



TECHNICAL CIRCULAR No. 482 of 06th May 2018

To: All Surveyors/Auditors

Applicable to flag: All Flags

The Polar Code, One Year On

Reference: IMO, Polar Code

The Polar Code, One Year On

On January 1, 2017, the International Maritime Organization's (IMO) Polar Code came into effect. The functional, risk-based Code establishes mandatory regulations and standards for vessels operating in ice-covered waters to, in its own words, "Provide for safe ship operation and the protection of the polar environment by addressing risks present in polar waters and not adequately mitigated by other instruments of the Organization."

Too Technical?

When demonstrating compliance, for instance, ice damage is limited to a longitudinal extent that is 4.5% of the upper ice waterline length if centered forward of the maximum breadth on the upper ice waterline."

To make sense of these regulations, Lloyd's Register (LR), a global engineering firm and maritime classification society, helps shipowners identify compliance gaps between their vessels and Code standards. Undertaking a gap analysis comparing the prescriptive requirements from the Polar Code and the actual vessel's equipment provision by reviewing vessel drawings and the contractual technical specification.

This analysis helps ships set a baseline for Code preparation, so they know what additional equipment they might need. LR also facilitates operational assessments ranging from Category C yachts to Category A icebreakers to identify appropriate risk-mitigation measures.

Once a ship is compliant, the owner can obtain Polar Code certification from a classification society like LR or DNV GL. Oslo-based DNV GL has already issued several certificates, and an additional 20 vessels are at different stages of the certification process. More are likely forthcoming since DNV GL has over 4,400 ice-class vessels.

Search-and-Rescue Challenges

*Customer Service Center
5201 Blue Lagoon Drive, 9TH. Floor,
Miami, Fl., 33126
Tel: 1 (305) 716 4116,
Fax: 1 (305) 716 4117,
E-Mail:*

joel@conarinagroup.com

*Technical Head Office
7111 Dekadine Ct.
Spring, Tx., 77379
Tel: 1 (832) 451 0185,
1 (713) 204 6380*

E-Mail: vbozenovici@vcmaritime.com

Though more vessels are sailing to the Arctic and Antarctic, the amount of infrastructure onshore is not increasing in step. This is worrisome for search-and-rescue preparedness. In more remote reaches, several days in sub-zero temperatures and freezing water may pass before help arrives.

To prepare for this scenario, the Code mandates that life-saving equipment protect all persons onboard for a minimum of five days – no easy feat. Having adequate life-saving equipment onboard is the Code’s “main challenge.”

Two search-and-rescue expedition (SARex) tests conducted in April 2016 and 2017 in the Barents Sea off Spitsbergen at 81°N revealed that equipment suppliers still have their work cut out for them. In the first test, after 24 hours the standard Norsafe Miriam 8.5 lifeboat had to be abandoned due to uncomfortably cold temperatures inside. Even after upgrades were made, a Norsafe presentation from last year admitted that “It is still very unlikely you can survive the minimum five days in a raft.”

Some of the improvements Norsafe has made involve better ventilation, condensation, and even features that wouldn’t immediately come to mind like a curtain in front of the toilet to provide privacy.

These lifeboats will be equipped with additional insulation and a fuel-based heating system, and loose equipment like water portions and food rations will be increased to have enough for at least five days. In addition, the communication system will have batteries that last over this extended period to guide rescuers to the boat’s position.

Ice Radar

The Code does not require ice radar, it recommends it, and that has driven a lot of industry awareness.

While ice radar is recommended in shallow water, deep water is equally important.

The Code is goal-based: It states what vessels should aim for but doesn’t give details on how to achieve these goals. It also sometimes does not even provide minimum requirements or clarify how compliance will be documented.

It will take some time for IMO to decide and be more specific, and then for the industry and equipment suppliers to be able to supply the right equipment.

REFERENCES:

- IMO Polar Code and curtesy Mia Bennett

- ATTACHMENTS: No.

kindest Regards,
Val Bozenovici
Naval Architect – Conarina Technical Director

*Customer Service Center
5201 Blue Lagoon Drive, 9TH. Floor,
Miami, Fl., 33126
Tel: 1 (305) 716 4116,
Fax: 1 (305) 716 4117,
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