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# MARITIME REPORTER AND ENGINEERING NEWS

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# Great Ships

of 2015

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**Special Report**  
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# CROE MARINE EXHAUST GAS SCRUBBERS

## THE SMART SOLUTION FOR MARPOL COMPLIANCE

Under the strict, new emissions requirements that went into effect on January 1, 2015 as part of MARPOL Annex VI regulations, vessels sailing in specific areas identified as Environmental Control Areas (ECA) in the North Sea/Baltic and US, Canada and Caribbean have to use fuel containing no more than 0.1% Sulfur. In January of 2020 (pending review in 2018) the sulfur regulation will expand to all other areas of the world requiring fuels to be limited to no more than 0.5% Sulfur content in those areas. Fortunately, IMO/MARPOL has provided an alternative path to MARPOL compliance by using Marine Exhaust Gas Cleaning Systems also known as Scrubbers.

Many ship owners and operators have already chosen to use Scrubbers allowing their ships to continue using heavy fuels with full confidence of meeting MARPOL compliance. By doing so, they save fuel costs while helping to clean the planet.

CR OCEAN ENGINEERING (CROE®) is a global leader in the supply of Marine Exhaust Gas Scrubbing Systems to the marine industry. The CROE® systems can be retrofitted into existing ships or installed into new-build ships. The small diameter and short height of the CROE® scrubbing system makes it the preferred system for many ship applications.

The CROE® scrubber reduces particulates and SO<sub>2</sub>



emissions from the exhaust gas from heavy fuel burning engines, generators and boilers. The CROE® system can easily reduce the SO<sub>2</sub> stack emissions to below the 0.1 sulfur fuel equivalence as required by the MARPOL regulations even when operating in the low alkalinity areas of the eastern Baltic. The typical scope of supply includes the scrubber tower, the primary circulation tank, the pumps, automated valves, instrumentation, continuous emissions monitors, washwater cleaning system, washwater monitors and control panel.

In today's very competitive shipping industry owners

and operators need to take advantage of every avenue that is available to them. Installing the CROE® scrubbers and using the lower cost fuels can make a significant difference in a company's competitiveness.

Owners contemplating exhaust gas scrubbing as an alternative to distillate fuel are typically confronted by the divergent interests of engine manufacturers, consultants, marine architects and others — most lack the depth of technology experience necessary to assure a seamless transition during the process of compliance.

CR Ocean Engineering, LLC's expertise lies in the technology that is at the heart of any effective exhaust gas cleaning system. We are prepared to guide owners to the most efficient and economical solution to MARPOL compliance.

CR Ocean Engineering Marine Exhaust Gas Scrubbers are available in three standard configurations, customizable to the ship's needs:

- a) As a once through scrubber, also known as Open Loop;
- b) As a recirculating scrubber, also known as Closed Loop;
- c) As a combination of both designs, also known as Hybrid.

They can be retrofitted into existing ships and are also the perfect choice for new builds.

**Should you need more information, please contact Nick Confuorto: [nconfuorto@croceanx.com](mailto:nconfuorto@croceanx.com)**

## THE MONEY-SAVING ALTERNATIVE TO LOW SULFUR FUEL



CR Ocean Engineering (CROE®) offers ship owners and operators a proven low-cost alternative to the conversion to distillate fuel. Backed by nearly 100 years of experience, CROE® provides cost-effective systems customized to your specific needs and designed to help you save money and remain competitive. Our systems can easily achieve the 0.1% Sulfur equivalency when burning high Sulfur fuel oil. The CROE® Exhaust Gas Cleaning System (also known as Scrubbers) offers:

- all metallic construction
- ability to run dry
- designed for full engine temperature
- in-line construction for single engines or multistreaming
- light weight & small dimensions
- ability to replace silencers
- high efficiency
- proven on-board performance

CROE® Scrubbers are very cost effective and can be delivered on a short schedule when needed. Let us guide you to the most efficient and compliant solution.

Contact: [nconfuorto@croceanx.com](mailto:nconfuorto@croceanx.com)  
Tel. +1 (973) 455-0005, Ext. 110  
[www.croceanx.com](http://www.croceanx.com)

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