

**OFFICE OF THE CHIEF ELECTRICAL INSPECTOR
TO GOVERNMENT OF KERALA**

No.B1-21363/2005/CEI.

Thiruvananthapuram
Dated : 16/03/2007

CIRCULAR

Subject :- Additional guide lines for issuing scheme approval and sanction for energization for electrical installations – reg.

Reference :- 1. Suggestions from the Kerala State 'A' Grade Electrical Contractors' Association vide letter No.KSAGECA/2006 dated 21.8.2006
2. Decisions taken at the conference of Electrical Inspectors' on 11.12.2006
3. Decisions taken at the Technical Expert Committee Meeting on 19.1.2007

Following guidelines shall be followed while issuing approval and sanction for energisation for electrical installations.

- 1) Tripping time of MCCBs may be taken as 100ms for down stream cable design and 40ms for ascertaining minimum rating of switches at down stream.
- 2) ACB/MCCB with U/V coil shall be provided at grid side on respective switch board at installations where standby generators are installed for preventing chances of back feeding from generators to grid side.
- 3) Three pole interlocked breakers/isolators can be permitted at HT installations for supply change over, provided neutral of all sources is earthed at neutral bus in the panel.
- 4) Lightning protection system based on early streamer emission principle is not permitted as this is not approved by B.I.S or I.E.C.
- 5) Converters used at 11kV supply system for induction furnaces shall be 12 pulse type to reduce harmonics.
- 6) ACB/MCCB controlled sub panels may be earthed using conductor of 1sec rating. 3sec rating may not be insisted.
- 7) For generators of 750kVA rating, 4 runs of 400Sq.mm YFY cables (Copper cables) may be allowed. Bus duct not to be insisted.
- 8) Test certificates shall be insisted for electronic change over switches regarding its ampere rating and proper supply change over function.
- 9) For current rating of medium voltage XLPE cables, IEC 60364-5-523 may be followed.
- 10) Vertical Distribution Boards may be permitted up to 100A. Unit capacity of motor connected to VDB shall not exceed 10hp/7.5kW
- 11) ~~If annual maintenance contract is given to a licensed 'A' grade Electrical Contractor, Degree/Diploma holders in Electrical Engineering may not be insisted as authorized person in the case of high-rise residential/commercial buildings availing supply at 11kV. [Revised, pls see the last page of this file]~~
- 12) Minimum 2m clearance shall be provided between two dry type transformers installed in the same room. Similarly clearance between one dry type transformer and DG set with acoustic enclosure installed in a room shall also be minimum 2m.
- 13) For all transformers, type tests as per I.S.2026 and I.S.11171 shall be conducted. Test certificates shall be produced along with completion report. Since most of the manufactures of transformers in Kerala do not have these test certificates at present, it is decided to give one year time for complying the above.
- 14) Ratio of CTs for H.T. tariff metering shall match with either the rating of the transformers or two times rating of contract demand.
- 15) CPCB approved type inbuilt fuel tanks may be permitted for DG sets.
- 16) Service short circuit breaking capacity of MCCBs provided in panel shall be equal to or above the prospective fault current at the location.
- 17) ACBs of fixed type may be permitted in DG control panel and DG feeder connected to MSB.
- 18) Auto Transfer Switches (ATS) of adequate ampere rating may be permitted for supply change over.

Contd.....2

- 19) G.I. conductors may be permitted for earthing even at locations where soil resistivity is very low, provided suitable corrosion factor is applied for size selection. The factors specified by CBIP may be followed for it. Corrosion factors specified by CBIP are give below.

Soil resistivity	Corrosion factor
Below 25 Ohm-m	: 30%
25 Ohm-m to 100 Ohm-m	: 15%
Above 100 Ohm-m	: No allowance

- 20) ~~When dry type transformers are installed above ground floor, 11kV A.B.S.F. Unit/Breaker has to be provided at ground floor for completely isolating the supply as envisaged in Rule 50(A) with lockable type push button near the transformers. . [Revised, pls see the last page of this file]~~
- 21) Insulation monitoring system as specified in I.S.732 shall be provided wherever unearthed system is employed.
- 22) Feeder wise energy meters not to be insisted in MSB.
- 23) For fire pumps, starters without overload relay shall be provided.
- 24) Copper/G.I.strips of 20x3mm size may be permitted above ground level for lightning protection. Below ground level strip size shall be minimum 32x6mm.
- 25) Trap door may not be insisted for lift machine room.
- 26) If DG set with acoustic enclosure is installed inside the room, proper ventilation facility shall be ensured. For DG set without inbuilt acoustic enclosure, the room shall be made acoustic.
- 27) Scrutiny fee shall be collected for the whole installation when a new scheme for any addition including generator at MV installation is received. Inspection fee shall be collected only for the additions and the changes as per completion report.
- 28) Each escalator at high rise building may be treated separately for calculating scrutiny fee and inspection fee.

The above guide lines shall come into effect immediately.

Yours faithfully,

Additional Chief Electrical Inspector in charge

To

1. The Deputy Chief Electrical Inspector, Ernakulam
2. All Electrical Inspectors
3. All Technical officers of the Chief Electrical Inspector's office
4. B1, B3 & B4 Section
5. Stock File
6. 'A' Grade Electrical Contractors' Association.

**OFFICE OF THE CHIEF ELECTRICAL INSPECTOR
TO GOVERNMENT OF KERALA**

No.B1-12522/2007/CEI.

Thiruvananthapuram
Dated : 17/07/2007

CIRCULAR

Subject :- Additional guide lines for issuing scheme approval and sanction for energization for electrical installations – modification - reg.

Reference :- 1. Suggestions from the Kerala State 'A' Grade Electrical Contractors' Association vide letter No.KSAGECA/2006 dated 21.8.2006
2. Decisions taken at the conference of Electrical Inspectors' on 11.12.2006
3. Decisions taken at the Technical Expert Committee Meeting on 19.1.2007
4. Circular No. B1-21363/2005/CEI dated 16/03/2007

The following modifications are made to the Sl. Nos-11 & 20 in the circular cited (4) above with immediate effect.

- 1) Sl. No. 11 of the circular is replaced with the following- "If annual maintenance contract is given to a licensed 'A' grade Electrical Contractor, Degree/Diploma holders in Electrical Engineering may not be insisted as authorized person in the case of high-rise residential/commercial buildings availing supply at 11kV, *provided the aggregate transformer capacity doesn't exceed 500kVA.*"
- 2) Sl. No. 20 of the circular is replaced with the following- "When dry type transformers are installed above ground floor, 11kV A.B.S.F. Unit/Breaker has to be provided at ground floor for completely isolating the supply as envisaged in Rule 50(A) with lockable type push button near the transformers *and a mechanical interlock in between the ABSF Unit/Breaker and the transformer enclosure.*"

Yours faithfully,

Sd/-
Chief Electrical Inspector

To

1. The Deputy Chief Electrical Inspector, Ernakulam
2. All Electrical Inspectors
3. All Technical officers of the Chief Electrical Inspector's office
4. B1, B3 & B4 Section
5. Stock File
6. 'A' Grade Electrical Contractors' Association.