

# Update on MLC and IMO Polar Code

OFEG meeting April 2015

# MLC update

- Five key points (for foreign cruise leaders):
  - Cruise personnel are not regarded as seafarers, but “special purpose personnel” and therefore many parts of MLC do not concern them.
  - Health certificate – All cruise participants must have a valid health certificate issued by a NMA-certified seafarers doctor.
  - All cruise personnel must have done basic safety at sea training. If not done before the cruise a “crash course” will be given on board before the vessel leaves harbor for the first time.
  - IMR vessels operates 24/7 and all personnel onboard, seafarers and cruise participants work 12 hours in any 24 hours period and shall have at least one continuous rest period in any 24 hour period. They are allowed to work up to 14 hours in any 24 hour period, but the extra work hours shall be “leveled out” with equal extra rest time in the next 24 hours period.
  - The cruise leader must have done basic course in Health, Safety and Environmental protection (HSE). In Norway this is basically a standard 40 hours course independent of type of activity/industry you work in, but IMR have a tailored version for our cruise leaders.

# 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

## 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



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



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



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



Special equipment for ice removal: such as electrical and pneumatic devices, special tools such as axes or wooden clubs



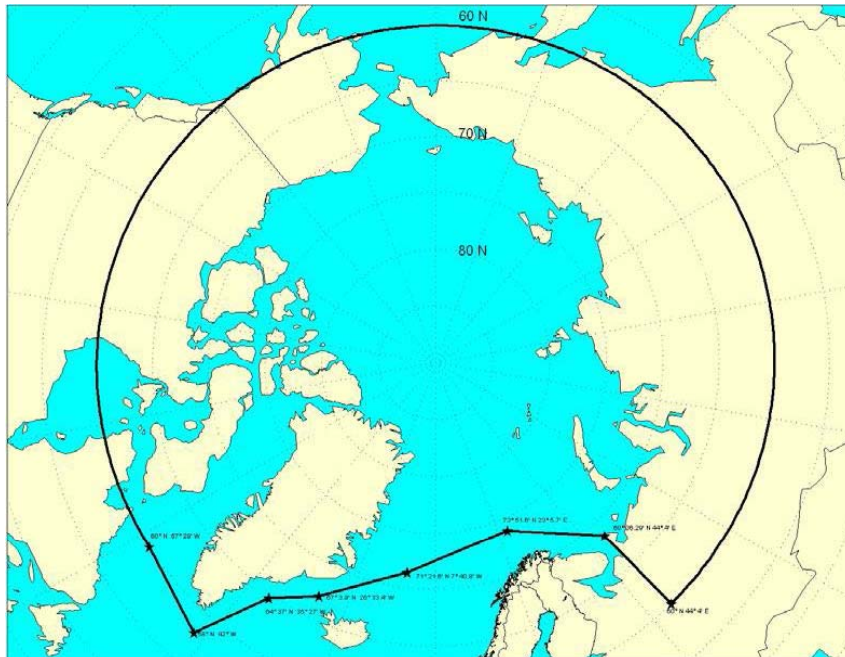
**FIRE SAFETY**  
Extinguishing equipment operable in cold temperatures; protect from ice; suitable for persons wearing bulky and cumbersome cold weather gear

