

aerial lines and suspending wires, and for all other parts of the structure, at least 6, taking the maximum possible wind-pressure at 30 lb. per square foot. Earth-wires, where led down poles, shall be protected by casing for a distance of 8 ft. from the ground.

All aerial wires shall be attached to suitable insulators carried on cross-arms of suitable material and cross-section, and they shall be so attached to the insulators or guarded that they cannot fall away from the support. Conductors covered with insulating material shall be so attached that their insulation will not be impaired where they are secured to the insulator.

Any aerial wire shall not in any part thereof be at a less height from the ground than 18 ft., or within 5 ft. measured horizontally or vertically from any part of any building or erection other than a support for the line, except where brought into a building for the purpose of supply.

Railway Crossings.

18. No work of any nature shall be erected or constructed upon, over, or under any part of the Government railways until the Council has obtained the consent of the Minister of Railways thereto, as required by section 4 of the Government Railways Amendment Act, 1910 (No. 2).

Service Connections to Overhead Lines.

19. Service lines from aerial lines shall be taken from insulators, and shall not be tapped off between insulators. They shall be led as directly as possible to insulators firmly attached to some portion of the consumer's premises which is not accessible to any person without the use of a ladder or any other special appliance. Every portion of any service line which is outside a building and is within 7 ft. from any part of the building shall be rubber-insulated.

Where an aerial line crosses a street, the angle between the line and the direction of the street at the place of crossing shall not be less than 60 degrees, and the spans shall be as short as possible.

Where an aerial line crosses or is in proximity to any metallic substance, precautions shall be taken against the possibility of the line coming into contact with the metallic substance, or of the metallic substance coming into contact with the line, by breakage or otherwise.

Guard-wires.

20. Efficient guard-wires effectively earthed shall be erected in a manner to meet with the approval of the Minister of Telegraphs at all crossings and places where electric lines intersect telegraph or other wires or at such other places as may be required by the Minister to be so protected. The Council shall bear the expense of such guard-wires in all cases where an electric line intersects a telegraph or other wire previously existing.

Maintenance.

21. Every aerial line, including its supports, its conductors, and their insulating covering, and all the structural parts and electrical appliances and devices belonging to or connected with the line, shall be duly and efficiently supervised and maintained as regards both electrical and mechanical conditions.

Lines not in Commission.

22. An aerial line shall not be permitted to remain erected after it has ceased to be used for the supply of energy unless the Council intends within a reasonable time again to take it into use.

Underground Conductors and Conduits.

23. The electric lines may be placed wholly underground or partly underground and partly overhead.

All conduits, pipes, casings, and street boxes used as receptacles for electric lines shall be constructed of durable material, and shall be of ample strength to prevent damage from heavy traffic, and reasonable means shall be taken to prevent the accumulation of gas in such receptacles.

Where an underground line crosses or is in proximity to any metallic substance, special precautions shall be taken against the possibility of any electrical charging of the metallic substance from the line, or from any metallic conduit, pipe, or casing enclosing the line.

All underground metal conduits, pipes, or casings containing an electric line shall be efficiently earthed, and shall be so jointed and connected across all street boxes and other openings as to make good electrical contact throughout their whole length.

Street Boxes.

24. The covers of street boxes shall be so secured that they cannot be opened except by means of a special ap-

pliance. Street boxes shall be inspected from time to time for the presence of gas, and suitable action shall be taken to check its influx and accumulation.

Conditions of Supply.

25. The Council shall be responsible for all electric lines or wires, fittings, and apparatus belonging to it, or under its control, which may be upon a consumer's premises, being maintained in a safe condition and in all respects fit for supplying energy.

In delivering the energy to a consumer's terminals the Council shall exercise all due precautions so as to avoid risk of causing fire on the premises.

Where medium pressure is supplied to any consumer the following conditions shall be complied with:—

Where the supply is for power purposes—

(a.) The frame of every electric motor shall be efficiently connected with earth.

(b.) The consumers' wires forming the connections to motors, or otherwise in connection with the supply, shall be, as far as practicable, completely enclosed in strong metal casing efficiently connected with earth, or they shall be fixed in such a manner that there shall be no danger of any shock.

(c.) The supply to every motor shall be controlled by means of an efficient cut-off switch, placed in such a position as to be easily handled by the person in charge of the motor, and connected so that by its means all pressure can be cut off from the motor itself, and from any regulating switch, resistance, or other device in connection therewith.

(d.) Switches, efficient fuses, or other automatic circuit-breakers shall be provided, so as to protect the circuits from excess of current, and all switches and cut-outs shall be so enclosed and protected that there shall be no danger of any shock being obtained in the ordinary handling thereof, or of any fire being caused by their normal or abnormal action.

(e.) A notice shall be fixed in a conspicuous position at every motor and switchboard in connection with the supply forbidding unauthorized persons to touch the motors or apparatus.

Where the supply is for arc lamps in series—

(a.) The consumer's wires forming the connections to the arc lamps, or otherwise in connection with the supply, shall be, as far as practicable, completely enclosed in strong metal casing efficiently connected with earth, or they shall be fixed in such a manner that there shall be no danger of any shock.

(b.) The supply to every arc lamp shall be controlled by means of an efficient cut-off switch, placed in such a position as to be easily handled by the person in charge of the arc lighting, and connected so that by its means all pressure can be cut off from the arc lamp itself, and from any regulating switch, resistance, or other device in connection therewith; provided that where the arc lamps are connected in series across the outer conductors of a three-wire system, it shall be sufficient if one such switch is provided for each series of arc lamps.

(c.) Switches, efficient fuses, or other automatic cut-outs shall be provided, so as to protect the circuits from excess of current, and all switches and cut-outs shall be so enclosed and protected that there shall be no danger of any shock being obtained in the ordinary handling thereof, or of any fire being caused by their normal or abnormal action.

Where the three wires of the system are brought into a consumer's premises for lighting purposes the supply shall be given to two pairs of terminals, arranged in such a manner that there shall be no danger of any shock to persons, and the wiring from those terminals shall be kept distinct.

Lightning-arresters.

26. Where any portion of any electric line, or any support for an electric line, is exposed in such a position as to be liable to cause injury from lightning, it shall be efficiently protected against such liability.

Service Connections.

27. A suitable safety fuse or other automatic circuit-breaker shall be inserted in each service line within a consumer's premises, as close as possible to the point of entry, and contained within a suitable locked or sealed receptacle of fireproof construction, but no fuse or automatic circuit-breaker shall be inserted in the intermediate conductor of the three-wire system.