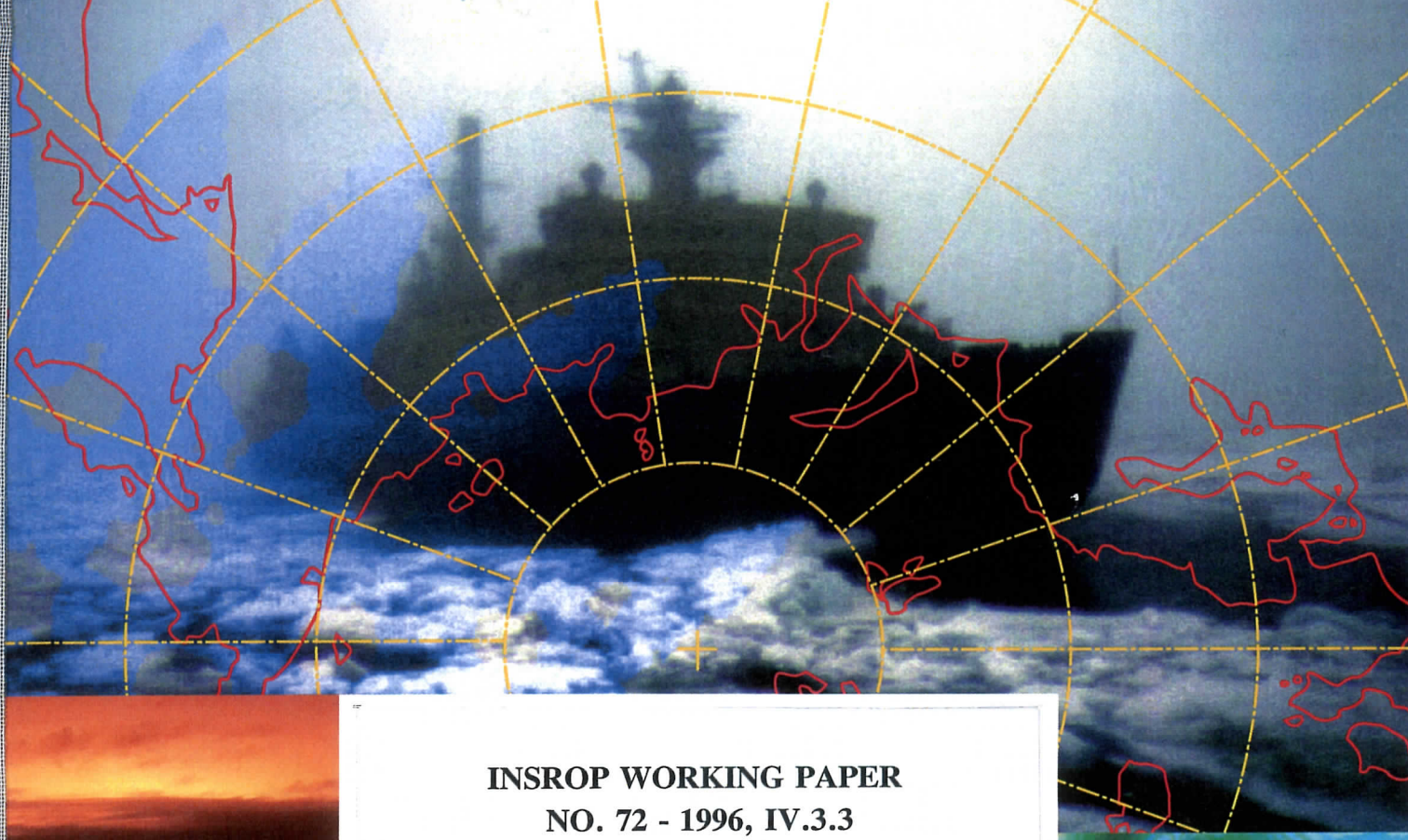



**INSROP WORKING PAPER**
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# Freezing Damage to Northern Sea Route Cargo: Liability and Insurance Considerations

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Ship and Ocean Foundation, Japan

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## FOREWORD - INSROP WORKING PAPER

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INSROP is split into four main projects: 1) Natural Conditions and Ice Navigation; 2) Environmental Factors; 3) Trade and Commercial Shipping Aspects of the NSR; and 4) Political, Legal and Strategic Factors. The aim of INSROP is to build up a knowledge base adequate to provide a foundation for long-term planning and decision-making by state agencies as well as private companies etc., for purposes of promoting rational decisionmaking concerning the use of the Northern Sea Route for transit and regional development.

INSROP is a direct result of the normalization of the international situation and the Murmansk initiatives of the former Soviet Union in 1987, when the readiness of the USSR to open the NSR for international shipping was officially declared. The Murmansk Initiatives enabled the continuation, expansion and intensification of traditional collaboration between the states in the Arctic, including safety and efficiency of shipping. Russia, being the successor state to the USSR, supports the Murmansk Initiatives. The initiatives stimulated contact and cooperation between CNIIMF and FNI in 1988 and resulted in a pilot study of the NSR in 1991. In 1992 SOF entered INSROP as a third partner on an equal basis with CNIIMF and FNI.

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# OUTLINE

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I would like to thank Professor Hugh Kindred, Faculty of Law, Dalhousie University, whose judicious comments on a draft version of this paper provided me with a much needed glimmer of light and guidance on my journey through the obscure and uncharted waters of arctic law of marine carriage and insurance.

Any opinions or conclusions expressed in this paper are those of the author alone, unless otherwise noted, and I bear full responsibilitiy for any shortcomings.

Freezing Damage to Northern Sea Route Cargo:
Liability and Insurance Considerations

*"The entire history of marine insurance has been taken up with dealing with the unknown, the uncharted. Today, most of the risks associated with shipping have been removed. In the Arctic, the situation is very similar to the days when vessels set off on voyages of discovery. The Arctic is still perceived as a [sic] unknown quantity or a marine frontier."*[1]

# INTRODUCTION

This paper is part of an ongoing research project called the "International Northern Sea Route Programme" (INSROP). The "Northern Sea Route" (NSR) is the name given to a shipping route stretching from Scandinavia to Japan via the Arctic Ocean. The icy arctic waters render navigation particularly difficult and risky and the aid of ice-breakers a necessity during the greater part of the year. As a result, the NSR is currently underexploited. Nevertheless, the NSR has the advantage of offering a 40% shorter seaway connection between Europe and the Far East, compared to the traditional route via the Suez Canal. Moreover, the NSR constitutes the normal shipping artery for the northern Eurasian communities, particularly those located in the former Soviet Union. For these reasons, it is

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1. K.J. Spears, *Arctic Marine Risks - The Interaction of Marine Insurance and Arctic Shipping* (Halifax, Canada: Dalhousie University, International Institute for Transportation and Ocean Policy Studies, 1986) at 106.

expected that with continuing technological and scientific research and development, the NSR will eventually experience a substantial amount of traffic.

