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To:	All Surveyors/Auditors
Applicable to flag:	All Flags
Subject:	The End of Oil-Lubricated Propeller Shafts
Reference:	Drydock and Propeller Shaft Survey

The End of Oil-Lubricated Propeller Shafts

Thordon Bearings has welcomed the introduction this week of a new classification society notation allowing extended inspection periods for propeller shafts using seawater-lubricated bearings.

DNV GL's new voluntary TMON notation for open loop water lubricated propeller shafts follows similar rule revisions by Lloyd's Register (LR), Bureau Veritas (BV) and the China Classification Society (CCS).

Thordon Bearing's Commercial Director, Andy Edwards, said: "As long as certain condition monitoring criteria are met, DNV GL's new rules mean that propeller shafts operating water-lubricated bearings no longer need to be withdrawn for inspection every five years. There will be no pre-determined intervals between shaft withdrawal surveys."

"The five-year shaft inspection rules previously stipulated in most shaft condition monitoring notations were a major deterrent to the wider take-up of the water lubricated system, but now the world's leading classification society has revised its rules we can present a viable and proven alternative to oil-lubricated propeller shafts."

The condition-monitoring-based survey process, which waives the requirement for the withdrawal of the tail-shaft at pre-determined intervals, also enables operators to consider seawater lubricated systems as a compatible alternative to meeting US Environmental Protection Agency's Vessel General Permit [VGP] requirements.

DNV GL said the evolution of its new TMON rule has been facilitated in conjunction with a combination of:

- A continuous focus on developing reliable customer-centric classification products without compromising safety,
- In-house experience from projects, historic data and seamless discussions with the key industry stakeholders,
- Increasing focus and demand on inherently environmentally friendly systems, such as water lubricated systems and;

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- Satisfactory availability of technology to support the DNV GL classification philosophy (remote bearing wear down sensors, alternative means of inspection by boroscopes, removable bearing segments, coating quality etc).

DNV GL recommended in the latest edition of its Technical and Regulatory News bulletin that shipowners consider the condition-based notation for water-lubricated tail-shafts at their next dry-docking.

Craig Carter, Thordon Bearings' Head of Marketing and Customer Service, said: "This is a major breakthrough for fleet-wide conversion back to the environmentally and operationally more efficient water-lubricated propeller shaft bearing. Like LR, CSS and BV's recently revised shaft condition monitoring rules, DNV GL's new TMON notations are indicative of the significant advancements made in polymer technology and the ability of these seawater-lubricated bearing systems to prevent further environmental damage from operational oil leakage."

Combined, the DNV GL, LR, BV and CCS classed fleets account for more than 40,000 vessels, 95 percent of which continue to operate with oil-based propeller shaft bearing systems.

REFERENCES:

- **Drydock and Propeller Shaft Survey**

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