Saurabh Sinkar

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Profile

- A diversified electrical engineer with certified Industrial Automation with a strong background in core electrical applications and knowledge of software programming through microcontroller.
- High-energy professional with experience in electrical panel testing including APFC, Star-delta starter, Interlocking, Power Control Centre (PCC), Motor Control Centre (MCC), DG Synchronization.
- An effective communicator with an ability to manage the work force under pressure situations

Work Experience

Feb'17 till date with Marine Electricals Pvt. Ltd. As Commissioning Engineer

- **Role: Testing/Commissioning/Servicing Engineer**

Responsibilities:

- To understand wiring diagrams and general arrangement of all electric panels
- To find out functioning and practical implications of all components used in an electric panel (including **relays**, contactors, **MCCBs**, ACBs, **Timers**, Analog and digital meters) by closer inspection
- To check wiring connections for continuity and the ratings of all components used as per requirements
- To do continuity and functional testing of panels
- To perform High Voltage and **Megger** tests on all busbars of electric panels
- To perform primary and secondary current injection tests for transformers and CTs
- To test **RCCBs** and **ELCBs** for earth leakage
- To identify and adopt suitable testing standards/ protocols/ methods for testing.
- To study the circuit diagrams (electrical design) and evaluate the same as per customer specifications.
- To carry out customer inspections at factory for witness of **FAT** (Factory Acceptance Test).
- Testing of marine panels such as distribution boxes, **Starters**, Main switchboards, and Emergency switch boards
- Testing of Industrial panels such as **LT**, **HT** (33KV), **MT** (Medium Tension) panels, MCC (Motor Control Center) panels, **PCC** (Power Control Center) panels, Capacitor bank panels, **ATS** panels, **PDU** (Power Distribution Unit).
- Testing of AC and DC supply panels.
- Taking suitable corrective action in case of fault location and making the suitable modification for proper functioning.
- Making site visits for refurbishment / expansion or up gradation of existing panels, to check and pass details to estimation section for giving offers.
- To perform installation, commissioning of panels on site as per customer requirements.
- **Functional Test**: Test of Main Switchboard, Emergency Switchboard, Power control centre (PCC), Motor control Centre (**MCC**), Starters (**DOL, Star- Delta, Soft starter, VFD**), Battery Charger, **Transformer Rectifier Unit** (TRU), DG control and Protection Panel. Interlocking between the DG's and the Shore Supply

Details:-

LT (LOW tension control panel)

- Know the working, operation and designing method of following low voltage LT panels.
- **APFC** panels (Automatic Power Factor Control panel)
- PCC panels (Power control centre panel)
- MCC Panels (Motor control centre panel)
- Relay control panels
- Auto synchronization panels
- **PLC** control panels
- Starters like DOL starter, star/delta starter, soft starter, auto transformer starter
- **HVAC** panel (Heat Ventilation & Air conditioning)
- **ATS** switch with two source control panels (Automatic transfer switch)

HT (High tension control panel)

- Know the working of 11KV, 33KV, 3.3KV, 6.6KV indoor and outdoor panels
- Know about relay control panels.
- Know about porcelain clad outdoor breaker PCOB which is used in main line in substation line.

Programming and setting of following protection relay

- MICOM P111, P122, P125, P127, P141, P343 (current and voltage protection relay) , ABB REF615H relay AMF panel programming, Vamp57 Schnieder Overcurrent Protection, Photosensor
- Transformer Protection relay
- Ground fault Monitoring relay
- SEPAM square D protection and monitoring relay which latest implemented device of protection.
- Testing of current transformer and potential transformer

Communication Devices & Protocols

Design of communication architecture for DG AMF panel, PCC, MCC, Utility Panels using Software interface and Modbus architecture.

