



MILIND JOSHI AND ASSOCIATES

Testing and Commissioning Consultant



About MJ&A

MILIND JOSHI & ASSOCIATES is one of the pioneers and top-notch Testing and Commissioning consulting organization in India. Our core team has two decade of hands on experience in this field.

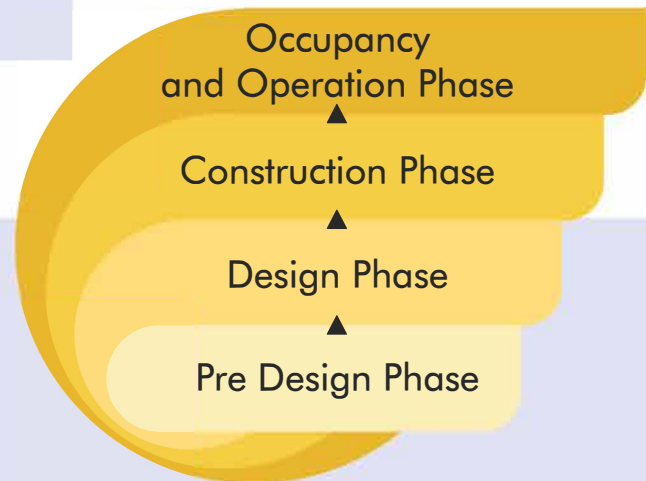
We actively conduct Testing and Commissioning consultancy services for all MEP as well as safety and security services for Commercial Interior fit-out projects, Data Centers, Call Centers and Industrial Premises.

We actively conduct Testing and Commissioning for LEED or IGBC certification projects.

We also provide services for Commercial building with GRIHA certification (Green Rating for Integrated Habitat Assessment).

We offer Indoor air quality assessment and solutions for commercial premises.

We undertake Exclusive Testing of HT sub-stations which includes:
Power Transformers, Breakers, Relays, Cables etc.



Secure Power Solutions:

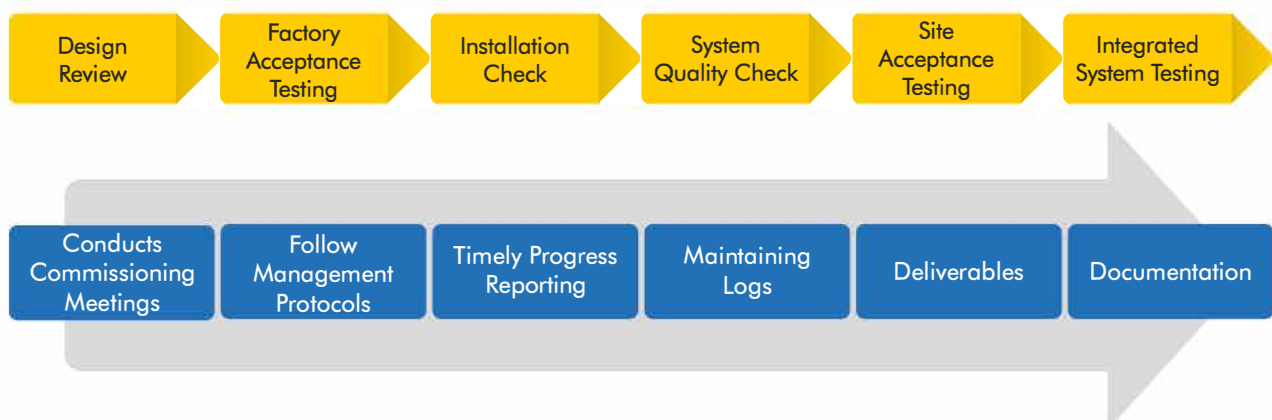
1. Harmonics mitigation
2. Power Factor Improvement
3. Energy Audit
4. Power / Electrical Audits including earth loop impedance testing.

HVAC :

Independant hi-side testing for chillers.

Testing and Commissioning Methodology

We understand the importance and criticality of Testing and Commissioning and therefore our experienced team of engineers has designed an effective delivery model. We offer high quality of Testing and Commissioning through a very systematic approach. Commissioning process is accomplished using a well defined procedure.



Why Commissioning Agent (CxA)

What is Commissioning?

Commissioning is defined as a process which ensures that all systems and components of a building or industrial plant are designed, installed, tested, operated and maintained as per the requirements of the client. It comprises of a set of engineering techniques and procedures to inspect and test every component of the project.

Commissioning process can be applied not only to new projects but also to existing units and systems undergoing renovation or reconstruction also known as Retro-Commissioning. In a broader sense, Commissioning is applicable to all the phases of the project, from basic design until the final handover of the unit to the Owner.

Importance / Benefits of Commissioning -

Commissioning helps customers in:

- ▷ Mitigation of client's risk
- ▷ Reducing operating Costs
- ▷ Substantial improvements in energy efficiency
- ▷ Assurance against any kind of failures
- ▷ Improving operating safety
- ▷ Fulfilment of project schedules
- ▷ Improvement in Quality

Fundamental and Enhanced Commissioning



Fundamental Commissioning focuses on installation and verification of the mechanical and electrical systems during construction.

