



Key Issues

Exhaust Gas Cleaning Systems

On 1 January 2020, the vast majority of shipowners will comply with the IMO global sulphur cap using compliant fuels with a sulphur content of 0.5% or less (while continuing to use fuel with a sulphur content of 0.1% or less in Emission Control Areas). However, the relevant MARPOL Annex VI regulation also allows ships to use alternative compliance options, provided that these are at least as effective in terms of emissions reduction as that achieved by the use of low sulphur fuels. This was something which ICS fought hard for when the new IMO regime was adopted in 2009, consistent with a 'goal based' approach to regulation which has been embraced by IMO since the 2000s.

The mostly widely used alternative compliance option is the use of Exhaust Gas Cleaning Systems (EGCS), or 'scrubbers' as they are commonly known, whereby sulphur is removed from the exhaust of marine engines or boilers. Ships fitted with scrubbers will therefore continue to be able to use residual fuel, which is expected to be far less expensive than low sulphur fuel oils, with significant economic benefits for shipowners that have invested in them.

In May 2019, depending on the port, the cost of residual fuel was typically about US\$400 per tonne, whereas low sulphur fuel (already required to trade in ECAs) was about US\$600. But as a result of the huge extra demand for low sulphur fuel that will be created by the implementation of the 2020 global sulphur cap, especially if supply of compliant fuels is tight, this differential is expected to widen considerably as ships start placing orders for compliant low sulphur fuels during the second half of 2019.

The financial attraction of fitting scrubbers is obvious, especially for larger ships that consume far more fuel and which have the space on board to accommodate this equipment. Even at a cost of up to US\$5 million per ship, the capital cost of installation could be recovered in two or three years, assuming that finance is available, and depending upon what the actual differential between residual and low sulphur fuels will be after 1 January 2020.

Until early 2019, it had been assumed that only around 2,000 vessels would be fitted with scrubbers by 2020. But in addition to retrofits, the number of new build ships being ordered with scrubbers is increasing – in tonnage terms about 30% of the current order book – with several major shipping companies reversing their initial decisions not to deploy them. In tonnage terms the proportion of the world fleet operating with scrubbers by about 2022 could be as high as 20%.

Scrubbers may be of the 'open loop' type where sea water used for scrubbing is treated and discharged back to sea, or of the 'closed loop' variety where fresh water treated with chemicals is used for scrubbing with only a small quantity of the treated wash water being discharged into the sea after a certain time period of operation. IMO adopted the first version of its Guidelines for Exhaust Gas Cleaning Systems back in 2005 which, among other things, address potential concerns about wash water. There have been many subsequent revisions to these guidelines, and the latest iteration adopted in 2015 is currently in the process of a further revision by IMO.





Despite the adoption of these IMO Guidelines, worries about the possible environmental impacts of scrubbers have led to an increasing incidence of unilateral action by several IMO Member States – including Germany, Belgium and Singapore – to ban wash water discharges from scrubbers operating in the open loop mode within their territorial waters. Notwithstanding the sovereign right of port states to enforce provisions at variance to MARPOL, ICS is concerned about the apparent lack of detailed technical justification for such measures.

Also of concern to ICS is the absence of global consistency of standards within a growing number of individual ports, which may result in ships fitted with scrubbers, as permitted by MARPOL, being unfairly penalised for being unaware of little known local requirements. ICS has therefore compiled a list of ports around the world that are understood to have prohibited discharges from open loop systems which is available via ICS national associations. In 2019, ICS will continue to work with the International Association of Ports and Harbors (IAPH), the European Ships and Ports Organisation (ESPO) and the Exhaust Gas Cleaning Systems Association (EGCSA) in order to gain further clarity on this issue.

In May 2019, in response to a submission by EU Member States, the IMO MEPC agreed a new work output for the evaluation and development of harmonised rules and guidance on the discharge of liquid effluents from EGCS. ICS supports the concept of a harmonised approach, but only provided that any subsequent control measures will be based on sound technical evidence. Most importantly, given the huge investments that many shipping companies are now making in scrubbers, the overarching IMO principle of 'grandfathering' arrangements for existing ships must be maintained. This to ensure that early adopters of new technologies which are permitted under MARPOL are not unfairly penalised in the event that IMO's current position regarding their use is changed in the future.