The objective of the INSROP is to foster and gather research and thinking into the multiple facets of an expanded NSR. The project comprehends environmental, scientific, commercial, political and legal components. This paper is concerned with the legal implications of shipping on the NSR, more particularly the liability and insurance issues relating to freezing damage to cargo carried on the route.

The paper aims to fulfill two objectives, namely:

- Provide a tentative insight as to the application of the law of carriage of goods by sea to freezing damage to cargo on the NSR; and

- Reflect on existing and recommended terms of insurance for freezing damage to cargo on the NSR.

The necessity of marine insurance coverage for the viability of the NSR has been studied and discussed elsewhere.[2] Suffice it to say that, unless the international insurance market is willing and accepts to back shipping and cargo interests on this route, the whole NSR project will founder. This explains the emphasis laid by the project on the topic of marine insurance.

While this paper is in full agreement with the preceding paragraph, it also highlights the importance of looking at the rules of the law of carriage of goods by sea for their potential application to the NSR. Although marine insurance has in many respects an existence of its

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2. See E. Gold, "The Northern Sea Route: Is it a Viable Marine Insurance Risk?" (Paper presented to the INSROP Symposium Tokyo '95, 1-6 Oct. 1995); D.L. Torrens, *Marine Insurance for the Northern Sea Route: Pilot Study* (INSROP Working Paper, 1994).

own, enjoying an autonomy in both its instruments[3] and philosophy,[4] it is nevertheless interdependent with the contract of carriage on which it is superimposed. To understand the coverage effected by a contract of insurance, it is often necessary to revert to concepts peculiar to the contract of affreightment. For example, P&I rules cover the shipowner's/carrier's liability to cargo in the event of uncargoworthiness; in order to understand what uncargoworthiness means, we have to go back to the shipowner's/carrier's duties under the contract of carriage.[5] It is therefore fair to say that a discussion of marine insurance will be incomplete unless it is confronted with the distribution of liabilities occurring under the contract of carriage. In this paper, the discussion of both contracts will go hand in hand.

The rationale underlying the paper is that a higher degree of care with respect to cargo is required from both the shipowner/carrier and shipper on NSR voyages and that this should be reflected in stricter conditions of P&I and cargo policy coverage.

The requirement of extra care is particularly manifest where cargo is subject to the risk of freezing. The NSR is by definition a harsh environment where very low temperatures are considered part of the operating conditions. It is therefore no surprise that, in the perspective of an expanding traffic of goods moving along the NSR, particular attention will have to be given to cargo the nature of which renders it sensitive to cold, icy, arctic

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3. The basic instruments in marine insurance are the marine insurance policy and the rules of coverage of Protection and Indemnity (P&I) clubs. In carriage of goods, the basic instruments are the charter-party, the bill of lading and, increasingly, the waybill.

4. The insurance contract is a contract of indemnity: M.J. Mustill & J.C.B. Gilman, *Arnould's Law of Marine Insurance and Average*, 16th ed. (London: Stevens, 1981) vol. 1, § 3 [hereinafter *Arnould*]. A contract of affreightment or carriage is, on the other hand, an agreement "to carry goods by water, or to furnish a ship for the purpose of so carrying goods:" A.A. Mocatta, M.J. Mustill & S.C. Boyd, *Scrutton on Charterparties and Bills of Lading*, 19th ed. (London: Sweet & Maxwell, 1984) Art. 1 [hereinafter *Scrutton*].

5. But see the cautionary remarks of E.R. Hardy Ivamy, *Chalmer's Marine Insurance Act 1906*, 10th ed. (London: Butterworths, 1989) at 62 [hereinafter *Chalmer*].

weather. Examples of such cargo are innumerable: a large part of the agricultural produce does not resist subzero temperatures; the same may be said of foodstuffs and livestock. But the kind of sensitive cargo involved is not restricted to consumables: a good proportion of manufactured goods can suffer irreversible damage if subjected to severe cold weather. One can think of electronic devices such as calculators and computers which are subject to permanent alterations when frozen below a certain temperature. To illustrate the diversity of potentially vulnerable cargoes, a case decided by the Court of Appeal of Paris is apposite.[6] There a cargo of tractor radiators froze and cracked, because the radiators contained water.

The majority of current NSR shipments are not prone to freezing damage. In fact, it is anticipated that the short-term development of the NSR will depend largely on exports of raw materials such as nickel, copper, diamonds, gold, forest products and oil.[7] According to one researcher, "[e]ven if the container transport via NSR would prove to be economical, it is not expected that the shipping companies will change quickly from their traditional seaway (Suez Route) to the NSR."[8] Therefore, the actual risk of freezing damage to cargo may be limited in the short term. However, as the NSR will gain more and more popularity, the market will expand to include vulnerable cargoes, so the question of freezing damage will almost certainly arise in the future.[9] This paper should be approached with this factor in mind.

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6. Paris, 4 February 1953, DMF 1953.385.

7. J. Schwarz, "Can the Northern Sea Route be Profitable" (Paper presented to the INSROP Symposium Tokyo '95, 1-6 Oct. 1995) at TS III-7-6.

8. *Ibid.* at TS III-7-5.

9. In the words of K.J. Spears, *supra* note 1 at 5, fully applicable to the risk of freezing on the NSR:
> Clearly defining the marine risks involved in arctic shipping will go a long way to ensuring that both present and future shippers and ship owners will be paying for insurance coverage that accurately reflects real, rather than perceived arctic shipping risks.

It is an underlying assumption of the paper that neither the contract of carriage nor the contract of marine insurance contain clauses prohibiting navigation in ice-bound waters on the NSR.*

The paper is divided into three parts. Part I analyzes the liabilities of shipowner/carrier and shipper/consignee with respect to freezing damage under the contract of carriage by sea. Both charter-party and bill of lading contracts are examined, but, as to the former, emphasis is laid on voyage charters as these will probably constitute the most common form of contract used on the NSR, at least in the first years. The analysis is based on a review of the clauses of standard charter-party forms, namely the Gencon[10] and Baltime[11] charters, and the provisions of the Hague-Visby Rules.[12]

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* It is the author's opinion that the crux of the comments made by the reviewer (which appear as an appendix) relate to the consent of the insurer (see comments # 1 to 4) or of the shipper/consignee (see comment # 5) to shipment of the cargo through the NSR. This debate is outside the scope of the present paper, which only deals with the distribution of liabilities once it is accepted that such shipment is authorized by both the contract of carriage and the contract of insurance; this debate is moreover excluded from the paper by the proviso in the text.
On the other hand, the reviewer's comments indirectly give rise to the questions of disclosure and alteration of risk in reference to the ship's heating equipment. These issues are not discussed in the paper. If they had to be discussed, they would need elaborate developments and would surpass the present scope of the paper, which deals with the effects of the acceptance of risk, not the modalities of such acceptance.

10. "Gencon" Charter (as revised 1922 and 1976).

11. "Baltime 1939" Uniform Time-Charter (Box layout 1974).

