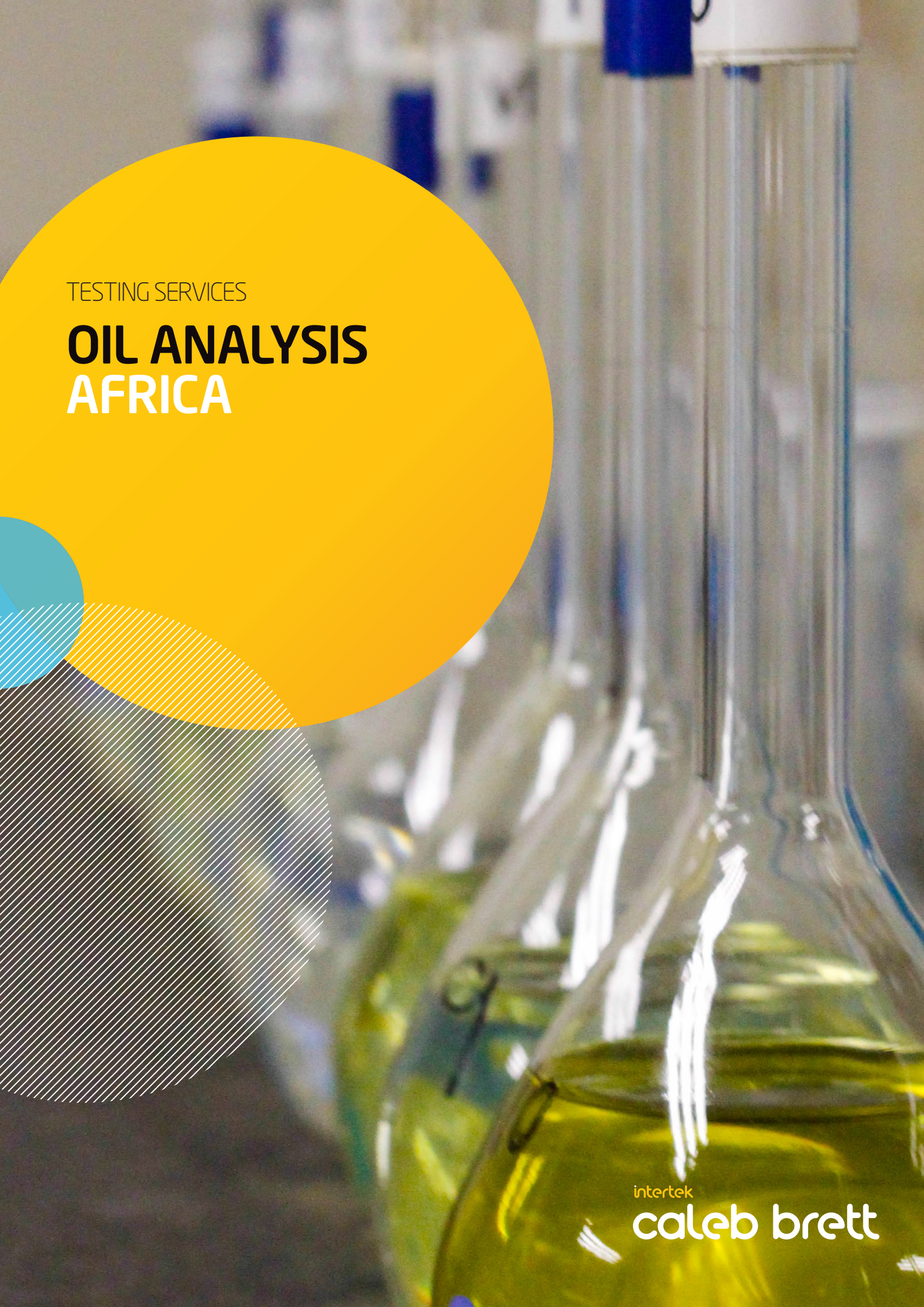

TESTING SERVICES

OIL ANALYSIS
AFRICA

intertek
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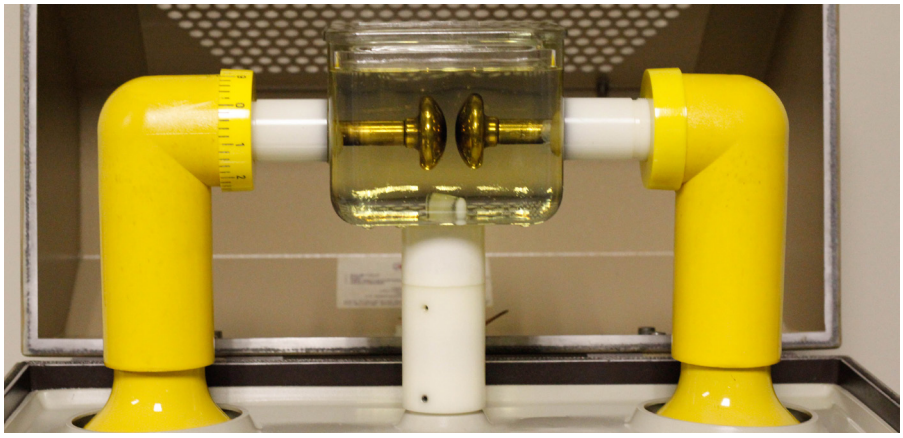
Through oil testing and analysis, Intertek is able to analyze a wide range of oil based products. Supporting client oil condition and predictive maintenance programmes, our oil tests are performed to ASTM, ISO, IEC, IP, in-house, client, and other industry standards.



Oil Condition Monitoring

Machinery requires planned maintenance to perform optimally. The frequency of this maintenance must be planned to ensure maximum continuous running of the machinery, with minimum wear and tear. An effective Oil Condition Monitoring (OCM) programme provides early detection of issues that may lead to failure of the machinery thus avoiding lengthy downtime.

The Solution

Intertek's OCM programmes increase productivity and profitability, resulting in:

- Reductions in unscheduled downtime
- Effective maintenance scheduling
- Increased reliability of machinery
- Lower maintenance costs
- Optimum planned oil change intervals
- Prevention of breakdowns

Intertek monitors the conditions of fluids, oils and lubricants from:

- Compressors
- Transformers
- Diesel and petrol engines
- Generators
- Turbines
- Gearboxes
- Hydraulic Systems

The analysis results in a detailed report that indicates the necessary action, the levels of wear and contamination, how they might have been caused, and suggested actions to improve the performance of the machinery.

Transformer Oil Testing

Within a transformer, oil acts as an insulator and a coolant. The oil undergoes mechanical and electrical stresses while the transformer is in operation, and over time, it deteriorates, reducing the oil properties. By sampling the oil, it is possible to monitor the overall oil deterioration and transformer health condition, in order to evaluate the operating status of the equipment and provide clients with accurate detailed, reports, diagnostics and interpretations.

