IMO Polar Code
ARCTIC SHIPPING BEST PRACTICE FORUM
Experience so far...

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The Polar Code

Goal:
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 of the Organization.
Challenges related to ship operations in Arctic waters

ICE

SEA SPRAY

LSA

EVACUATION
Risk = Probability x Consequence

Identify
Mitigate

WORLD WIDE
POLAR
The main impacts of the Code; - additional requirements

- Operational (Risk) Assessment*
- PWOM, Polar Water Operational Manual*
- Life Saving Equipment
- Route planning
- Environment; no discharge = stricter
  - Requirements to holding tanks (volume), garbage storage etc.

- Finally, a Polar Ship Certificate is required and will be issued by DNV GL on behalf of flag

*Documents to be produced by owner and approved by DNV GL
Table of content; Part IA SAFETY MEASURES

– Chapter 1: General
– Chapter 3: Ship Structure
– Chapter 4: Stability and Subdivision
– Chapter 5: Watertight and Weathertight Integrity
– Chapter 6: Machinery Installations
– Chapter 7: Fire Safety/Protection
– Chapter 8: Life Saving Appliances and Arrangement
– Chapter 9: Safety Navigation
– Chapter 10: Communication
– Chapter 11: Voyage Planning
– Chapter 12: Manning and Training Familiarity
– Part IB: Additional guidance regarding the provisions of the introduction and Part IA
Operational Assessment, the first step

- Define polar operating profile
- Identify relevant hazards
- Select design measures
- Select operational measures
- Scope of Polar Code requirements

EXPERIENCE
Experience from:

- **Chapter 1 General**
- **Operational Assessment**
  - Include all additional HAZARDS
  - Example on table to be used in OA:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>EQUIPMENT</th>
<th>HAZARD</th>
<th>R = P x C</th>
<th>RISK CONTROL ACTIONS</th>
<th>STATUS</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
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<td>No Go</td>
<td></td>
</tr>
</tbody>
</table>

Design, Equipment or Operational procedure (->PWOM)
Experience from:

- **Chapter 2: Polar Water Operation Manual**
  - Different interpretations, ref. chapt. 2 and Appendix 2.
  - Limited understanding of the main goal of the manual
  - Need for a **template** for table of content
  - The connection between the Operational Assessment and PWOM not understood

- **Chapter 3: Ship Structure**
  - Relation between Categories and Ice Class.
  - Actual ice limit for Cat. C is maximum thin first year ice (0.3m)
  - Category refers to ice class but not same definition of ice conditions (WMO)

- **Chapter 4: Stability and Subdivision**
  - Confusion if damaged stability (Cat. A and B) requirements to be fulfilled with ice accretion
Experience from:

- Chapter 5: Watertight and Weathertight Integrity
  - ok
- Chapter 6: Machinery Installations
  - ok
- Chapter 7: Fire Safety/Protection
  - ok
- Chapter 8: Life Saving Appliances and Arrangement
  - Maybe the 5-days requirement to equipment should be possible to reduce based on actual operation. Example, OSV during field operation and cruise vessels with limited operations
  - Gap between actual requirements to equipment to ensure survival and what will be required by flags. (LB capacity, use of rafts, possible de-rating etc.)
  - Content and quality of PSK and GSK
  - Thermal protection
  - TPA and survival suites
Experience from:

- **Chapter 9: Safety Navigation**
  - Definition of up-to-date information including ice information (9.3.1)

- **Chapter 10: Communication**
  - Battery capacity/operational procedure
  - TMAS (need satellite communication, often not approved solutions) ref. (10.3.1.4)

- **Chapter 11: Voyage Planning**
  - ok

- **Chapter 12: Manning and Training Familiarity**
  - Actual training requirements, - how to fulfil?
  - With regard to training and STCW, the following Implementation timeline has to be followed:
    - The amendments to the STCW enter into force on 1 July 2018. Implementation of them includes a two-year transition period (from 2018 to 2020). Ship owners and seafarers should contact their national maritime administration for information on how it is implementing the Polar Code training requirements and how to obtain the necessary certificates.
The process towards receiving the certificate

1. Owners Polar Operating Profile
2. Operational Assessment
4. Survey -> Certificate

For Information

Approved
Some general challenges

- Testing procedures for equipment, for PST lower than -25° C
- Data/picture communications required for TMAS and Ice information
  - Equipment to satisfy same Performance Standard referred to in SOLAS
- Actual need for GSK, - if evacuation to land/ice
- If OA concludes with dry evacuation, TPA ok and no need for survival suites
  - Definition of Thermal Protective Aid? =TPA?
- PSC: Definition of Operational Limitations; Ice Conditions
  - Refer to Polaris?
  - What about vessels with documented experience in more severe ice than the Category definition?
  - Info about possible operation in darkness and exposure to icing may be included.
DNV GL have so far more than 60 vessels approved or in the loop
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