

Empower

with efficient energy, economics &
reducing carbon footprints



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Who we are

We are please to introduce ourselves as an ISO 9001 : 2015 certified company and pioneer in the field of Energy Management consulting services to more than 300 companies since 2008.

We undertake Energy Audit of any kind of industrial as well as commercial institutions like machining shops, molding industries, fabrication shops, chilling plans, colleges, hotel industry, foundries, distillers, packaging industry. With the help of our esteemed clients we saved almost 4000 Kva plus energy PAN India.

Why Power Audit

Power audit is an effective mean of enhancing present power efficiency level and identifying potential areas of improvement in power consumption. Power audits of utility systems largely help in reducing the energy consumption with result and reduction in fuel and electricity bills.

Power audit is a systematic approach for decision making in area of energy management. It helps the management to identify areas where waste occurs and there is scope for improvement, reduction in energy consumption.



What we do :

We study :

At first hand, we conduct an onsite careful survey of Electrical Distribution System and electrical usages of the plant. Amperage, voltage, power factor & KWH are measured. Actual running hours per batch or per hours out puts are observed. Illumination levels, air conditioning or blower system are evaluated for house keeping measures.

We measures distortion and displacement power at various points viz. PCC, MCC, load centres etc. Then we do analysis of the same for optimizing the network losses. We evaluate Transformers' performance through measurement of major electrical parameter on H.T. and L.T. side and do rationalization of transformer loading if required.



We analyze :

We compare actual electrical energy consumption with standard consumption and/ on with other reference consumption at other plant, this helps us to locate the trouble zone. For direct savings we study electricity billing patterns for relevant penalties or fixed rates.



We recommend :

Based on the energy losses and percentage loading of rotating equipment loading of rotating, electricity energy conservation measures are presented with techno economic analysis. The energy saving areas normally identified are: Compression/ illumination load, de-rating of blowers/ fans, control mechanism, application of motor controllers, sizing of pumps, usage of TOD tariff etc.



Scope of Power Audit

Power audit is classified in two categories, viz. Basic Power Audit and detailed power audit. Energy Audit generally involves collection of necessary data and analysis to identify energy conservation opportunities with cost effectiveness. It also indicates the areas which need details instrumented investigations.

Detailed Energy Audit (DEA) involves detailed engineering along with appropriate instrumentation need for maintaining and monitoring of energy performance of the plant through measurement of relevant electrical parameters like voltage, current, power and illumination level.



Benefits of Power Audit

- Collection and validation of electricity usage data
- Analysis of the present consumption and past trend
- Consumption of standard consumption with actual
- Checking of capacities and efficiencies of equipment
- Checking and reviewing of the adequacy of the existing instrumentation controls and metering systems
- Setting up energy reporting methods
- Developing energy use indices to compare performance
- Preparation of energy balance diagram
- Monitoring of new power saving techniques
- Training to staff for energy conservation awareness

The areas we served

- Fabrication Industry
- Foundries
- Press Shop
- Machine & CNS Shops
- Electroplating & Electrical Equipments
- Dairy & Food
- Hotel Industry
- Hospitals
- Stone Crusher
- IT Companies
- Electronics
- Forging
- Educational Institutions
- Packaging & Printing
- Chemical Industries
- Moldings

Manufacturers of APFC/ Control Panel



Thermography :

Enhance power efficiency

Thermography is the process of using an infrared imager / camera to look for abnormally hot or cold areas on a component operating under normal conditions. It is a viable nondestructive evaluation technique for the characterization of corrosion in metallic materials and is the simplest of all thermal inspection techniques. Thermography is useful for the detection of corrosion/erosion damage in plants operating at elevated temperatures.

All objects which are warmer than minus 273 degrees centigrade (absolute zero), emit infrared heat radiation. Infrared radiation cannot be seen by the human eye. Thermal imagers however, can convert this infrared radiation into electrical signals, and present them as a thermal image. The heat radiation is thus made visible for the human eye.