In-depth analysis can determine potential electrical and thermal faults within the transformer without de-energising it. Dissolved Gas Analysis can determine the condition of the transformer and locations of the faults. A high-dissolved combustible gas indicates the level of decomposition of the cellulose and/or oil. The breakdown voltage indicates the ability to withstand high electrical stress without failure. It is essential to quantify the moisture content of the transformer oil as this can cause a reduction in the breakdown voltage and deterioration of the insulation material. Moisture in the presence of oxygen causes the paper in the transformer to decay, thereby forming an acidic compound as well as sludge. Sludge attaches itself to the winding and prevents the oil from cooling down the transformer, creating thermal faults and eventually the destruction of the transformer. The interfacial tension and the neutralisation value enables us to determine the degree of deterioration. High acid values and low IFT values indicate oil deterioration.

The Solution

By predicting the condition of the transformer we can help prevent premature failing by means of the following testing services:

- Dissolved Gas Analysis (DGA)
- Dielectric Strength (BDV)
- Colour and Appearance
- Dielectric Dissipation Factor (Tan Delta)
- Resistivity
- Sediments and Sludge
- Corrosive Sulphur (Cu – Corrosion)
- Aniline Point
- Flash Point
- Polychlorinated Biphenyls (PCB's)
- Moisture Content
- Acidity (Neutralisation Value)
- Particle Count
- Interfacial Tension
- Density
- Viscosity
- Corrosive Sulphur (Paper & Copper corrosion)
- Pour Point
- Carbon Composition/Aromatics

FOR MORE INFORMATION

+233(0)54 431 6499

info.ghana@intertek.com

intertek.com