

# Marine industry

Solutions and specific services for reliable, sustainable, cost-effective shipping











A modern fleet must maintain its profitability in a climate of cost optimization, increasingly stringent environmental regulations and rising concerns over safety. Given the increasing specialization of ships, the ability to explore every potential improvement to optimize their life cycle is a crucial asset to achieving targets on lowering construction, operation, maintenance and repair costs.

## Improving transmission power and boosting reliability

#### **OK** coupling

OK couplings significantly reduce the time needed for connecting shafts. Based on an injection of oil between the adjustment surfaces, this approach makes mounting and dismounting considerably faster, more accurate and more reliable compared with mechanical couplings, and without any effect on the working surfaces. With this method, there is no further need for heavy, noisy pneumatic machinery. These couplings have been designed to deliver very high torque.

- Simple, dependable, quick to fit
- Reduces mean time to repair (MTTR)
- Boosts equipment performance
- Reduces maintenance costs
- Lengthens service life

#### OKCX and OKFX drive couplings

The inner sleeve of OKCX and OKFX couplings have a high-friction coating formulated using advanced plasma technology. This coating increases torque capacity by over 50% compared with OKC or OKF couplings of the same size.

- Reinforcing sleeves for hollow shafts not required
- Shaft diameter can be reduced
- Coupling weight can be reduced

#### Simplex intermediate shaft bearing

Devised for line shaft propulsion, Simplex bearings are plain bearings fitted with two positioning screws. Featuring a thin cross-section, they can be accurately aligned to avoid edge stress. Lubricated with oil, Simplex bearings support permanent lubrication even if shafts are rotating at low speed.

- Easy installation and alignment
- Self-lubricating
- 11 variants up to 1 040 mm in shaft diameter
- Low maintenance

Couplings and hydraulic nuts





Simplex intermediate shaft bearing



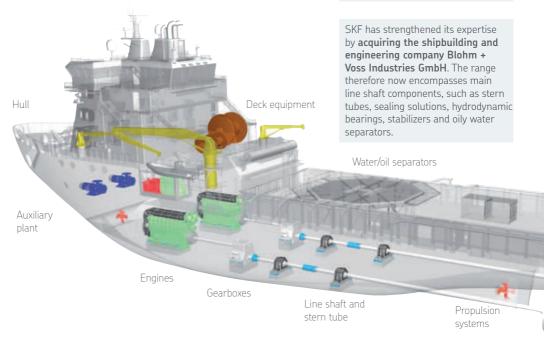
#### SKF Vibracon chocks

SKF's Vibracon adjustable chocks are designed to offset angular differences without machining, chocks, or epoxy resin. Made from stainless steel, they are resistant to corrosion prevalent in humid, saline conditions. Their self-levelling capability cuts out any risk of soft foot in shaft alignment.

## Upgraded SKF Explorer sealed spherical roller bearings

Upgraded SKF Explorer sealed spherical roller bearings have contact seals for greater protection against contamination. The new heat treatment process for the steel provides up to twice the service life compared to conventional spherical roller bearings.

- Easy to use
- Accurate and reliable
- Wide range of settings
- Self-levelling
- Extremely reliable
- Highly resistant to wear
- High-quality lubricant
- Low maintenance
- Longer operating time
- Bearing and package identified with the WR designation



SKF Vibracon chocks





Upgraded SKF Explorer spherical roller bearings

SE housing

## Keeping the hull and bulkheads sealed

#### Simplex seals

The extensive range of Simplex seals can tackle a host of different applications. Extremely reliable, they also contribute to protecting the environment thanks to the Airspace range, which completely separates stern tube lubricant from seawater. To complement the Simplex range, there are intermediate shaft bearings, bushings and the Simplex FlexiTube – a stern tube turnkey solution comprising bearings, seals and bushings.

- Extremely reliable
- Numerous versions available for all types of vessels
- Very wide range
- Resistant to abrasion and seawater

#### Customized stabseals

Designed with a polyurethane base, large size stab seals for stabilizers and pods, ensure an excellent seal and high resistance to abrasion. With their chevron pattern, they are delivered in slit form for glueless assembly.

- Five times more abrasionresistant than rubber seals
- Simple to mount, as few parts to disassemble
- Glueless fitting

#### SKF SPEEDI-SLEEVE + radial seal + V-Ring

Specifically for pumps and gearboxes, the combination of an SKF SPEEDI-SLEEVE stainless steel wear sleeve, an HMS5 radial seal and a V-Ring ensures an effective seal. This solution provides an effective barrier that prevents water and contaminants from penetrating bearings.

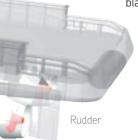
- Fast, economical and reliable
- Highly resistant to abrasion
- Shaft diameter: 12 to 203.2 mm

#### Hydraulic seals for screws and propellers

Designed for use in two-way hydraulic jacks or propeller blades, SKF hydraulic seals – piston seals,

rod seals, wiper seals, guide rings and guide strips – retain lubricant while maintaining hydraulic pressure, and protect against contaminants.

- Seals between moving components
- Helps keep out external contaminants
- Maintains a lubricating film
- Forms a pressure barrier maintaining fluid level
- Retains lubricant



Simplex seals



SKE SPEEDI-SLEEVE





MDR seal

### Monitoring reliability for enhanced self-sufficiency at sea

#### Condition monitoring and maintenance

SKF Microlog facilitates the collection, storage and analysis of data about processes and machinery condition. Including an equipment library as standard, the system provides a straightforward status readout using visual alerts. Suitable for critical or inaccessible on-board machinery, online condition monitoring systems speed up data collection. Maintenance crews can concentrate on diagnostics and early failure detection while minimizing the risk of incidents.

- Managing risk
- Plan work schedules
- Reduce the risk of accidents
- Identify equipment that needs attention
- Avoid unscheduled downtime
- Facilitate implementing a periodic maintenance programme







#### Shaft alignment services

The alignment of a propulsion unit can be affected by deformations in the engine room and hull. SKF offers high-precision shaft alignment services, including dynamic, static and geometric alignment, for on-board machinery, propeller shafts, main drives and auxiliary equipment.

- Longer service life for mechanical components
- Lower energy consumption
- Reduced wear, noise and vibration

#### Electrical analysis

Electrical analysis is carried out to identify internal faults in engines, their power supply and driven machinery before failures occur. Whether it involves a dynamic approach for characterizing electrical equipment behaviour. or a static approach for diagnosing all components, electrical analysis complements and fine-tunes the techniques applied in condition monitoring.

- Enhanced reliability of electric motors
- Plan work schedules
- Improve plant energy efficiency
- Avoid systematic maintenance costs







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