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Implications of the IMO 2020 Sulphur Cap from a hull and machinery claims perspective

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Introduction

On 1 January 2020 the limit for sulphur in fuel oil used in vessels operating outside designated control areas will be reduced from 3.5% to 0.5% under the IMO 2020 Sulphur Cap, set out in MARPOL Annex VI. These changes apply globally to all fuels used onboard vessels, whether in the main or auxiliary engines or other machinery. This will be one of the biggest changes to the marine industry in decades as Shipowners and Charterers must find ways to comply with the new rules or face heavy penalties which vary between jurisdictions.

Most attention has been focused on the impacts to P&I Clubs who may be left picking up the pieces in the event of non-compliance with the new rules by their members. However, hull & machinery insurers are not immune from losses arising as a result of the 2020 changes.

What options are available to Shipowners?

Broadly speaking there are three options available to Shipowners in order to comply with the Sulphur Cap:

1) Operate the vessel using compliant fuels such as marine distillates, low-sulphur residual fuels and blended fuels which have sulphur contents below the 0.5% threshold.

2) Install scrubbers to remove sulphur-oxides from the exhaust gases.

3) Convert the vessel to run on alternative fuels such as liquefied natural gas (LNG), methanol, liquid hydrogen (LH2) (with and without carbon capture and storage), biodiesel, straight vegetable oil (SVO) and bio-LNG.

The option that each Shipowner chooses will depend on many factors including the age and type of the vessel, its size, operating area, engines and machinery and much more.

Retrofitting engines to run on compliant low-sulphur fuels

This is expected to be the option of choice for most Shipowners, at least in the short term, as it represents the easiest method of complying with the new regulations.

Currently, vessels switch over from Heavy Fuel Oil (HFO) to low-sulphur fuel when entering an emission control area to comply with local environmental legislations. Most modern diesel engines can run for significant lengths of time on compliant fuels, such as Marine Gas Oil (MGO). However, MGO has a lower viscosity than HFO and the continuous use of MGO (and low sulphur fuels in general) can lead to increased wear on certain engine components. In order to reduce maintenance, optimise performance and protect the engine, certain components and lubricating oils may need to be changed.

As with any new engine components / change in operation, there will be a need for crew training and familiarisation. When claims do arise, there will be increased scrutiny as to what constitutes "wear and tear" and what constitutes "crew negligence" in the operation of the engine. Attention may also be drawn to whether the due diligence proviso in ITCH 1.10.83 and similar clauses is applicable in certain cases where the bunker management plans and engine operational procedures do not reflect the changes needed to safely operate the engines in view of the change of fuel.

Installation of 'scrubbers'

The installation of 'scrubbers', which remove sulphur and nitrogen-based oxides from engine exhaust gases, is popular with some Shipowners as these allow vessels to continue burning cheaper high sulphur fuels.

Scrubbers can either be 'wet' systems, using seawater or chemically treated fresh water, or 'dry' systems, using substances such as calcium hydroxide or hydrated lime to treat the exhaust gas. Dry systems are most commonly used on land-based exhaust gas cleaning systems and require a large storage capacity for the lime/ calcium hydroxide. It is therefore the wet scrubbers that are focused on here.

Wet scrubbers can be either open loop or closed loop systems. Installation of closed loop scrubbers tends to be more expensive, with less effluent being discharged into the environment. Open loop scrubbers may be more economic at initial installation but will discharge effluent into the environment and it is for this reason that this type of scrubber has already been banned by several port authorities around the world.

However, it is estimated that only around 2% of all vessel's worldwide will have scrubbers fitted to comply with the 2020 Sulphur Cap. Challenges will be faced by these Shipowners as their crews must learn to monitor, operate and maintain this new equipment and repairers all over the world will need to become familiar with repairing them when things go wrong.

On the basis that the operating fluids are corrosive, it is possible that some corrosion issues could be expected. To counter possible corrosion, corrosion resistant materials could be used but this will increase installation costs.

Consequential damages to the main engine and turbocharger could occur, should the scrubber process controls fail.

As for any main engine and turbocharger damages this can incur significant amounts of down time and potential loss of hire. It is likely that there will be maintenance requirements from the crew, which if not carried out can lead to failure and subsequently claims being made.

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Conversion to LNG

With legislation concerning pollution from ships likely to get more stringent in future, it is increasingly likely that LNG will form a viable alternative to conventional fuels given its comparatively green credentials. However, whilst most marine diesel engines can operate using LNG, conversions to the fuel can be expensive as fuel storage tanks need to be fitted to the vessels, taking up space which could be better utilised for cargo. It is projected therefore to be a more popular option with new builds, rather than existing vessels.

LNG has been used as a marine fuel for decades and is not considered to create any greater risk to the vessel than conventional fuels when stored and used correctly.

