



O-SECUL NIGERIA LIMITED

RELIABILITY SOLUTIONS FOR DRILLING COMPANIES



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About Us

Incorporated in June, 1997, O-SECUL Nigeria Ltd is a provider of engineering products and services. The Company has grown steadily over the years to become a well established provider of services in the field of:

- Maintenance Support
- Engineering
- Engineering Equipment Procurement & Supply
- Technical Manpower Development.

O-SECUL is staffed with highly skilled, qualified and experienced professionals who are committed to achieving ultimate client satisfaction, and focus on details, in pursuance of clients' goal.

Introduction

Efficient maintenance is particularly important in hazardous areas such as drilling rigs. Planned maintenance ensures safe and efficient operations. The drilling industry is facing great challenges as oil is being extracted from increasingly harsher and difficult environments. As a consequence, there is a growing need for more complex equipment to operate. Efficient maintenance of this equipment is essential.

An important factor in asset maintenance is applying the right maintenance strategy, which is based on a criticality assessment. Using the right maintenance strategy greatly reduces the risk of potential HSE (Health, Safety and Environmental) dangers as well as reducing rig operational downtime.

Predictive maintenance provides cost efficient solutions to maximize reliability and enhance workplace safety. Benefits of incorporating predictive maintenance technologies into a company's maintenance strategy include:

- Determines the operational status of equipment
- Evaluates present condition of equipment
- Detects abnormal conditions in a timely manner
- Initiates actions to prevent possible forced outages

Monitoring the condition of equipment provides trending data to help anticipate and plan future maintenance activities, which saves time and money.

OUR RELIABILITY SOLUTIONS INCLUDE: ELECTRIC MOTOR ANALYSIS, LUBE OIL ANALYSIS, VIBRATION ANALYSIS, INFRARED INSPECTION, INDUSTRIAL COMMUNICATION AND POWER REGULATION.

Electric Motor Analysis Service

O-SECUL conducts testing of clients' electric motors/alternators and their associated circuitry using portable, computer-supported test equipment to monitor and trend the condition to reveal a wide-range of hidden problems.



This service helps identify defective motors/alternators before they reach a point of catastrophic or functional failure, this allows for planned corrective actions and minimize the interruption of normal scheduled production. PDMA is our Technical Partner in delivering this service.

We perform this Service using the MCEmax from PdMA, whether online (energized) or offline (de-energized) to provide early detection of defects or faults in electrical distribution, motor circuits, motors and motor drive trains. Fault zone considered include; **power quality, power circuit, stator, rotor, insulation, and air gap**. We test the quality of new or rebuilt motors/alternators prior to inventorying or installation for quality assurance purpose. We also report failure mode identification and recommend corrective action.

O-SECUL procures and supplies PdMA's line of portable testers to clients. We also train client's personnel on the best use of the equipment. Visit www.pdma.com for more information about PdMA Corporation.

Lube Oil Analysis Service

One of the keys to keeping machinery operating at optimal performance involves monitoring and analyzing lubricant oils for characteristics such as contamination, chemical content and viscosity.



O-SECUL'S lube oil analysis service will provide critical early warning information indicative of machine failure. Analyzing and trending this data means you can schedule maintenance before a critical failure occurs. The result – higher equipment availability and productivity, lower maintenance costs, lower total cost of ownership (TCO), fewer outages, optimal equipment performance.

Spectro Scientific are our technical Partners in delivering this service. We represent them in Nigeria. O-SECUL Procures and supplies Spectro's wide range of analyzers for clients. We also train client's personnel on the best use of the analyzers. Visit www.spectrosci.com for more information



Vibration Analysis Service

O-SECUL'S Vibration Analysis Service is based on the high information content provided by the machine vibration signals that are an indicator of machine condition, used for the diagnosis of faults. This will allow client's to evaluate the condition of their equipment and avoid failures.



EMERSON is our Technical Partner in delivering this service. We use Emerson's CSI2140 vibration analyzer to collect vibration data and do the analysis using the AMS suit.

This service is fundamental in a predictive maintenance programme, we use it for detection and monitoring of incipient and severe faults in client's machinery parts, like bearings, shafts, couplings, rotors, motors etc. Maintenance personnel can minimize unplanned downtime by scheduling needed repairs during normal maintenance shutdowns with this service. Faults like unbalance, misalignment, bent shaft, rolling bearing faults, eccentricity, resonance, looseness, rotor rub, fluid-film bearing instabilities, gear faults, belt/sheave problems are detected using this service.

