
YEAR :
FEE PAID VIDE CHALAN No..... dated

- 1. Name and address of the owner :
- 2. Name and address of the authorised person by whom the escalator is erected or maintained :
- 3. Escalator erected at :
- 4. Angle of inclination :
- 5. Width between balustrades :
- 6. Width of the steps :
- 7. Details of balustrading :
Type
Construction
Condition
- 8. Details of handrails :
Type
Construction
Condition
- 9. Details of step treads and landings :
- 10. Details of comb plates :
- 11. Details of girders :
- 12. Details of track arrangement :
- 13. Rated load :
- 14. Rated speed :
- 15. Machine room :
Size
Height
Height above machine room
Platform
Placement of machine
Distance from wells
- 16. Details of Motor :
- 17. Details of Machine :
- 18. Details of control panel :

XXX - XXXXXXX

(EC 2177 92)

19. Provision of phase failure or reversal

20. Protection relay

21. Condition of wiring

22. Main switches

23. Power main capacity

24. Lighting main switch capacity and condition:

25. Lighting of machine room

26. Ventilation

27. Protection from rain

28. Approach to machine room

29. Details of earthing

30. Earthing of parts

31. Details of chains

32. Details and condition of safety devices
safety/over speed
Governor operation

33. Lighting details of step treads

34. Rated load test

35. Over speed test

36. Reversal test

37. Broken chain test

38. Other remarks, if any

**Inspector of Lifts and Escalators/
Assistant Inspector of Lifts and Escalators**

10/10/2006
10/10/2006
10/10/2006
10/10/2006
10/10/2006

ANNEXURE XX
(see rule 23).

Report of Half Yearly Inspection by person Authorised Under section 13.

Licence No.

Date of Inspection:

Year

Lift situated at

Details of motor

Number of floors:

Half year ending on:

Name and address of the owner :

Type of door:

Inspection made from the LIFT PIT.

Number of persons and Load

Table-1

Sr. No.	DESCRIPTION	REQUIREMENT	ACTUALLY PREVALENT AT THE TIME OF INSPECTION		REMARKS
			a.	b.	
1	Clean and dry	Shall be in clean and dry condition	a. Clean and dry <input type="checkbox"/>	b. Clean but not dry <input type="checkbox"/>	
			c. Dry but not clean <input type="checkbox"/>	d. Neither dry nor clean <input type="checkbox"/>	
2	Condition of car buffers	Buffers shall not be in bent condition. In case of oil buffers a device for determining the quantum of oil shall be provided.	a. Normal/Bent/Missing <input type="checkbox"/>	b. Device for determining the quantum of oil is provided. (applicable only for oil buffers) <input type="checkbox"/>	
			c. Device for determining the quantum of oil is not provided. (applicable only for oil buffers) <input type="checkbox"/>		
3	Condition of Counterweight buffer.	Buffers shall not be in bent condition. In case of oil buffers a device for determining the quantum of oil shall be provided.	a. Normal/Bent/Missing <input type="checkbox"/>	b. Device for determining the quantum of oil is provided. (applicable only for oil buffers) <input type="checkbox"/>	
			c. Device for determining the quantum of oil is not provided. (applicable only for oil buffers) <input type="checkbox"/>		
4	Counterweight guard screen.	shall be provided upto a height of two metres from the floor of the pit except when rope compensation sheave is provided.	a. Guard screen is provided. <input type="checkbox"/>	b. Guard screen is not provided. <input type="checkbox"/>	
			c. provided but not upto a height of two metres. <input type="checkbox"/>		
5	Operation of Pit Switch	The lift shall stop on opening of pit switch.	a. Pit switch is tested & found OK <input type="checkbox"/>	b. not found OK. <input type="checkbox"/>	
6	Condition of pulley of safety governor rope	It shall have free movement	a. Pulley is having free movement <input type="checkbox"/>	b. jammed. <input type="checkbox"/>	
7	Condition of pulley of limit switch/ roller of limit switch.	It shall have free movement	a. Pulley is having free movement <input type="checkbox"/>	b. not having free movement <input type="checkbox"/>	
8	earthing of metal parts of lift car.	The metal parts shall be efficiently earthed.	a. Metal part are efficiently earthed <input type="checkbox"/>	b. are not efficiently earthed. <input type="checkbox"/>	
9	Condition of trailing cable and its termination.	The trailing cable shall be properly terminated so as to avoid detachment from termination box.	a. Condition of trailing cable and its termination in the box is satisfactory <input type="checkbox"/>	b. Unsatisfactory. <input type="checkbox"/>	

