

# Successful scrubbers

VDL KTI has been building marine scrubbers for supertankers and ferries ever since 2013. A scrubber is placed inside a ship's funnel. The technology reduces sulphur emissions by using seawater to remove SOx particles from exhaust gases.

The exhaust gases are treated by spraying them with a mist of seawater. The exhaust gases from the ship's engine pass through the scrubber, starting from the bottom of the scrubber and eventually leaving at the top as clean, white smoke. The water droplets inside the scrubber absorb sulphur, soot and ash particles, and the contaminated water that remains in the

system on the ship is then cleaned. The scrubbers mainly filter sulphur particles from the exhaust gases emitted from the ship's engine, resulting in lower air pollution.

VDL KTI delivers the scrubbers to VDL AEC Maritime, which then sells the scrubber systems, including installation and commissioning, to customers in the maritime industry. Joost Wijdeveld, Sales Director at VDL AEC Maritime, is extremely satisfied with the collaboration with VDL KTI. "It is a company with highly skilled employees who are capable of manufacturing scrubbers using high-grade materials and reliable production techniques. The scrubbers are built utilizing a combination of high-quality components, optimal gas diffusion and an equally optimal process. The quality



of assembly, as well as the welding, is first-rate." The importance of quality in our scrubbers should not be underestimated. "We use our scrubbers in extreme conditions, such as high exhaust gas temperatures, with salted seawater environment and high acidity levels," says Joost Wijdeveld. "This level of quality is also essential for international shipping, considering that our customers are at sea 24 hours a day, 365 days a year." VDL AEC Maritime has customers in all major maritime countries and regions, including Greece, Japan, China, Singapore, the US, Germany and Scandinavia. "Our customers are very satisfied with our scrubbers, especially if they had experience in the past working with other suppliers who delivered poor-quality products" according to Wijdeveld. "They have seen what kind of problems poor quality causes. Considering value for money, VDL scrubbers are the best choice on the market." Since 1 January 2020, new, stricter emission standards were introduced for the international shipping industry, restricting maximum sulphur emission levels from between 0.1 to 0.5 % range. "The new standard on sulphur emissions, which applies on seas and oceans around the world, is of particular importance to the larger ships with higher fuel consumption, such as



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cruise ships, oil tankers, bulk carriers and ferries," says Joost Wijdeveld. VDL AEC Maritime has abundant evidence to persuade ship owners to install a scrubber. "A scrubber enables you to prove that your performance exceeds the agreed standards," explains Wijdeveld. "Using a scrubber, you can continue to use heavy fuel oil (HFO) at sea. Research shows that ships with a scrubber emit less CO<sub>2</sub> than those powered by low-sulphur fuel without a scrubber. Low-sulphur fuel does not guarantee lower CO<sub>2</sub> emissions. After all, cracking low-sulphur fuel consumes so much energy that it actually has a significantly negative effect on CO<sub>2</sub> emissions. Moreover, high-sulphur fuel oil is cheaper than the low-sulphur alternative. Low-sulphur fuel oil is thinner and can cause leaks, and is therefore a fire hazard in the engine room."