



## TECHNICAL CIRCULAR No. 673 of 5<sup>th</sup> March 2021

To	All Surveyors/Auditors. All flags
Title	<b>Scrubber technology</b>
Reference	IMO 2020 emission requirements

### **Scrubber system**

Installing scrubbers on board has brought well documented challenges for older tonnage. Need accurate drawings and documents sometimes hard to source. Different class societies can have different requirements and interpretations vary by individual surveyor.

Having secured more than 60 exhaust gas scrubber references, naval architecture and marine engineering firms suggest that future project will benefit from the lessons learned at the level of detailed design and installation work. For installing scrubbers, it is to consider, space availability, any structural changes and reinforcements that may be needed. Also, may be considered extra tankage and other heavy components. Retrofitting a scrubber can involve re-building parts of a vessel's structure, sometime complex.

The required modification can affect damage stability if tanks are added asymmetrically. Can bring the need of re-calculation of the vessel stability.

Changes on the watertight integrity, like tank modifications and bulkhead penetrations, cannot be done when the ship is at sea. That means that such installations must take place when the ship is in port.

Some corrosion problems occur due to scrubber water in the discharge piping passing through hull penetrations. It is noted an incident where corrosion in Sox scrubber piping between the overboard valve and ship hull led to a large quantity of seawater entering a ship engine room. During the damage survey, the spool piece and the diffuser diluting the acid wash water outflow were found to be heavily corroded, with the most likely cause a flow in the application of the protective epoxy coating. The class may require an annual inspection of the stool piece, either by gauging measurements or by a diver.

The heat loads generated by scrubber systems may be a problem for machinery spaces where scrubber system piping manufactured from combustible materials.

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REFERENCES:

- IMO and Ships and Bunker

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Kindest Regards,

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