12. *International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading*, 25 August 1924, 120 L.N.T.S. 155 [hereinafter "Hague Rules], amended by *Protocol to Amend the International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading, signed at Brussels on 25th August 1924*, 23 February 1968, U.K.T.S. 1977 No. 83 [hereinafter "Visby Rules"], amended by *Protocol Amending the International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading, 25 August 1924 as Amended by the Protocol of 23 February 1968*, 21 December 1979, U.K.T.S. 1984 No. 28 [hereinafter "Hague-Visby Rules"]. In view of the growing popularity of the *United Nations Convention on the Carriage of Goods by Sea, 1978*, 31 March 1978, U.N. Doc. A/CONF.89/14 [hereinafter "Hamburg Rules"], the latter could also be examined, but, for reasons of space, that is omitted here.

Turning to the consideration of marine insurance issues, Part II looks at the P&I conditions of cover in respect of freezing damage. In other words, insurance against the shipowner's/carrier's liability as determined in Part I is discussed. The basic documents used are the P&I rules of cover of three clubs, namely The Steamship Mutual Underwriting Association (Bermuda) Limited,[13] The Shipowners' Mutual Protection and Indemnity Association (Luxembourg)[14] and Assuranceforeningen Gard.[15]

Finally, Part III analyzes coverage of freezing damage under standard marine cargo policy clauses, namely the Institute Cargo Clauses (A), (B) and (C).[16] Reference is also made to the Institute Frozen Food Clauses[17] and to the English *Marine Insurance Act*.[18]

In concluding, the paper identifies areas of further research.

Research has relied principally on standard textbooks of carriage of goods by sea and marine insurance. Pertinent judgments are also mentioned; however, because reported cases dealing with freezing damage are scarce, analogies are emphasized, particularly with cases on refrigerated cargo.

The paper is based on English law although some American and European sources are also referred to. Concentration on English law is justified by two reasons: first, English maritime law and forms enjoy a world-wide prestige, particularly in the field of marine

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13. Class 1 Rules 1996/1997 [hereinafter "The Steamship Mutual"].

14. Class 1 Rules 1996 [hereinafter "The Shipowners' Mutual"].

15. 1996 Rules for ships, Part II, P&I Cover [hereinafter "Gard"].

16. (Effective 1 January 1982.) Where mention is made herein of the Institute Cargo Clauses (A), (B) or (C), it is in reference to these Clauses as reproduced in *Chalmer*, *supra* note 5 at 239ff.

17. (Effective 1 August 1986, re-issued 1 January 1986.) Where mention is made herein of the Institute Frozen Food Clauses, it is in reference to these Clauses as reproduced in N.G. Hudson & J.C. Allen, *The Institute Clauses Handbook* (London: LLP, 1986) at 48ff.

18. (U.K.), 6 Edw. 7, c. 41 [hereinafter *MIA*].

insurance where London still holds a considerable part of the international market; the second reason is space constraints. The reader should not be misled into thinking that English law and forms are to prevail on the NSR. It goes without saying that contracts may be made subject to the laws of any country and this applies to contracts of carriage and insurance.

# PART I: CONTRACT OF CARRIAGE OF GOODS BY SEA

Under the contract of carriage of goods by sea, the shipowner/carrier and charterer/shipper have certain duties to guard against cargo damage such as freezing. On the one hand, the shipowner/carrier is bound to make the vessel cargoworthy (A) and to care for the cargo (B). This could mean that the shipowner/carrier must heat the ship's holds during the NSR voyage. Furthermore, the duty not to deviate could mean that the shipowner/carrier is not entitled to carry the goods in unheated space unless authorized to do so (C).

On the other hand, the charterer/shipper must provide a sufficient packing (D). Loss due to inherent vice lies on the shipper/consignee (F). Other exonerations of liability for the shipowner/carrier are also relevant: act or omission of the shipper (E), negligence in the navigation or management of the ship (G) and perils of the sea (H).

## A) Duty of cargoworthiness

The duty of cargoworthiness must first be defined. It is the duty of every shipowner or carrier undertaking to carry goods by water to provide a ship that is fit for the carriage of the particular cargo on the particular voyage contracted for.[19] Cargoworthiness is included in the broader duty of seaworthiness,[20] which is implied in every contract of affreightment in the absence of words to the contrary.[21]

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19. A good definition of cargoworthiness is contained at article 3(1)(*c*) of the Hague-Visby Rules.

20. R. Colinvaux, *Carver's Carriage by Sea*, 13th ed. (London: Stevens, 1982) vol. 1, §§ 151 and 500 [hereinafter *Carver*]; *Scrutton, supra* note 4 Art. 48; E.R. Hardy Ivamy, *Payne and Ivamy's Carriage of Goods by Sea*, 13th ed. (London: Butterworths, 1989) at 15-16 and 111 [hereinafter *Payne &*

While seaworthiness *stricto sensu* implies that the ship must be fit in design, structure, condition and equipment to encounter *qua* ship the ordinary perils of the voyage,[22] cargoworthiness refers to the fitting of the vessel for the purpose of safely carrying the goods to their destination.[23] On the NSR, safe carriage to destination requires artificially maintaining vulnerable cargo at a certain temperature where exposure to ambient cold weather would otherwise cause the cargo to freeze and spoil. Cargoworthiness would thus require the fitting of heating equipment capable of providing a suitable environment for the shipment in question. By analogy, in *Maori King* v. *Hughes*,[24] where the contract of carriage was to carry frozen meat, the ship was held to be unseaworthy unless provided with suitable refrigerating machinery.[25]

Cargoworthiness also entails that the special on board equipment required by the nature of the cargo is in good working order. For instance, in *Maori King* v. *Hughes*,[26] not only did

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*Ivamy*]; J. Pineau, *Le contrat de transport terrestre, maritime, aérien* (Montreal: Thémis, 1986) paras. 124 and 134-135.

21. *Carver*, *supra* note 20 vol. 1, § 140; *Scrutton*, *supra* note 4 Arts. 47-48; *Payne & Ivamy*, *supra* note 20 at 14-16. For time charters, see *Scrutton*, *ibid.* Art. 47, note 39, and Art. 176. As to the undertaking of fitness of the ship for the purpose for which it is hired under a charterparty by demise, see *Scrutton*, *ibid.* Art. 26.

22. *Stanton* v. *Richardson* (1872), L.R. 7 C.P. 421, aff'd (1874), L.R. 9 C.P. 390 (Ex.Ch.), aff'd (1875), 45 L.J.Q.B. 78 (H.L.). For a discussion of seaworthiness on the NSR, see D.L. Torrens, *supra* note 2 at 89-95.

23. *Stanton* v. *Richardson*, *supra* note 22.

24. [1895] 2 Q.B. 550 (C.A.).

