Bureau Veritas Services

CONDITION MONITORING & MACHINERY DIAGNOSTICS

Using Condition Monitoring (CM) to Protect Your Assets & Optimise Production.

BUSINESS CHALLENGE

Maintenance reviews are generally driven by the ageing of plant, deficiencies identified in the existing maintenance practice and unplanned shutdowns leading to deferred production.

The outcome of such a review may lead to updating the maintenance procedures and practices with the objective of bringing maintenance practices in line with modern best practice and hence minimising the number of unseen failures.

SOLUTION

What is Condition Monitoring & Machinery Diagnostics?

Condition Based Monitoring (CBM) stems from the logical assumption that preventative repair or replacements of machinery would be optimally timed if they were to occur just prior to the onset of failure. The CBM objective is to obtain the maximum useful life from each physical asset before taking it out of service.

The concept is to carry out maintenance based upon non-invasive, scientific measurement of condition related parameters. By recording a baseline of fault specific factors on plant or machinery whilst operating under normal conditions, any change in condition will be identified during subsequent routine surveys.

What are the key benefits?

- Maximise resources - Monitoring programs which achieve maximum uptime at acceptable cost
- Identify and limit risk
- Minimise financial liabilities
- Reduced responsibility for the duty holder to carry out inspections at every equipment load out / mobilisation

WHY CHOOSE BUREAU VERITAS?

The Bureau Veritas Acoustics and Vibration Group is one of the largest independent noise and vibration consultancies in the UK. Our service range is extremely broad covering the impacts of noise and vibration in the environment and on people, and in detail, the assessment and impact of noise and vibration on structures and machinery:

- Rapid response to client needs
- Highly qualified, experienced specialists for both routine and ad-hoc diagnostic investigations
- Our total independence of monitoring and measuring equipment suppliers allows us to provide completely unbiased advice on the correct equipment for our clients’ specific requirements
- Our extremely wide skill based enables a “one stop service” from routine data acquisition to complex machinery, pipe-work and structural vibration problem solving

RELATED SERVICES

- Development of CM for new plant
- Maintenance performance review for existing plant
- CM implementation, planning and support
- Management and operation of CM programme
- Machinery diagnostics, commissioning and troubleshooting
- Introductory training in CM and Vibration
- Structural and pipework vibration surveys
OUR APPROACH

CM Development for a New Plant
Bureau Veritas is able to provide strategic support during the design stage of a new plant to ensure that CM is integrated into the overall maintenance philosophy where appropriate. This may involve a criticality assessment of major plant and machinery and the use of equipment specific fault matrices to define the type of monitoring that should be undertaken, and whether on-line or off-line techniques are most appropriate. Various parameters can be evaluated, including, but not limited to:
- Vibration
- Performance
- Acoustic emission
- Infra-red thermal images
- Lubricants
- Process

CM Performance Review for an Existing Plant
The first step in the process involves a review of the management and operational effectiveness of the current CM programme. The review commences with a self assessment and is followed by an interactive audit undertaken by an experienced Bureau Veritas consultant. A number of criteria are assessed and reported upon.
Following analysis of the information gathered during the review process a Statement of Current Performance is produced and improvement strategies developed and presented.

Implementation, Planning and Support
Once the optimum strategy has been agreed, a detailed action plan is drawn up to support project management. This may allow for staged implementation, with initial attention focused on areas providing potential step gains in performance.
Bureau Veritas can facilitate, support or manage the performance improvement process, as dictated by the needs of the client.

Management and Operation of CM
Bureau Veritas is retained by many operators to manage and co-ordinate Condition Monitoring on their behalf. Our role in each case is structured to address the specific requirements of the client and may vary from asset to asset. Options include:
- The full management and operation of the CM process
- The management of the CM process, but utilising operator employed personal to collect data and conduct first line data analysis
- Consulting and technical support to operations personnel who actively manage the CM process on a day to day basis
- Performance indicators related to quality and quantity of data collected

FAQ

Can we use our existing condition monitoring equipment?
Yes, Bureau Veritas Engineers have experience in the use of almost all condition monitoring software and hardware packages.

CONTACT
For details about this service, please contact
Bureau Veritas
- By phone: +33 1 55 24 77 10
- By e-mail: oilandgas@bureauveritas.com

FOR MORE INFORMATION
please visit:
- www.bureauveritas.com