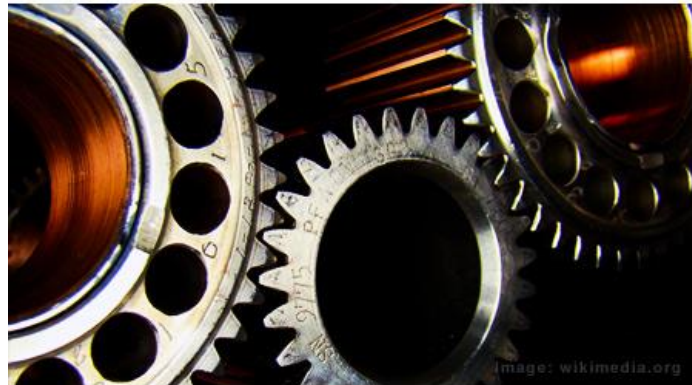


# Safety, Efficiency Drive Need for Predictive Maintenance in O&G Industry

by Karen Boman

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Planned shutdowns for maintenance not only cost time and money for assets such as production platforms, pipelines or refineries, but the tearing down and putting back together of equipment for preventive maintenance can actually do more harm than good.

Woburn, Mass.-based [Azima DLI](#), which was recognized as an Energy Innovation Pioneer at IHS CERAWEEK 2012, offers monitoring services and tools for predictive maintenance--rather than preventive maintenance--as a means of maintaining equipment and plants and ensuring efficiency, reliability and safety of operations.

By studying the vibrations that a machine emits and comparing it to a baseline vibration signature, vibration specialists can determine when a machine will need maintenance.

The science of vibration analysis and oil analysis and infrared have been evolving over the past 30 years, but the internet has allowed Azima DLI to deliver its machine monitoring services to customers worldwide and a centralized analysis resource for tracking maintenance needs, said Azima DLI CEO Burt Hurlock.

"Azima has sought to assemble the right combination of professional expertise and hardware, software and internet capability," said Hurlock.

Data is gathered through web-based tools, and then compared with the signatures in Azima DLI's diagnostic software library. Pending maintenance requirements are given a risk rating based on a composite risk index, ranging from moderate to extreme, indicating when the machines or plants will need attention and whether these machines are integral to operations.

Companies can then allocate their maintenance needs; the capability of rating risk is especially critical for companies with large operations. If a machine that must be kept in operation goes down, the company can deploy a portable online system to monitor the machine's status until it can be repaired.

Forrás: [http://www.rigzone.com/news/article.asp?a\\_id=116468](http://www.rigzone.com/news/article.asp?a_id=116468)

Az **AZIMA DLI** hivatalos magyarországi képviselőjét a **Delta-3N Kft.** látja el.

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The company's machine health maintenance programs offer different levels of services based on the cost of an hour of unplanned downtime to reflect the size, complexity and cost of the production operation. Customers can pay as they go for the company's web-based portal monitoring services and tools.

Azima DLI has a total staff of about 80, 40 of whom have specialized knowledge and backgrounds in vibration analysis and 30 of whom work in the field.

The company was created through a series of acquisitions. DLI, which has been around since the late 1960s, was founded in Bremerton, Wash., near Seattle, to provide maintenance for the U.S. aircraft carrier fleet. Azima DLI continues to monitor maintenance for the rotating machinery on board the U.S. Navy's fleet of over 100 ships, including carriers, which is critical for vessels that are out at sea for months at a time.

"Besides maintaining battle readiness, the program is a cost saver for the Navy, with every dollar investment generating twenty dollars in returns," said Hurlock. The technology was designed to be easy to use, as the sailors monitoring the combat readiness of the vessels are typically young and promoted to other job duties after a short time.

Monitoring aircraft carrier equipment – which comprises pumps, compressors and fans – is not that different from rotating equipment in oil and gas industry operations. For the Navy monitoring program, a closed loop machine health monitoring system is used in which a work order is automatically triggered by the system. Hurlock has found that in commercial operations, companies are still more comfortable with people processing the work orders.

Azima DLI's technology also is used in a number of commercial industries, including mining, steel, paper, automotive and manufacturing. One commercial client, Air Liquide, was able to reduce its unplanned maintenance at its 100 plants across the U.S. by 95 percent over a three-year period, saving millions of dollars in cost and unknown savings in avoided lost production.



The company's pitch to the energy industry was initially not well received. Energy companies have previously attempted in-house predictive maintenance programs

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similar to what Azima offers. However, the implementation of these programs was inconsistent, as they require workers with specialized knowledge and experience to maintain the programs.

"The growing emphasis on health, safety and environment in the aftermath of the Macondo oil spill has companies realizing that predictive maintenance can play an integral role in their safety programs," said Hurlock.

The company's oil and gas customers now include BP and ExxonMobil.

The practice of predictive maintenance itself is mundane, requiring workers to walk around the plant and take gather data, and with fewer man-hours available for personnel to carry out a task deemed non-core, many companies find it easier to outsource predictive maintenance.

Occasionally, something thrilling happens. Azima DLI was supporting the commercial plant that pumps gases into the Atlantis ignition systems. The day before Atlantis launched, the plant manager called about a compressor that sounded bad and needed to be examined. Azima DLI's analysts were able to diagnose the problem, allowing the flight to go forward.

"At the end of the day, we're a publishing company," said Hurlock, commenting on the reports of maintenance needs that Azima generates for its clients.

"Predictive maintenance is not a sexy business but Azima's services can make a big impact in maintaining long-term assets on a company's bottom line if they'll listen to us," he added.

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