

CUSTOMER SUCCESS STORY

BENTLY NEVADA* ASSET CONDITION MONITORING

A/S NORSKE SHELL, ORMEN LANGE COMPLEX – NYHAMNA, NORWAY

“GE’s Bently Nevada team worked with us to help realize our vision for wireless condition monitoring by listening to our input, refining their early ideas, maturing a step-change technology, making it commercially viable as a standard catalog item, integrating it with System 1* software, and ensuring that it adhered to emerging, open industry standards. By working together, the solution has taken ease-of-deployment for condition monitoring to a whole new level for us.” – Sicco Dwars, Upstream Technology Development, Shell Global Solutions International

PROBLEM

A 2005 initiative to reduce costs and improve Health, Safety, and Environmental (HSE) performance led Shell to investigate the use of easy-to-deploy sensor technologies that could address the hundreds of machines where the cost of conventional, hardwired continuous monitoring systems could not be justified, but where manual data collection was deemed impossible, impractical, or insufficient.

SOLUTION

Shell teamed with GE’s Bently Nevada Asset Condition Monitoring group to beta test wireless sensing technology just being introduced to the marketplace. Based on positive results from this early testing, the technology was further refined and industrialized into a commercially available product. Currently, 18 points are deployed on a mix of assets throughout the complex. Using battery or self-powered energy harvesting technology, the sensors are designed to run without intervention for many years, delivering readings every few hours - compared to weekly or monthly readings from their route-based manual data collection system.

PAYBACK

The new wireless technology enables Shell to improve the utilization of their machine condition monitoring experts by a factor of two. It also makes their jobs more interesting by allowing them to focus on data analysis and root cause investigation rather than data collection. Previously, expert staff spent much of their valuable time walking from machine to machine with a portable tool, often in areas classified as hazardous. Now, the number of staff that needs to venture into such areas is reduced.

BENEFITS

- **Better utilization of machinery experts** – time is spent acting on data rather than collecting data.
- **Reduced failure severity** – mechanical failures are caught early, allowing better and more proactive maintenance planning, before conditions progress to catastrophic failures and unplanned downtime.
- **Lower installation costs** – condition monitoring can be deployed easily, without the need for multiple crafts such as electrical and millwright resources to install each point.
- **More frequent, higher quality data** – mechanical problems can progress unacceptably far when manual data gathering techniques are used; in contrast, wireless technology allows mechanical condition parameters to be transmitted several times per hour, giving operators higher confidence in asset availability.



Essential Insight.mesh*
Wireless Condition
Monitoring

