

SKF WindCon Lubrication Interface

Increase wind turbine reliability by combining
SKF condition monitoring and automatic
lubrication systems



Onshore and offshore, anything that can prevent an up-tower service trip contributes to increased worker safety and reduced maintenance costs. Accordingly, demand for greater equipment serviceability and intelligent, connected solutions is increasing. Consequently, condition-based maintenance to extend wind turbine life cycles is gaining importance. SKF provides several proven solutions, including the SKF WindCon online condition monitoring system, plus a range of automatic, centralized lubrication systems.

To complement these offerings, an active interface has been added to the range. The SKF WindCon Lubrication Interface links SKF WindCon and SKF Windlub, which feature SKF and Lincoln lubrication systems. The interface enables the lubrication pump and overall system health to be monitored. It also offers the ability to remotely trigger a lubrication cycle.

The SKF WindCon Lubrication Interface allows original equipment manufacturers and wind farm operators to control maintenance demands and reduce their costs per kilowatt-hour.



Optimizing uptime with remote monitoring



Benefits

- Remotely trigger additional lubrication cycles
- Extend wind turbine life cycle
- Increase wind turbine availability
- Reduce risk of unplanned shutdowns
- Remotely monitor lubrication pump and system health via alerts
- Incorporate GL-certified solutions
- Cut operating costs and costs per kWh produced
- Extend maintenance intervals
- Reduce up-tower costs

Applications

- Main shaft
- Generator

Reduced life cycle costs

At preset intervals, SKF WindLub delivers preset lubricant amounts to key wind turbine bearing systems, while SKF WindCon monitors bearing irregularities as they occur. Linking these two systems, the SKF WindCon Lubrication Interface enables monitoring of the lubrication system's health via alerts. In addition, the unit can be used to remotely trigger a lubrication cycle.

For wind turbine operators, the added lubrication functionality keeps maintenance crews on the ground instead of traveling to remote locations to manually lubricate the bearings. It helps reduce life cycle energy costs, since poorly functioning bearings can increase energy consumption.

For original equipment manufacturers, the SKF WindCon Lubrication Interface can help to increase equipment reliability and product value.

Enhanced bearing life

The SKF WindCon Lubrication Interface reports every lubrication cycle to the monitoring centre. This helps operators enhance bearing life, plan repairs and prevent cascading bearing failures, thereby extending maintenance intervals.

Monitor lubrication systems

The SKF WindCon Lubrication Interface allows the SKF WindCon system to monitor lubrication pumps and components, including pump status and grease levels. If failures such as empty or blocked pumps or torn feed lines are detected, operators are notified immediately.

Enabling a more functional tribological system

1

SKF WindLub lubrication systems

A lack of proper lubrication can bring your equipment to a standstill. Vibration, high mechanical loads, contamination and moisture are all threats to the life of your bearings. With an SKF or Lincoln automatic lubrication system, you can lengthen bearing life by delivering frequent, small amounts of grease to each bearing while the machine is running. Precisely controlled amounts of lubricant, delivered at preset intervals, keeps bearings coated, enabling them to perform to their rated capacity.

