IMO 2020: A review of the transition to VLSFOs

Many predictions were made in the run up to the imposition of the MARPOL 2020 sulphur cap, none of which was that the transition to Very Low Sulphur Fuel Oil (VLSFO) would be smooth sailing. From Gard's experience, the transition has been smoother than many predicted but not without challenges.

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Introduction

In 2019, there were numerous discussions in the marine industry over how the transition to 0.5% fuels would pan out, with concerns about a wide variety of issues. Which predictions were right? To address this question, Gard held a series of webinars in July 2020 for our members and clients where we discussed the technical, compliance related, and legal challenges which owners, crew, and charterers faced when using very low sulphur fuel oil in the first six months of 2020. A video of the webinar presentation and the materials are available to view and download here .

A number of important and pertinent questions were posed by the attendees during and after the webinars, touching upon technical, contractual, insurance and enforcement related areas. In this Insight, we will briefly summarize our experience with the transition based on the claims and inquiries received from our members and clients. Then we turn to some of the attendee's questions to provide more detailed answers.

Our experience with the transition

Initial experience suggests there has been significant variances in the composition of residual VLSFOs. They have been found off-specification on a variety of ISO 8217 parameters such as aluminium plus silicon (catalytic fines), pour point, acid number and several others. The most commonly experienced problems with fuel reported to Gard were high total sediment potential (TSP) and marginal exceedance of sulphur. In fact, the results of an industry wide survey jointly carried out by BIMCO, ICS, Intercargo and Intertanko has produced similar findings.

The most common operational problems faced onboard was an increase in sludge formation in purifiers and filters, although so far these have not led to a high frequency of major breakdowns or engine damage cases. This could be because the crew were either able to manage these fuels or they were de-bunkered. Again, our experience is reflected in the wider industry survey.

Our data for fuel related machinery damage claims shows that the first six months of 2020 saw fewer claims than the same period in 2018 and 2019. This data only captures incidents where there was damage to machinery and the repair costs were above the deductible, so it does not take into account purely operational problems faced by crew. On the Defence side, the number of case files opened this year on contractual bunker disputes is similar to previous years. So, from Gard's perspective, the more dire predictions regarding potential engine damage, and a deluge of litigation between owners and charterers have not materialized, at least in this first six-month period. Yet challenges remain as evidenced by the questions put to us below.

Testing bunkers before use

Question: **Is a shipowner obliged to test for bunkers before consuming them?**

Although there are no regulatory requirements obliging owners to test bunkers before consumption, testing by specialized laboratories has become the norm given a vessel owners' lack of insight into quality control of marine fuels on the supply side. From an insurer's perspective, the question is 'how would a prudent uninsured act in the circumstances?'. Best practice is therefore to seek to avoid using a new batch of bunkers until its quality has been confirmed to be satisfactory by the laboratory analysis report. There can, of course, be situations where testing and analysis before use is not feasible.

From our engagements with owners and managers over the past few months, we understand that it is now common to perform pre-consumption analysis as per ISO 8217, table 2 parameters. A few are also supplementing these basic tests with investigative tests to identify and quantify contaminants, which helps to assess whether the fuel satisfies the requirements under Clause 5 of ISO 8217.

Question: **As a charterer, we have seen owners trying to claim for non-compliant fuel and alleging damage by fuel which they have burned without testing it. How does a failure to test affect such claims?**

If normal testing would have revealed the contaminant that caused the damage, and thereby allowed the damage to be avoided or reduced, then there could be an argument that the failure to test broke the chain of causation or was contributory negligence by the owners, but it would depend on the facts of the case. If standard testing would not have revealed the problem, it may be difficult to criticize the owners.

Representative sample and bunker delivery note (BDN)

Question: **Should binding fuel quality test results be based on (a) the supplier's sample (i.e. the one taken on bunker barge), or (b) the ship's sample (taken at receiving ship's manifold)?**

In the majority of claims handled by Gard this year, there have been arguments over which sample to test. Both charterers and bunker suppliers usually opt for the supplier's sample to be tested, whereas owners prefer to test their own ship's sample, i.e. the receiving ship's sample taken at the manifold. From an owner's perspective, there may be legitimate concerns about a supplier's sample not being representative of the fuel supplied, especially if the crew on the receiving vessel were unable to monitor and oversee the sampling on the bunker barge. In a few cases the different samples have produced very different results, with the supplier's sample found to be on-spec but the receiving ship's sample off-spec.

