



CONDITION MONITORING

Analysis and subsequent condition monitoring of essential fluids on board a vessel is one of the most effective maintenance and breakdown prevention tools available.

Maintaining the optimum condition of lubricating oils, hydraulic fluids, greases and fuels is critical to ensuring the efficient and safe operation of a vessel. That is well known and yet there is much more that analysis can provide as a predictive tool to avoid accelerated wear in engines and machinery, well before any other signs are evident.

Routine analysis and trending gives an accurate insight into potential performance and reliability issues and allows precise programming of maintenance schedules to suit the vessel's operational cycle, negating downtime at inopportune periods and geographic locations.

Fluid analysis is also an essential tool during re-fit to ensure that optimum performance has been restored after repair and furthermore to identify wear situations which might only be able to be repaired in dry dock or refit. Classification Societies regularly defer extensive and invasive surveys, such as stern tubes and thrusters, if routine oil and fluid analysis is performed by a suitably qualified and accredited laboratory*.

Purchasing or selling a vessel requires a precise assessment of the vessels mechanical condition by both buyer and seller. For the seller to endorse the pedigree of the vessel and for the buyer to confirm or refute the same. Historical maintenance records are, of course, important but a real-time snapshot of mechanical condition can

only be truly accurate through the use of spectrographic laboratory analysis of fluids. This gives a present and historical indication of potential problems that might pre-exist and manifest themselves after sale of the vessel.

Hydraulic systems require total cleanliness and complete lack of contamination and are not tolerant of deficiencies in this area. Regular analysis will ensure there are no issues that are reaching a critical tipping point where total failure and zero functionality will quickly occur.

Fuel is equally important to the safe and efficient operation of a vessel and unlike hydraulic fluids and lubricating oil its quality and integrity cannot be so easily guaranteed. With new regulations coming into law there is greater demand on distillate fuels which in turn has caused quality deficiencies. In particular FAME is causing microbial contamination in fuel tanks, resulting in engine failure with disruptive and expensive tank cleaning/engine repair required. Spectro regularly tests fuel for water, FAME and microbial contamination and, of equal importance, the sulphur level ensuring the fuel is fully compliant.

Independent laboratory analysis is therefore the ultimate and effective security against engine and machinery malfunction, accelerated wear and failure.

Quality Analysis Services

Analysis is performed from samples provided by the vessel, using easy to use sample kits. These include pre-paid analysis, a sample pump to extract the oil cleanly and directly to the bottle, labelling and outer packaging to allow safe transit. Analysis results are reported within two working days.

* UKAS, the United Kingdom Accreditation Service and SAS, the Swiss Accreditation Service, ensure our laboratories comply with the ISO/IEC 17025:2017 standard.

Analysis Tests

- Elemental Analysis by ICP
- Viscosity at 40°C & 100°C
- Total Acid Number
- Total Base Number
- Water Content
- FAME
- Sulphur level
- Flash point
- Particle Count

CONTACT US

Spectro | Jet-Care UK
T +44 (0) 1256 704000
E enquiries@spectro-oil.com

Jet-Care International Inc
T +1 973 292 9597
E inquiries@jet-care.com