2

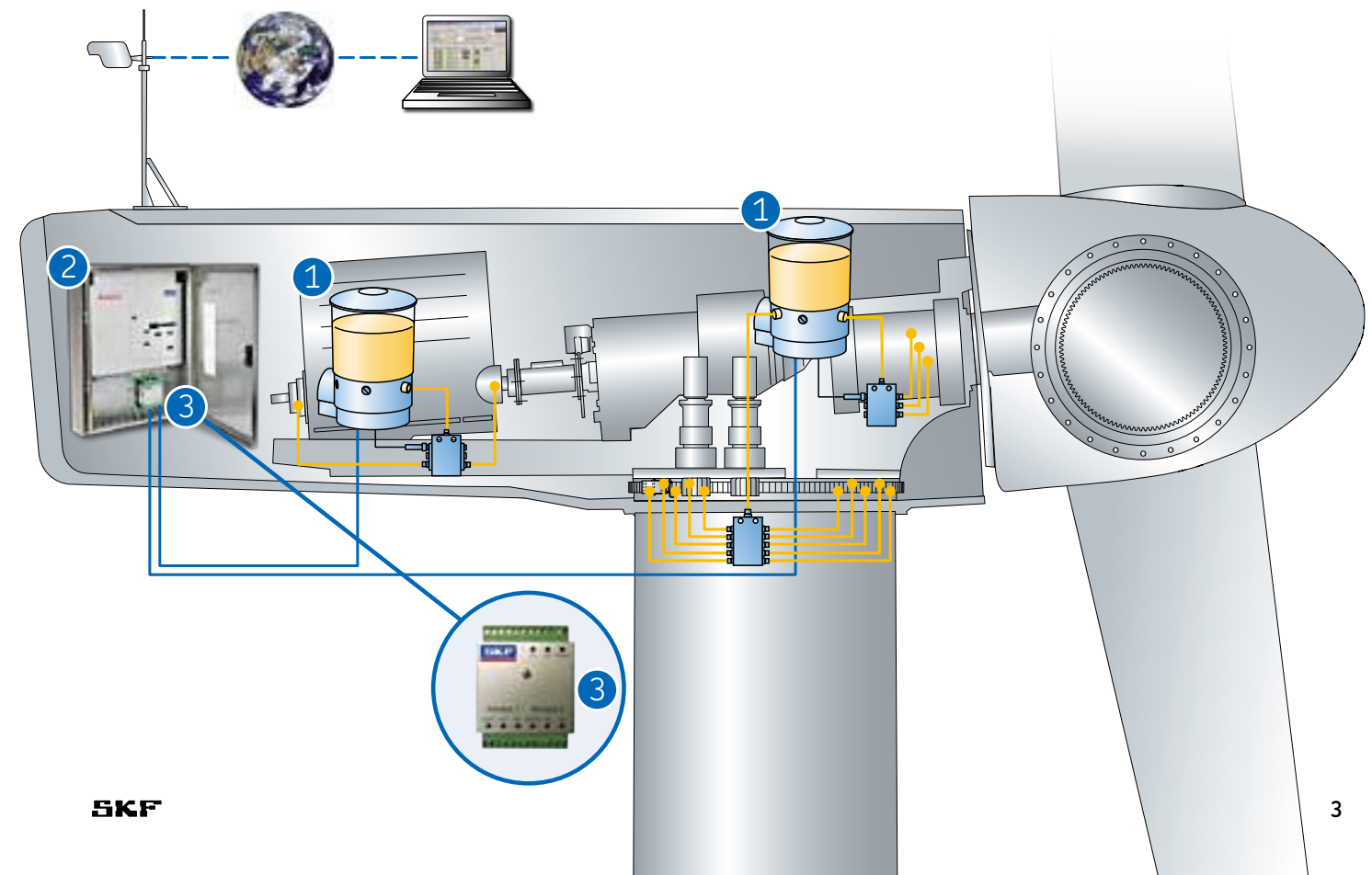
SKF WindCon online condition monitoring system

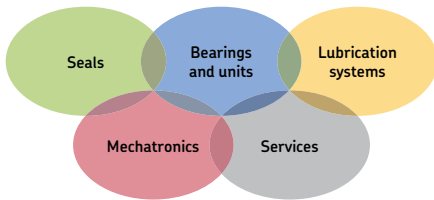
By enabling operators to monitor and track deteriorating component conditions in real time, SKF WindCon enables maintenance decisions to be based on actual machine conditions, rather than arbitrary maintenance schedules. Along with the possibility that maintenance intervals can be extended, the system provides a powerful tool for managing day-to-day maintenance routines and consolidating risky, costly maintenance activities.

3

SKF WindCon Lubrication Interface

Utilizing the SKF WindCon Lubrication Interface as a link between SKF WindCon and SKF Windlub systems provides the ability to monitor lubrication system health. In addition, the unit can be used to remotely trigger a lubrication cycle.





The Power of Knowledge Engineering

Combining products, people, and application-specific knowledge, SKF delivers innovative solutions to equipment manufacturers and production facilities in every major industry worldwide. Having expertise in multiple competence areas supports SKF Life Cycle Management, a proven approach to improving equipment reliability, optimizing operational and energy efficiency and reducing total cost of ownership.

These competence areas include bearings and units, seals, lubrication systems, mechatronics, and a wide range of services, from 3-D computer modelling to cloud-based condition monitoring and asset management services.

SKF's global footprint provides SKF customers with uniform quality standards and worldwide product availability. Our local presence provides direct access to the experience, knowledge and ingenuity of SKF people.



SKF BeyondZero is more than our climate strategy for a sustainable environment: it is our mantra; a way of thinking, innovating and acting.

For us, SKF BeyondZero means that we will reduce the negative environmental impact from our own operations and at the same time, increase the positive environmental contribution by offering

our customers the SKF BeyondZero portfolio of products and services with enhanced environmental performance characteristics.

For inclusion in the SKF BeyondZero portfolio, a product, service or solution must deliver significant environmental benefits without serious environmental trade-offs.

All our solutions for the renewable energy sector have been selected for inclusion in the SKF BeyondZero portfolio, which includes products and solutions with significant environmental benefits, such as improved energy efficiency and the enabling of increased renewable energy generation.

© SKF, BeyondZero and WindLub are registered trademarks of the SKF Group.

© Lincoln is a registered trademark of Lincoln Industrial Corp.

™ BeyondZero is a trademark of the SKF Group.

© SKF Group 2015

The contents of this publication are the copyright of the publisher and may not be reproduced (even extracts) unless prior written permission is granted. Every care has been taken to ensure the accuracy of the information contained in this publication but no liability can be accepted for any loss or damage whether direct, indirect or consequential arising out of the use of the information contained herein.

PUB 74/P2 13986/1 EN · March 2015

Certain image(s) used under license from Shutterstock.com