O-SECUL procures and supplies Emerson's CSI2140 Vibration Analyzer and software to clients. We also train client's personnel on the best use of the Analyzer and software. Visit <http://www2.emersonprocess.com/enus/brands/csistechnologies/pva/csi2140/page/csi2140.aspx> for more information.

Infrared Inspection Service

Infrared technology has revolutionized maintenance by providing a means of non-contact and non-destructive testing to identify eminent failures related to compromised components before they occur.



O-SECUL Infrared Thermography Inspection diagnoses problem areas and their severity in electrical and mechanical systems using intrinsically safe and designed tested CorDEX infrared camera. We also support clients with guidance on effective report writing, establishing proper inspection routes, implementing appropriate procedures and establishing best safety practices.

O-SECUL procures and supplies CorDEX cameras/infrared cameras to client. We also train client's personnel on the best use of the Cameras. Visit www.cord-ex.com for more details about CorDEX.

Industrial Communication Service

Drilling Rigs are a place where individuals are subjected to an environment that poses challenges to reliable communications and potential harm to people, property, and process, so we must deal with the need for responding to a possible emergency.

These environments are an opportunity for O-SECUL through its technical partner, GAI-Tronics® to provide systems, products, and services to improve communications. The benefits to our client's in these environments are to improve reaction time, improve chances for minimizing injury, and saving lives. It is therefore our mission to provide systems, products, and services of the highest reliability in every one of these opportunities.

O-SECUL procures and supplies GAI-Tronics® wide range of products. We Install, commission and maintain these systems. Visit <https://www.gai-tronics.com/indcomsystems/default.htm> for more details about GAI-TRONICS products.



Power Regulation Service

O-SECUL'S power regulation Service supplies energy to your work through its technical partners. We supply, commission and maintain Uninterrupted Power Supplies (UPS), On-Grid and Off-Grid Power, Inverters, DC Power Supply, and Battery Charging Rectifiers, Static Frequency Converters, Servo and Static Voltage Stabilizers, Dry type Batteries, Lead Acid/NiCd Batteries, Distribution Panels and Customized power systems developed in accordance with specification of our customer.



Visit www.borri.it and <http://en.esis.com.tr/> for more information.

Training

The complexities of Rig operations frequently require special training for those who are to operate and maintain them. To meet this objective, O-SECUL designs courses and course materials, conduct classroom, in-plant and on-the-job instruction training on Electrical maintenance & Inspection for production, operations, maintenance and other technical staff. We undertake Staff skill level evaluation, skill gap analysis and develop course modules to upgrade employee skills in the light of these technologies: **Electric Motor Analysis, Infrared Thermography and Lube Oil Analysis, Vibration Analysis, amongst others.**

O-SECUL also organizes globally recognized certification courses with institutions and corporation namely PDMA cooperation, Infrared Institute, U.K, Vibration Institute, etc.

Procurement

As local business representative to some Original Equipment Manufacturers, we procure and supply their entire product to our clients. We also procure and supply related equipment from other manufacturers other than our Partners.

List of OEM and Technical partners

In delivering high tech products and service to our esteemed clients / customers, O-SECUL developed strategic partnership with some world class original equipment manufacturers (OEMs) and service providers as listed: **PdMA Corporation, SDT, EMERSON, Cordex Instruments UK, VAISALA, Des-Case, and BORRI.**



Partial Client listing

- Chevron Nigeria Limited (CNL)
- SPDC
- SNEPCO
- ExxonMobil
- Nigerian Agip Oil Company (NOAC)
- Pan Ocean Corporation
- TOTAL (E & P)
- Warri Refinery and Petrochemicals Company (WRPC)
- Kaduna Refining & Petrochemical Company (KRPC)
- Notore Chemical Industries Ltd
- Guinness Nigeria (DIAGEO)
- Larfarge-WAPCO
- BAT
- WAMCO Plc
- Port Harcourt Refinery Company (PHRC)

To achieve higher return on investment, minimize production downtime, increase reliability, improve quality control and safety of your entire operation contact us today.