
Customer reference case

Ship to shore cranes

SKF condition monitoring



SKF condition monitoring for container cranes improves safety, productivity and cost control

At one of Australia's largest ports, the operator of the port's container terminal focuses on productivity, efficiency and innovation. SKF condition monitoring services support the operator's initiatives in these areas.

The challenge:

To reduce unplanned maintenance

To meet its goals of productivity, cost control and service level, the terminal operator continually strives to improve its operations. At the same time, the company is dedicated to the safety of its employees. To enhance the terminal's uptime and service levels, the

operator needed to plan maintenance operations in a manner that did not interrupt high-capacity time periods. It was recognized that condition monitoring of the terminal's six container cranes could provide the data necessary to greatly reduce unplanned maintenance.

The solution:

Periodic condition monitoring

The operator contracted with SKF to perform periodic inspections of critical crane components using vibration analysis techniques designed for variable speed machinery. Starting in 2006, SKF began to periodically survey conditions on each crane's main hoist, trolley drive and boom hoist motors and gearboxes.



Each crane is monitored every three months during scheduled downtime. The data is recorded and analyzed by SKF engineers. A report is provided to the container terminal

operator, identifying faults related to bearings, gear tooth damage, lubrication status, coupling faults and misalignment. In 2010/2011, the operator rolled out the program to cover cranes at two more container terminals in Australia.

Examples

In one instance, an SKF survey detected a drive end bearing problem on a cross travel motor. The bearing was replaced before any unplanned downtime was incurred. In another case, SKF identified a critical defect on a bearing in the main hoist gearbox. Again, early identification allowed the operator to make the necessary bearing replacement with no unplanned downtime.

The result: Actionable data, enhanced uptime and safety

With the data provided by the SKF condition monitoring service, reliability issues can be detected before they become major problems, saving time and money, decreasing downtime and increasing asset availability. In addition, employee safety is improved because of the ability to plan maintenance when accessing potentially unsafe areas of the cranes.

Operating conditions

- Hot and humid environment
- Crane availability required 24/7
- Corrosive environment

Benefits

- Reduction of unplanned downtime
- Increased productivity
- Increased crane availability
- Reduced maintenance costs
- Improved cost control
- Enhanced worker safety



To find out how SKF condition monitoring solutions can benefit your application, contact your local SKF representative.

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