25. See also *Upperton* v. *Union Castle SS. Co.* (1903), 9 Asp.M.C. 475 (C.A.), where the only on board receptacle available for stowing passengers' luggage, a lavatory, was held to be improper and the ship was consequently uncargoworthy. On the other hand, in *Bond, Connolly* v. *Federal S.N. Co.* (1906), 22 T.L.R. 685 (C.A.), the cargo was held to be improperly stowed, because the ship was fitted with otherwise suitable refrigerating machinery; see Part I, B), below. But the point is rather ambiguous, for, according to certain *dicta*, bad stowage affecting cargoworthiness alone and not the ability of the ship to encounter the perils of the voyage is mere bad stowage and does not constitute a breach of the implied duty; it seems these *dicta* are wrong, because cargoworthiness is part of seaworthiness: *Carver*, *supra* note 20 vol. 1, § 156; *contra*: *Scrutton*, *supra* note 4 Art. 48.

26. *Supra* note 24.

the court express a requirement of refrigerating machinery in the case of a shipment of frozen meat, the court also stated that the equipment had to be free of defects. If heated containers are supplied by the carrier, they are considered part of the ship and must be made cargoworthy with the rest of the vessel; a defect in their condition would therefore render the carrier liable.[27]

"If exceptionally bad weather is to be expected the standard of seaworthiness required is correspondingly high."[28] On the NSR, bad weather could be treated as the rule rather than the exception. Shipowners/carriers should therefore enhance their vigilance in preparing for NSR navigation. Even on summer voyages, it is not uncommon to encounter sudden drops of temperature. Shipowners/carriers should guard against such occurrences and provide for the protection of vulnerable cargo, e.g. by fitting ship holds with heating equipment and seeing that the equipment is in working order.

As with shipbuilding, improved knowledge of cargo-preserving technology raises the standard of cargoworthiness, but the carrier need not constantly introduce the latest or best appliances.[29] It seems fair to say that cargoworthiness for the NSR implies today at a minimum the fitting of heating equipment where freezing-sensitive goods are involved.

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27. It would seem that in such case "... the carrier is responsible for damage to cargo regardless of whether it is the shipper or the carrier who packs and seals the container:" W. Tetley, *Marine Cargo Claims*, 3rd ed. (Montreal: Yvon Blais, 1988) at 499 and 647.

28. *Carver*, *supra* note 20 vol. 1, § 147.

29. *Scrutton*, *supra* note 4 Art. 48; *Carver*, *supra* note 20 vol. 1, § 148; *Payne & Ivamy*, *supra* note 20 at 16.

At common law, the duty of cargoworthiness must be discharged absolutely. It is no defence for the shipowner/carrier to use all due diligence if the ship is in fact uncargoworthy.[30]

Nevertheless it should be noted that, in practice, the implied undertaking of seaworthiness is superseded by express terms in the contract of carriage or the provisions of some applicable statute. For instance, the Gencon voyage charter-party form provides:

> Owners are to be responsible for loss of or damage to the goods or for delay in delivery of the goods only in case the loss, damage or delay has been caused by... personal want of *due diligence* on the part of the Owners or the Manager to make the vessel in all respects seaworthy and to secure that she is properly manned, equipped and supplied... And the Owners are responsible for no loss or damage or delay arising from any other cause whatsoever, even... from unseaworthiness of the vessel on loading or commencement of the voyage or at any time whatsoever.[31]

Similarly, the Hague-Visby Rules provide at article 3(1):

> The carrier shall be bound... to exercise due diligence to— (*a*) Make the ship seaworthy... (*c*) Make the holds, refrigerating and cool chambers, and all other parts of the ship in which goods are carried, fit and safe for their reception, carriage and preservation.

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30. *Carver, supra* note 20 vol. 1, § 145; *Payne & Ivamy, supra* note 20 at 15. Though absolute, the undertaking does not require absolute perfection, or an absolute guarantee of safe carriage; it is relative to the state of knowledge and the standards prevailing at the material time: *Scrutton, supra* note 4 Art. 48; *Carver, ibid.* § 148. But can there be a breach of the duty of cargoworthiness where the failure to provide heating equipment results from the shipowner's/carrier's lack of knowledge of the heating requirements of the cargo in question and even though reasonable diligence was in fact exercised for the purpose of acquiring such knowledge? The point seems undecided yet: see *Scrutton, ibid.* Art. 110, note 36.

31. Part II, clause 2 (emphasis added). The Baltime Time-Charter provides much to the same effect that "Owners to be responsible... for loss or damage to goods onboard, if such delay or loss has been caused by want of due diligence on the part of the Owners or their Manager in making the Vessel seaworthy and fitted for the voyage..." (clause 13). Clause 1 of the "Baltime 1939" form, stating that "[t]he Owners let, and the Charterers hire the Vessel... she being in every way fitted for ordinary cargo service," has been held to impose a duty to use reasonable diligence to deliver the vessel in a fit condition, not an absolute obligation of seaworthiness: *Marbienes Compania Naviera S.A.* v. *Ferrostaal AG*, [1976] 2 Lloyd's Rep. 149 at 152, Lord Denning M.R. (C.A.).

Pursuant to these clauses, the test is not one of absolute cargoworthiness, but whether the owners or their manager exercised due diligence to make the vessel cargoworthy.

Due diligence is an objective standard, ascertained with reference to the conduct of a skilled and prudent shipowner. "'"'Due diligence' seems to be equivalent to reasonable diligence, having regard to the circumstances known, or fairly to be expected, and to the nature of the voyage, and the cargo to be carried.'"[32]

Under the Hague-Visby Rules, in order to avail, due diligence must in fact be exercised, whether by the shipowner or carrier itself or its servants, agents or sub-contractors.[33] Therefore a carrier would be held liable under the Rules where the ship's crew did not exercise due diligence before and at the beginning of the voyage to make the ship cargoworthy, e.g. by failing to check the working order of the heating equipment, even though the carrier had previously fitted the vessel with the equipment in question. On the other hand, a charter-party usually holds the shipowner liable only for its own lack of due diligence or that of its manager.[34]

For purposes of the NSR, a relatively high standard of due diligence should be applied because of extreme weather conditions. Surely a reasonable shipowner/carrier would recognize that a cargo of bananas carried on the NSR is subject to a substantially higher risk of freezing damage than a similar shipment crossing the Atlantic Ocean. It is submitted

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32. *Carver*, *supra* note 20 vol. 1, § 500. *Scrutton*, *supra* note 4 at 435 and 446: "... the protection given by the Rule [i.e., due diligence] in relation to the physical condition of the ship protects, in effect, only against latent defect."

33. *The "Muncaster Castle"*, [1961] 1 Lloyd's Rep. 57 (H.L.); *Carver*, *supra* note 20 vol. 1, §§ 500-502; *Scrutton*, *supra* note 4 at 434. The common law would seem to vary on this point: see *Carver*, *ibid.* §§ 503-504.

34. See *supra* note 31 and accompanying text; *Carver*, *supra* note 20 vol. 1, § 635.

that failure to equip the ship with heating equipment would constitute lack of due diligence to make the ship cargoworthy for NSR navigation.

