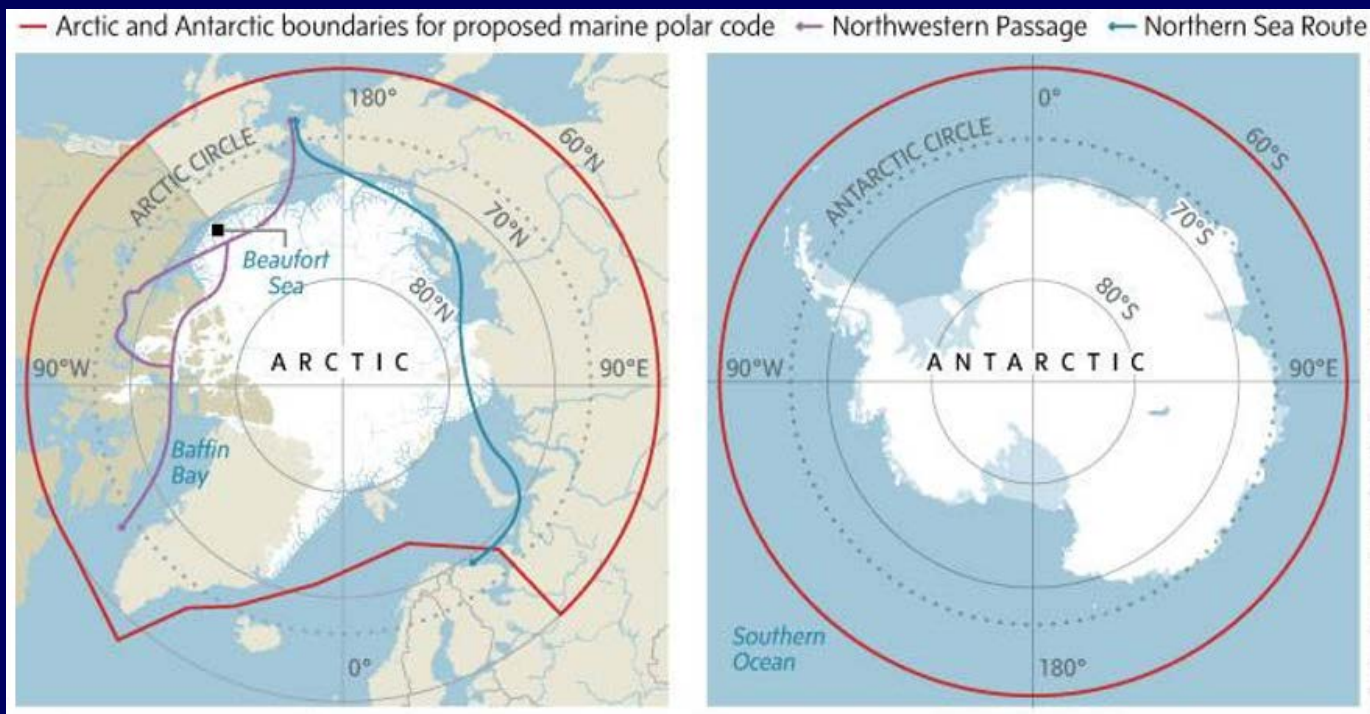




U. S. Coast Guard Seventeenth District Polar Code Brief

LCDR Jonathan Dale – D17 Inspections & Investigations





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.

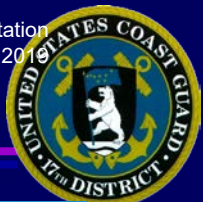
Chapter 9 – Safety of Navigation

- 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



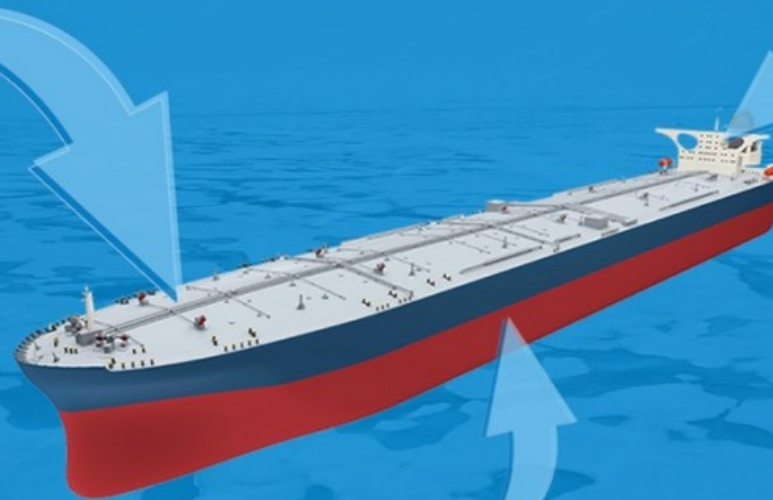
CLOTHING II
On passenger ships, an immersion suit or a thermal protective aid for each person on board



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



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

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



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



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

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 OPERATION 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 2017)



HEAVY FUEL OIL
Heavy fuel oil is banned in the Antarctic (under MARPOL). Ships are encouraged not to use or carry heavy fuel oil in the Arctic



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 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



DISCHARGES II
• Sewage not comminuted or disinfected can be discharged at a distance of more than 12nm from any ice shelf or fast ice
• Comminuted and disinfected sewage can be discharged more than 3nm from any ice shelf or fast ice

GARBAGE



PLASTICS
All disposal of plastics prohibited (under MARPOL)



FOOD WASTES I
Discharge of food wastes 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 ship is not less than 12nm from the nearest land, nearest ice shelf, or nearest fast ice



ANIMAL CARCASSES
Discharge 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 those ports. The same requirements apply to Antarctic area under MARPOL

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 ship designed to operate in polar waters in:

- A) at least medium first-year ice
- B) at least thin first-year ice
- C) open waters/ice conditions less severe than A and B



FAST ICE: Sea ice which forms and remains fast along the coast, where it is attached to the shore, to an ice wall, to an ice front, between shoals or grounded icebergs



ICE SHELF: A floating ice sheet of considerable thickness showing 2 to 50m or more above sea-level, attached to the coast

CHEMICALS



DISCHARGES
Discharge of noxious liquid substances (NLS) or mixtures containing NLS is prohibited in polar waters





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

***Standing the watch on the last frontier
yesterday, today and tomorrow***