MARPOL does not regulate commercial samples and its requirements are only limited to the MARPOL sample which is to be taken at receiving ship's manifold, sealed and carried on board to be made available to port or flag state authorities. It is nonetheless in the interest of all parties for the commercial samples and MARPOL sample to be taken from the same source. Absent regulatory requirements, reliance must be placed on:

• Domestic requirements of the state where bunkering is taking place, such as Singapore'sSS600 ; or
• Industry standards (ISO 13739) and good practices, including IMO guidelines (MEPC.1/Circ.875/Add.1); or
• Contractual agreement.

It is worth highlighting that the 2020 version of ISO 13739 requires representative samples to be taken at the receiving ship's manifold. The previous version allowed the sample to be taken from either end of the bunker hose. The ISO standard can be incorporated into bunker supply contracts and charterparties. Masters are also encouraged to seek guidance from charterers about sampling well before bunkering.

An associated issue is that in a few cases bunker delivery notes have been found to incorrectly state that all samples were taken at the receiving ship's manifold and ship's crew have signed them without taking note of this. It is important that Masters and Chief Engineers do not sign BDNs without verifying the information in them, and if there are discrepancies the matter should be raised with their managers and charterers, and perhaps consider issuing a protest and/or clause the BDN.

Liability for machinery damage caused by poor quality fuel

Question: **If there is a machinery breakdown caused by contaminants in the fuel which could only have been detected by advanced investigative tests, who is liable – owners or charterers?**

This is a question with which we at Gard are familiar. We insure shipowners for physical damage to the vessel and we insure charterers for their liability to owners for such damage. We also cover both owners and charterers for costs of legal disputes under the charterparty for uninsured losses.

This question assumes that the cause of the engine breakdown is a contaminant in the fuel. It is often difficult to establish the cause of breakdown as there are many substances that are found in fuel that are not part of the fuel specifications and require investigative tests like GC-MS analysis to be found. There is also the question of establishing a causal connection between the substance and the damage which, as the " Houston Bunkers Saga" demonstrated, is no easy task.

Let's assume, as the question suggests, that the experts - chemists and engineers - have opined that a contaminant in the fuel as supplied has caused the engine breakdown. The question of liability is then contractual – did the charterer breach an obligation in the charterparty rendering the charterer liable for the breakdown?

Each charterparty is different but generally the time charterer is obliged to supply the vessel with bunkers meeting the charterparty specification. This is normally done by reference to a version of ISO 8217 that contains a catchall provision requiring that the fuel is free from any material at a concentration that is " *harmful to personnel, jeopardizes the safety of the ship, or adversely affects the performance of the machinery* ".

Thus, assuming that there is evidence to support the claim that an identified contaminant caused an engine breakdown, the owner could in theory recover damages from the charterer. Damages would normally include repair costs, hire and costs. Investigating these claims and proving or defending them can be an expensive proposition given the cost of enhanced testing and expert attendance often seen in these disputes.

Question: **If the charterer refuses to debunker fuel and the owner refuses to consume it – the ship will stop trading. Where does the risk lie in such cases?**

Some of the VLSFO blends can be challenging to deal with, and when there is a dispute over suitability for consumption both owners and charterers face financial risk until the dispute is resolved. If owners are correct that the fuel is off-specification and cannot be consumed safely then the vessel remains on hire and charterers face hire payments while the vessel remains idle. On the other hand, if charterers are correct and the fuel is suitable for consumption, owners risk that they will not receive hire. The key is for both sides to act quickly to identify if the fuel is off-specification and what, if anything, can be done to allow it to be safely used, both of which likely require input from an expert. It is also essential to involve the bunker supplier quickly in case the vessel must be de-bunkered. Many bunker supply contracts have short notice provisions and time bars. Reputable suppliers will likely assist in removing bunkers proved to be off specification under the bunker sale contract.