Inspection Made From Inside of The LIFT CAR
Table-2

Sr. No.	DESCRIPTION	REQUIREMENT	ACTUALLY PREVALENT AT THE TIME OF INSPECTION		REMARKS
			a.	b.	
1	Display of car capacity	Car capacity shall be displayed	a. Car capacity is displayed <input type="checkbox"/>	b. not displayed. <input type="checkbox"/>	
2	Condition of fan	Fan shall be in working order.	a. Fan is tested and found OK/ <input type="checkbox"/>	b. not found OK <input type="checkbox"/>	
3	Condition of emergency alarm bell	Emergency alarm bell shall be in working order.	a. Emergency alarm bell is tested and found OK/ <input type="checkbox"/>	b. not found OK. <input type="checkbox"/>	
4	Condition of light point	Light point shall be in working order.	a. Light point is tested and found OK <input type="checkbox"/>	b. not found OK <input type="checkbox"/>	
5	General condition of the lift car sides, top and flooring.	General condition shall be satisfactory.	a. Condition of lift car is satisfactory <input type="checkbox"/>	b. not satisfactory. <input type="checkbox"/>	
6	Condition of car door	condition of the car door shall be satisfactory.	a. Condition of the car door is satisfactory/ <input type="checkbox"/>	b. not satisfactory. <input type="checkbox"/>	

7	Landings level of car with respect to landing sill at all landing for up and down direction.	The car shall stop exactly at landing level. The car shall stop at landing level within the specified limits.	a. The car stops at level/ <input type="checkbox"/> b. above landing level/ <input type="checkbox"/> c. below landing level. <input type="checkbox"/> d. the car stops within the specified limit of the landing level <input type="checkbox"/> e. the car does not stop within the specified limits of the landing level <input type="checkbox"/>
8	Experience of jerk in the car at the time of starting or stopping.	No appreciable jerk shall be noticed at the time of starting.	a. Appreciable jerk is not noticed <input type="checkbox"/> b. Noticed at the time of starting/stopping. <input type="checkbox"/>
9	Operation of stop button/switch (Push button type only)	On pressing the stop button/switch the lift shall stop.	a. Stop button/switch is tested and found OK <input type="checkbox"/> b. Not found OK. <input type="checkbox"/>
10	In case of manually operated car door, open the car door while the lift is moving.	On opening the car door, lift shall stop.	a. Lift stops <input type="checkbox"/> b. Lift continues to move <input type="checkbox"/>
11	In case of power operated car door, while lift is moving, operate the "DOOR OPEN" button.	The car door shall not open.	a. The car door opens/ <input type="checkbox"/> b. does not open. <input type="checkbox"/>
12	In case of power operated car door, and landing doors when they are about to close at landing operate the "DOOR OPEN" button.	the doors shall open.	a. The doors open/ <input type="checkbox"/> b. do not open. <input type="checkbox"/>
13	In case of power operated car door, and landing doors when they are about to close at landings, place a round object of a normal finger size in the air gap & actuate door safety mechanism.	the doors shall open.	a. The doors open/ <input type="checkbox"/> b. tend to close. <input type="checkbox"/>
14	While inside the car and control is on attendant mode, operate landing side call button.	The lift shall not respond to calls. The lift shall respond to calls as per type of control.	a. The lift responds to call / <input type="checkbox"/> b. does not respond to calls. <input type="checkbox"/>
15	Put the control in an automatic mode, enter the lift car, manually close the landing door and the car door.	The lift shall not operate for four to six seconds after arrival of car at that landing	a. The lift door remains open for.....sec. <input type="checkbox"/> b. The lift operates instantly <input type="checkbox"/>
16	In case of power operated car doors, while lift is moving, is the floor position correctly displayed?	The floor position shall be correctly displayed.	a. The floor position is correctly displayed / <input type="checkbox"/> b. is not correctly displayed. <input type="checkbox"/>
17	In case of manually operated doors reverse the order of closing the doors by closing the car door and not closing landing door. Operate the floor button from inside the car or from landing side.	The lift shall not operate.	a. The lift operates / <input type="checkbox"/> b. does not operate <input type="checkbox"/>
18	In case of goods lifts, when the lift halts either above or below the landing level say by about ±180mm, operate the inching device if provided.	The lift shall come to landing level.	a. The lift comes to landing level. <input type="checkbox"/> b. The lift does not come to landing level. <input type="checkbox"/>