## BACKGROUND INFO

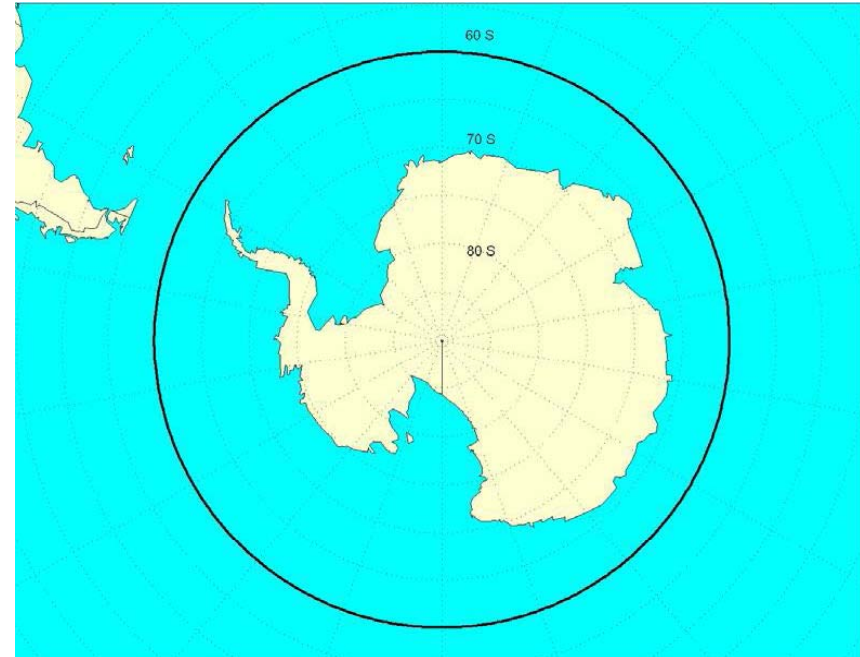
- ❄️ THE INTERNATIONAL CODE FOR SHIPS OPERATING IN POLAR WATERS WAS ADOPTED NOVEMBER 2014 BY THE IMO MARITIME SAFETY COMMITTEE.
- ❄️ IT APPLIES TO SHIPS OPERATING IN ARCTIC AND ANTARCTIC WATERS.
- ❄️ THE AIM IS TO PROVIDE FOR SAFE SHIP OPERATION AND THE PROTECTION OF THE POLAR ENVIRONMENT BY ADDRESSING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

# What are the Polar Areas Concerned?

## Arctic Waters



## Antarctic Waters



# The Polar Code Content

- **Part 1 – Safety Measures (SOLAS)**
  - Part I-A: ***Mandatory Requirements 13 Chapters***
  - Become chapter under SOLAS Chapter XIV
- Part I – B: *Recommendations on safety*
- **Part 2 – Pollution Prevention (MARPOL)**
  - Part II–A: ***Mandatory Requirements 4 Chapters***
  - Links with existing MARPOL Annexes
  - (Oil, Noxious Liquids, Sewage, Garbage)
- Part II – B: *Recommendations on pollution prevention*

# What Will You Need to Operate in Polar Waters?

## 1. **Polar Ship Certificate Defines Capability**

- Defines operational limitations
  - Additional for new buildings: Requirements concerning design and technical
- Approved by Flag State, or expert acting on behalf the Flag

## 2. **Polar Water Operational Manual (PWOM) defines operating procedures**

- Emergency response procedures, voyage planning, maneuvering , etc.
- Evacuation, survival

## 3. **Qualified Deck Officers Training and experience**

- Approved process

# Manning and training

- *An Ice Capable vessel is of limited value unless her personnel are fully competent.*
- *This implies a comprehensive program of training for key decision making individuals.*

# Training for Crew

- Development of an Advanced Level training Program
- Sea Time Requirement?
- Region of Experience
- Recognizing Previous Experience
- Ice Breakers?
- Ice Pilots
- Recertification Process



# STCW Chapter V – training and manning

Ice Condition	Tanker	Passenger Vessel	Other
Ice free	N/A	N/A	N/A
Open water	B for master, chief mate and OOW	B for master, chief mate and OOW	N/A
Other water	A for Master, Chief Mate B for OOW	A for Master, Chief Mate B for OOW	A for Master, Chief Mate B for OOW

A – advanced

B – basic

# Summary

- **Certification**
  - Polar Ship Certificate, approved by Flag State
  - Polar Waters Operational Manual (PWOM)
  - Certification that ship board equipment, including LSA is fit for polar temperatures and usage.
  - Likely impact on other ship certificates (ISM, Class, Flag)
- **New Ships**
  - Will need to meet all requirements through the code
  - Incumbent on owners to understand what it is they want to do and select the appropriate Polar Class
- **Existing Ships**
  - Dependent on requirement and operation for retroactive application