Owners procuring bunkers for time charterers

Question: **In a few cases, a time charterer has asked us, the owners, to procure VLSFO and pass on the costs to them. Does this alter the risk landscape and what precautions are to be taken as owners?**

We do see this sometimes, for example where the owners are bunkering for their own needs and the charterer wants to make use of the same supplier to save time/costs. In at least one case this year, the successive stems of the bunker provided by the charterers were off-spec and they had to be de-bunkered following which the charterers requested the owners to procure the next stem.

With such an arrangement in place the burden would be on the owners to do the due diligence in procuring the fuel, including:

• Vetting the bunker supplier.
• Check if they are dealing with an intermediary or the physical supplier.
• Check the sale terms for acceptability including time bars, sampling clauses, disclaimer excluding warranty as to fitness of the fuel and so on.
• Describe the fuel that is required, and address issues such as minimum viscosity, pour point; the ISO standard required. On which ISO standard to specify, our recommendation is ISO 8217:2017 rather than the more commonly found ISO 8217:2010.
• Ask for and check the Certificate of Quality (COQ). Very old COQs might not correlate to the actual product.
• Industry recommendation is to avoid co-mingling bunkers but if this is unavoidable, compatibility checks should be done before the bunkers are taken onboard.

Owners should be careful on three points where they are arranging a supply for charterers:

• Make sure the purchase is done as agent for the charterers and not as a separate sale contract whereby the owner buys from the bunker seller and sells the cargo on to charterers under a separate sale contract. If the owner is not acting as agent, they may well owe the charterer obligations under the sale contract.
• Check that the charterer is happy with the bunker seller's price and sale terms before you proceed.
• Warn the bunker seller of the arrangement and that you are acting as agent for the charterers only, and not as principal.

Hull & Machinery (H&M) cover

Most of the questions we received in our webinar on insurance cover related to whether the hull and machinery (H&M) insurance would cover claims for damage to ship's engines in the following two scenarios:

• Where the bunkers has to be consumed before the results of the sample analysis are ready
• Where crew negligence is involved

Every case will depend on its own facts, so it is not possible to give a response covering all situations. Generally speaking, H&M cover is intentionally wide so it will cover most situations where owners take a commonsense approach to solving problems. As an H&M insurer, we accept that getting samples tested is not always straightforward and that delays can happen for various reasons. If owners take a fact-based approach to assessing the quality of the bunkers, and that includes matters such as using the COQ, and based on that assessment they believe that the bunkers are likely to be compliant and fit for purpose, it is likely that any damage would be covered by H&M.

Coming to the point on crew negligence, H&M cover includes accidents arising from negligence by crew or of the shore-based owner's office. The interpretation of crew negligence is subject to a commonsense standard which means doing something that one should not do, or not doing something which should have been done. If the crew or the shore staff could reasonably foresee the outcome of their actions then this might affect the H&M cover, but if it was more an oversight or following incorrect procedures then cover would very likely remain in place.

Diversion costs to bunker compliant fuel

Question: **If test results reveal that the bunkers are off-spec and the owner decide to make a diversion to debunker and take on compliant fuel, will the Club cover the associated costs?**

Deviation costs to debunker and take on compliant fuel would not be covered by neither the H&M Policy nor the P&I policy. Defence cover would respond to legal and expert costs to establish a claim against the supplier (where owners purchased the bunkers) or against the charterer (if the charterer purchased the bunkers). Deviation costs would form part of the claim in addition to the differential in cost between the stem and replacement stem and also any delay claim.

Role of experts

Question: **In some cases of machinery breakdown or damage, it may be difficult to establish whether the quality of the fuel directly caused the incident. Should an expert be appointed in these cases?**

In quite a few cases this year engineering experts and/or chemists had to be appointed or at least consulted, especially where the bunkers were on-spec on ISO 8271 Table 2 parameters and the crew were still finding it difficult to manage them. As highlighted in the question itself, establishing causation can be a complex affair, and also time consuming and expensive. In one case this year, the cost of the investigative tests alone was USD 20,000.

