

# SATISH B MANKAR

ELECTRICAL CONSULTANCY SERVICES & PMC (ELECTRICAL) (MS No. 34535)  
MSME REGI No- MH20D0094982. GST No. 27AGOPM9359C1ZX. PAN No. AGOPM9359C  
Add: 10, Bhande Plot, Umred Road, Nagpur  
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## ELECTRICAL SAFETY AUDIT REPORT

Dt: 12.02.2021

To  
Smt. REWABEN MANOHARBHAI PATEL  
MAHILA KALA MAHAVIDYALAYA,  
(Gondia Education Society), Bhandara-441904  
Maharashtra.

### Actions adopted in this audit:

Date of Visit- 10.02.2021

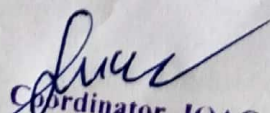
Visual inspection and data collection of existing electrical Installation  
Observations on the general condition of the facility and equipment and other parameters by  
Measurements

### Field work

The mechanical and electrical systems are examined in order to verify that their implementation, operation and use correspond to that designed.  
The most essential factors affecting energy use, the present electrical operating situation and the most important savings potential are investigated.  
The electrician, staff and occupants at the site are guided on matters related to energy use.

Data collection forms are a helpful reminder while checking and writing results.

The objective of this Electrical safety Audit and Assessment is to evaluate the existing systems in the facility which is with safety or not. This analysis reviewed installed equipment as well as operation and maintenance practices at the facility. The following steps were conducted to prepare the survey:

  
Coordinator, IQAC  
Smt. Rewaben Manoharbhai Patel  
Mahila Kala Mahavidyalaya,  
Bhandara

  
Officiating Principal  
Smt. Rewaben Manoharbhai Patel  
Mahila Kala Mahavidyalay.  
Bhandara

• **MAIN OBSERVATIONS IN INSTALLATION:**

Based upon the measurement data, analysis of the performance and our observation, it is observed that Energy utilization is managed. Some of the very effective steps are being highlighted here with:

**VOLTAGE RATIO IN ELECTRICAL INSTALLATION**

Voltage Phase to Phase-418 to 438

Voltage Phase to Neutral-216 to 241

Insulation Resistance at Main Distribution:

Between Phases	above 150 Mega-Ohms
Between Phase & Neutral	above 300 Mega-Ohms
Between Phase & Earthing	above 200 Mega-Ohms
Between Neutral & Earth	above 100 Mega-Ohms

**BUILDING**

Year of Construction- 1986

Sanctioned Load = 27 KW

Contract Demand = 27 KW

Power Factor = 0.90

Solar Power Generation= 10KW Installed on terrace (on grid Solar)

Lighting Arrester is installed on terrace.

Main Meter panel is installed in meter Room, and panel condition is good

Sub Distribution Panel is installed at Building open area and cover with slab, all incomer and outgoing cables are in good condition and proper sizes.

**GROUND FLOOR LIGHTING+POWER+AC DB-1 (4W TPN)- Wiring is in good condition.**

DB Incomer- 63A TPN MCB

DB Outgoing- 6A, 10A & 16A SP MCB- 12 Nos.

Current R Phase-2.05A

R Phase-1.90A

R Phase-2.25A

Neutral – 2.40A

Suggestion-

- 1) Load is balance in proper distribution.
- 2) MCB used as an incomer for Protection, use RCCB as an incomer of DB, so that you can get all protection i.e. Short circuit, overload, earth fault, earth leakage.

**FIRST FLOOR LIGHTING+POWER+AC DB-1 (4W TPN)- Wiring is in good condition.**

DB Incomer- 40A TPN MCB

DB Outgoing- 6A, 10A & 16A SP MCB- 12 Nos.

Current R Phase-1.15A

R Phase-1.20A

R Phase-1.36A

Neutral – 1.7A

Suggestion-

- 1) Load is balance in proper distribution.
- 2) MCB used as an incomer for Protection, use RCCB as an incomer of DB, so that you can get all protection i.e. Short circuit, overload, earth fault, earth leakage.

  
Smt. Rewaben Manoharbhai Patel  
Mahila Kala Mahavidyalaya,  
Bhandara

  
Officiating Principal  
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Mahila Kala Mahavidyalaya,  
Bhandara

**FIRST FLOOR LIGHTING+POWER+AC DB-2 (4W TPN)- Wiring is in good condition.**

DB Incomer- 40A TPN MCB

DB Outgoing- 6A, 10A & 16A SP MCB- 12 Nos.

Current R Phase- 2.10A

R Phase-1.84A

R Phase-1.98A

Neutral – 2.20A

Suggestion-

- 1) Load is balance in proper distribution.
- 2) MCB used as an incomer for Protection, use RCCB as a incomer of DB, so that you can get all protection i.e. Short circuit, overload, earth fault, earth leakage.

**SECOND FLOOR LIGHTING+POWER+AC DB-1 (4W TPN)- Wiring is in good condition.**

DB Incomer- 40A TPN MCB

DB Outgoing- 6A, 10A & 16A SP MCB- 12 Nos.

Current R Phase- 2.33A

R Phase-1.95A

R Phase-3.10A

Neutral – 2.51A

Suggestion-

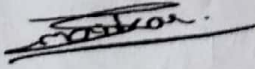
- 3) Load is balance in proper distribution.
- 4) MCB used as an incomer for Protection, use RCCB as an incomer of DB, so that you can get all protection i.e., Short circuit, overload, earth fault, earth leakage.

**SOME POINT IN OBSERVATIONS WHICH WILL DO IMMEDIATELY:**

- 1) All Main earthing is in proper condition, change main earthing with Maintenance free chemical earthing with 17.2mm Dia and 250Micron Copper bonded rod, and earthing strip size will be aluminium and minimum 25x3/5.
- 2) Main cable is in good condition.
- 3) All earthing point is in proper earth value.
- 4) Use all DB's incomer RCCB instead of MCB and its very important. And RCCB rating will be 63A, 100mA.
- 5) All DB's is in proper load distribution.
- 6) All switch board wiring is in 2.5 sqmm (with 1.5 sqmm earthing) copper wire- OK
- 7) All Power board wiring is in 2.5 sqmm (with 1.5 sqmm earthing) copper wire- OK
- 8) All AC power board wiring is in 4.0 sqmm (with 2.5 sqmm earthing) copper wire- OK
- 9) CCTV camera system provided in all Buildings and college campus.
- 10) Fire alarm and Manual call point system is installed in collage premises.
- 11) Electrical Back up is provided to full load with 25KVA.
- 12) Online UPS of 5KVA 1 Nos is provided for all office computer system

Important Notes-

- 1) Instal immediate Safety protection (RCCB) device in all Distribution Boards

  
FOR SATISH B MANKAR

  
Officiating Principal  
Smt. Rewaben Manoharbai Patil  
Mahila Kala Mahavidyalay,  
Bhandara