U. S. Coast Guard
Seventeenth District
Polar Code Brief
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Safety Measures for Non-SOLAS Ships

Proposals to Maritime Safety Committee to consider applying “goals, functional requirements and regulations of chapters 9 and 11 to non-SOLAS vessels operating in polar waters, to include fishing vessels over 24 meters.

Chapter 9 – Safety of Navigation
- Ice forecasting information
- Navigation information (high latitude)
- Ice detection
- Prevent ice accumulation

Chapter 11 – Voyage Planning
- STCW certification
- Polar Waters Operations manual
WHAT DOES THE POLAR CODE MEAN FOR SHIP SAFETY?

EQUIPMENT

- WINDOWS ON BRIDGE
  Means to clear melted ice, freezing rain, snow, mist, spray and condensation

- LIFEBOATS
  All lifeboats to be partially or totally enclosed type

- CLOTHING I
  Adequate thermal protection for all persons on board

- CLOTHING II
  On passenger ships, an immersive suit or a thermal protective aid for each person on board

- ICE REMOVAL
  Special equipment for ice removal; such as electrical and pneumatic devices, special tools such as axes or wooden clubs

- FIRE SAFETY
  Extinguishing equipment able to operate in cold temperatures; protect from ice suitable for persons wearing bulky and cumbersome cold weather gear

DESIGN & CONSTRUCTION

- SHIP CATEGORIES
  Three categories of ship which may operate in Polar Waters, based on:
  A) medium first-year ice
  B) thin first-year ice
  C) open waters/ice conditions less severe than A and B

- INTACT STABILITY
  Sufficient stability in intact condition when subject to ice accretion and the stability calculations must take into account the icing allowance

- STRUCTURE
  In ice strengthened ships, the structure of the ship must be able to resist both global and local structural loads

MATERIALS

- Ships intended to operate in low air temperature must be constructed with materials suitable for operation at the ships polar service temperature

OPERATIONS & MANNING

- NAVIGATION
  Receive information about ice conditions

- CERTIFICATE & MANUAL
  Required to have on board a Polar Ship Certificate and the ship’s Polar Water Operational Manual

- TRAINING
  Masters, chief mates and officers in charge of a navigational watch must have completed appropriate basic training (for open-water operations), and advanced training for other waters, including ice

BACKGROUND INFO

- THE INTERNATIONAL CODE FOR SHIPS OPERATING IN POLAR WATERS WAS ADOPTED NOVEMBER 2014 BY THE IMO MARITIME SAFETY COMMITTEE
- IT APPLIES TO SHIPS OPERATING IN ARCTIC AND ANTARCTIC WATERS
- THE AIM IS TO PROVIDE FOR SAFE SHIP OPERATIONS AND THE PROTECTION OF THE POLAR ENVIRONMENT BY ADDRESSING RISKS PRESENT IN POLAR WATERS AND NOT ADEQUATELY MITIGATED BY OTHER INSTRUMENTS
HOW THE **POLAR CODE** PROTECTS THE ENVIRONMENT

**OIL**
- **DISCHARGES**: Discharge into the sea of oil or oily mixtures from any ship is prohibited.
- **STRUCTURE**: Double hull and double bottom required for all oil tankers, including those less than 5,000dwt (A/B ships constructed on or after 1 January 2015).
- **HEAVY FUEL OIL**: Heavy fuel oil is banned in the Antarctic (under MARPOL).
- **LUBRICANTS**: Consider using non-toxic biodegradable lubricants or water-based systems. In lubricated components outside the underwater hull with direct seawater interfaces.

**INVASIVE SPECIES**
- **INVASIVE AQUATIC SPECIES**: Measures to be taken to minimize the risk of invasive aquatic species through ships' ballast water and biofouling.

**SEWAGE**
- **DISCHARGES I**: No discharge of sewage in polar waters allowed (except under specific circumstances).
  - **TREATMENT PLANTS**: Discharge is permitted if the ship has an approved sewage treatment plant, and discharges treated sewage as far as practicable from the nearest land, any fast ice, ice shelf, or areas of specified ice concentration.

**GARBAGE**
- **PLASTICS**: All disposal of plastics prohibited (under MARPOL).
- **FOOD WASTES I**: Discharge of food waste onto the ice is prohibited.
- **FOOD WASTES II**: Food wastes which have been comminuted or ground (no greater than 25mm) can be discharged only when the ship is not less than 12nm from the nearest land, nearest ice shelf, or nearest fast ice.
- **ANIMAL CARCASSES**: Disposal of animal carcasses is prohibited.
- **CARGO RESIDUES**: Cargo residues, cleaning agents, or additives in hold washing water may only be discharged if they are not harmful to the marine environment; both departure and destination ports are within Arctic waters and there are no adequate reception facilities at these ports. The same requirements apply to Antarctic areas under MARPOL.

**CHEMICALS**
- **DISCHARGES**: Discharge of noxious liquid substances (NLS) or mixtures containing NLS is prohibited in polar waters.

**BACKGROUND INFO**
- **THE INTERNATIONAL CODE FOR SHIPS OPERATING IN POLAR WATERS WILL ENTER INTO FORCE ON 1 JANUARY 2017**
- **IT APPLIES TO SHIPS OPERATING IN ARCTIC AND ANTARCTIC WATERS: ADDITIONAL TO EXISTING MARPOL REQUIREMENTS**
- **IT PROVIDES FOR SAFE SHIP OPERATION AND PROTECTS THE ENVIRONMENT BY ADDRESSING THE UNIQUE RISKS PRESENT IN POLAR WATERS BUT NOT COVERED BY OTHER INSTRUMENTS**

**DEFINITIONS**
- **SHIP CATEGORIES**: Three categories of ships designed to operate in polar waters:
  - Category A: Shall use ice-strengthened ships.
  - Category B: Shall use ice-strengthened ships with limited ice-breaking ability.
  - Category C: Shall use ice-classified ships.
- **FAST ICE**: Sea ice which forms and remains fast along the coast, where it is attached to the shore, to an ice wall, or an ice front, between shoals or grounded icebergs.
- **ICE SHELF**: A floating ice sheet of considerable thickness showing 2 to 30m or more above sea-level, attached to the coast.
What does this mean for Alaska?

• No immediate changes.
• Early stages of discussion.
• IMO engaged on Polar Safety, heavy focus on the Southern Ocean.
• Polar Code Phase II = Safety Measures for Non-SOLAS ships in Polar Waters.
• Could see “guidelines”.

Questions?

Seventeenth Coast Guard District

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