As for the duration of the duty of cargoworthiness, at common law, the ship must be seaworthy on sailing[35] and at the beginning of each subsequent stage of the voyage in addition to loading, which is treated as a separate stage. The rule is known as the doctrine of stages.[36] Thus if a ship loading at an inland river port proceeds therefrom without being fitted for the ocean stage of the voyage, there is no *ipso facto* breach of the seaworthiness duty; seaworthiness may still be satisfied prior to the beginning of the ocean stage. The doctrine of stages applies to bills of lading and voyage charters, but not to time charters. Under a time charter, the vessel need only be seaworthy at the commencement of the period of hire.[37]

The Gencon form maintains the applicability of the doctrine of stages.[38] The doctrine could be of relevance on the NSR as a number of inland river ports exist in northern Russia and Siberia. Different stages of the voyage have different cargoworthiness requirements. For instance, cargo heating equipment might be unnecessary for the river stage of the water carriage because of the predictability of weather on land, but be essential for the ocean leg over the NSR; in addition, carrying heavy heating equipment on river might be

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35. *Carver, supra* note 20 vol. 1, § 153; *Scrutton, supra* note 4 Art. 48. In the case of a charter for consecutive voyages, the vessel must be cargoworthy at the commencement of each voyage: *Scrutton, ibid.*

36. *Carver, supra* note 20 vol. 1, §§ 154-157; *Scrutton, supra* note 4 Art. 48.

37. *Payne & Ivamy, supra* note 20 at 15-16 and 111-112; *Carver, supra* note 20 vol. 1, § 155; *Scrutton, supra* note 4 Art. 176.

38. See *supra* note 31 and accompanying text. Clause 3 of the Baltime form provides: "The Owners... to maintain [the Vessel] in a thoroughly efficient state in hull and machinery during service." When combined with clauses 1 and 13 (*supra* note 31), clause 3 could be said to impose due diligence to make the vessel seaworthy throughout the voyage and not only at the beginning of the voyage: see *Scrutton, supra* note 4 Art. 176; J. Pineau, *supra* note 20 para. 124.

undesirable. The doctrine of stages would allow vessels sailing downstream to defer their fitting for the ocean transit until they reach the river mouth.

Because loading is considered as a separate stage, a ship loading potatoes on the NSR would have to be provided with heating machinery ready to operate should an otherwise foreseeable drop in temperature occur while the ship is in harbour.

On the other hand, the Hague-Visby Rules set aside the doctrine of stages by expressly imposing due diligence only "... before and at the beginning of the voyage..."[39] This does not mean that a carrier proceeding from an inland river port is relieved of the duty of due diligence to make the ship cargoworthy for the purpose of the ocean transit. In fact, it has been held that, under article 3(1), due diligence must be exercised before and at the beginning of the *contractual voyage*, i.e. the voyage from the port of loading to the port of discharge.[40] This interpretation imposes *a priori* on the carrier the duty to fit the ship with heating equipment before sailing from the river port; but it is submitted there is no reason the carrier should not be allowed to defer the installation of on board heating equipment until reaching the river mouth if that is justified by inland weather predictions and provided arrangements are made for the availability of the equipment at the river mouth "before and at the beginning of the voyage." "It is sufficient for practical purposes if the ship is 'river-worthy'... [and] fit to steam to an ocean port... It seems to be unreasonable to require the carrier to make the ship seaworthy for the ocean voyage at the river port, and so put an impossible burden on him."[41]

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39. Art. 3(1).

40. *Carver, supra* note 20 vol. 1, §§ 508-510; *Scrutton, supra* note 4 at 434, note 92; *Payne & Ivamy, supra* note 20 at 113.

41. *Carver, supra* note 20 vol. 1, § 509. On the doctrine of bunkering stages, see *Scrutton, supra* note 4 Art. 48 and at 434; *Carver, ibid.* § 154.

Because the obligation of due diligence to make the vessel cargoworthy applies only at the beginning of each stage of the voyage or, under the Hague-Visby Rules, before and at the beginning of the voyage, uncargoworthiness arising during the voyage does not constitute a breach. Thus if, through a collision on the NSR, the holds' heating equipment is damaged but the ship resumes the voyage, the cargo claimant cannot rely on lack of due diligence to make the vessel cargoworthy following the collision.[42]

If "[t]he effect of Article III, rule 1, [of the Hague-Visby Rules] is to place on the owner an obligation of seaworthiness *qua* cargo throughout loading...,"[43] it seems that any uncargoworthiness arising after the beginning but before the conclusion of loading would be judged on the basis of paragraphs (1) and (2) of article 3 and not merely paragraph (2). For instance, a breakdown in the ship's heating machinery occurring during loading would still require the carrier to exercise due diligence to remedy it instantly, whereas, at common law, the carrier would be bound only to take care of the cargo until sailing at which point the cargoworthiness duty would attach anew.

As to the consequences of non-performance, at common law, the duty of cargoworthiness is regarded as an "indeterminate term," i.e. it is not a condition nor a warranty. The charterer's/shipper's right to treat the contract of carriage as at an end depends on the circumstances of each case and whether the breach is of such a nature as to defeat the commercial purpose of the voyage.[44] Exceptionally, where the initial uncargoworthiness is sufficiently serious, the charterer/shipper may treat the contract as discharged even after the

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42. However the duty of care continues: see Part I, B), below; *Scrutton, supra* note 4 Art. 48, note 85 and accompanying text.

43. *Carver, supra* note 20 vol. 1, § 508.

44. *Hongkong Fir Shipping Co.* v. *Kawasaki Kisen Kaisha*, [1962] 2 Q.B. 26 (C.A.); *Carver, supra* note 20 vol. 1, § 142; *Scrutton, supra* note 4 Arts. 47-48.

contract has been partially performed.[45] On the NSR, it is submitted that the inexistence of heating equipment on board would justify the charterer/shipper in repudiating the contract and refusing to load freezing-sensitive cargo at any time of the year, because temperature fluctuations are always a possibility on the voyage.

Furthermore, the right to damages arises only if unseaworthiness contributes to the cargo loss or damage; in other words, the shipowner will escape liability where its failure to make the ship cargoworthy does not cause the damage.[46]

These principles hold true under the Gencon charter despite the transformation of the common law absolute duty of seaworthiness into an obligation of due diligence.

In contrast, the carrier's duty to exercise due diligence under article 3(1) of the Hague-Visby Rules is an overriding obligation: if the carrier fails to show that due diligence was exercised to make the ship cargoworthy before and at the beginning of the voyage, the carrier is not entitled to rely on any exceptions of liability in the contract of carriage.[47]

Causation as between cargo damage and uncargoworthiness is however maintained under the Hague-Visby Rules as a condition for recovery against the carrier.[48]

Finally, the burden of proving uncargoworthiness rests on the party invoking it. The general rule is that the loss, uncargoworthiness and causal link must be proved by the claimant. Nevertheless where the damage appears to result from no other explainable cause than the unfitness of the ship, there is *prima facie* evidence of uncargoworthiness, which

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45. *Hongkong Fir Shipping Co.* v. *Kawasaki Kisen Kaisha*, *supra* note 44; *Scrutton*, *supra* note 4 Art. 48.

