

Riggtilpasning i Polare strøk

Foredragsholder: Jørgen Jorde, Inocean Engineering

Resymé av foredrag

Inocean is a designer of floating structures for the Oil and Gas industry, and is involved in several client funded design development projects for the arctic.

The polar environment varies a between the different regions, both in terms of temperature challenges, ice coverage, ice berg challenges and water depths. Because of this an arctic drilling unit must be evaluated towards the specific site(s) where it will be operating, and different units will be needed for different locations.

When considering the arctic capabilities of a drilling operation a holistic approach is useful. In such an approach the combined capabilities of the drilling unit, ice management and logistics vessels and shore support are evaluated together. The lack of capabilities in one unit may very well be compensated by reinforcing another unit – or by introducing new capabilities.

For Evacuation, Escape and Rescue (EER) in particular we believe that the most robust concept is taking into account the rescue capabilities of the support vessels. A short transfer to large and capable support vessels vastly outperform the safety of lifeboats and other rescue means, even if such units are ice reinforced and winterized. The most challenging situation is probably in scenarios where there are rough seas in addition to some ice. Operations may from a technical standpoint take place in ice conditions, although we believe a stepwise approach is wise: Performing challenging operations in open water situations, and non-challenging operations (e.g topholes) in partial ice coverage/ light ice conditions. When experiences are gained these can be used to enhance safety and evaluate further operational criteria for operations in ice.

We advise winterization is performed on a need basis, evaluating which equipment is necessary for safety functions (including backup/ redundancy) and which equipment is needed for different operations. Safety critical equipment (both for personnel, materiel and drilling operation) need to function in the extreme situations (low temp/ icing), while non-safety critical equipment should receive winterization measures according to operational needs – with temperatures set accordingly. For ensuring a good work environment wind protection is paramount, and low temperatures should be accepted for areas not regularly manned.