



Soundings

Sulphur Series 09

Scrubbers update

In the January, 2019 edition of our Sulphur Series, we foreshadowed some of the potential considerations relating to the use of scrubbers as a means of compliance with the MARPOL sulphur cap regulations. Now that scrubbers have come into common usage on many ships, we take an updated look at some of the legal and practical issues that have come to the fore.

It is estimated that about 4,000 ships were fitted with scrubbers in time for the January 2020 deadline and many more are scheduled for fitting or retrofitting in due course. Initial market predictions in early 2019 were that about 5% of world tonnage would have scrubbers installed. Clarksons now estimates that about 19% of world tonnage will carry scrubbers by the end of 2020. Although still only a relatively small percentage of the world fleet, this is nevertheless a significant number of ships. The sudden surge in scrubber usage has inevitably brought with it reports of problems.

Installation issues

Reports of delays in scrubber installations circulated in the lead-up to 2020 and many ships were not ready for

the 1st January, 2020 deadline. Owners with ships out of service waiting for the work to be completed will have faced mounting financial pressure. Whether or not such losses are recoverable from the shipyard or scrubber manufacturer will depend on the terms of the relevant contracts. Such contracts frequently exclude or restrict compensation for delays solely to an agreed rate of liquidated damages, thereby removing an owner's ability to claim for losses above that agreed rate.

There have also been incidents of fires breaking out during the retrofitting of scrubbers which have reportedly led to significant damage to the engine room. Fires during hot work at shipyards are not uncommon. There is clearly scope

for costly incidents, given the sudden increase in scrubber installation projects, some of which can be complex.

Operational issues

The sharp increase in the use of scrubbers in the world fleet carries with it a potential for teething problems. There are inevitable variations in the quality of scrubber equipment being produced. The expertise of manufacturers and installers is unpredictable and the operational experience of crews in relation to this relatively new equipment is fluid. Even with good planning, unanticipated operational and maintenance issues may well arise.

For example, there have been reports of corrosion in respect of closed-loop scrubbers. Those scrubbers use a corrosive chemical, caustic soda, to remove the sulphur content from the exhaust gas. Consequently, the wash water from the scrubbers is itself corrosive and can pose a problem for neighbouring pipework and fittings, if the pipes and fittings are not of an appropriate quality material and have not been correctly cleaned or coated during the installation process. In turn, the corrosion damage can lead to the leaking of scrubber wash water, which then risks causing damage to other parts of the ship. It is worth noting that there are alternatives to caustic soda scrubbers; magnesium oxide is a non-corrosive option, although reportedly more expensive to install.

Whilst open-loop scrubbers do not suffer from the same issue, as they do not use caustic soda, nevertheless there can be issues arising with corrosion to paintwork in the immediate vicinity of the overboard discharge pipe in the hull.

The true extent of the corrosion problem is yet to be seen as the durability of the vulnerable pipework and fittings will only realistically be put to the test with the increased use of scrubbers from early 2020 onwards. Some of the Classification Societies are now recommending that owners test for corrosion every six months.

Operational issues such as these provoke consideration as to where resultant financial losses should fall. Owners may want to check the nature and scope of warranties given by the shipyards and manufacturers who have produced and installed the scrubbers. As touched on in our January, 2019 edition of Soundings, warranties are usually restricted in terms of timescale and financial exposure, and often cover direct losses only. Owners affected by operational problems may therefore face some unrecoverable losses.

Compliance and enforcement

Looking ahead, it is estimated that with only approximately 19% of the world's fleet be fitted with scrubbers, the

majority of ships will burn low sulphur fuel instead. The global demand for HSFO will therefore fall considerably, leaving open the likelihood of HSFO being unavailable at many of the less major ports at least. The owners of scrubber-fitted ships will need to keep a careful eye on the availability of HSFO in their trading areas and ensure that they have a back-up supply of VLSFO in case HSFO is unavailable or in the event of a scrubber failure.

IMO MEPC.1/Circ.883 provides guidance to owners faced with a scrubber malfunction. Any problem that cannot be rectified is to be regarded as an accidental breakdown. Owners should attempt to remedy the problem as soon as possible. If the problem cannot be rectified within one hour, the ship should switch to using compliant fuel and report the malfunction to the Flag State and Port State (where the ship currently is and where she is expected to be next) with an explanation of the steps being taken to resolve it. If the ship does not have sufficient compliant fuel on-board, a plan of action for stemming compliant fuel, or for repairing the scrubber, must be communicated to the above authorities for agreement. Owners should consider making clear in their charterparties who is responsible for the cost of compliant fuel and any time loss in this scenario.

We have yet to see what enforcement action, if any, different Flag and Port States will impose in relation to scrubber malfunctions. To date, we are not aware of ships having been detained following a scrubber failure or malfunction.

Regional restrictions on use of scrubbers

A number of countries have banned the use of open-loop scrubbers in their waters. Some also forbid the discharge of open-loop scrubber wash water within their port areas. A map showing global scrubber regulations can be found on the Exhaust Gas Cleaning Systems Association's website (<https://www.egcsa.com/map-regulations>).

It remains to be seen whether the scope and application of these scrubber bans expands or reduces as the industry adjusts to the new sulphur regime.

Concluding remarks

All of the above must be read in light of the fact that scrubbers have been in use on some ships for many years and that the alternative option to use low sulphur fuel has its own unpredictabilities as regards availability, quality, compatibility, price, performance, etc. There is no 'one size fits all' solution.

Members are invited to contact the Managers if they have any queries in relation to the above issues.

The UK Defence Club

Thomas Miller Defence Ltd, 90 Fenchurch Street, London, EC3M 4ST
tel: +44 207 283 4646 fax: +44 207 204 2131
email: tmdefence@thomasmiller.com web: ukdefence.com