At present, the availability of LNG in useful quantities in major ports is extremely limited. This would need to be addressed in order for this fuel to be considered as a viable alternative. Manufacturers at present have extensive experience of LNG as a fuel for medium speed diesel engines, but less so for large slow speed engines. This aspect would require addressing for LNG to be considered a viable alternative for deep sea shipping.

Other impacts on H&M claims

The impact of the 2020 Sulphur Cap on hull & machinery claims extends much further than simply considering breakdowns to engines and scrubbers due to the use of different fuels and inexperienced crew.

Fuel costs are allowed in claims as part of the reasonable cost of repairs (particular average) in certain instances such as in removal of the vessel to a port of repair. Fuel allowances are also made in general average where vessels are detained in consequence of any accident or sacrifice which render it necessary for the common safety or for necessary repairs to be affected.

Removals and detentions can be lengthy and fuel consumptions during these periods high. Allowances for these periods will increase for vessels that have made the switch to more expensive compliant fuels (for example, MGO is currently on average around 50% more expensive than HFO). However, the impact will likely be greater on allowances for removal rather than detentions, given that most detentions take place in port limits where low-sulphur fuels must already be consumed.

Issues may also arise for Shipowners in cases of general average, particularly in respect of Rule F of the York Antwerp Rules. Allowances under this rule are made on the basis that any additional expense incurred in place of another expense that would have been allowable in general average, shall also be allowed in general average, up to the general average expense avoided.

If a vessel is chartered to tranship cargo to destination following a general average act, the allowance in general average would be the cost of forwarding less voyage savings, but only up to the amount of general average expenses avoided, e.g. storage costs. As most vessels will choose to switch to more expensive low-sulphur fuels to comply with the IMO regulations, charter rates are expected to increase, which could lead to an increased proportion of transhipment costs that may not be recoverable in general average, depending of course on the level of general average expenses avoided.

One of the major challenges that could materialise as a result of the new regulations concerns seaworthiness. Speaking at the European Refining Technology conference in Athens in 2017, the IMO's Head of Air Pollution and Energy Efficiency, Dr. Edmund Hughes, stated that non-complaint vessels could be considered unseaworthy, which may invalidate their charter parties and liability insurance. In terms of hull & machinery insurance, policies can either be time or voyage policies. Under English Law (S. 39 of the Marine Insurance Act 1906), vessels insured on voyage policies are subject to an implied warranty that at the commencement of the voyage the ship shall be seaworthy for the purpose of the particular adventure insured. However, most vessels are insured on time policies, which do not contain this implied warranty, but the Act does make it clear that "where, with the privity of the assured, the ship is sent to sea in an unseaworthy state, the insurer is not liable for any loss attributable to unseaworthiness."

Section 39(4) of the Act states that "a ship is deemed to be seaworthy when she is reasonably fit in all respects to encounter the ordinary perils of the seas of the adventure insured". It is unlikely that a breach of emissions regulations would lead to a vessel being unable to encounter the ordinary perils of the seas and therefore unlikely to be "unseaworthy" as a result.

However, if a vessel's Flag State has ratified Annex VI then the Flag State may revoke or suspend the vessel's MARPOL certificates in the event of non-compliance with the new regulations. The vessel's Classification Society may also suspend or withdraw the vessel's Class in the event of non-compliance which could result in a breach of the 'Class Maintained' warranty, a warranty found in most hull & machinery policies, and also Clause 4.1 of ITCH 1.10.83, which states that the insurance shall terminate automatically in the event of suspension, discontinuance, withdrawal or expiry of the vessel's Class.

Under the Insurance Act 2015, which amends various aspects of the 1906 Act, but crucially does not replace it, Insurers can no longer deny liability in the event that a warranty has been breached but remedied before the loss. Insurers can contract out of parts of the 2015 Act if they desire.

Therefore, if a non-compliant vessel does suffer a loss, the exact consequences on hull & machinery coverage are difficult to pinpoint for certain and the outcome will depend very much on the facts of each particular case, the insurances in place, law and jurisdiction applicable, Classification Society and other factors.

Effect of increased claims

The introduction of the Sulphur Cap at the start of 2020 will represent a period of market disruption as shipowners adapt to the changes and ship and fuel management practices of crew evolve to meet the demands. While it is unclear how exactly this will affect the marine insurance market, it is highly possible that the volume of claims associated with breakdowns to engines and scrubbers may increase due to the use of different fuels and the maintenance procedures implemented by inexperienced crews. It is expected that underwriters will have to respond in kind, and should an increased volume of claims arise, then this may produce a knock on effect in the way of increased premiums, increased deductibles and even the wider use of the Institute Machinery Damage Additional Deductible clause to combat the effects. The retrofitting of vessels with expensive scrubbers will also impact on the sound market value of vessels and it is likely that insured values and premiums will have to be increased in any event in response.

The exact effect of the Sulphur Cap remains to be seen, but it is expected that marine claims practitioners and the wider marine insurance market as a whole will be kept busy as a result.