

The Superyacht

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REPORT

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THE POLAR CODE IS COMING!



The Marine Safety Committee of the IMO, at its 94th session in November, will be invited to consider, with a view to adopting, the draft International Code for Ships Operating in Polar Waters. **Chris Van Hooren**, technical and environmental director, Superyacht Builders Association (SYBAss), looks at the legislation and its likely impact.

THE POLAR CODE

Ships operating in the Arctic and Antarctic environments are exposed to a number of unique risks. Cold temperatures may reduce the effectiveness of numerous components, ranging from deck machinery and emergency equipment to sea suction. When ice is present, it can impose additional loads on the hull, propulsion system and appendages. Ice accretion or ice-related damages will affect stability. Poor weather conditions and the relative lack of good charts, communication systems and other navigational aids pose challenges for mariners. The remoteness of the areas makes rescue or clean-up operations difficult and costly.

The existing IMO Guidelines for ships operating in Polar Waters (hereinafter called “the Guidelines”) are intended to address those additional provisions deemed necessary for consideration beyond existing requirements of the SOLAS and MARPOL Conventions. After its adoption, the more comprehensive Polar Code will replace the existing Guidelines and will become mandatory under the new SOLAS chapter XIV for new and existing ships.

THE POLAR CODE AND SHIP DESIGN

According to the current versions of the yacht codes (LY3 and PYC), yachts that intend to operate in Polar Regions must meet the requirements of a recognised Classification Society, while reference is made to the Guidelines. In due course these recommendatory Guidelines will be replaced by the requirements of the mandatory Polar Code.

The first and decisive step when considering Polar Code Certification is determining the desired Polar Code Category and Polar Ice Class. The

Polar Code distinguishes three ship categories (A, B and C), while an ice class is assigned based upon the IACS Unified Requirements. The Ice Class relates mainly to materials and structural strengthening for operation in ice. The relationship between the ship categories, ice classes and ice thickness is depicted in Figure 1.

Considering their typical Polar operation in summer time, ice classes up to PC7 seem the most appropriate for large yachts. Although at the lower part of the scale, a recent design study by a SYBAss member has demonstrated that compliance with PC7 affects the design of a yacht considerably, especially with regard to structural strength, intact and damage stability, subdivision and tank arrangement, machinery and lifesaving appliances.

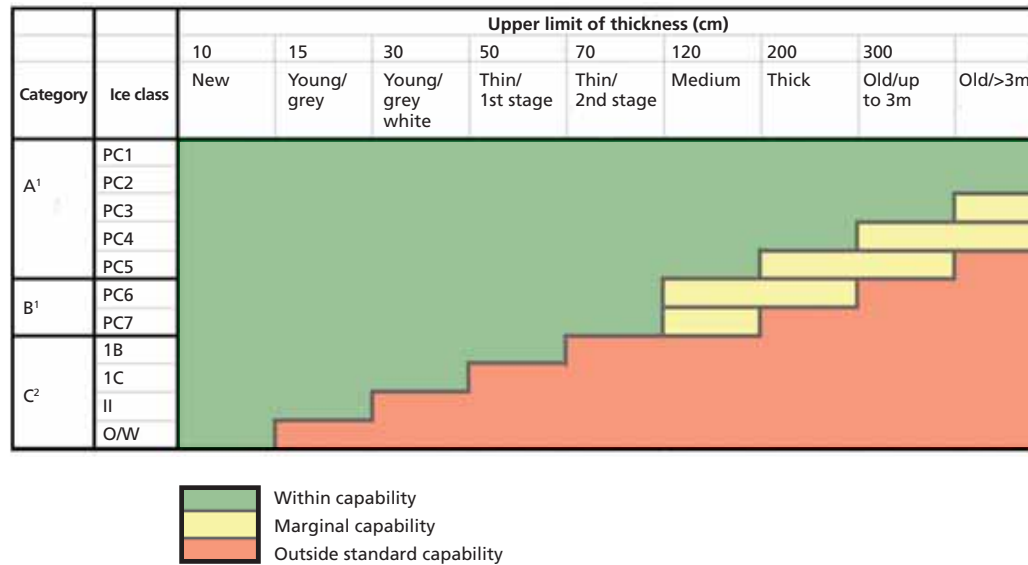
THE POLAR CODE AND SHIP OPERATION

Each vessel operating in Polar regions shall be provided with a Polar Water Operational Manual (PWOM). The manual shall include or refer to:

- The ship-specific capabilities and limitations;
- Procedures to be followed in normal operations and in order to avoid encountering conditions that exceed the ship’s capabilities;
- Procedures to be followed in the event of incidents in Polar waters;
- Procedures to be followed in the event that conditions are encountered which exceed the ship’s specific capabilities; and
- Procedures to be followed when using ice-breaker assistance, as applicable.

For operation in Polar waters, masters, chief mates and officers in charge of a navigational watch shall be qualified in

FIGURE 1: CONTINUOUS ICE CAPABILITY FOR STRUCTURAL SAFETY (SOURCE MSC 94/3/1)



The Polar Code seems to be a good piece of legislation that, being mandatory, will considerably increase the safety of ship operations and mitigate the impact on the people and the environment in the remote, vulnerable and potentially harsh Polar waters.

accordance with chapter V of the STCW convention and code, as amended as follows:

- In freely navigable waters, in which sea ice is present in concentrations less than 1/10, basic training for the master, chief mate and officers in charge of a navigational watch;
- For other waters additional advanced training is required for the master and chief mate.

In addition, every crewmember shall be made familiar with the procedures and equipment contained or referenced in the PWOM relevant to their assigned duties.

THE POLAR CODE IS GOAL-BASED

Each chapter of the Polar Code consists of an overall goal, functional requirements to fulfil the goal, and regulations. A ship shall be considered to meet a functional requirement when either:

1. The ship's design and arrangements comply with all the regulations associated with that functional requirement; or
 2. The ship's relevant design and arrangements have been reviewed and approved in accordance with regulation 4 of SOLAS chapter XIV.
- Option two is of interest as it provides designers and builders with a methodology for alternative design and arrangements as necessary.

CONCLUSION

The Polar Code seems to be a good piece of legislation that, being mandatory, will considerably increase the safety of ship operations and mitigate the impact on the people and the environment in the remote, vulnerable and potentially harsh Polar waters. Designers, builders and operators considering operation in Polar regions should familiarise themselves with the Polar Code for

awareness of its impact, and to reserve time for developing alternative design, arrangements, procedures and training as necessary.

The above short summary may illustrate that the Polar Code is much more than “a paper exercise to justify the present arrangements”, as stated by Garry Elliot in the article ‘No Prizes for the Polar Code’ on *SuperyachtNews.com* (<http://bit.ly/1tWhyMQ>). Concerns expressed in that article do not appear in the reports of the various IMO forums dealing with the Polar Code (committees, working groups and correspondence groups). It seems that Nautilus International prefers to voice disputable criticism to the media rather than contribute in a constructive manner to the debate at the IMO forums.

I invite Garry to note the contents of Paul Duncan’s ‘Drowning in a Sea of Yes’ in *TSR* 153. ■



TO COMMENT ON THIS ARTICLE,
EMAIL: ISSUE158@SUPERYACHTREPORT.COM
WITH SUBJECT: THE POLAR CODE IS COMING!