
Customer reference case

Ship to shore cranes

Automatic lubrication

SKF ProFlex



SKF ProFlex automates STS crane lubrication, reducing maintenance and unplanned downtime

This automatic, progressive lubrication system from SKF can help container terminals eliminate the time-consuming manual greasing routines associated with ship-to-shore cranes.

The challenges of STS crane lubrication

For busy seaports with heavy container traffic, keeping the heavy cranes properly lubricated is, quite literally, a tall order.

The manual lubrication most often employed can only be carried out when the cranes are not operating, so maintenance windows are always tight. If maintenance crews fall behind, the poor lubrication that follows can result in failing bearings that require unplanned, costly emergency lubrication. If those bearings were to fail, unplanned downtime and lost productivity costs can soar.

Worker safety is also a concern. Crane wheelbases operate in traffic zones, while crane winches and trolleys can stand some 45 meters above the dock – a less than ideal scenario for manual lubrication in either case.

A progressive lubrication solution

Well suited to STS crane design and harsh dockside environments, the SKF ProFlex progressive lubrication system offers a cost-effective alternative to manual greasing.

Designed to handle up to 150 lubrication points with grease or oil, SKF ProFlex systems feature a pump unit that supplies lubricant to a series of progressive feeders with metering pistons. The feeders automatically supply several lubrication points with a defined amount of lubricant. Each feeder can also supply a secondary feeder that divides the amount of lubricant into smaller portions for progressive delivery to additional outlets.





SKF ProFlex in action

To one terminal operator already weighing the benefits of automatic lubrication for its suite of cranes, the SKF ProFlex system sounded promising. Hopeful about the prospect of eliminating its manual crane lubrication routines, the operator had SKF assess the greasing requirements of each crane's key sub-systems. SKF suggested an engineered, automated solution that would meet those lubrication needs, and the customer gave SKF the go-ahead to install the system.

For each crane, SKF identified lubrication points for the wheelbase, trolley and winch – almost 80 points overall. To help the systems withstand the saltwater environment and harsh elements, the pump units were housed in stainless steel cabinets and used stainless steel feeders and feed line tubing wherever possible. Each ProFlex system was also fitted with pressure indicators and grease level control options that would enable condition monitoring from an office computer.

Once operational, the solution reduced the port operator's manual grease maintenance demands substantially. SKF ProFlex systems are now saving the operator the nearly 2 000 man-hours per year that its manual crane lubrication routines required. The systems are also keeping workers safely on the ground and out of traffic zones.

By ensuring optimal lubrication for hundreds of bearings and lubrication points while the cranes are in operation, SKF ProFlex systems are helping the terminal operator cut costs, increase reliability and availability, and greatly reduce the risk of unplanned lubrication work and lost productivity.



SKF ProFlex

- Cuts manual maintenance and costs
- Reduces planned and unplanned downtime
- Increases reliability and productivity
- Helps prevent bearing failures
- Cuts lubricant consumption

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