Enhanced Commissioning covers a broader scope of systems and involves broader participation of the CxA beginning with planning, identifying monitoring during construction and continuously till occupancy.



Key Deliverables

Pre Design Phase

- ▷ Owners Project Requirements (OPR)
- ▷ Commissioning plan

Design Phase

- ▷ Regular Commissioning progress report
- ▷ Comments on Basis of Design (BOD) and design narrative
- ▷ Snag list / issues log format
- ▷ Updated Commissioning plan
- ▷ Cx specifications for Commissioning documents

Construction Phase

- ▷ Updated Commissioning plan
- ▷ Reports of submittals review
- ▷ Completed verification checklists and Functional tests
- ▷ Reviewed system manuals
- ▷ Minutes from the Cx meetings
- ▷ Snag list / issues log
- ▷ Cx progress reports
- ▷ Draft Commissioning report

Occupancy and Operation Phase

- ▷ Summary report from seasonal testing
- ▷ Warranty review of each system
- ▷ O&M manual
- ▷ Findings from the operations and occupancy phase
- ▷ Final issues log and Commissioning



Benefits of T&C Activities

Optimum / Desired Performance

Specific requirements as defined in OPR are addressed and verified during entire project duration.

Full load testing of all system and services on dummy load (resistive load bank) with trend logging prior to occupying of premises.

Simulation of all failure scenarios under dummy load condition during site specific Integrated System Testing (IST)

Greater Control over Cost

Specific project requirement described in OPR are addressed and verified.

Ensure equipments, energy efficiency and maintainability are met through out the project.

Adhering to design aspects at all stages of project. This prevents design issues and change orders.

Reduction in Operational Cost

Regular verification of design to ensure owner's project requirements throughout the project / construction.

All systems and services tested and commissioned in line with owner's project requirements.

Adherence to Project Schedule

Identifies and recommends commissioning role and scope for all members of design and construction / contractor / vendor.

Specifies condition of specifications.

Specifications for each system and component for which the suppliers support is required.

Smooth Handover

Submit Commissioning plan.

Conduct Commissioning meeting.

Ensure Commissioning requirements are captured by vendor / contractor / supplier in final submission.

Gaps identified and immediate actions taken in co-ordination with project team during construction stage are correctly documented.

Elimination of Future Complaints

Performance evaluation of all systems and services on full dummy load.

Site specific monitoring and verification protocol.

Site specific O&M manual.



Services

We take an end-to-end responsibility of Testing and Commissioning. We provide Testing and Commissioning services for following systems.

Electrical Systems

- ▷ Main electrical and sub distribution panels
- ▷ Cables.
- ▷ UPS systems
- ▷ Power distribution units with inbuilt Isolation Transformers
- ▷ Diesel generator set and ATS interlock
- ▷ Light management system
- ▷ Security and safety systems
- ▷ BMS

HVAC systems

- ▷ Crac - precision air conditioning system
- ▷ Air handling units
- ▷ Ductwork
- ▷ Variable air volume system
- ▷ Adjusting and balancing work
- ▷ Kitchen exhaust equipment

Plumbing Systems

Safety systems

- ▷ Fire alarm system
- ▷ PA public announcement system
- ▷ Fire hydrant and sprinkler system
- ▷ Pre-action system
- ▷ Water leak detection system (WLD)
- ▷ VESDA system

Other Services

We are offering consultancy services aligned with LEED certification to IT / ITES sector,



banking and finance. We address **power quality issues** in existing and new buildings. We perform a systematic analysis to understand the power quality issues and design the best possible solution to resolve such issues.

Our solutions benefit customers in reducing

- ▷ Electricity costs
- ▷ Recurring maintenance problems
- ▷ Unexpected interruption/ failure / trip
- ▷ Malfunctioning of electronic controls and instrumentation

FURTHER TO POWER QUALITY ANALYSIS, we are also offering analysis of present load scenario with respect to new policies endorsed by Government Electricity Distribution Companies like KVAH billing.

Earlier the Electricity Companies were imposing penalty only on Power Factor. Nowadays penalty is being imposed considering Leading and Lagging Power Factor plus total harmonic Distortion too. Due to KVAH billing, simple PF Correction Solution doesn't work. We are required to study the load pattern and design customised solutions. We have decades of experience in providing such customised power quality solutions to many of our esteem customers.

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Key Members

Mr. Milind Joshi

- B.E., ET&C

Key Skills : Secure power solutions, Energy Auditing and Implementation of Energy Conservation Projects, Assisting in implementation of Energy Efficiency Project and Green Building certification for LEED registered Commercial projects and Data Centre.



Mr. Sandeep Kulkarni

- Dip. in Computer Tech

Key Skills - Energy audits and Secure Power Solutions for Industrial projects, installation and commissioning of Commercial Fit-out Projects, Data Center registered for Green Building Certification.



Awards



To ensure performance of MEP and Safety Security Services in line with your design intent contact:



MILIND JOSHI AND ASSOCIATES

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