

Quality Circle – Industrial Relations (QC-IR)
Industry Institute Partnership Cell (IIPC)

INDUSTRIAL CONSULTANCY

KLNCE offer various industrial consultancy through the following expertise fields like,

- 1. Electrical Power Quality Audit (Harmonic Audit)**
- 2. Energy Audit**
- 3. Assets valuation of Mechanical /Electrical Equipment's**
- 4. Wireless sensor networks, AI & IoT**
- 5. Industrial automation**
- 6. Business Solutions, HR Services, Marketing, Finance and Operations**
- 7. Microwave Engineering**

1. Electrical Power Quality Audit: (Harmonic Audit)

Electric Power Quality (PQ) is today's need for all Power Utilities (power suppliers), end users (customers and all other manufactures). Power quality is defined as the set of parameters, concerned with the power supply properties, characteristics of voltage and current (magnitude, frequency, symmetry, waveform) etc., The recent technologically influenced industries have to satisfy the specific applications according to their need with the help of non-linear devices. Such devices used in industries are power electronics based nonlinear loads such as Variable Frequency Drivers (VFD), Arc-Furnaces, Converters/Inverters, Computers, LED's and Uninterrupted Power Supply (UPS). These non-linear loads create wave form distortion in the supply system leading to PQ problems. Poor PQ has become a more important concern of both power utility and its end users. Poor PQ adversely affects a country's economy in a big way. More initiatives are expected from the concerned parties and regulating bodies to take corrective measures for maintaining better power quality from utility and end users. High accuracy Power Quality Analyzer has been used to measure the instantaneous values and record the data which helps to analysis. During the PQ audit We measure all the parameters such as System Voltage, Current, Power, Energy, Total Voltage Harmonics (%THDI), Total Current Harmonics (%THDI), K- Factor, Voltage/ Current Unbalance, Wave Forms, Phasor diagram, Transient analysis. We have more than 100 industrial clients across PAN India, and also established international consultancy collaborated with the international industries AYYKA Tech-Israel , CTC Engg & UIS Tech- USA.

Harmonic Consultant

Dr.S.Parthasarathy M.E.,Ph.D.,MIE.,MISTE.,
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2. Electrical Energy Audit

Energy audit is an inspection, survey and analysis of energy flows, for energy conservation in a building, process or system to reduce the amount of energy input into the system without negatively affecting the output(s). In commercial and industrial real estate, The energy audit is the first step in identifying opportunities to reduce energy expense and carbon footprints. Energy Audit is the first step in Energy Conservation and Energy Efficiency Projects for Industrial Plants. First and foremost advantage is cutting down on the production costs as Energy costs are ever-rising. Energy Conservation and Energy Efficiency Solution implementation is next. Major areas include Electrical Energy Conservation, Electrical Energy Efficiency, and Thermal Energy Conservation. Thermal Energy Efficiency, Fuel Optimization etc. During the audit, sophisticated instruments such as Power Analyzer (Single phase and Three Phase), Harmonics Analyzer, Megger etc. are used by the Energy Auditors to carry out measurements of various electrical utilities. Analysis of electrical consumption is done based on these measurements. Reduces Electricity Bills, Increase energy efficiency, Reduce energy usage, Improve indoor air quality, Produce consistent interior temperatures, Reduce interior drafts, Improve humidity control & ventilation etc.

Team:

- **Dr. S. Venkatanarayanan**, Prof/ EEE -KLNCE, senior member of IEEE, USA, Empanelled Faculty, Petroleum Conservation and Research Association (PCRA), Government of India, Chartered Engineer, EnMs Lead Energy Auditor, Speaker – National Small Scale Industrial Corporation, Government of India, Member – MADTTISSIA, Madurai.
- **Dr. S.M. Kannan**, Professor & Head/EEE - KLNCE
- **Dr.P.Loganthurai**, ASP/EEE – KLNCE

3. Assets valuation of Mechanical /Electrical Equipment's

The Department of Mechanical Engineering is engaging in Industrial Consultancy Works such as Evaluation of Machine life, Industrial Assets, Measurement of Dimensions, Roughness Testing for various industries, solving specific industrial technical problems etc. Mechanical Engineering department is involving both students and faculty members for carrying out the various industrial consultancies in industries and raising fund. Based on the performance, students are receiving the industrial visit, inplant training, internship and placement offers.

Dr.P.Udhyakumar

Prof & Head, Department of Mechanical Engineering,

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4. Wireless sensor networks, AI & IoT

The Department of Information Technology actively engages industry consulting in the fields of wireless sensor networks, smart cities, artificial intelligence, and complete stack development both in India and overseas. For the past one decade department involving both student and faculty for the industrial consultancy in MSME industries and MNC industries as an outcome department registered many international pattern, publication and fund raised from various industries and societies. Also based on the performance of the students were observed as an intern and thereby placements.

Dr.P.Ganesh Kumar,B.E.,M.E,Ph.D

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5. Industrial automation

Industrial automation refers to the use of advanced technologies and control systems to automate industrial processes, machinery, and systems. It involves the application of various technologies such as robotics, computer control, sensors, machine learning, and artificial intelligence (AI) to streamline and optimize industrial operations. Industrial automation aims to improve efficiency, productivity, safety, and reliability in manufacturing and other industrial sectors. It involves automating repetitive and labor-intensive tasks that were previously performed by humans, reducing human error and increasing overall operational efficiency.

Key components and technologies commonly used in industrial automation include, Programmable Logic Controllers (PLCs), Supervisory Control and Data Acquisition (SCADA),Sensors and integration, Internet of Things (IoT), Machine Learning and Artificial Intelligence (AI) and Human-Machine Interface (HMI).

Team Members:

Dr.S.Parthasarathy ,

Professor / EEE & Director / KLN.IRP – KLNCE

Dr.D.Pardeep Kannan,

Prof / EIE – KLNCE

Dr.K.Gananambal

Prof / EEE –KLNCE

Prof.S.Nalla Thanmbi

ASP / Mech – KLNCE

6. Business Solutions, HR Services, Marketing, Finance and Operations

MBA Department is actively engaging in industrial consultancy and training to the needy nearby industries both in government organization like India post, ESI and non-government organizations apart from regular academic and research work.

MBA Departments will provide Business Solutions in the areas like HR, Marketing, Finance and Operations of the Business. It also acts as a Platform to provide Industrial Exposure to our MBA Students by the way of expert talks, Industrial visit and competency development Training by Industrial expert. It also adds value to our MBA Program with Industrial Practices and Industrial Oriented Courses like Digital Marketing, Logistics and ERP Solution to Industries.

Team:

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Dr.S.N.R.Srikumar,
Prof / MBA - KLNCE

7. Microwave Engineering:

The Department of Electronics and Communication actively engages consultation in the fields of microwave engineering. For the past one decade our department helps to test microwave components, antenna for the students and staff members of our college, as well as students and staff members of engineering colleges in and around Madurai. This helps them in international and national journal and conference publications also for placement.

Dr.V.Kejalakshmi, B.E.,M.B.A.,M.E, Ph.D

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