



KIMO Resolution 2020/01

Prohibiting or setting strict limits on wash water from scrubbers in ships

Introduction

The sulphur regulation was implemented as an important tool to reduce the impact shipping has on air quality. It was seen as an effective measure to reduce the impact on human health and damage to the environment in the form of acidification and eutrophication. It was assumed that ships would switch to a cleaner fuel with lower sulphur content. However, low-sulphur fuel is more expensive than heavy fuel oils. Against this background, the market has now developed two alternative solutions, so-called scrubbers and hybrid oils. With investments in scrubbers, vessels can continue to run on heavy bunker fuels. Scrubbers are a flue gas cleaning technology that can wash ship exhaust gases from sulphur pollution. However, scrubbers release large volumes of strongly acidified and contaminated water directly into the sea, which has devastating consequences for the marine environment.

Background

In 2008, the United Nations International Maritime Organization (IMO) adopted requirements for stricter limit values for sulphur in marine fuel through an amendment to Annex 6 to the MARPOL Convention. The new rules entered into force at global level on 1 January 2020, and have already been implemented within the EU. The EU has implemented the new rules through the Sulphur Directive, which contains the EU's common rules on the amount of sulphur certain fuels may contain. From 2020, the sulphur content in marine fuels may only be 0.5 per cent. In addition, stricter rules apply to the Baltic Sea, the North Sea and the English Channel, which are sulphur control areas (SECA). In these areas, fuels with a sulphur content of no more than 0.10 percent are allowed since 2015. The Baltic Sea is furthermore a particularly sensitive sea area (PSSA) where stricter requirements may be used to protect sensitive ecosystems.

As mentioned earlier, low-sulphur fuel is much more expensive than heavy fuel oils and switching to these may double fuel costs. Hence, a majority of vessels have made investments in scrubbers, which allows the ships to continue to run on heavy fuel oils. The IMO estimates that as of January 1 2020, approximately 3,800 vessels will have had scrubbers installed, the majority having an open loop system.

Seawater scrubbing is a technique for the purification of ship exhaust gases, where the exhaust gases are led through a fine spray of seawater that washes out acidifying sulphur oxides. The process creates very large volumes (about 500 m³/h for a medium-sized vessel) of heavily acidified (pH3) and contaminated water, as other pollutants than sulphur oxide are washed from the exhaust gases. The use of scrubber technology is on the rise as it offers a cheap alternative to meeting the new stricter sulphur rules. Currently three different types of scrubbers exist; open loop, closed loop and hybrid systems.



Open-loop scrubbers are the simplest and most common form of scrubber, which release the acidified and contaminated water directly into the sea. The guidelines for controlling the release of wash water from open scrubbers include pH, turbidity and nitrate (related to possibly washed out nitrogen oxides), and polycyclic aromatic hydrocarbons (PAHs). However, the metal content of the scrubber water is not included in the guidelines. It is also unclear where the sometimes very high levels of copper and zinc that has been measured in the wash water originate.

The closed loop scrubbers add a base to the spray, which allows it to use less water. Used wash water can be drained ashore. In hybrid variants of scrubbers, the wash water can be drained ashore or discharged into less sensitive sea areas. Although the name "closed" indicates a "closed" system, most such systems still have a substantial discharge of wash water into the sea; lower volumes than open systems, but with significantly higher concentrations of pollutants. It is important to realize that the amount of emissions of less-degradable substances is the same regardless of the amount of dilution done onboard.

Areas where shipping goes near the coast or through sensitive archipelagos are exposed to significant negative environmental impact. Discharges of wash water in coastal areas containing both acidifying and hazardous substances may hamper the possibility of improving the environmental state of these areas and in the long-term hinder European member states from achieving good environmental status.

The use of scrubbers counteracts all of the work and effort put in during the last 10-15 years to ensure legislation that bans the release of sulphur from the shipping industry.

Several countries such as Germany and Belgium have already decided to ban the discharge of scrubber water, based on its detrimental effects on achievement of the criteria for good environmental status of the Marine Strategy Framework Directive and good chemical status according to the Water Directive. Several countries globally have implemented or are investigating the possibility of national regulations.

Position

KIMO welcomes the European Commission and International Maritime Organization decisions to reduce emissions from the shipping sector but recognizes that:

- The majority of ships have not switched to low sulphur fuels but have instead installed scrubbers causing acidification and polluting marine ecosystems.
- The United Nations International Maritime Organization (IMO) has estimated that approximately 3,800 vessels will have scrubbers installed as of January 1 2020, the majority of which have open systems.
- Discharge of wash water from scrubbers may compromise EU member states' ability to reach good environmental status according to the Marine Strategy Framework Directive, and good ecological and chemical status according to the Water Directive.
- There is a need to act quickly to impose prohibitions on scrubbers or strict limits on wash water from scrubbers.

KIMO International urges Regional Seas Conventions to act as quickly as possible to impose either prohibitions on scrubbers or limits that are so strict that the scrubbing technology in practice will be useless. Strict limit values might be preferred due to their technology neutrality.



Based on the designation of the Baltic Sea as a PSSA area, it is reasonable for the IMO to decide on strict limits for the Baltic Sea as well as North Sea as it is a SECA area. It is important that the matter be handled promptly before the majority of global shipping has installed scrubber technology.

KIMO

Recognizing the need for a clean environment in and around the Northern- and Baltic seas and the threat posed to marine ecosystems by wash water pollutants from scrubbers in ships.

Urges:

- European Governments, the European Commission and International Maritime Organization to take vigorous action to ban or set strict limits regarding discharge of wash water from scrubbers in shipping for the Baltic Sea and the North Sea, so that it does not compromise achievement of good environmental status and good ecological and chemical status.
- European Governments to take unilateral action to ban the discharge of wash water from scrubbers in ports and coastal areas and in Particularly Sensitive Sea Areas (PSSAs).

KIMO members:

- Agree to submit this Resolution to all National Governments, the European Commission, the International Maritime Organization, HELCOM, OSPAR, and other relevant organizations.