Salient features of Thermal Imagers :

- ☐ See the problems which we can't see with our eyes.
- ☐ Immediate analysis of problems.
- ☐ Simple reports, easy to understand.
- ☐ Ensure fast and comprehensive analysis.

The most common applications :

Regular checks in electrical maintenance

Thermal imagers allow an evaluation of the heat status of low, medium and high voltage systems. Thermal images lead to early recognition of defective components, so that the required preventive steps can be taken. This minimizes the risk of fire that avoids costly production down times.

Support in preventive mechanical maintenance

A reliable early recognition of threatening damage to process-relevant system components is necessary in order to guarantee the security and reliability of the machines. A high level of heat emissions, especially from mechanical components, may indicate an elevated level of stress. This is caused, for example, by friction due to faulty adjustment, component tolerances or a lack of lubricant. With their high temperature resolution, Thermal imagers provide an exact diagnosis. Critical heating conditions can be directly detected with the alarm or isotherm function, and counter-measures can be introduced.

Variable high temperature measurement

In some industrial applications, very high temperatures need to be measured. In Thermal imagers, the temperature measuring range can be flexibly extended up to 12000C. This means that the right measuring range is available for every application. The high contrast representation takes place using the high-temperature color palette iron HT or the special histogram compensation.



More reliability in quality assurance and production monitoring :

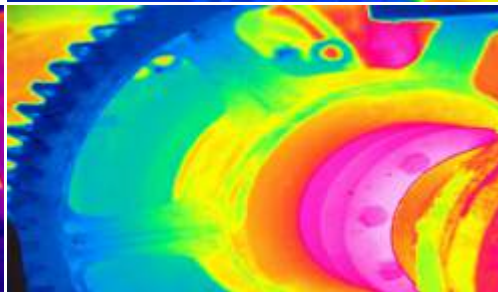
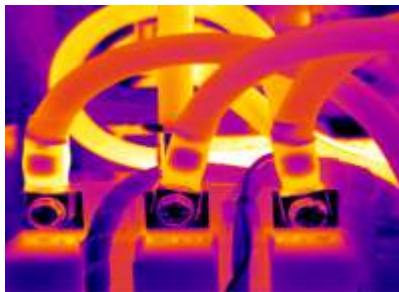
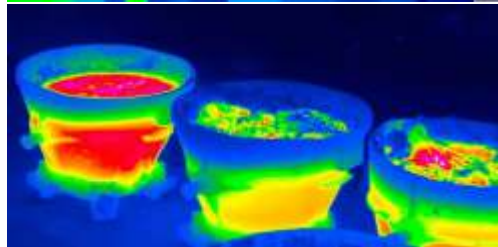
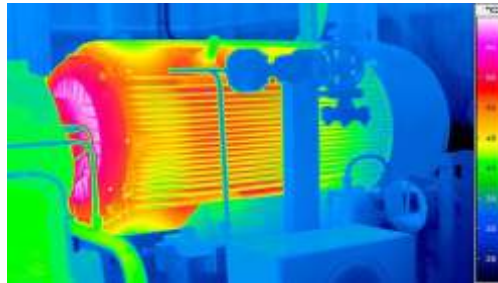
The thermal imagers ensure precise situation analysis, thus supporting process monitoring and assure product quality. In addition to foreign bodies in production process, anomalies in the heat distribution of components are also recognized at a glance, quickly and without contact.

Thermography can help to prevent :

- a. Sudden Break down
- b. Stoppage in production
- c. Hazardous event
- d. Loose contacts
- e. Cable bursting

Benefits :

- a. Uninterrupted production
- b. Reduce maintenance cost
Labour / Material
- c. Upto 2% units in power savings (wastage due to loose connection)



Benefits of Power Audit

- Saves Power
- Reduces Electricity Expenses
- Eliminates Penalties
- Increases Incentives
- Increases Energy Efficiency
- Increases Cost Effectiveness
- Low Emission of Carbon-Di Oxide





Stabilizers

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Certification



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