



SKF knowledge on board

Delivering on the promise of condition based maintenance





The promise, delivered

The promise of condition monitoring as a means of reducing shipboard machine maintenance costs has long been understood and accepted by ship operators worldwide, but too often the anticipated gains have failed to materialize.

The problem is not the premise, but the programme – specifically how and where data is collected, shared, stored, interpreted, and used.

As a world leader in machine reliability with decades of condition monitoring experience, SKF has the tools, technologies and people to deliver on the promise of condition based maintenance (CBM) in marine applications:

- Reduced machine maintenance costs
- Improved equipment reliability and predictability
- Maximum machine and vessel availability

- Simplified and streamlined classification procedures
- A safer on-board environment for your workforce
- Minimum environmental impact through good machinery condition

We look forward to discussing how 100 years of SKF knowledge and experience makes us uniquely qualified to deliver the full potential of your condition based maintenance programme.

SKF delivers timely data analysis for major oil/gas fleet



A leading ship operator with more than 50 vessels selected SKF over all competition to take the fleet's condition based maintenance programme to a higher level. The SKF solution was the combination of machine knowledge, the availability of SKF condition monitoring systems as well as other complementary product and service offerings, and the ability to deliver timely remote vibration data analysis performed by skilled SKF condition monitoring specialists. The customer saw the benefits of having the same company that manufactured the data collectors – SKF – manage their calibration exchange and repair programme.

SKF condition monitoring offers



The broadest portfolio

Unlike most other providers, the SKF portfolio includes not only world-class condition monitoring technology, but also mounting and alignment services, as well as industry-leading products and tools for bearing, sealing and lubrication solutions. All can be used to enhance the ship operator's assets and provide one source of responsibility and accountability.

Certified remote monitoring

SKF condition monitoring systems reduce or eliminate the need for extensive condition monitoring training or knowledge required of on-board personnel. Standardized and simple work procedures are used to collect data that is transmitted through the ship's communications system and analyzed remotely on-shore by certified SKF specialists. The results are put into customized reports that help ship engineers focus their efforts on specific machines that are most in need of maintenance.

Limited visual examinations

With SKF condition monitoring, the need for visual examination through opening of machinery is reduced, and limited to machines whose condition readings indicate deterioration beyond the manufacturer's limits or impending failure. This open-out reduction saves time and costs during mandatory in-port continuous survey machinery inspection cycles.

Global presence

No matter the size or location of the fleet, SKF has the capability and capacity to handle contracts with full global product and service support. This includes the timely and convenient availability of SKF's certified condition monitoring engineers.



Reduced environmental impact

Machinery kept running in optimum condition is less prone to leak oil or grease, and energy consumption is reduced through smoother operation and greater machine efficiency.

Improved safety

With data collection points outside hazardous areas or away from hazardous machines, ship engineers or other personnel do not have to enter these areas or approach these machines – a significant improvement in below-decks safety conditions.

SKF credentials

Although SKF is less known in the shipping industry than in many other global industries where our name is synonymous with quality and dependability, SKF condition monitoring technology is at work worldwide in mission-critical installations and harsh operating environments. These include offshore oil and gas platforms, sea and land-based wind farms, mining and aggregate materials operations, steel and paper mills, hydrocarbon processing and chemical plants.

The knowledge gained through this experience has provided SKF with an intimate understanding of all kinds of equipment and machinery, most of which form part of the auxiliary machinery of a large ship – pumps, fans, compressors, purifiers, and electric motors.

Typical applications for condition based maintenance (CBM)

The applications of a CBM programme vary from ship to ship and with the operator's goals and experience with maintenance procedures. An in-depth discussion of needs and objectives between the ship operator and SKF lays the groundwork for a recommended programme.

Depending on the type of ship, the number of auxiliary machines on board ranges from 75 to 150 per vessel. Auxiliary machines typically covered under a CBM programme include:

- Auxiliary engine lubrication oil machine systems
- Cargo pumps
- Engine room fans and blowers
- Engine room purifiers
- Main engine lubrication oil machine systems
- Main engine blowers
- Refrigeration plants
- Turbochargers



Time is money – get SKF on board now

Every unnecessary hour in port, every machine whose premature damage or failure impacts on your profitability, can be minimized or virtually eliminated with an effective condition based maintenance programme, and SKF can provide you with one of the best CBM programmes in the industry. The sooner you discuss your specific needs with an SKF representative the sooner you can save time and money by reducing the need for maintenance and minimizing machinery downtime.

For more information, or to set up a meeting with an SKF condition monitoring professional, contact your local SKF sales office and ask for the Reliability Systems Manager, or visit www.skf.com/marine.

Reducing your shipboard maintenance and operating costs

The major classification agencies have confirmed that condition based maintenance processes that help to identify and rectify problems at early stages can improve marine machinery reliability and reduce costs significantly. SKF provides predictive and proactive maintenance for auxiliary machinery, applying condition monitoring supported by a broad range of services and products. With SKF “on board”, the goal of maintaining the highest levels of condition based maintenance can be achieved.

Assessment and mapping

An SKF condition based maintenance programme begins with a detailed mapping of the ship's critical auxiliary machinery and the establishment of measuring points and trend values.



Data collection

Portable data collectors

Designed for ease of use and sophisticated analysis of machine vibration data, SKF portable condition monitoring tools set the standard for the industry. ATEX approved models are available where required.

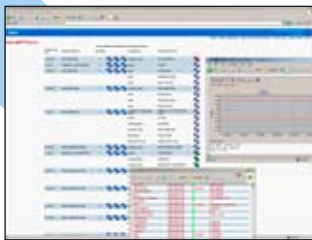
On-line surveillance

SKF on-line and fixed condition monitoring systems provide the optimum approach to safety and reliability of a ship's critical machinery by automatically collecting machine data on a 24/7 basis. This enables analysis or interpretation of data to be done at any time – either on board ship or by remote diagnosis via the ship's communication system.



Verification and improvement

Reliable and effective condition monitoring technologies, combined with extensive SKF engineering knowledge, enable a continuous process of machine reliability improvement.



Correction

Through guidance of the delivered reports, the fleet maintenance can be planned and the necessary corrections carried out in an efficient way. SKF can provide specialist services for advanced maintenance and alignment works.



Analysis

Machine reliability data, sent via the ship's communication system to an SKF remote diagnosis centre, is monitored and interpreted by certified machine reliability experts. Customized reports identify potential problems, recommend appropriate actions, and facilitate the scheduling of maintenance procedures.



SKF – a global resource

With more than 100 manufacturing sites worldwide and sales companies in 70 countries, SKF is a truly international resource. In addition, our distributors and dealers in some 15 000 locations around the world, an e-business marketplace and a global distribution system put SKF close to customers for the supply of both products and services. In essence, SKF solutions are available wherever and whenever customers need them. As the knowledge engineering company, we stand ready to serve you with world-class product competencies, intellectual resources, and the vision to help you succeed.

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