# Part 1-A Part 1-A *Mandatory Requirements (Safety)*

- General
- Polar Water Operational Manual
- Ship Structure
- Stability and Subdivision
- Watertight/ weathertight integrity
- Machinery Installations
- Operational Safety
- Fire and Safety protection
- LSA
- Safety of Navigation
- Communications
- Voyage Planning
- Crewing/Training
- **Part 1- B *Additional Guidance (Recommended)***

# *Requirements/ Guidance*

## ***Part 2-A Mandatory Requirements (Pollution)***

- Prevention of oil pollution
- Prevention of pollution from noxious liquid substances
- Prevention of pollution by harmful substances in packaged form
- Prevention of pollution by sewage from ships
- Prevention of pollution by garbage

## ***Part 2- B Additional Guidance (Recommended)***

- Ballast Water Management
- Ant-Fouling
- Bio Fouling

# IACS and Vessel Class Descriptions, continuing

- **Category A Ship**
- Designed for operations in at least medium first year ice which may include old ice inclusions. Ships to be ice strengthened and scantling shall be approved by the administration or a recognized organization (RO)
  - Polar Class 1-5 or equivalent
- **Category B Ship**
- A ship not included in Category A, designed for operation in polar waters in at least thin first year ice, which may include old ice inclusions. Ships to be ice strengthened and scantling shall be approved by the administration or a recognized organization (RO)
  - Polar Class 6-7 or equivalent
- **Category C Ship**
- A ship designed to operate in open water or in ice conditions less severe than those in A or B. Ships to be ice strengthened and scantling shall be approved by the administration or a recognized organization (RO)
- \* Category C Ship may not be ice strengthened if in the opinion of the administration, the ships structure is adequate for its intended operation

# Ship's Polar Capacity

- **Safety Equipment Machinery system functionality**
  - Fire protection and life saving
  - Navigation and communications
- **Temperature Consideration Design, equipment, and operational requirements for ships intended to operate in low air temperatures which are defined as -10o C MLDLT**
  - MLDLT (Mean Lowest Daily Low Temperature). Mean lowest temperature during a year of ships operation during 24 hr
- **Environmental Consideration Polar waters become “zero discharge” under MARPOL 1, 2**
  - Sewage and garbage disposal requirements increased
  - Category A and B ships will need further internal subdivisions (MARPOL)

# IACS and Vessel Class Descriptions

- Polar Class 1** Year round operations in all ice covered waters
- Polar Class 2** Year round operation in moderate multi year ice conditions
- Polar Class 3** Year round operation in second year ice which may include multi year ice intrusions
- Polar Class 4** Year round operations in thick first year ice which may include old ice intrusions
- Polar Class 5** Year round operations in medium first year ice which may include old ice intrusions
- Polar Class 6** Summer/Autumn operations in medium first year ice which may include old ice intrusions
- Polar Class 7** Summer/Autumn operations in thin first year ice which may include old ice intrusions

# Polar Waters Operating Manual

- Operations in ice, as applicable
- Operations in low air temperatures, as applicable
- Communications and navigation capabilities in high latitudes
- Voyage Duration
- Voyage planning to avoid ice/temperatures that exceed ships design capabilities
- Arrangements for receiving forecasts of environmental conditions
- Means of addressing any limitations of the hydrographic, meteorological, and navigational information available
- Operation of equipment required under other chapters of the code
- Implementation of special procedures to maintain equipment and system functionality under low temperatures, top side icing and the presence of sea ice, as applicable
- Procedures for contacting emergency response providers for salvage, SAR, pollution control, as applicable
- For ships intending to operate in ice, procedures for maintaining life support and ship integrity if the ship become beset or trapped in ice for long periods
- Measures to be taken in the event of encountering ice/temperatures which exceed the ships design capabilities