

## SCRUBBER SUPPORT SERVICES

As the compliance deadline for IMO's 2020 Global Sulphur Cap nears, many in industry are considering exhaust gas cleaning systems (EGCS) or scrubbers as a compliance solution.

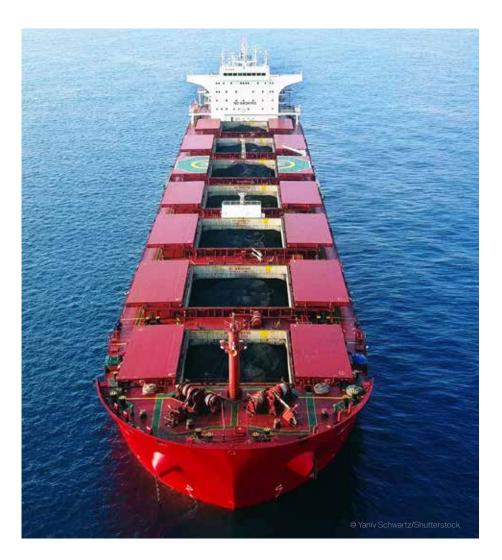
Once the decision to use a scrubber has been made, it is important for owners and operators to understand the available technology, life-cycle costs and operational impacts of each type of scrubber being considered. Whether you are just starting to explore approved scrubber systems, or you have a system selected or you have already installed a scrubber, ABS provides a comprehensive suite of guidance and solutions to help you every step of the way.

## **SCRUBBER SELECTION**

Before selecting a scrubber for your fleet, it is critically important to identify the best options based on specific vessel and operational characteristics. To inform the scrubber selection process, ABS offers a technology evaluation that helps shortlist the most suitable scrubber options. As part of the evaluation, ABS utilizes its in-depth manufacturer questionnaire that is customized to the specific vessel and its trading profile.

Each potential scrubber option is evaluated on:

- Status of Approvals or Certifications
- Redundancy and Safety
- Operational Reliability and Efficiency
- Technology Availability, Reliability and Maturity
- Capital and Operating Costs
- Manufacturer After-sale Support



## SCRUBBER INSTALLATION AND OPERATION

Installing a scrubber onboard introduces changes that can impact fuel supply, equipment and operating procedures, adding a new element of complexity and risk to your operations. Through a hazard identification (HAZID) and hazard and operability (HAZOP) workshop,

ABS can help you identify and mitigate risks to your operations. The interactive workshop, facilitated by ABS, brings together key stakeholders, including the vessel owner/operator and scrubber manufacturer. Once completed, ABS provides a comprehensive study that can be used to reduce your risk and better plan for scrubber installation and operations.

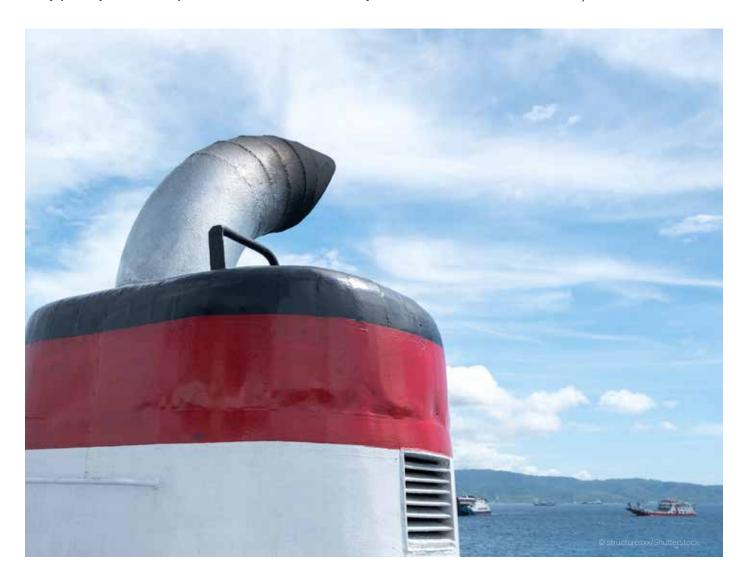
Once you have selected a scrubber or are planning to use another compliance option, the IMO is encouraging development of a Ship Implementation Plan to demonstrate that owners have a plan in place to consistently implement the 0.50% sulfur limit. ABS can help you develop a plan that outlines how the vessel will be in a position to comply. This plan will likely be

used to help local and regional authorities verify compliance.

Finally, ABS offers a full range of class, certification and verification services to support the proper installation and commissioning of a scrubber. From plan review to equipment certification to surveys during and after installation, ABS can help you at any stage of scrubber installation and operation.

If you are still exploring compliance options for any other vessels in your fleet, ABS can provide a lifecycle cost analysis which compares the economic impacts of the various fuel and associated equipment options to better inform your selection process.

Regardless of where you are today on your compliance journey, ABS can help you make the right decisions for your fleet.



To learn more about our compliance solutions, please visit www.eagle.org/environmentalcompliance or email us at environmentalcompliance@eagle.org.