46. *Carver*, *supra* note 20 vol. 1, §§ 141 and 143-144; *Payne & Ivamy*, *supra* note 20 at 16-17.

47. *Maxine Footwear Co.* v. *Can. Government Merchant Marine Ltd.*, [1959] A.C. 589 (P.C.); *Carver*, *supra* note 20 vol. 1, § 499. Some of these exceptions will be considered in Part I, D) to H), below.

48. Art. 4(1); *Carver*, *supra* note 20 vol. 1, § 531; *Scrutton*, *supra* note 4 at 446.

must be rebutted by the shipowner/carrier.[49] In the case of freezing damage on the NSR, the mere fact of absence of heating machinery will afford such *prima facie* evidence. But it seems that more elaborate proof, e.g. defectiveness of the heating equipment at the time of sailing, will be required on the part of the cargo claimant where unfitness of the appliances used *in casu* is alleged.

Under the Hague-Visby Rules, it is for the carrier to prove that due diligence was exercised to make the ship cargoworthy before and at the beginning of the voyage, once the cargo owner has proved that damage resulted from unseaworthiness.[50] It follows that the carrier needs to show that the ship was equipped with heating machinery, that competent and reputable surveyors were employed to verify that the machinery was in working order and ready to operate, and that the verification was carried out with due diligence.

## B) Duty of care of cargo

In addition to cargoworthiness, there is implied at common law in every voyage charter or bill of lading contract an undertaking on the part of the shipowner/carrier to use due care and skill to protect and carry the cargo.[51] As stated in *Carver*:

> All reasonable precautions ought to be taken, by pumping, ventilation, and so forth [e.g., it is submitted, **heating**], to prevent the goods being damaged either through the action of causes external to them, or by their own infirmities.

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49. *Scrutton, supra* note 4 Art. 48; *Payne & Ivamy, supra* note 20 at 18; *Carver, supra* note 20 vol. 1, § 158.

50. Art. 4(1); *Carver, supra* note 20 vol. 1, §§ 506, 531 and 500; *Scrutton, supra* note 4 at 446.

51. *Carver, supra* note 20 vol. 1, § 168; *Scrutton, supra* note 4 Art. 127.

Underlying the duty of care is the duty to prevent the spread of mischief, i.e. to prevent the continuation of cargo loss or damage by all reasonable means.[52] Where the heating equipment fails for any reason, the NSR shipowner/carrier is by law obliged to exercise due care in order to remedy the defect and restore the equipment back in order.

The Gencon form maintains the implied duty of care in part. Clause 2 provides:

> Owners are to be responsible for loss of or damage to the goods or for delay in delivery of the goods only in case the loss, damage or delay has been caused by the improper or negligent stowage of the goods (unless stowage performed by shippers/Charterers or their stevedores or servants)... or by the personal act or default of the Owners or their Manager. And the Owners are responsible for no loss or damage or delay arising from any other cause whatsoever, even from the neglect or default of the Captain or crew or some other person employed by the Owners on board or ashore for whose acts they would, but for this clause, be responsible...

The effect of this clause is to exonerate the shipowner from liability for any negligence save as to the improper or negligent stowage of the goods or where damage results from the personal act or default of the shipowner or its manager. It is submitted that such limitation of liability is unsatisfactory where the shipment contemplated under the charter-party is prone to freezing damage. Indeed, clause 3 only requires the NSR shipowner to exercise reasonable care in stowing the cargo, e.g. by placing it in heated holds; otherwise the shipowner has no obligation to care for the cargo during the voyage; the crew can for instance turn off the heating apparatus during the voyage and the carrier will not be responsible if cargo suffers freezing damage. Such a result is clearly unjust, hence the need to restore the shipowner's duty of care throughout the voyage or at least to hold the shipowner liable for failure of the crew to heat the cargo while in transit.

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52. *Carver, supra* note 20 vol. 1, § 171; *Scrutton, supra* note 4 Art. 127.

No such limitation exists under the Hague-Visby Rules. Pursuant to article 3(2), the carrier is bound to "properly and carefully load, handle, stow, carry, keep, care for, and discharge the goods carried." This obligation applies throughout the contractual voyage. It is a stronger obligation than due diligence. While the latter merely means reasonable care, the word "properly" denotes a sound system of operation. In the words of the House of Lords, "... the obligation is to adopt a system which is sound in light of all the knowledge which the carrier has or ought to have about the nature of the goods"[53] Having a "slightly different" meaning from "carefully,"[54] the word "properly" is "tantamount... to 'efficiently.'"[55]

A "sound system" of stowage and care implies the use of modern methods and up-to-date practices.[56] It is submitted that the standard of care under article 3(2) requires the use and operation by the carrier of heating equipment for the purpose of carrying and preserving vulnerable cargo on the NSR. Heating the cargo would be the only possible and imaginable "sound system," apart from refraining to send the cargo altogether on the NSR.

The carrier's obligations under paragraphs (1) and (2) of article 3 of the Hague-Visby Rules seem complementary. As discussed above, paragraph (1) would, on the one hand, require the carrier to fit the holds of the vessel with heating equipment. Paragraph (2), on the other hand, would require the operation of this equipment for the purpose of preserving the cargo from freezing. It might also be argued that paragraph (2) requires the carrier, in the absence

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53. *Albacora S.R.L.* v. *Westcott & Laurance Line Ltd.*, [1966] 2 Lloyd's Rep. 53 at 58, Lord Reid. Contrast *ibid.* at 62, Lord Pearce: "A sound system does not mean a system suited to all the weaknesses and idiosyncrasies of a particular cargo, but a sound system under all the circumstances *in relation to the general practice of carriage of goods by sea.*" See *Scrutton*, *supra* note 4 at 436; *Carver*, *supra* note 20 vol. 1, § 514; W. Tetley, *supra* note 27 at 553-554.

54. *Albacora S.R.L.* v. *Westcott & Laurance Line Ltd.*, *supra* note 53 at 58, Lord Reid.

55. *Ibid.* at 62, Lord Pearce.

56. W. Tetley, *supra* note 27 at 554-555.

of heated holds, to supply heated containers[57] for shippers loading freezing vulnerable cargo on the NSR.

As part of its obligation under article 3(2), the NSR carrier should first study the cargo in order to ascertain the kind of care it requires. In this regard, the carrier must learn from past experience with similar cargo.[58] If the cargo is prone to freezing damage, but the carrier, despite studying the cargo, is unaware of its vulnerability to cold weather, it is the shipper's duty to inform the carrier of any special instructions. It was thus held that where tractor radiators which contained water froze and cracked, and there had been no special recommendation concerning the cargo, the carriers were not responsible.[59]

A useful analogy can be made here with the carriage of dangerous goods. Dangerous goods are referred to at article 4(6) of the Hague-Visby Rules. The expression there used ("Goods of an inflammable, explosive or dangerous nature...") seems narrower than the common law definition, which includes not only physically dangerous cargo, but also cargo which is susceptible of causing legal detention of the vessel. Although it cannot be said that cargo which is vulnerable to freezing qualifies as dangerous cargo, the analogy is apposite, because liability with respect to dangerous goods has revolved mainly around the carrier's actual or imputed knowledge of the special requirements needed to take care of the cargo and the shipper's duty to inform the carrier of such requirements.