Transformer Protection Devices:

- Oil temperature indicator, Winding temperature indicator, Gas operated relay (Buchholz relay), Pressure relief valve, Oil surge relay, magnetic oil gauge relay, conservator, breather

Switchgear used

- Schneider electric
- Siemens
- ABB

Highlights:

- **Handled Inspections of many industrial panels along with the scheme modifications as per the customer needs and satisfaction.**
- **Performed following tests for each industrial panel:** Continuity, Functional, High Voltage, Megger (IR) Test, Current Injection, ACBs, MCCBs secondary current injection, Meter testing using SMPS and performing settings

Core Competencies

- To apply mathematics, science, and electrical engineering knowledge
- Design and execute experiments, analyze and interpret electrical data
- Abilities to absorb technological new knowledge and understand industrial situations
- Market research

Certified in Industrial Automation

1) **Trained on Programmable Logic Controllers** (Brands: Allen Bradley, Siemens, Schneider Electric, Ge Fanuc, ABB, Omron, Delta, Mistubishi) Architecture, Operation Instructions, Control Instructions, Interfacing with SCADA

2) **Supervisory Control and Data Acquisition** (Brands: Invensys Intouch, Siemens WINCC, Schneider Electric Vijeo Citect, Ge Fanuc IFIX, Rockwell Automation Factory Talkview.)

3) **Human Machine Interface** Awareness of HMI, Dynamic Properties, Trend and Alarm Configurations, Real Time Interface with PLC.

4) **Variable Frequency Drive** Speed Modulation, ON/Off Command, Trip Status, Real Time Interface with PLC & SCADA.

5) **Programmable Automation Controllers** (Schneider Electric Modicon M-340) **PAC**- Architecture, Operation Instructions, Control Instructions, Interfacing with SCADA & HMI

Software Skills:

Automation –

Rockwell Automation, TwidoSuite, Microwin V4.0, CX-Programmer, UnityProXL, WPLSoft, Wonderware Intouch, iFix, WinCC, Vijeo Citect, Factory TalkView

Final Year Projects & Internships

- **Solar Fan Using BLDC Motor**

  Provides electronic control of speed through **Arduino** microcontroller (UNO atmega 328P) and electronic speed controller (ESC) module sending PWM pulses to BLDC motor as per requirement

- **Traffic Light Control Using IC-555 timer**

  The time taken for light signals can be varied from **7s** to about 2.5 mins. The 555 astable circuit provides clock pulses for the **4017** counter which has 10 outputs.

- **Internships-**
  1) High Voltage Transmission & Distribution Substation
  2) Android Framework Development by ITDP, Seven Motors

Events

- **TECHNOTSAV 2K16** Project competition and achieved 4th rank
- **SCINTILLA 2K16 national** level technical symposium – Explaining beneficial project ideas for industries
- '**Project Competition-2016**' conducted by RDCC cell FAMT
- **Workshops:-**
  1) Energy Audit
  2) Ethical Hacking

Technical & Verbal Skills

Sr.no.	Area of Knowledge	subjects
1.	**Core concepts**	Electrical **machines**, **power** system, **Protection** systems, control systems, signal processing
2.	**Computer skills**	**C, C++, Java language**
3.	**Software knowledge**	**MATLAB**, **AUTOCAD** (Electrical), **MPLAB**, PROTEUS
4.	**Verbal Skills**	Good **Communication** skills, can handle extreme situations, Productive, Punctual and **reliable**, Good **self-esteem**, Self Management, Conflict Management, **Self motivated**, Assertive, **Responsible**

Education

- **Bachelor of Engineering (Electrical)-** 2012 – 2016

Bachelors in Electrical Engineering with First Class with Distinction having **8.27** GPA (**75%** Score)

- **PG Diploma (Industrial Automation)-** Aug. 2016 ; Mumbai

Personal Profile

- **Date of Birth:** 12th May'1994
- **Languages Known:** English, Hindi and Marathi
- **Permanent Address:** 202,Vasant vihar complex, Maruti Mandir, Ratnagiri [MH], Pin 415612

References on Request ● Available for Relocation