

Osborne Engineering

Osborne Machinery Maintenance L.L.C
Predictive Maintenance &
Condition Monitoring Services



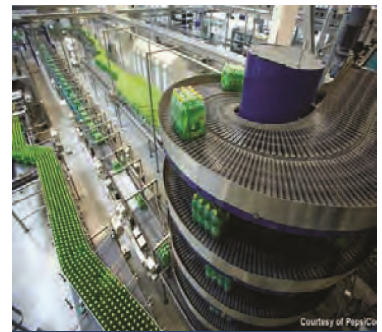
POWER PLANTS



PETROCHEMICAL PLANTS



OIL & GAS INDUSTRY



HEAVY PROCESS INDUSTRIES

VIBRATION ANALYSIS

TURBINE ROTOR BALANCING

TURBO MACHINERY & COMPRESSOR SERVICES

LASER ALIGNMENT

INFRARED THERMOGRAPHY

START-UP ACCEPTANCE TESTING

VIBRATION SENSORS & CABLES & CONNECTORS

NDT SERVICES

MOTOR CURRENT SIGNATURE ANALYSIS

PORTABLE VIBRATION ANALYZERS

ONLINE REMOTE MONITORING

TRAININGS



ABOUT US

Osborne Engineering, LTD was founded in 1984, Newcastle, UK, as a white metal repair and manufacturing facility. Enjoying an immense success, OEL soon enhanced its gas turbine and fuel system portfolio with acquisition of Turbo Power Services (TPS).

This was followed by the establishment of Osborne Training (OTS) and Osborne Condition Monitoring Services to provide field services as well as technical training to oil, gas, petrochemical and power generation industries.

With facilities in UK, UAE, Poland and US, OEL now operates across five continents, working with End Users, Original Equipment Manufacturers and Service Companies.

With exceptional service quality and dedicated customer support, Osborne Engineering has obtained a reputation as an outstanding service provider.

WHY US

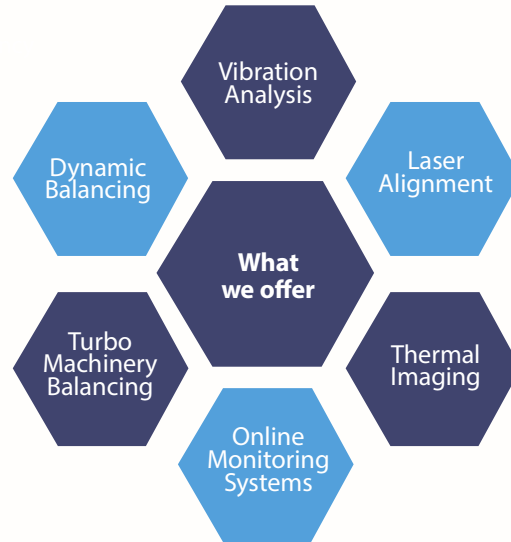
- Fast response time
- Service to the highest standards
- A complete solutions provider
- Well qualified engineers



CONDITION MONITORING

Well-implemented reliability and condition monitoring plan can add measurable value to your business. Condition monitoring, combined with well-planned action can significantly improve performance of the rotating equipment.

- Improved plant availability
- Increased plant uptime
- Improved productivity
- Increased component life
- Increased plant efficiency at higher throughputs
- Improved energy efficiency
- Improved reliability



VIBRATION ANALYSIS

Vibration analysis is one of the most successful techniques used for the condition monitoring of the rotating equipment. Used to detect early machine failures and allowing the machinery to be repaired or replaced before an expensive failure occurs.

- Misalignment
- Unbalance
- Soft foot
- Gear Faults
- Mechanical Looseness
- Resonance
- Bearing Damages
- Electrical Problems
- Process Related Issues

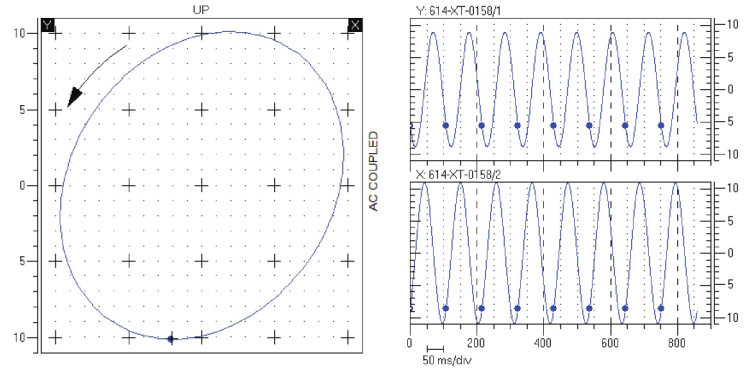


DYNAMIC BALANCING

Rotor balancing extends machinery life by eliminating the unbalance force that destroys mechanical components.

Osborne engineering has 4 & 24 channel vibration and balancing devices available for on-site balancing. Osborne brings extensive balancing expertise to your plant for virtually every type, shape, and size of rotors, from Generators, Turbines, Industrial fans, Paper Mill rolls, Pumps, etc...