Three situations can be distinguished. First, the carrier may have actual knowledge of the goods' dangerous character; this awareness can arise either from studying the cargo, the carrier's past experience or from notification by the shipper. In such cases, the carrier is

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57. Heated or refrigerated containers are widely used on the market. The most common design is equipped with a diesel engine which can maintain the temperature inside the container at the required level.

58. W. Tetley, *supra* note 27 at 554-555.

59. Paris, 4 February 1953, DMF 1953.385.

deemed to accept the risks of carrying the goods and must therefore take the necessary precautions. In the event of damage to the goods due to their dangerous character, the shipper's liability is excluded,[60] unless the danger which caused the damage was of such special and not obvious nature as fell outside the range of dangers which a carrier of that type of cargo should foresee and guard against.

Second, there are cases where the carrier, although lacking knowledge of the dangerous character of the goods, is nevertheless treated as having the necessary knowledge by reason of the full opportunities which enabled it to exercise reasonable diligence to gain such knowledge. The test is whether the goods in question are commonly carried in ships and whether their nature and properties are well known to persons carrying on the business of carriers in ships and by water. It follows from this imputed knowledge that the parties' liabilities are identical to those arising in cases where the carrier has actual knowledge.[61]

The third situation arises where the carrier does not and ought not to have knowledge of the dangerous character of the goods. Two instances are to be distinguished. On the one hand, if the shipper is aware of the danger, there is an unequivocal duty on its part to inform the carrier, failing which the carrier bears no responsibility for any consequences of the goods *qua* dangerous goods. This means that the carrier is not bound to take the special precautions demanded by the dangerous character of the goods. All responsibility lies on the shipper.

On the other hand, where the shipper is itself unaware of the dangerous character of the goods, the position of the case-law is not clearly established. According to one line of

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60. But see Hague-Visby Rules, art. 4(6) *in fine*, which puts the responsibility of landing, destroying or rendering innocuous the goods on the shipper even where the carrier consented to their carriage.

61. See preceding paragraph in text.

cases, the shipper's duty to inform is absolute; even if the shipper lacks knowledge of the dangerous character of the goods, it bears full responsibility for the consequences resulting from their carriage if the carrier is not and ought not to be aware of their dangerous character. Another line of cases holds the opposite view, namely that the shipper's duty to inform is not absolute; consequently the shipper is relieved of liability where, despite due diligence, it is unaware of the dangers appertaining to its goods. The latter position seems to have prevailed in the more recent cases.[62]

Dangerous goods serve as a good analogy with cargo subject to freezing damage for the following reasons:

- Both types of cargo are in a suitable state, at least theoretically, unlike cargo presenting an inherent vice.[63] In other words, if proper care is taken, the former types of goods can and should arrive in undamaged condition at destination, whereas cargo with inherent vice is intrinsically defective; this means that whatever measures are taken the damage will still take place because of the cargo's inherent quality.

- Like the rationale underlying this paper, the carriage of dangerous goods proceeds on the basis that a higher degree of care is required from both the shipper and the carrier, i.e. through the adoption of special precautions demanded by the type of cargo in the packing, handling, loading, stowage, carriage and discharge stages.

- This higher degree of care is reflected in the shipper's warranty as to the suitability of the cargo. In other words, the shipper is made liable for any damage to the cargo as a result of the carrier's failure to apply the special precautions required by the dangerous character of

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62. For a full discussion of dangerous goods, see *Carver*, *supra* note 20 vol. 1, §§ 566 and 1107-1113; *Scrutton*, *supra* note 4 Art. 102 and at 456-457; W. Tetley, *supra* note 27 at 461-469.

63. See Part I, F), below.

the goods. Nevertheless, the effects of this warranty are alleviated if the carrier is informed or is otherwise bound to know of the dangerous character of the goods. Similarly, where despite reasonable care taken to assure itself of the characteristics of the cargo, the NSR carrier is unaware of its vulnerability to cold weather, liability for freezing damage will lie on the shipper's shoulders.

But the contract of affreightment may provide that cargo is to be stowed by the shipper, not the shipowner/carrier. This is permissible both under the Hague-Visby Rules[64] and the general common law.[65] In this case, there is no duty of care on the part of the shipowner/carrier for such operation. Where for instance pre-packed heated containers are shipped on the NSR the shipowner/carrier is exempt from liability for the stowage of the cargo inside the containers.[66] This exemption can be of relevance on the NSR; stowing too many goods in the container and too close to each other may reduce the effectiveness of the heating; improper stowage inside the container can thus amount to inherent vice of the goods.[67]

Furthermore, the type of packing used may reduce the shipowner's/carrier's ability to preserve the cargo, because of restricted access to and control over the cargo. For instance, pre-packed heated containers restrict access and control. Because the appliances operate in response to temperature changes and are normally stacked in such a way as to make access by the crew impossible there is little a shipowner/carrier could do to look after the orderly

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64. *Pyrene* v. *Scindia Navigation Co.*, [1954] 2 Q.B. 402; *Carver*, *supra* note 20 vol. 1, § 515; *Scrutton*, *supra* note 4 at 436; J. Kingsley, *Brækhus & Rein Handbook on P&I Insurance*, 3rd ed. (Arendal, Norway: Gard, 1988) at 150 [hereinafter *Brækhus & Rein*]: the carrier's obligation is to do "properly and carefully" whatever it has undertaken to do.

65. Under the freedom of contract principle.

66. W. Tetley, *supra* note 27 at 498.

67. *Ibid.* at 649. See Part I, F), below.

functioning of the heating system. It is submitted that the shipowner's/carrier's liability should in these cases be alleviated consequently.

Both at common law and under article 3(2) of the Hague-Visby Rules, the duty of care for cargo extends throughout the voyage. This is in contrast to the duty of seaworthiness which, as was seen above, attaches on sailing and at the beginning of each new stage of the voyage or, under article 3(1) of the Rules, before and at the beginning of the voyage.[68] For instance, even though the ship gets locked in ice on the NSR, the contract of carriage continues to operate and the duty of care thereunder still applies.[69] This reasoning is confirmed by the decision in *Orient Merchant-Olau Gorm.*[70] There, it was held that, while the ship was detained on the Great Lakes during winter, the carrier had the duty to care for the cargo by the least expensive reasonable method and could not charge for storage on board. It is arguable whether the "least expensive *reasonable* method" would require the carrier to continue heating the cargo during ice detention on the NSR.

