

# Novaspect

## Machinery Health Solutions for Industry

Poorly maintained machinery is a significant cause of unplanned downtime and unplanned safety and environmental events. Emerson Process Management coupled with Novaspect local technical expertise use a full breadth of diagnostic tools, support a diverse industry base, and a wide range of machine types.

### Predictive Technologies

- Vibration
- Oil Analysis
- Infrared Thermography
- Ultrasonic
- Performance Monitoring
- Wireless Condition Monitoring

### Reliability Services

Our staff of senior reliability engineers and support engineers are experienced in design, implementation, testing and ongoing support of online and route based predictive maintenance programs.



Emerson's Wide Breadth of Predictive Technologies



***“Early bearing fault detection allows us to predict bearing failures so we can plan ahead for work on the atomizers and avoid lost production.”***

**Glenn Hauck**  
Elk River Station

Novaspect's On-site or  
Remote Diagnostic Services

### Systems and Software

- Online Protection and Prediction Systems
- Online Predictive Vibration Transmitters
- Asset Management Software (AMS)
- Emerson Portable Technology
- Emerson Services and Training

### Condition Monitoring

Example conditions that our systems monitor:

- Bearing Defects
- Lubrication
- Cavitation
- Gear Defects
- Looseness
- Alignment
- Balance
- Soft Foundation
- Temperature Deviations

# Novaspect

## Asset Reliability Services – Mechanical Equipment

In addition to a full breadth of technology and product offerings, we bring a wide array of services to the reliability market including:

### Machinery Health™ Management

- Program Design
- Machinery Health Audit
- Equipment Reliability Prioritization
- Diagnostic Selection Criteria
- Preventive Maintenance Optimization
- Operator Inspection Rounds
- Performance and Cost-benefit Metrics

### Machinery Monitoring and Analysis (Vibration and other PdM Technologies)

- Onsite and Remote
- Periodic and Continuous Online
- Long-Term Contract or On-Call as Needed
- Laboratory Oil Analysis
- Root Cause Analysis

### Machinery Balancing and Alignment

- Laser Alignment
- Dynamic Balancing

### Application of Technology

- Electronic Operator Rounds
- Predictive Maintenance Technologies
  - Online Vibration
  - Portable Vibration
  - Oil Analysis
  - Infrared Thermography
  - Sonic and Ultrasonic Analysis
  - Motor Analysis
- AMS™ Suite: Machinery Health Manager

### Advanced Vibration Analysis

- Modal and Multi-Channel
- Operational deflection Shapes (ODS)
- Reciprocating Equipment Analysis

### CSI Technology Implementation (In-house Programs)

- AMS™ Suite: Machinery Health Manager
- Portable and Online Vibration Analysis
- Onsite Oil Analysis
- Infrared Thermography
- Alignment and Balancing
- Sonic and Ultrasonic Analysis

### Education and Certification

- Machinery Health Management Training
- CSI Technology Training
  - Classroom and Onsite
  - Certification
- Coaching and Mentoring
  - Onsite
  - Remote

### Assets Served

- Turbines/Generators
- Compressors
- Engines
- Pumps
- Motors
- Motor Control Centers
- Transmission and Distribution
- Switchgear, Connections, and Cables
- Gearboxes
- Fans
- Rolls
- Presses
- Conveyors
- Boilers
- Refractory

Learn more about our services, products, and customer testimonials on the web at:

### Uptime Magazine – June 2010

Vibration Continuous Monitoring – Great Savings at Great River  
[www.nxtbook.com/nxtbooks/reliabilityweb/uptime\\_20100607/#/58](http://www.nxtbook.com/nxtbooks/reliabilityweb/uptime_20100607/#/58)



### Power Engineering Magazine – October 2009

“Installing Predictive Vibration Monitors”  
[www.pennenergy.com/index/power/display/371153/articles/power-engineering/volume-113/issue-11/departments/what-works/installing-predictive-vibration-monitors.html](http://www.pennenergy.com/index/power/display/371153/articles/power-engineering/volume-113/issue-11/departments/what-works/installing-predictive-vibration-monitors.html)



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