SECTION 11

ELECTRICAL AND MECHANICAL INSTALLATIONS

Contents

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1101 GENERAL

a) All electrical installations must be carried out in accordance with the electricity regulations in force and in accordance with good practice as required by the latest edition of the standards fixed by the Regulations for the Electrical Equipment in Buildings issued by the Institution of Electrical Engineers of Great Britain.

b) All electrical installations must be certified by the electrical inspector in accordance with the relevant regulations in force.

1102 INSTALLATION OF EQUIPMENT

1102.1 Air Conditioning

Air Conditioning and other mechanical ventilating systems shall be done in accordance with the manufacturers' instructions and in accordance with recognised practice. The standard of installation must be equal to that approved by the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) or other Code approved by the Authority.

The design requirements are

a) At least 2 complete air changes per hour shall be induced for any normally occupied room or enclosed space.

b) At least 3 complete air changes per hour shall be induced for any internal lavatory or bathroom and at least 12 complete air changes per hour for any kitchen, and in both cases the ventilating systems shall be separate and distinct from any other ventilating system installed in the building.

c) Extract systems shall be capable of handling at least 75 percent of the total fresh air supply per hour.

d) All equipment shall be installed in such a way that it is readily accessible for inspection and repair, and all refrigerant condensers and/or receivers installed in association with systems containing more than 10 lb. of refrigerant shall be supplied with relief valves of adequate size ventilating to open air at a suitable protected point.

1102.2 Elevators and Escalators

a) Requirement

All electric lifts, elevators and escalators shall be of proprietary manufacture. The installation shall be carried out by an approved specialist contractor and the construction, installation and maintenance shall be in accordance with recognised standards of good practice and shall conform with the "Standard Safety Code for Elevators, Dumb-waiters, Escalators, and Moving Sidewalks - ANSI A 17.1", except as may otherwise be approved by the Authority.

b) Design and Construction Requirements

1) Lift well enclosures, pits and machine rooms shall form part of the building construction and shall provide for the clearance and other requirements shown on the manufacturer's drawings.

2) No lift well shall form part of a ventilating system or accommodate any services other than those ancillary to the installation and operation of the lift.

3) Lift well enclosures shall extend from structural floor to structural ceiling and shall be constructed in accordance with the fire resistance rating requirements of Section 3 of this Code.

4) A smoke escape vent shall be provided within 1ft. of the highest point of each lift well enclosure leading directly to open air.

5) Where a machine room is located on the roof of a building more than 60' 0" high, provision shall be made for lightning protection.

6) Escalators shall not be less than 2'0" in clear width and shall have horizontal treads. They shall have solid balustrades on both sides, each balustrade being furnished with a handrail moving at the same speed as the escalator. The maximum angle of inclination of the escalator with the horizontal shall be 30 degrees and emergency stop buttons shall be located at the top and bottom landings of each escalator flight.

1103 EQUIPMENT IDENTIFICATION AND INSTALLATION

1103.1 General

a) All equipment shall be provided with a legible and securely attached permanent sign giving the names and addresses of the manufacturer and the installing contractor.

b) All equipment shall be installed in such a way that it is readily accessible for inspection, servicing and repair.

1104 DUCTS

1104.1 Basis of Requirement

No void or concealed space within a building shall be used as an integral part of a duct system unless it conforms fully with the requirements of this Code.

1104.2 Service Ducts

a) All service ducts passing through floors and walls other than chases and pipe sleeves of not more than 50 sq. in. in area shall conform with the fire resistance requirements of Section 3 for such floors and walls unless the whole of the free space within the duct is filled to the thickness of the floor or wall with non-combustible barrier material to give a fire resistance rating not less than that of the floor or wall through which the duct passes.

b) Common ducts may be used for the accommodation of different services provided that adequate precautions are taken in the location of services in relation to one another and provided that the spacing and arrangements of pipes and cables is such that one does not interfere with access to another.

c) All service ducts shall be large enough to give adequate access to all cleaning eyes, stop cocks and other controls, for the inspection modification or repair of all services accommodated.

1104.3 Air Ducts

a) All air ducts shall be constructed of non-combustible materials with no openings other than those essential to the proper functioning and servicing of the system.

b) Any air duct passing through fire division walls or fire division floors and/or ceilings shall be provided with automatic fire doors or shutters having a fire resistance rating not less than that of the wall or floor through the duct passes.

1105 ARTIFICIAL LIGHTING

Artificial lighting where required shall be in accordance with the requirements of the electricity regulations in force.