

Vibration Analysis ~ predictive maintenance

Critical equipment should have an ongoing vibration monitoring program to optimize operations.

Every commissioning or start-up after repairs should include vibration analysis to detect abnormalities and create or compare baseline data.

Many organizations do not have enough resources to justify the purchase of vibration monitoring and balancing tools. Without help they expend labour and downtime to perform repairs without knowing the root cause, never knowing if their work has corrected the problem.

What can Vibration Analysis do for you?

- Focus maintenance and operations by predicting functional failures, forecasting failure mode and estimating time until failure; conveniently schedule targeted proactive failure interventions and prevent loss of production availability/production capacity/product quality
- Improve reliability (mean time to repair, mean time between failure, plant availability and utilization)
- Decrease maintenance cost and optimize returns, reduce labour and material cost needed for preventive maintenance routines, minimize energy consumption, increase product quality, increase production capacity, reduce spare parts inventory, provide consistent equipment performance, provide reliable production, increase equipment availability, reduce downtime, extend asset life, reduce overhauls, prevent maintenance overkill and maintenance collateral damage, improve staff time allocation, improve repair scheduling, save overtime cost
- Define details of failures and repair requirements
- Optimize preventive maintenance routines
- Avoid health and safety and environmental risks

What assets could benefit from Vibration Analysis?

- Rotating equipment such as motors, pumps, blowers, fans, gear boxes, mills, rollers, crushers, compressors and turbines
- Interconnected structures, static equipment and piping

What equipment problems can Vibration Analysis detect?

- unbalance
- misalignment
- looseness
- bent shaft
- gear problems
- bearing problems
- motor internal faults
- electrical grounding faults
- noise excitation (piping/structural)



How can Weir help?

- Our experienced, unbiased specialists will define and forecast equipment problems, needs and goals
- We develop a sequential performance improving predictive maintenance program
- Specialists provide expertise and mentorship to support performance improving increments
- Develop equipment operations description complete with drawings, collect real operating data, generate reports with useful details, trend graphs and exception reports
- Provide specific recommendations, avoiding guesswork and percentage estimates
- Perform start-up and commissioning acceptance tests
- Complete field balancing
- Evaluate used equipment before purchase
- Install a remote monitoring program
- Identify root cause problems and propose long term resolutions
- Complement other condition-monitoring techniques to validate or negate findings
- Provide quality repairs on site or at our facility, with warranty
- Replicate obsolete parts or parts not readily available
- Extend service life of parts by appropriate coating applications to withstand severe conditions



What industries can benefit from Vibration Analysis?

- Power generation as well as cogeneration, windmills and turbines
- Oil and gas extraction, refining, processing and transmission
- Mining
- Heavy primary industry and general manufacturing
- Pulp and paper

Weir believes in long term resolutions, not interim fixes, using Vibration Analysis as a supporting tool.

Call us today

Toronto

1180 Aerowood Drive
Mississauga, ON L4W 1Y5
T (905) 625-7202
F (905) 624-0097

Edmonton

4737, 97th Street
Edmonton, AB T6E 5W2
T (780) 438-1122
F (780) 436-9424

Calgary

2715, 18th Street N.E.
Calgary, AB T2E 7E6
T (403) 250-7000
F (403) 250-2032

Fort St. John

10508, 89th Avenue
Fort St. John, BC V1J 5P9
T (250) 785-6627
F (250) 785-4501

Montreal

8600 St. Patrick Street
LaSalle, QB H8N 1V1
T (514) 366-5907
F (514) 366-2067

Houston

920 Seaco Ave.
Deer wPark, TX 77536
T (832) 200-6220
Fw (832) 200-6227