Port State Control (PSC)

Question: **What has the Club's experience been with enforcement by port state control?**

In the first six months of 2020 the number of PSC inspections dropped by nearly 40% due to the Covid-19 outbreak. Despite that, detentions relating to SOx regulations of MARPOL Annex VI were in double digits in the Tokyo MoU region, with the majority of those being for high sulphur content in the fuel.

From our involvement in some of those cases, we note that PSC officers have generally been aware of and following the IMO's 2019 Guidelines for Port State Control under MARPOL Annex VI and the guidelines in IMO resolution MEPC.320(74) . However, we have seen some cases where further training may perhaps be needed for crew members and even shore management to increase their awareness of the PSC inspection guidelines, with an emphasis on two points in particular:

• Results from portable devices of a sulphur content more than 0.53% can be considered as clear grounds for a more detailed PSC inspection, but they should not be treated as evidence of non-compliance. The results are merely indicative.
• As part of more detailed inspection, the "in-use" or "onboard" samples have to be tested ashore by an accredited laboratory. If the sulphur content of such samples is found to be equal to or less than 0.53% verified as an average of two tests performed at the same laboratory, then the vessel should be deemed to be in compliance.

However, owners, managers and crew should be aware that if the "MARPOL" delivered sample is tested, i.e. one delivered in accordance with regulation 18.8.1 of MARPOL Annex VI, then under the IMO guidelines a strict limit of 0.50% applies, verified as an average of two tests performed at the same laboratory. To the best of our knowledge, authorities have so far limited the testing for sulphur verification to the "in use" or "onboard" samples and have not extended it to the MARPOL delivered sample. For a detailed explanation of testing procedures and the differences between the in use and onboard samples and the MARPOL delivered sample, see our Insight article " Are you 95% confident your very low sulphur fuel is on spec and MARPOL compliant? "

We have also been made aware that some states may impose a nominal fee for testing of the samples ashore. Owners and managers should check with the local agents about this, as it may be provided for under the state's domestic legislation.

General recommendations

There are quite a few challenges ahead for crew members, owners and charterers, mainly because of the variability in the fuel blends and the lack of oversight by authorities over the bunkering eco system. By way of general recommendations, we suggest:

• Risk mitigation at procurement stage:the priority for the purchaser of bunkers, whether it is charterer or owner, should be to prevent poor quality fuel from getting onboard. When selecting the supplier, consider assessing the level of control the supplier has on the bunker supply chain; their market reputation; whether they have insurance cover for issues related to poor quality bunkers; and the terms and conditions of the bunker supply contract. Members can refer to ourInsight where we have highlighted key considerations for the buyer. Where possible, the latest ISO standards should be incorporated. We recommend use of ISO 8217: 2017
• Notifying non-compliances to authorities:
it is important that owners report instances where fuel fails to meet the requirements specified in regulation 14 or 18 of MARPOL Annex VI. Administrations, through the IMO, are then to upload this information on theIMO GISIS platform . In the first six months there were 152 reports uploaded by various flag states on this platform and is a good source of information for owners, managers and charterers.
• Getting charterparty clauses right: although there are some good charterparty bunker clauses in circulation, check that you understand how these clauses work before you agree to them, and make sure they meet your needs (which may change over time).
• Preparing for disputes:do not wait until there is a problem to start collecting information and evidence – by then it may be too late. Make sure information in BDNs is accurate before they are signed off, seek instructions if a bunker supplier is not following standard good practice, and keep good records of all steps in the bunkering, storage, and combustion process.
• Cooperation between owners and charterers:Currently, much of the focus is on areas of dispute and not so much on how the parties can come together to address the various challenges each side is facing in their respective roles. There are various areas where owners and charterers can cooperate for mutual benefit, such as vetting bunker suppliers, knowing more about the fuel composition, sharing costs for tests and getting feedback on how bunkers performed operationally. Cooperation can lead to better financial results for all parties.

Links to relevant Gard insights

• **Contaminated bunkers: protecting the purchaser**
• **Bunker supply contracts – key considerations for the buyer**
• Are you 95% confident that your very low sulphur fuel is on spec and MARPOL compliant?
• Prepare crews for PSC spot sampling of ships' fuel