

■ POLAR CODE

ABS delivers first Polar Code Operational Assessment

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New global regulations, emerging commercial interest and a renewal of the ice-breaking fleet are driving a rise in requests for technical support to manage the risks of polar shipping.

ABS, a leading provider of classification and technical services to the marine and offshore industries, last month delivered North America's first Polar Code Operational Assessment, supporting the polar-readiness of a cable-laying vessel owned by a U.S.-based organization.

The IMO's International Code for Ships Operating in Polar Waters, or the 'Polar Code', is a global regulation that entered into force in January. It requires owners and operators of all ships seeking to transit 'polar' waters (above the 60th parallel in the northern hemisphere) to conduct an operational assessment before sailing in the Arctic and Antarctic.

Commercial ships operating in Arctic waters — whether they are support ships such as cable layers, standard bulk carriers and tankers, or cruise ships — are exposed to additional hazards above and beyond traditional open-water routes, the most apparent is the requirement to navigate sea ice in the shipping lanes.

Operators can also face operational hazards associated with the extreme lows in ambient air temperatures, which can affect the performance of equipment and personnel, and accelerate the erosion of materials.

Ice accretion, which can affect the stability of smaller ships, is another potential hazard faced by crews that has the potential to impact the functionality of exposed equipment and make areas of the ship treacherous.

The Polar Code is a risk-based regulation, meaning it requires owner/operators to select controls that are appropriate to

the variable threats to be faced by the specific ship (including its equipment) and its intended operations in a specific area, a set of criteria known as the ship's 'operational profile.'

The profile establishes the potential hazards for the specific operation. Because the Arctic is a dynamic environment, which changes seasonally and geographically, setting the operational parameters and associated hazards is the key to establishing the applicability of each of the Code's regulations.

The assessment will also set any limitations to be listed on the Polar Ship Certificate, a list of procedures for the Polar Water Operational Manual, and any risk-control measures for the ship's systems and equipment, including lifesaving appliances and survival resources in areas where rescue options can be limited.

It also establishes a structure for how a company intends to manage its survival resources — one of the more challenging components of complying with the Code — and ultimately supports a smoother process towards certification.

The Polar Code does not require the operational assessment to be conducted by an independent third party. However, there are advantages to enlisting the services of external experts, not least of which is the confidence that an 'arm's length' assessment builds with the operator's stakeholder community.

After establishing the operational profile, environmental data needs to be reviewed to project seasonal ice and weather trends for the intended areas and periods of operation. These data sets are, for the most part, publicly available.

However, ABS has invested substantial resources into the analysis of the data to establish rich veins of information with regards to trends in areas such as sea ice age and concentrations, the potential for ice accretion and low air temperatures specific to relatively finite areas.

Through this analysis it is possible to gain a deeper understanding of a vessel's operating risks and to prepare for them using a structured assessment.

