

Condition Monitoring Deliverables

- Vibration Analysis
- In-situ Balancing
- Ultrasound Analysis
- Infrared Analysis
- Steam Trap Analysis
- Oil Sampling and Analysis
- Grease Handling
- Fluid Management
- Remote Control
- Operational Checks
- Laser Alignment
- CM Assessments
- Walkdowns and Hierarchy
- Criticality Analysis

Reliability Engineering Deliverables

- RCA — RCM
- FMA — FMECA
- Equipment Maintenance Plans
- Consequence Classification
- Spares Optimisation
- Workflow Optimisation
- PM Optimisation



The optimum approach to implementing and improving Asset Management Programmes



PSW are focused on cost effective, optimised Maintenance and Reliability improvements with proven success at delivering best practice results.



The best way to predict the future is to
create it with
PSW Integrity Maintenance Programs

Condition Monitoring (CM) Programmes are the optimum approach towards improved equipment reliability for our customers. CM

surveys have been continually proven to detect the majority of machinery problems in the most cost effective and timely manner.

Early detection of defects allows for planning of repairs with a less reactive maintenance culture whilst increasing asset reliability.

PSW Integrity offers you a range of CM inspections which enable you to optimise/enhance your Asset Management programme.

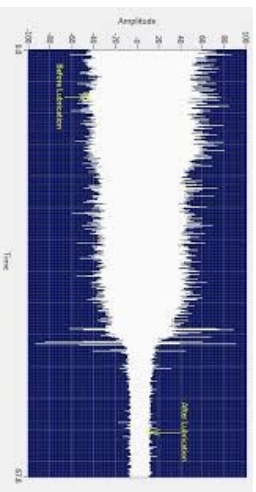
Vibration Analysis — Remote Control

Correctly performed Vibration Analysis will provide a more in depth insight into condition of new, existing or overhauled machinery. Vibration measurements are widely accepted as the most effective technology for diagnosing the condition of rotating machinery. Every machine malfunction generates its own unique vibration pattern, making Vibration Analysis the most widely used, reliable and proven diagnostic technology. Vibration Analysis can detect imbalance, misalignment, looseness (mechanical/electrical), bearing issues, gear problems, cavitation, resonance and electrical problems to name a few, which supports improved asset integrity when embedded within the Maintenance culture.



Ultrasonic Analysis

Ultrasonic Analysis has a wide variety of uses. There are numerous examples of applications for detecting failure modes on mechanical, electrical and stationary equipment and components. The data collection methods determine the types of detectable failure modes. Two main methods are contact (structure-borne) and non-contact (airborne).



Contact methods are typically used for mechanical applications such as bearing faults, lubrication issues, gear damage and pump cavitations. Non-contact measurements (airborne Ultrasonic Analysis) include pressure and vacuum leaks on compressed gas (including air) systems, hydraulic system defect detection and numerous electrical applications to name a few. This highly versatile technology is effective in both Energy Management and Asset Integrity programmes including slow speed equipment.

Phase 1 Assessment

An assessment is the analysis of work processes or organisation, versus a procedure, standard or best practices in order to identify improvements processes. The assessment is accomplished by asking a series of questions all representing different aspects of the operation. Overall Program, Vibration Analysis, Ultrasonic Analysis, Lubrication program and the use of standards are some examples of this.

PSW Integrity, 1A Hamilton Street, Birkenhead, CH41 6DJ, United Kingdom Phone: (+44) (0) 151 792 8688 or (+44) (0) 1224 900165 Email: info@pswintegrity.co.uk

Oil Sampling & Analysis

Lubricants are the life blood of equipment. To ensure equipment integrity is good it is highly important to analyse the lubricants (where applicable) to verify that the condition of oil is good and also prove the lubricant is free of contaminants. If contaminants are found, the material/type should be identified to pinpoint the cause of contamination and rectify the defect, not only to identify when the oil needs changing but also to optimise asset's integrity and reliability.



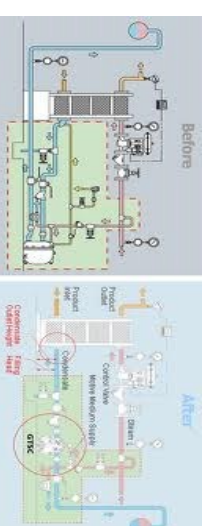
Infrared Analysis (Mechanical, Stationary & Electrical)

Infrared (Mechanical, Stationary and Electrical) inspection is a highly effective technique that enables us to locate overheating in MCC's, switchgear, breaker panels, junction boxes, and control cabinets caused by poor connections, corrosion, overloads, unbalanced loads, mechanical issues bearings, and fatigue to name a few.

Steam Trap Analysis — Steam and Condensate

Our team offers a comprehensive, unbiased assessment of your steam trap stations with a goal of reducing steam trap failure rates. Our program covers the complete steam trap station and encompasses:

- Steam trap testing
- Root cause analysis of failure
- Correct sizing
- Isolation valve operation



There are no limits as to the potential growth that you can achieve. PSW Integrity will help and support you in your drive towards achieving Optimum Asset Integrity and Reliability.

