

## TANGEDCO

Office of the Superintending Engineer,  
KEDC/Kanchipuram.

### Memo.No.SE/KEDC/KPM/EEGL/AEEGL/AEGL/SS Equip Failure/D.259/20 dt.08.07.2020.

Sub: Eley – Kanchipuram EDC – Avoiding failure of SS Equipments –  
Instructions issued-Reg.

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It is ascertained from the failure reports furnished by Executive Engineers/O&M regarding the failure of VCB and other equipments that most of the VCBs/SS Equipments have failed due to non adherence of the standard maintenance practice. Failure of equipments leads to outages and in turn leads to revenue loss to TANGEDCO, which has to be totally avoided. Hence the following guidelines are once again communicated for strict adherence:

#### DURING FEEDER FAULT TRIP CONDITIONS

If a feeder trips under fault condition the following things are to be observed by the operator:

1. The relay indications should be noted down properly in log book.
2. The fault current shown in numerical relays should be noted in log book.
3. It should be clearly noted that the relay tripping was instantaneous (**I>> E>>**) or Time (**I>E>**)
4. The feeder VCB breaker and yard condition should be inspected by the operator for any abnormality immediately.
5. If the feeder has tripped on Instantaneous or High set fault (**I>> or E>>**) the feeder should not be test charged without ground line patrol by the field officer/staff.
6. After getting concurrence from the field officer, test charge should be given.

#### DURING MASTER RELAY OPERATION AND POWER TRANSFORMER PROTECTION RELAY OPERATION

1. When master relay has acted and power transformer protection relay acted, all the Alarms would be activated. If master relay has acted, GC and LV would have tripped.
2. The operator should verify the master relay power transformer protection flag relays and identify the power transformer for which the protective relays has acted.
3. The yard condition and the power transformer should be thoroughly inspected for any oil spurt out condition, pressure relief valve flag operation, Buchholz chamber gas collection and any other abnormalities and the same should be entered in log book.

4. Immediately It has to be communicated to AE/JE Maintenance, AEE and EE incharge of Sub-station and to AE/MRT/Protection (9445855266), AEE/SPL & MRT (9445855161, 9445855162)
5. After consultation with MRT, the Master relay link of the power transformer for which protection flag relay has acted is to be removed.
6. Only after getting concurrence from MRT & Spl. The supply has to be restored to other healthy transformers.
7. **Test charge should not be given without observing the above procedure**

#### **IN GENERAL**

1. The equipment earthing should be checked and conductor earthing should be replaced with GI flat earthing immediately. Additional earth to be provided for all equipments, power transformers and breakers.
2. The power transformer neutral bushing to earth flat connection bolts should be provided with TVS bolts instead of GI bolts.
3. The VCB breaker mechanism should be lubricated periodically.
4. Switch end clamps, CT and breaker clamps tightness should be checked periodically.
5. Estimates should be evolved for the life served equipments (VCB, Battery etc..) by the SS Incharge official for early replacement.
6. The healthy use of the trip circuit should be recorded for each shift.
7. The pilot cell battery reading should be taken and recorded for each shift without fail.

Hence, considering the TANGEDCO's stringent financial condition, all the Executive Engineers / O&M are requested to take special efforts to avoid SS equipment failure by instructing the field officers to adhere the above instructions strictly. If any failure of equipment is found to have occurred due to non-adherence of the instructions in force responsibility will fixed on the concerned official immediately.

Matter is most urgent.

Sd/\*\*

**SUPERINTENDING ENGINEER,  
KEDC/KANCHIPURAM.**

To,  
The Executive Engineers/ O&M/MRT of this circle.  
Copy to All Assistant Executive Engineers of this circle.  
Copy to All Assistant Engineer/Substation Maintenance of this circle.  
Copy submitted to CE/Distribution/Chennai South Region/Chennai.