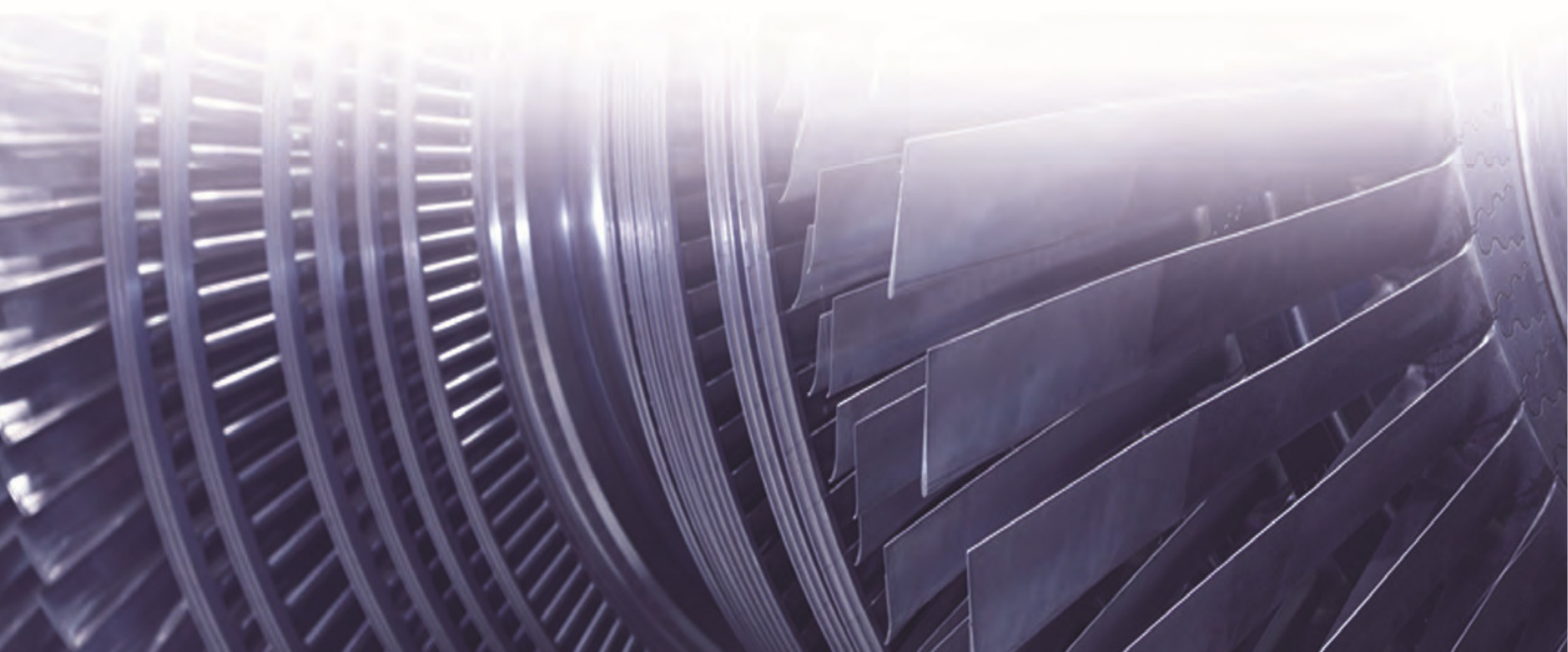
- Workshop balancing facility available in Jebel Ali.
- On-site balancing by experienced service personnel.
- Detailed reporting.



TURBO MACHINERY & COMPRESSOR SERVICES

Osborne is specialized in Turbo-Machinery Vibration Analysis using Powerful 16 Channel & 24 channel Vibration Analyzer, capable of simultaneous Data collection in both Steady & Transient (Run up & Coast down) conditions with a highly skilled people who have rich experience in handling any turbomachinery.

- Turbine-Generator set on-site balancing
- Consulting services to analyze and diagnose problems and take corrective action.
- Technical assistance to carry routine maintenance to keep turbo machinery running more Efficiently with longer MTBF.
- Technical & service support and assistance for new installations and start-ups.



THERMAL IMAGING

By measuring the intensity of the infrared radiation emitted by the machinery, our experienced engineers can uncover valuable information about your plant operating condition.