Inspection Made From Top of The LIFT CAR
Table-3

Sr. No.	DESCRIPTION	REQUIREMENT	ACTUALLY PREVAILENT AT THE TIME OF INSPECTION	REMARKS
1	Testing of maintenance switch in "UP" and "DOWN" DIRECTION.	When maintenance switch is in "ON" position, the calls from the landings shall not get registered when the car traveling in either direction.	a. Tested and found OK/ <input type="checkbox"/> b. Not found OK <input type="checkbox"/>	
2	Operation of lever of landing gates locks i.e. pressing the lever from the car top during travel in "UP" or "DOWN" direction.	The lift shall halt / stop if the gate locks are of such design that the electrical alarm gets open circuited on pressing of lever.	a. Lift halts <input type="checkbox"/> b. does not halt. <input type="checkbox"/>	
3	Condition of Hoistway	Hoistway shall be maintained in clean condition.	a. Hoistway is clean and needs no repair/ <input type="checkbox"/> b. requires plastering or repairs. <input type="checkbox"/>	
4	Observe whether the retiring cam comes in contact with the lever of landing gate locks.	Retiring cam shall not come in contact with the lever of gate locks while the lift is in motion.	a. Retiring cam comes in contact/ <input type="checkbox"/> b. does not come in contact, with the lever of gate locks. <input type="checkbox"/>	

