

ARCON – Arctic Container

Gunnar Sander, July 2011

1. Project / publication	<p>Mejl�nder-Larsen, Morten and Espeland, �yvind. (2009): <i>ARCON – Arctic container</i>. Oslo: Det norske Veritas.</p> <p>http://www.dnv.com/industry/maritime/publicationsanddownloads/publications/dnvc ontainershipupdate/2009/02/arcon.asp</p> <p>The study is not available on the Veritas web site apart from the article linked to above. A memo dated 1. September 2009 is the basis for this review.</p>
2. Initiator	<p>Based on the brief report from the project, it seems to be initiated internally.</p>
3. Objective	<p>To look into the possibilities, challenges and risks related to a new direct shipping route across the Arctic Ocean from today and until 2050.</p>
4. Geographical delimitation	<p>Arctic Ocean with extensions to cover shipping routes between NE Asia and Europe.</p>
5. Time horizon	<p>2050 with simulations of development over time from 2009.</p>
6. Thematic focus	<p>It is a feasibility study of different solutions for container traffic on a particular shipping route over the Arctic Ocean.</p>
7. Images for the future	<p>Three different approaches for container traffic are considered:</p> <ol style="list-style-type: none"> 1. A conventional container vessel with ice strengthening 2. A purpose-built container vessel with an icebreaking hull shape 3. A Double Acting container vessel <p>These are tested in a model where ice conditions for 2009-2050 are a core variable.</p>
8. Key driving forces	<p>Ice conditions are considered the key variable in the feasibility study. Five cost components have been included: fuel price, operational costs, Suez canal fee, cargo insurance both for Suez and Arctic and financial costs.</p> <p>Other drivers and uncertainties are also mentioned, first of all in the final discussion. Here world trade pattern is stated as a primary driver.</p>
9. Uncertainties/ wildcards	<p>The final discussion of risks can be seen as ”wildcards”.</p>
10. Accomplishment and collaboration	<p>Expert based.</p>
11. Method	<p>Quantitative supported by qualitative discussions. A model has been developed for the study, allowing for variation in parameters like oil price, ice coverage and speed of vessel.</p>
12. Sources of information	<p>No particular referred.</p>
13. Strengths	<p>The model allows for simulation of sensitivity to varying assumptions.</p> <p>It is positive that a quantitative technical-economical study giving indicative answers is followed by a discussion of challenges and risks that cannot so easily be taken into account in the model calculations. The economic calculations did in fact look promising, and the technical aspects were not considered a “showstopper” for container traffic in Arctic waters. But other factors brought into the discussion give a more nuanced reply where the main conclusion is that transit traffic is not feasible</p>

	in the short term.
14. Weaknesses	The study is narrow in scope and based on a lot of assumptions.
15. Attention and significance	Hard to assess. It has at least been presented at "Verftskonferansen 2009".
16. Relevance for the Fram Centre	The project is useful for more detailed work on shipping, but it is too narrow in scope to be interesting for broader discussions about Arctic futures.