Detecting anomalies that are usually invisible to the naked eye, thermal imaging allows corrective action to be taken before costly system failures occur. Some faults that can be detected include,

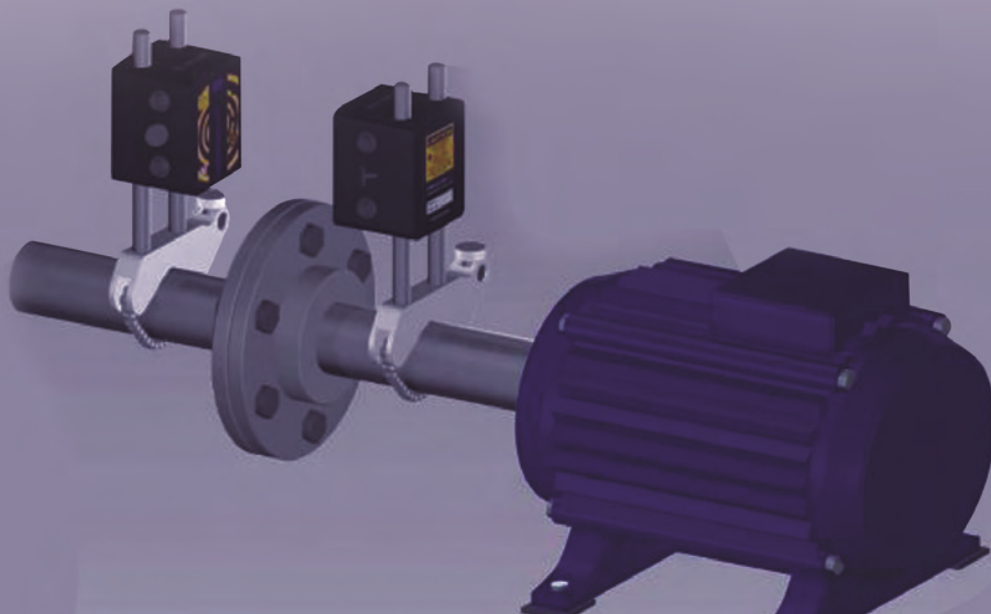
- Hot joints caused by faulty connections in electrical circuits.
- Insulation degradation heat losses.
- Electrical phase imbalance heat losses.
- Incorrect installation or poor lubrication of bearings.
- Misalignment of couplings
- Moisture infiltration in roofs.
- Blockages and dead shots in circulation system such as the cooling tubes of heat exchangers.



LASER ALIGNMENT

Precision alignment has a huge impact on energy consumption and wear of mechanical components in a coupled machinery. Be it motor-pump, fan, gearbox or a generator-turbine set. A well-aligned machinery runs much smoother.

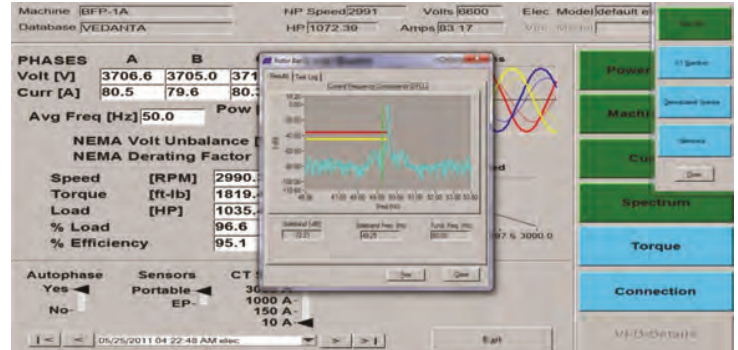
- Reduced vibration levels.
- Reduced downtimes and breakdowns.
- Improved electrical efficiency.
- Reduced bearing and seal consumption.
- Improved life cycle for couplings.



MOTOR CURRENT SIGNATURE ANALYSIS

MCSA is simply the process by which motor current readings are recorded and analyzed in the frequency domain. It has been effective in locating electrical equipment faults. MCSA can be used to effectively diagnose.

- Electrical motor overall condition
- Rotor or stator bar faults.
- Faults in load or phases.
- Earthing issues
- Electrical imbalance.



ONLINE REMOTE MONITORING

Osborne Engineering has the capability and expertise to install, commission and remotely monitor assets through online monitoring systems. This makes it possible to analyze the condition, generate messages automatically and even predict hazardous conditions before severe damage occurs.

- The remote connection of condition sensors helps experts to evaluate the condition of the equipment and its performance without having physical access to it.
- On-site technicians can receive support from system engineers at CCR.



TECHNICAL TRAINING

The main problem in industry faces now is the high-level management forcing them to seek fresher's or inexperienced people, but the machines are becoming more and more complex and technologies are more and more complicated. Technical training is a vital and immediate requirement for reliability centered industry. Osborne provides certified training programs on below list of technical courses:

1. Vibration analysis
2. In-situ dynamic balancing
3. Laser alignment
4. Advance Reliability centered maintenance
5. Bearing failure analysis.

AMC OPTIONS

AMC Service Program: Option of 24x7 AMCs where we employ our vibration instruments, software and experts in the field of condition-based maintenance to monitor, make the proper schedule, collect and analyze data, diagnose and advice the maintenance team for corrective action. We submit daily, weekly and monthly reports.

Monthly Services: Osborne engineers visit the site, conduct pre-survey meetings with maintenance team in order to collect machine technical data, data acquisition, and analysis for diagnosing the problem, and submit the report with recommended action soon after completing the visit, and conduct post survey meetings with maintenance team to review the result of recommended actions.

On-call Services: Osborne engineers are always available for emergency machine problems (Balancing, laser alignment, RCFA etc..)



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