



O-SECUL NIGERIA LTD

MACHINERY HEALTH MANAGEMENT SERVICES

ARE YOU EXPERIENCING UNEXPECTED EQUIPMENT FAILURES? DO YOU WANT TO SAFELY CUT DOWN YOUR MAINTENANCE BUDGETS? ARE YOU PLANNING A MAJOR MACHINERY MAINTENANCE OVERHAUL? ARE YOU COMMISSIONING NEW MACHINES OR NEWLY OVERHAULED MACHINES? O-SECUL IS HERE FOR YOU.

Cost Effective-Technology driven maintenance services are now brought to your doorstep by our experienced and certified hands. We undergo the full range of maintenance services including; Vibration Analysis, Oil Analysis, Laser Alignment and In situ Balancing and Infrared Thermography. A brief outline of these services and their applications are available for your perusal. Make your choice now.

If you want to maximize utility from your investments in equipments and facilities try O-SECUL. **CALL TODAY!**

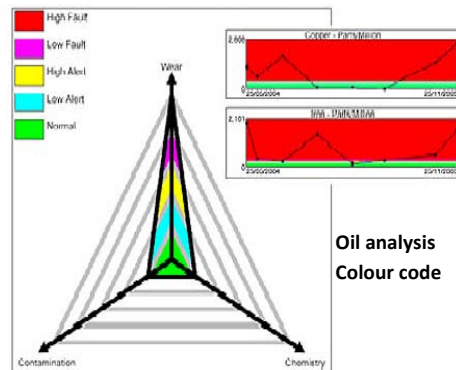
OIL ANALYSIS

O-SECUL Nigeria Limited offers Oil Analysis which is the most cost-effective way to prevent machine breakdowns, cutting down maintenance costs and providing a means of detecting the presence of contamination in oil.

We collect oil samples from our clients or have them simply send them to us. We then do our laboratory analysis and return a fully-detailed report with technical recommendations where necessary within a few working days.



Oil Analysis laboratory with Equipment



Oil analysis Colour code

- Identification and tracking of progress stages in bearing failure
- Identification and correction of Imbalance, resonance and Misalignment
- Identification of Mechanical Wear in couplings, bearings, support structures, etc.
- Detection of other defects such as :Soft foot/broken rotor bar, etc. **CALL US**

LASER ALIGNMENT AND INSITU BALANCING

If your facility has rotating equipments like cooling towers, turbines, rotors and impellers O-SECUL Nigeria Limited is the right stop for you. Properly aligned and balanced equipments run smoother, more efficiently, experiences fewer breakdowns and lost production time. We carryout laser alignment and measurement services including; Shaft alignment (Vertical, Horizontal and Cardan shafts), Machine train alignment, Roll parallelism, Flatness measurement, Straightness measurement, Thermal growth and lots more.

A workshop machine balancing cannot duplicate the actual machine "system" and its response. For these reasons, including time, cost and convenience, the **in-situ balance** method is often the preferred option. O-SECUL has the ability to In-situ Balance banks of multistage equipment whilst adjacent machinery is still on line. (E.g. Fans, Pumps, Turbines, Generators and Centrifuges).



FOR ALL YOUR EQUIPMENT CONDITION MONITORING SERVICES, EQUIPMENT PURCHASE AND PERSONNEL TRAINING **CALL O-SECUL TODAY!!!**

DEMONSTRATION OF ANY OF THESE APPLICATIONS CAN BE MADE ON REQUEST

CALL NOW!!!

VIBRATION ANALYSIS

O-SECUL's Vibration Monitoring Service offers a predictive maintenance method which allows early problem detection in rotating machinery, such as: gearboxes, fans, turbines, motors, compressors, pumps, mixers, driers - in fact, almost any type of active machinery.

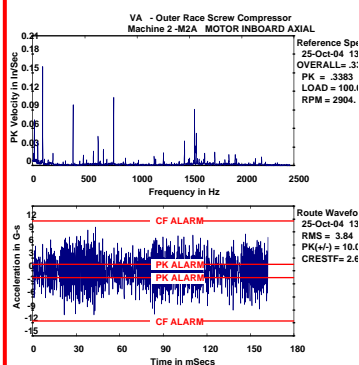
If you seek identification of component faults (e.g. defective bearings and misalignments) to enable maintenance action before a failure in service brings your plant to a halt, then you need Vibration analysis from O-SECUL.

