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Thiruvananthapuram

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## Circular

Subject :- Safety guidelines for the installation and operation of Portable Generators-regarding.

Reference:- Letter received from the Electrical Inspector, Palakkad vide letter No.B2-7768/2021/EIP dated 01/01/2022.

### Safety guidelines for the installation and operation of Portable Generators

- 1 Generators up to 10kVA rating shall be treated as portable generators.
- 2 A residual current device (ELCB) having an operating time of 20ms at a residual current of 30mA shall be provided.
- 3 a) For single-phase generators one terminal shall be connected to earth and designated as the neutral.  
b) Three-phase generators shall have their windings connected in star, with the star connection made available and connected to earth.
- 4 All the exposed metal work of the generator shall be adequately connected to the earth terminal.
- 5 The installation where both Licensee/KSEBL supply and DG supply are available, change over switch (COS) with adequate rating shall be provided, such a way that 4 pole COS for 3 phase and 2 pole for single phase applications.
- 6 The supply from a single-phase generator shall be feed to a three-phase supply system through a 4-pole change over switch subject to the following conditions:
  - a) The neutral conductors of the load side and generator side shall be of adequate capacity to carry the total current in the neutral.
  - b) The 3 poles in the 4 pole change over switch shall be linked by using rigid conductors of adequate short circuit and continuous current rating capacity as detailed below.

Capacity of single Phase Generator	Change over switch rating	Minimum copper area of conductors used for linking the poles
Up to 3 kVA	32 A	20 sq.mm
3 to 6 kVA	63 A	40 sq.mm
6 to 10 kVA	100A	60 sq.mm

- c) The copper strip/rigid conductors used for linking the poles shall be insulated by using tapes or sleeves.

- 7 Shielding shall be provided when the generator is kept exposed to weather.

- 8 Portable generators shall be kept at a place, sufficiently ventilated so as to avoid possible hazards due to the accumulation of smoke and pollution.
9. In the case of single phase generators, the size of the earthing conductor shall be of equivalent size of phase conductor.
- 10 If three pin plugs are being used for feeding single phase generator to an installation, care shall be taken to ensure that the switches at both ends are in 'off' position before inserting and removing the plugs from both ends of the cable.

Sd/-  
Chief Electrical Inspector.

To

- 1) All Deputy Chief Electrical Inspectors/ Electrical Inspectors.
- 2) All Technical officers in the office of Chief Electrical Inspector, Thiruvanthapuram.
- 3) Stock file.
- 4) Website.