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Thiruvananthapuram  
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## Circular

Subject Guidelines for installation of Electric Fence Energizer

- Reference
1. Orders of Hon. High court of Kerala in RFA 472 of 2010 dated 18 / 08 / 2010 and 12/10/2010.
  2. Government circular number. 8096 / B2 / 10 / PD. dated 17/ 12 / 2010

In Government circular referred as (2) above ,it is directed that no electric fence shall be energized excepting with the prior sanction of the Electrical Inspector based on the orders of Hon. High Court of Kerala. So the following guidelines are issued for the installation of electric fence.

1. The applicant will have to submit a formal application containing the location and area covered by the electric fence energizer.
2. Erection and maintenance of the fence shall be carried out under the supervision of an authorized person.
3. When the fence is crossing public / private property necessary sanction / NOC from appropriate agency shall be obtained.
4. The electric fences shall be installed, operated and maintained in a manner that minimizes danger to persons, animals or their surroundings. Electric fencing must have its conducting wires effectively isolated from the ground. The fence structure must be of sufficient strength and capacity to deliver an electric shock sensation to an animal when it touched.
5. The Energizer shall be of standard make and having following characteristics.
  - a) The impulse repetition rate shall not exceed 1Hz.
  - b) The out put voltage of energizer shall not exceed 10000 V.
  - c) The impulse duration of the impulse in the 500 Ohm component of standards load does not exceed 0.1 seconds.
  - d) The energy per impulse in the 500 Ohm component of the standard load shall not exceed 5 Joules.
  - e) Mains operated and battery operated energizers suitable for connection to the main shall be Class II with respect to protection against electric shock.
  - f) Energizer shall be of minimum degree of protection IPX4 for outdoor installation
6. Electric fence construction that is likely to lead the entanglement of animals or persons shall be avoided.
7. Fences shall not be supplied from two separate energizer or from independent fence circuits of the same energizer. If the separate fences are supplied from separate energlzer, the distance between the wires of electric fences shall be minimum 2 metre. If the distance is to be less, it shall be effected by means of electrically non conductive materials or with an isolated metal barrier.
8. If the energizer is provided with more than one fence circuit the impulse for the individual sets of output terminals shall be synchronized. The duration and repetition of impulse shall be the same as for the energizer with one circuit.
9. The barbed or razor wires shall not be used.
10. The energizer shall be earthed independently and a minimum distance of 10 metre shall be maintained between energizer earth electrodes and any other earthing system.

11. Connecting leads of energizer that are run inside building shall be effectively insulated from the earthed structural part of building and if that are run underground shall be run in conduit of insulating materials or with insulated H.V cables. Care must be taken to avoid the damage caused by the effect of animal hooves or rodents or by farming tools.
12. Energizer live wires shall not be installed in the same conduits as the electrical domiciliary installation, communication, TV, data etc.
13. The connecting leads and fence wires shall not cross OH power lines/communication lines. If such crossing cannot be avoided, it shall be taken underneath of the power lines and as nearly as possible at right angle to it.
14. The minimum clearance as shown shall be maintained for connecting leads / electric fences wire which are installed near OH power lines.

Less than or equal to 1000V	3metre
Between 1000V and 33 kV	4metre
Above 33kV	8metre.

Height of electric fence above ground shall not exceed 3metre for either side of power line for a distance of 2 metre for voltage up to 1000 V and 15 metre for a voltage exceeding 1000 V.

15. Where an electric fence crossing a public pathway, a non-electrified gate or stiles shall be provided and warning signs shall be provided at adjacent electrified wires. The warning signal at not greater than 50metre interval of fences where there is public access.
16. The conducting wires of fence shall be made of non-corrosive material. The joints in the wire shall be made either by knotting or with double crimp sleeve joiner.
17. A cut out switch shall be used to isolate parts of fences without need to turn off the energizer and the switches shall be capable of isolating and insulating a voltage level of 10 kV.
18. The fence wires running under the telephone wires or parallel to underground telephone cables for any distance shall be avoided.
19. Electric fence bordering public thoroughfares are required to have a warning sign at least 20 cm x 10 cm size with yellow back ground and black letters. **"CAUTION : Electric animal fence"**.
20. In dry areas with low rain flow registers there is a severe decrease of the conductivity through the ground. In such place, 'Ground wire return system' of earthing shall be preferable.
21. For Electric security fences used for security purpose shall comprise an electric fence and a physical barrier not less than 1.5 metre in height intended to prevent inadvertent contact with the pulsed conductors of the Electric fence.
22. Electric fence installation should conform to IS 302-2-76/1999 and IEC 60335-2-76/2002.
23. Inspection fee of Rs 2500/- (Rupees Two Thousand and Five Hundred Only) per circuit of energizer shall be remitted by the applicant under the head of account 0043-102.

Sd/-  
Chief Electrical Inspector

To

CA to CEI  
CA to Addl.CEI  
The Deputy Chief Electrical Inspector, Ernakulam  
All Electrical Inspectors  
All Technical Officers of Chief Electrical Inspector's Office  
Law Officer  
Stock File