5	Condition of car guide shoe liners	The guide shoe liners shall be in good condition and there shall not be any play. The guide shoe liners shall be in good condition and there may be reasonable play, but it shall not be so much as to cause the shoe to jump the rails under any condition.	a. The guide shoe liners are in good conditions <input type="checkbox"/> b. not in good condition. <input type="checkbox"/>	
6	Condition of counter weight guide shoe liners.	The guide shoe liners shall be in good condition and there shall not be any play. The guide shoe liners shall be in good condition and there may be reasonable play, but it shall not be so much as to cause the shoe to jump the rails under any condition.	a. The guide shoe liners are in good conditions <input type="checkbox"/> b. not in good condition. <input type="checkbox"/>	
7	Condition of midway junction box.	The wiring shall be properly terminated in midway junction box where installed.	a. Wiring terminated neatly/ <input type="checkbox"/> b. needs adequate termination. <input type="checkbox"/>	
8	Condition of trailing cable.	The trailing cable shall be in good condition i.e. the insulation shall not get frayed or damaged mechanically.	a. The trailing cable is in good condition and insulation is not frayed/ <input type="checkbox"/> b. not in good condition. and insulation is frayed. <input type="checkbox"/>	
9	Condition of floor gangway switches on car top	Gang switch shall be in good working condition	a. Gang switch is in good condition/ <input type="checkbox"/> b. not in good condition. <input type="checkbox"/>	
10	Operation of safety switch on car top.	On operation of safety switch the car shall stop.	a. The car stops/ <input type="checkbox"/> b. does not stop. <input type="checkbox"/>	
11	Condition of car top.	The car top shall be in good and strong condition.	a. The car top is in good condition <input type="checkbox"/> b. not in good condition. <input type="checkbox"/>	
12	Lubrication of car and counter weight guides. (Roller guide shoes do not require lubrication of rails)	The guides shall be in properly lubricated condition	a. The guides are in properly lubricated condition. <input type="checkbox"/> b. The guides are not in properly lubricated condition. <input type="checkbox"/>	
13	Condition of gathering clips, rope fastening of suspension ropes near counterweight and near car top.	The suspension rope shall be adequately held by means of gathering clips.	a. The suspension ropes are properly held by gathering clips <input type="checkbox"/> b. not properly held by <input type="checkbox"/>	
		The suspension rope shall be adequately fastened.	c. The suspension ropes are properly fastened <input type="checkbox"/> d. not properly fastened. <input type="checkbox"/>	
14	Earthing of landing gate locks, gang switches etc.	Earthing shall be satisfactorily done.	a. Earthing is efficiently done <input type="checkbox"/> b. not efficiently done. <input type="checkbox"/>	
15	Termination of suspension ropes of car and counterweight	The termination shall be firm and with proper clips	a. Termination is proper / <input type="checkbox"/> b. not proper. <input type="checkbox"/>	
16	Condition of compensatory link chain/rope.	It shall be in good working condition whenever provided.	a. Linkchain/rope is in good condition <input type="checkbox"/> b. not in good condition. <input type="checkbox"/>	

Inspection of Lift From MACHINE ROOM
Table-4

Sr. No.	DESCRIPTION	REQUIREMENT	ACTUALLY PREVALENT AT THE TIME OF INSPECTION	REMARKS
1	Locking arrangement of the machine room.	Locking arrangement shall be provided and machine room shall be kept locked.	a. Locking arrangement is provided <input type="checkbox"/> b. not provided/ <input type="checkbox"/> c. provided but machine room was not locked. <input type="checkbox"/>	
2	Approach to the machine room from the top landing.	There shall be an easy access from the top landing to the machine room	a. there is an easy access/ <input type="checkbox"/> b. inadequate access to the machine room from the top landing. <input type="checkbox"/>	
3	Cross ventilation.	There shall be an adequate cross ventilation preferably with exhaust fan.	a. The cross ventilation is adequate/ <input type="checkbox"/> b. inadequate. <input type="checkbox"/>	

