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| To: | All Surveyors/Auditors |
| Applicable to flag: | All Flags |
| Subject: | **Cylinder Lubrication** |
| Reference: | MARPOL Annex VI |

## Cylinder lubrication – a key issue when fuel switching

It was examined the legal issues arising from the modern drive for environmentally aware shipping, following the entry into force on 1 January 2015 of the requirement for 0.1% sulphur in fuel oil within designated Emission Control Areas (ECAs).
Fuel switching continues to be the favored method of compliance with Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL). Indeed, the Lloyds List Sulphur Survey results, published in April 2015, suggest that up to 62% of shipowners and operators prefer fuel switching to the other methods of compliance (namely the installation of scrubbers or use of LNG or methanol as fuel).
Fuel switching involves a changeover from heavy fuel oil to low sulphur distillate fuel on entering the designated ECAs – the Baltic Sea, the North Sea, the English Channel, and the majority of the coast of the continental USA and Canada – where MARPOL Annex VI has, since 1 January 2015, required the use of fuel oil with a sulphur content no greater than 0.1%.
A key consideration when fuel switching is the type of engine cylinder lubricant used onboard. In particular, different fuels often require cylinder lubricants with a different basicity content, or base number (BN). The more commonly used higher BN lubricants may adversely affect the performance of the engine if used with the 0.1% sulphur fuel required to be used in ECAs by MARPOL Annex VI, resulting in excessive deposit formation on and around the hottest parts of the engine and, ultimately, mechanical breakdown.
One solution to this issue may be to reduce the load on the engine when operating on low-sulphur fuel (i.e. in ECAs). Reports suggest that, in certain circumstances, deposit formation is less significant in vessels operating with a standard high BN lubricant while using low-sulphur fuel, if the engine load is reduced.
If owners and operators intend to take that approach to the cylinder lubrication issue, however, they should consider the speed and performance warranties made in their charter parties. The slow steaming of a vessel in an ECA could give rise to speed and performance claims or allegations of off-

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hire, depending on the wording of the clauses.
Another solution to the issue of excessive deposit formation is the use of lower BN lubricants. It is usually for the owners to ensure that a lubricant with the appropriate BN is used, but it is worthwhile for charterers to keep in mind the possible difficulties that may flow from unsuitable cylinder lubricant, and charterers should therefore consider specifying particular lubricants in the charter party to reduce the risk of delays occurring to the vessel as a result of mechanical breakdown. Ultimately, if mechanical breakdown does occur, the owners may be exposed to claims for breach of their obligation to ensure the seaworthiness of the vessel, under both charter parties and contracts evidenced by bills of lading.

REFERENCES:

- MARPOL Annex VI – Emission Control Area

ATTACHMENTS: No.

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