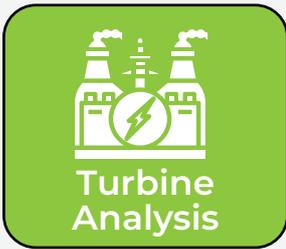


LABORATORY TESTING



TURBINE OIL ANALYSIS

At PCMS Engineering, we provide a comprehensive turbine oil analysis service to ASTM Standards. Our experienced analysts process samples through our independent oil laboratory to detect unwanted oil contamination, diagnose potential varnish build up, antioxidant depletion and make recommendations to restore the lubricant to peak condition

Introduction

Turbines play a vital part in most manufacturing operations, driving electric generators by converting the thermal energy of steam and gas into electrical energy.

Commonly used in power plants, waste incineration plants and natural gas power plants, turbines must run around the clock and any unexpected shutdowns can result in significant downtime costs.

With a lifespan of around 10 to 20 years, it pays dividends to invest in routine turbine oil analysis to avoid wastage, reduce downtime and improve overall turbine health.

Our turbine oil analysis service detects unwanted contamination, determines oxidation levels and highlights degradation issues.

All our tests comply with ASTM or ISO standards and are performed by BINDT certified analysts with decades of experience.

And, acting as a single point of contact for all turbine lubrication testing requirements, we can provide our clients with a complete reliability portfolio, offering reliability solutions, training and products all under one roof.



BENEFITS

- ✓ Schedule oil changes or top ups in advance
- ✓ Detect detrimental contamination to allow resolutions to be planned
- ✓ Evaluate the stability of the lubricant
- ✓ Monitor the overall health of the turbine as well as the lubricant

TEST METHODS

TURBINE OIL ANALYSIS TESTS

Test	Test Method	Benefit
FW	ASTM D8184	Gives a value to any ferrous material too large for the ICP (>10um)
ICP – OES	ASTM D5185	Gives a ppm value for numerous wear metals, additives and contaminants
Viscosity	ASTM D7279	Used to quality check the lubricant and identify any degradation or contamination.
TAN	ASTM D974	Measures the acidity of the lubricant, allowing the analyst to identify any oxidation.
Particle count	ISO 4407	Gives a particle count at 4, 6 and 14 microns allowing the cleanliness of the lubricant to be established.
CKF	ASTM D6304	The ppm level of water is analysed to detect any subtle changes in water level
FTIR	ASTM E2412	Allows the lubricant to be compared to the reference to monitor the oxidation, sulfation and nitration of the lubricant. Contaminants can also be evaluated.
RPVOT	ASTM D2272	Evaluates the oxidative stability of the lubricant
Ruler	ASTM D691 + D6810	Monitors the antioxidant levels of the lubricant
MPC Varnish	ASTM D7843	Gives a potential for the lubricant to form varnish

Why choose us?

Our independent oil laboratory processes over 50,000 samples every year for clients across multiple industries.

- UK based oil laboratory
- ISO 9001:2015 accredited
- 1-3 business day turnaround
- Pre-paid sample return services
- BINDT accredited analysts
- Web based reports
- Bespoke & advanced testing
- Daily certified calibrations

Head Office

PCMS Engineering
Unit 3a, Adwick Park
Manvers, Rotherham
South Yorkshire
S63 5AB

t: +44(0)1709 876 712
e: info@pcmseng.co.uk