4	Cleanliness in the machine room.	Machine room shall be kept in clean condition.	a. The machine room is kept clean/ b. is not kept clean.	<input type="checkbox"/> <input type="checkbox"/>
5	Provision of light points and their working parts.	Adequate number of light points shall be provided and maintained in working order.	a. Adequate number of light points are provided/ b. not provided/ c. provided but not working.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6	Provision of maintenance log book and entries therein.	Log book shall be maintained in upto date condition.	a. Log book is provided/ b. not provided/ c. provided but not upto date.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
7	Operation of phase failure device or phase reversal device.	Phase failure device and phase reversal device shall be maintained in working order.	a. Phase failure device and phase reversal device tested and found OK b. not found OK	<input type="checkbox"/> <input type="checkbox"/>
8	Operation of overload tripping.	Overload device shall be maintained in working order. Overload tripping device for motor when provided shall be maintained in working order.	a. Over load device tested and found OK/ b. not found OK	<input type="checkbox"/> <input type="checkbox"/>
9	Condition of various contacts at the panel.	All contacts shall be in proper condition.	The condition of following contacts are not proper: 1) 2) 3)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
10	Earthing arrangement of main switches, lift motor, control panel, overspeed, governor etc.	The earthing arrangement shall be proper and earth resistance shall not exceed one Ohm	a. Earthing arrangement is tested and found OK/ b. not found OK	<input type="checkbox"/> <input type="checkbox"/>
11	Adjustment of brakes.	The lift shall correctly stop at landing level on application of brakes. The lift shall stop on application of brakes within specified limit.	a. The lift correctly stops/ b. does not stop correctly. c. The lift stop/ d. does not stop within specified limit. Limit = _____ mm	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
12	Condition of brake shoe liners.	The brake liners shall be in good condition.	a. The condition of brake shoe liner is OK/ b. not OK	<input type="checkbox"/> <input type="checkbox"/>
13	Operation of gear box and its condition	The gear box shall be smooth in operation There shall not be any oil leakage from gear box (oozing acceptable) the gear box shall be well lubricated	a. The gear is smooth/no oil leakage does not need lubrication. b. noisy in operation/oil leakage/ needs lubrication	<input type="checkbox"/> <input type="checkbox"/>
14	Operation of motor.	The motor shall be smooth in operation.	a. The motor is smooth in operation/ b. noisy in operation.	<input type="checkbox"/> <input type="checkbox"/>
15	Condition of grooves of traction sheave and of diverter pulley if used.	The condition of grooves shall be such that the rope does not slip when the lift stops. The condition of grooves shall be such that the rope does not move when the traction sheave stops.	a. The rope moves/ slips b. does not move/ slip. Slipping = _____ mm	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
16	Condition of main suspension ropes.	The ropes shall not be in frayed condition.	a. The suspension rope is not frayed/ b. frayed.	<input type="checkbox"/> <input type="checkbox"/>
17	Condition of ropes of overspeed governor.	The ropes shall not be in frayed condition.	a. The governor rope is not frayed/ b. frayed.	<input type="checkbox"/> <input type="checkbox"/>
18	Condition of limit switch operating rope when provided.	The rope shall not be in frayed condition.	a. The limit switch rope is not frayed/ b. frayed.	<input type="checkbox"/> <input type="checkbox"/>
19	Condition of wiring at control panel.	The control panel wiring shall be neatly grouped and the insulation of wires shall be more than one mega ohm with 500 volt megger.	a. The control panel wiring is neat and insulation is above one meg. Ohm/ b. below one meg. ohm.	<input type="checkbox"/> <input type="checkbox"/>
20	Operation of up-final limit switch.	The lift, when operated on power or manually, from top most landing shall travel in upward direction till the final limit switch cuts off electric supply to motor.	a. Tested and found OK/ b. not found OK	<input type="checkbox"/> <input type="checkbox"/>

ANNEXURE-XXI
(see rule 23)

REPORT OF HALF YEARLY INSPECTION OF ESCALATOR BY PERSON AUTHORISED UNDER SECTION 13

Licence No.

Inspection by.....

Authorization Number.....

Half year ending on

1. Name and address of the owner or agent
2. Name and address of the authorized person by whom the escalator is maintained
3. Escalator situated at
4. Condition of Balustrading
5. Condition of handrails
6. Checking of rated load
7. Checking of rated speed
8. Condition of machine room
9. Condition of control panel
10. Condition of phase failure or reversal
11. Condition of protection relay
12. Condition of wiring
13. Condition of main switches
14. Power main capacity
15. Lighting of machine room
16. Ventilation
17. Protection from rain
18. Approach to machine room
19. Details of earthing
20. Earthing of parts
21. Condition of the chain

22. Details of motor
23. Details of machine
24. Condition of safety devices,
Safety/Over speed
Governor operation
25. Lighting details of step treads
26. Rated load test
27. Over speed test
28. Reversal test
29. Broken chain test
30. Other remarks, if any

Date

Signature of the authorized person.

By order and in the name of the Governor of Gujarat.

(R.K.Shah)
Under Secretary to Government.

GOVERNMENT CENTRAL PRESS, GANDHINAGAR

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