

Service Update: S2020 – 18 Months to go!
Applicability: All ship owners and operators

This bulletin is an update to our previous [bulletin](#) addressing key questions related to the implementation of MARPOL Annex VI regulation 14.1.3 coming into force on 1st January 2020. Consistent implementation of the regulation (outside ECA-SOx), quality, and availability of 0.50% VLSFO (Very Low Sulphur Fuel Oils) remain the main talking points at various industry forums.

An Update on the Fuel Supply Chain

It is anticipated that the majority of ship operators will switch to 0.50% VLSFO to comply with the regulation. This would mean refineries, storage depots and physical suppliers will have to contend with over 150 million tonnes of high sulphur residual fuel oil becoming surplus. Refiners are faced with a difficult decision to make multimillion pound-long term investments for bottom upgrading, source sweet crude or look for other outlets for high sulphur residual fuels after January 2020 when this convenient marine bunker option is no longer available. Some refineries have made a decision to invest in a coking plant, however, there are others who may be playing a waiting game on how exhaust gas scrubber markets evolve.

The IMO fuel availability study predicted that around 3,800 ships with EGCS will be in use by the implementation date; however, the figure is looking more likely to be about 1000-1500 ships. The relatively small uptake of Exhaust Gas Cleaning systems (EGCS) at this time will be unlikely to make a significant difference, despite a recent surge in orders with indications that the order slots for completion January 2020 are almost full. However with the potentially greater price differential between high sulphur fuel oil (HSFO) and 0.50% VLSFO by 2020 and short pay-back, ship owners & operators have shown increased interest in installing scrubbers on their vessels. Nevertheless, there are a number of relevant operational, logistical, technical, regulatory and commercial parameters which require careful consideration when making a decision to install an EGCS, making it a complex issue. Lloyd's Register has developed an [option evaluator](#) to help clients make an informed decision based on the specific operational profile of their vessels.

To help the fuel supply chain, we also emphasise to ship operators the need to engage in open dialogue with their charterers and suppliers on the type of fuel they will need, based on ship

operations and trading pattern so that suppliers also get themselves prepared to meet the demand ahead of 1st January 2020 deadline.

Implementation - An update from IMO

During PPR5 (Pollution, Prevention and Response – an IMO sub-committee) held in March 2018, a few key areas of implementation of the regulation 14.1.3 were discussed and some actions agreed. It has been made clear that the implementation date is 1st January 2020 and there is no possibility of any delays. Secondly, PPR5 principally agreed the proposal of a carriage ban of non-compliant fuels on board after the implementation date which is expected to come into force from March 2020. It was agreed to produce a Consistent Implementation guide to cover various implementation parameters such as enforcement, safety, quality of fuel, verification, port state control, FONAR (Fuel Oil Non-Availability Report) etc. which will be presented and discussed at an intersessional PPR5 working group meeting scheduled for 9 to 13 July 2018. There have also been discussions on the requirements for ships having designated sampling points to facilitate compliance verification for port state control. A number of submissions have been made to the IMO from member states and NGO's related to the implementation of the 0.50% regulation which are being carefully considered and taken up for discussion. We (LR) is actively participating in these discussions as a recognised organisation and we will keep our clients informed of the developments.

Progress of ISO TC28/SC4/WG6 (ISO 8217)

A question of whether ISO 8217 provides coverage for all marine distillate and residual fuel oils remains an important discussion point. As it stands today, ISO 8217 provides coverage to all marine fuels, however in view of the expected variations in 0.50% S fuels, we anticipate further guidance from the ISO and CIMAC fuels working groups on how best to order and manage these less familiar formulations.

ISO TC28/SC4/WG6 is mainly working on the development of PAS 23263 (Publically Available Specification – an insert to the latest ISO 8217) which will specifically address the 0.50% sulphur fuels quality. At the moment, it is not clear when exactly the PAS 23263 will be available, however considering industry pressure on this front, it is expected somewhere around mid-2019. Secondly, there has been lot of concern with regards to the stability of future fuels. An ISO sub-group has been actively working to evaluate and conclude the most appropriate test method(s) to determine the stability of new fuel formulations.

0.50% VLSFO Quality Concerns

One of the main quality concerns is the long-term storage stability and compatibility between two different bunkers. Stability is mainly a supplier's issue, as they are responsible for supplying a stable

blend to the vessel. However, controlled mixing or complete segregation on-board between two potentially incompatible fuels is the vessels responsibility. Thus there needs to be an increased awareness amongst all stake-holders on issues which can originate from unstable fuels and two stable but incompatible fuels. To help ship operators, the FOBAS team is looking into the existing compatibility test method and any alternative methods which may be more suited to the new fuel formulations. Subsequently we will provide guidance alongside specific compatibility testing to help effectively manage the future blends.

Secondly, there is a high probability of paraffinic blends making their way into the marine bunker market, which will not only increase the need to address higher pour points but also the general cold flow properties of fuels. It is expected that the majority of the 0.50% VLSFO will be light residual products with viscosity between the current distillate (DM) and residual (RMG) grades of ISO 8217. Moreover, relatively lighter blends would make it easier for any catfines to readily separate, however this may warrant increased monitoring and cleaning to remove accumulated catfines from tank bottoms.



Whilst at this time not many 0.50% products are around, our data however indicates that there are naturally low sulphur heavy fuel blends being supplied in specific locations around the world such as South America, West Africa and North Africa. Moreover from China and Thailand, likely due to the 0.50% Chinese emission control regulation. We have also been receiving 0.50% VLSFO samples for analysis which appear to be blended products to comply with the regional maximum 0.50% sulphur regulation. We (FOBAS) have started to develop the characterisation of the 0.50% VLSFO with currently available fuels and will continue to do so as various suppliers bring VLSFO to the market in run up to the 2020 deadline.

Please note that Lloyds Register FOBAS have also produced specific [guideline](#) titled 'Sulphur 2020: What's your plan?' to facilitate the ship operators plan for upcoming regulation. We will continue to provide updates as and when there are significant developments to keep you informed.

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