For any of the following:

- Detection of defects and impending failures for



Vibration Analysis in Progress



Enquires should be addressed to:
The Managing Director
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 Delta State
 E-mail: mike.orugbo@osecul.com,
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 Phone: 2348037026147/8055533311,
 053-252931. 254719. Fax: 053-252931

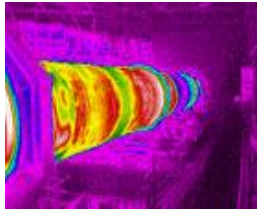


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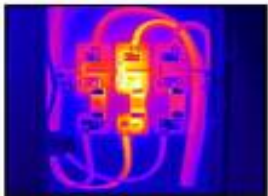
FACILITY/EQUIPMENT CONDITION MONITORING SERVICES



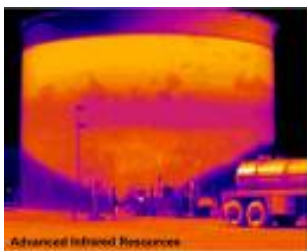
Fluke Infrared Cameras



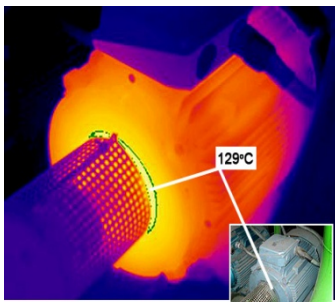
Heat Tracing in Pipelines



A Thermograph image quickly & Safely identifies an overheating Fuse connection



Storage Facility Inspection



Motor Inspection

INFRARED THERMOGRAPHY

DO YOU NEED A COST-EFFECTIVE EQUIPMENT FAULT DIAGNOSIS WITH IMMEDIATE RESULTS? DO YOU NEED INSTANT, PRECISE, NON-CONTACT ANALYSIS OF YOUR PLANT & MACHINERY CONDITION TO HIGHLIGHT FAULTY COMPONENTS SUCH AS BEARINGS, MOTORS, FUSES, RELAYS, STEAM PIPES, DRIVE GEARS & BELTS?

O-SECUL is there for you. Our Infrared Thermography Survey Services enable you to prevent equipment failures and save hundreds of hours of wasted time in routine testing of components. Using our assorted Thermal Imaging Cameras, we capture heat-generated images and our certified infrared thermographers then do the analyses building a report with technical recommendations to assist you in identifying potentially catastrophic problems thereby reducing unscheduled downtime. These surveys can be applied to all sections of your plants which include:

Electricals: Faulty components (fuses, relays, switches, transformers, capacitors, transistors, printed circuit boards, etc), poor connections, corrosion, load imbalances and much more can be instantly detected. Fires, unscheduled outages and lost production time due to electrical anomalies can be avoided by using infrared thermography on a regular basis.

Storage Tanks: Determining tank levels, finding the layers of different liquids and gases, and determining the amount of build-up.

Piping: Issues such as build-ups, de-laminations, insulation problems, heat tracing, material build up, deposits in piping and other aspects can be evaluated using infrared technology.

Processes: Ranging from determining internal build-up on components, to evaluating the effectiveness of insulation to finding and analyzing failures of equipment such as flare tips.

Machinery: In Drives/Conveyors, Pillow Blocks, Couplings, gears, power transmission belts, pulleys and shafts, immediate diagnosis and location of overheated bearings or rollers, misalignment of shafts, pulleys or couplings and lubrication failures can be carried out.

Motors: Identifying locations of overheated windings and bearings, blocked cooling passages, friction, damping, material deformations, brush contact problems and much more

Pumps/Compressors/Fans/Blowers: Overheated bearings, high compressor discharge temperature, high oil temperature, and much more.

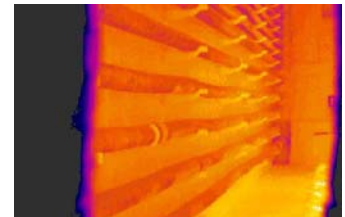
Furnace and Boiler: Location and severity of damaged insulation and refractory, location of steam leaks in buried steam lines, etc.

Buildings: Moisture infiltration of roof, Air infiltration or exhalation, Areas of potential mould growth, Air circulation and distribution, leaky or clogged pipes and much more.

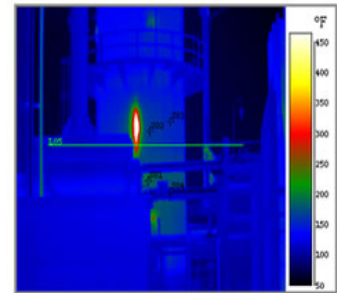
Turbines: Continuous condition monitoring of turbine casings, bearings, inlet and outlet temperatures, etc.



FLIR Systems: Thermacam P60



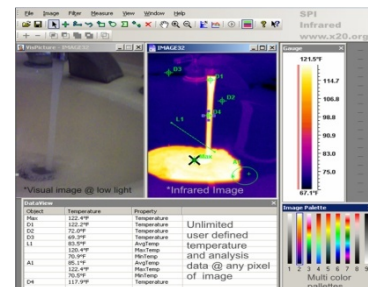
Tube Inspection



Boiler Inspection



CSI 9800XL Infrared Camera



IR Analysis software

All enquires should be addressed to:
The Managing Director

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