



OIL & GAS

OTC Asia 2014: Panel Session 7: Operating in Adverse Weather Conditions Cold Climate: Winterization

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Winterization: Fresh Challenges

- Winterization for crew well-being
 - Physical effects such as fatigue, frostbite, hypothermia
 - Slips, Trips & Falls (HS&E)
- Winterization for technical safety
 - Safety-critical equipment and systems
- Winterization for operability
 - Systems to maintain the functionality of desired operations



Winterization: Why should Asia be interested?

- Sakhalin Island, etc
 - “in your backyard”
- Engineering hub for international offshore projects
- Winterization/Ice Class on Newbuildings
 - Shipyards (Ships & MOUs)
 - Offshore Yards (markets: Barents Sea, Canada, Alaska)
- Shipping routes (N.E. Passage/N.W. Passage)
 - Driving new designs => newbuildings
 - heavy lift ships

Winterization: Technical Issues



Icing



Freezing

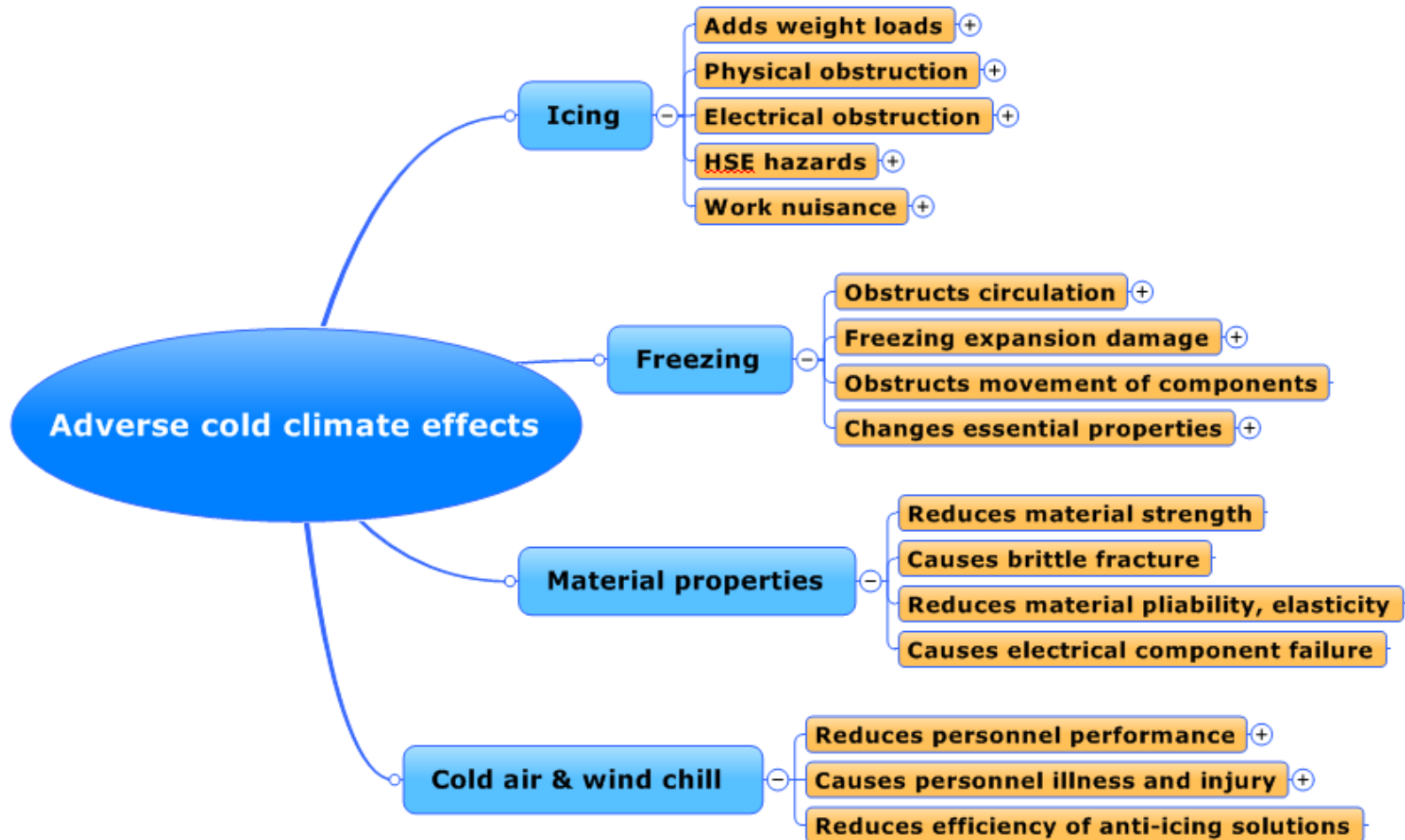


Materials



**Wind chill.
etc**

Cold Climate: Effects



Cold Climate: Winterization

Categories of Functional Requirements

- “Function as Normal”:
 - activities important for safety: e.g. LSA, fire-fighting, hull structure, stability, ballast, power generation, propulsion, mooring, ESD, F&G, Well Control, etc.
- “Restrictions on Operational Limits”:
 - industrial activities: e.g. crane operations, drilling activities, etc.
- “Do No Harm”:
 - minimise disruption, e.g. basic habitability, anti-freezing protection, etc.
- “Special Studies”:
 - Wind chill, dropped objects, emergency contingency (2nd order effects), etc.

**Thank You for your attention.
Q & A Session ?**

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