



Scrubbers help the
environment and
save money

Marine industry



Increased attention has been focused on ships that produce air pollutants. There has been a lack of regulation for many years resulting in engines optimized for fuel consumption rather than those set up to minimize emissions.

Sulphur content reduction required

In October 2008 the Marine Environment Protection Committee (MEPC) of the International Maritime Organization (IMO) agreed to progressively reduce the maximum sulphur content in ship fuel.

The revised Marpol Annex VI regulations reduce the global sulphur cap to 0.5%, effective from 1 January 2020. The limit applicable in Emission Control Areas (ECA) will be reduced to 0.1%, effective from 1 January 2015.

SO_x emissions are directly proportional to fuel sulphur content, thus fuel with lower sulphur content has lower SO_x emissions. However, instead of using a more expensive fuel, SO_x can be removed after combustion with an exhaust gas cleaning system.

Case study

- Mist elimination marine exhaust gas cleaning

Advantages:

- Remove sulphur oxides from ship engine and boiler exhaust gases
- Divide spray equally
- Cools gases until optimal temperature is reached
- Remove particles from sea water droplets
- Clean sulfur and particles from exhaust gases



The Munters solution

There are several different marine exhaust gas cleaning systems designs, usually referred to as scrubbers. These scrubbers remove sulphur oxides from ship engines and boiler exhaust gases.

Exhaust gases are led through the scrubber from bottom to top. Process water is fed into the top of the scrubber with nozzles. This results in an equally divided spray.

Exhaust gases are cooled until the optimal temperature is reached. Seawater droplets fall and all particles are removed. The sulphur in the exhaust gases dissolves in the process water and binds as a salt.

A mist eliminator is needed, after the scrubber, to stop the polluted mist from escaping out of the funnel. It is a critical component and quality cannot be compromised. The clean exhaust gases then exit, cleaned from sulphur and particles.

Investing in an EGC system normally pays off quickly, not only from an environmental perspective, but also in actual fuel cost savings.

Munters has been installing land-based scrubbers for many years, having delivered more than 1500 to date, and has been working closely with the R&D departments from leading marine exhaust gas cleaning system manufacturers.

Today, Munters delivers customized mist eliminators to the most advanced emission gas cleaning systems on the market and has a global organization ready to support.

Munters is an associate member of the Exhaust Gas Cleaning Systems Association.

Would you like to find out if Munters has a solution for your company too? If so, please visit our website, www.munters.com

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