

marine diesel solutions



Annex VI to the International Convention for the Prevention of Pollution from Ships (MARPOL) limits SO_x emission from marine diesel engines and creates two new Emission Control Areas (or ECAs) in North America and the Caribbean.

MARPOL Annex VI also applies more stringent global emission standards and fuel sulfur limits. Emissions are tied to fuel quality, with ECA compliance levels changing over time, ultimately restricting SO_x emission to the equivalent of 0.1% sulfur fuel by 2015.

SO_x emission compliance can be met by using more expensive, low sulfur fuel, by scrubbing the exhaust gas stream, or a combination of both. Using low sulfur fuel significantly increases operating costs.

A global leader in gas scrubbing technology, BoldEco Group has been developing and testing marine diesel motor particulate and gas emissions solutions since 2008. BoldEco's commercially available emissions control options include wet scrubbing, dry particulate and catalytic systems, all designed to maximize emissions removal efficiencies while maintaining system performance reliability and flexibility at the lowest possible operating cost.



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Skillman NJ 08558 www.boldeco.com
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features of BoldEco systems

BoldEco's marine diesel solutions are comprised of maintenance friendly components. Our systems are designed to be installed within the space parameters available on-board modern marine vessels. Solutions available include controls for SO₂ removal, NO_x removal, and PM removal.

Advantages of BoldEco multi-stage systems:

- Separate PM and SO₂ effluents
- Reduce maintenance
- Increase gas scrubbing efficiency
- Reduce VOCs that cause odor

Wet-Wet systems:

- All metallic elements - allow for running without water
- Eliminate any chance of sump liquid flow-back to engine
- Actively maintain system pressure drop
- Centralized or distributed system architecture
- Operate in once-through or closed-loop mode
- Minimize sodium hydroxide use in closed-loop mode
- Exclusive heat exchange technology eliminates vapor plume and minimizes fresh water usage

Dry-Wet hybrid systems:

- Eliminate oily discharge

In-port regenerative zero-discharge systems:

- Eliminate the need for sorbent
- Eliminate materials procurement logistics
- Eliminate need for in-port liquid storage requirements
- Minimize operating cost

typical reduction efficiencies

Based on required reductions and fuel flexibility, the following performance guarantees will be provided:

- SO₂ removal rate (>95%)
- NO_x removal rate (>90%)
- PM removal rate (>80%)
- VOCs removal rate (>50%)



on-going testing of innovative solutions

BoldEco maintains an ongoing test program with one of the largest shipbuilders in Europe. Test programs are designed to demonstrate the reliability of next generation technologies and optimize efficiency, effluent and sorbent requirements.

program highlights

- low capital and operating cost
- fuel flexibility
- reduces or eliminates effluent and sorbent requirements
- competitive financing available

Available exclusively through:

Inquiries: JoAnn Pacinelli

email: pacinelli@ecapitalexchange.com • phone: 412.427.0133



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