The effect of a breach of the engagement of due care gives rise at common law to a right to claim damages for any cargo loss or damage caused thereby. As in the case of cargoworthiness, the burden is on the cargo claimant to prove negligence, damage and causation.[71] This applies to the Hague-Rules as well.[72]

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68. See Part I, A), above.

69. On the excepted peril of "detention by ice" inserted in some contracts of carriage, see *Scrutton*, *supra* note 4 Art. 104, note 89.

70. 1968 AMC 974 (D. Col. 1968), aff'd 1969 AMC 1658 (D. Col. Cir. 1969).

71. *Carver*, *supra* note 20 vol. 1, § 169; *Scrutton*, *supra* note 4 Art. 127.

72. W. Tetley, *supra* note 27 at 143.

## C) Duty not to deviate

At common law, there is a further duty implied in every contract of affreightment on the part of the shipowner/carrier not to deviate. The duty originally meant that the shipowner/carrier would refrain, save for valid reasons, from departing from the contractual route or, where no route was stipulated, from the usual geographic course of the voyage,[73] but was later extended to cover other non-geographical deviations from the agreed method of execution of the contract. For example, it is now established that deck carriage amounts to deviation in the absence of agreement by the parties or a trade custom authorizing such method of stowage. Other examples are overcarriage and delay.[74] Deviation is accordingly any "breach which goes to the root of the contract."[75]

For a deviation to occur, the act or omission must be done voluntarily or intentionally. A departure from the agreed method of execution of the contract resulting from an error of judgment is not sufficient to constitute a breach of the implied undertaking.[76]

It is submitted that carriage of freezing-sensitive cargo on the NSR in unheated space may be treated as a deviation from the contract of carriage if it is intentional or voluntary and is not expressly authorized by the contract of carriage. It seems obvious that heating such

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73. *Carver*, *supra* note 20 vol. 1, § 291, and vol. 2, §§ 1161 and 1213; *Scrutton*, *supra* note 4 Art. 125; *Payne & Ivamy*, *supra* note 20 at 21.

74. *Brækhus & Rein*, *supra* note 64 at 292-293. Non-geographic deviation is sometimes called "pseudo deviation."

75. *J. Spurling Ltd.* v. *Bradshaw*, [1956] 1 W.L.R. 461 (C.A.). In the words of W. Tetley, *supra* note 27 at 99:

> ... When however the breach is so serious, usually the result of a fraudulent or wilful act... [the carrier] has seemingly placed himself outside the contract and the law. Such a breach has been called a fundamental breach in Commonwealth common law jurisdictions, a material deviation or quasi-deviation in America...

See also C. Hill, B. Robertson & S.J. Hazelwood, *An Introduction to P&I* (London: LLP, 1988) at 94.

76. *Brækhus & Rein*, *supra* note 64 at 292; W. Tetley, *supra* note 27 at 107.

cargo during transit constitutes the only normal method of shipment and must be held to be implicitly agreed to by the parties failing consensus to the contrary.[77] For the shipowner/carrier to escape liability for deviation, the contract of carriage should expressly stipulate the liberty to carry the goods in an unheated condition.

An American case on refrigerated cargo is in point. In *Agfa-Gevaert* v. *TFL Adams*[78] failure to connect a reefer container to electric power was deemed to be a quasi-deviation.

Breach of the implied undertaking not to deviate used to trigger serious consequences for the shipowner/carrier. Deviation resulted in the latter's being treated as an insurer of the goods, responsible for their loss regardless of its origin—unless it was demonstrated that the loss would have occurred irrespective of the deviation—, while the benefit of the contractual exclusions and limitations of liability was lost. This was known as the substantive fundamental breach rule. But following the *Suisse Atlantique* decision,[79] as confirmed in *Photo Production* v. *Securicor Transport*,[80] the rule was reversed and replaced by constructive fundamental breach. The latter rule means that freedom of contract is supreme and that the consequences of an unjustified deviation may be varied by agreement between the parties.[81]

Nevertheless there is authority to support the view that the *Suisse Atlantique* decision has no application to Admiralty cases.[82] The argument seems even stronger under the Hague-

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77. *Scrutton*, *supra* note 4 Art. 47: "The court will imply into a contract all such terms as are *necessary* to give business efficacy to the contract as both parties must have intended."

78. 1986 AMC 411 (S.D. N.Y. 1984).

79. *Suisse Atlantique Société d'Armement Maritime S.A.* v. *N.V. Rotterdamsche Kolen Centrale*, [1967] 1 A.C. 361 (H.L.).

80. [1980] A.C. 827 (H.L.).

81. W. Tetley, *supra* note 27 at 100-102 and 119-120.

82. *Carver*, *supra* note 20 vol. 2, § 1216.

Visby Rules, which are said to have retained the substantive fundamental breach rule by legislating specifically, although partly, on the matter. According to this view, under the Hague Rules, the carrier loses all its protections under the Rules and the contract in case of an intentional deviation; on the other hand, the Hague Rules alleviate the consequences of an unjustified deviation insofar as only direct loss or damage need be compensated by the carrier. The Hague-Visby Rules modified the Hague Rules in only one respect: by article 4(5)(*e*), the loss of the right to limit liability only arises where the carrier intends to cause damage, or acts recklessly and with knowledge that damage will probably result.[83]

Whatever be the right position in sea carriage cases, it is sufficient for our purposes to point out the inconsistency of interpretations. This leads to uncertainty in the law, which is detrimental to shipowners when risk assessment enters into account.[84]

In the preceding sections, we analyzed the three main duties of the shipowner/carrier with regard to the preservation of cargo from freezing damage. It is concluded from this analysis that failure to heat the cargo on the NSR could amount, under certain conditions, to a breach of the three duties involved.

These duties should not overshadow, however, the responsibilities of the cargo owner, which will now be examined.

It is perhaps more appropriate to talk of "exceptions" to the shipowner's/carrier's liability rather than use the term "responsibility" of the cargo owner. Article 4(2) of the Hague-Visby Rules is really a list of exceptions rather than obligations. This is explained by

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83. W. Tetley, *supra* note 27 at 107-126; C. Hill, B. Robertson & S.J. Hazelwood, *supra* note 75 at 95.

84. See Part II, C), below.

historical reasons: prior to the adoption of the Rules, carriers were held as bailees—as they still are, subject to statutory and contractual provisions—. As such, they were answerable for the damage incurred by the goods during the currency of the bailment unless they could show an exculpatory cause for the damage. But there is perhaps no mistaking to leap one step further and state that those types of damage which occur by reason of an exculpatory cause are the shipper's/consignee's responsibility.

## D) Defective packing exception

The shipowner is exonerated from liability for the consequences of the defective packing of the goods, both at common law and according to article 4(2)(*n*) of the Hague-Visby Rules.

Brown writes:

> It must be remembered that the purpose of the packing of goods for overseas is to ensure, as far as possible, that the goods arrive in the consumer's hands in the same perfect condition in which they were when they left the consignor.[85]

Cargo must be sufficiently packed to withstand ordinary handling as contemplated under the contract of carriage.[86]

For the purpose of the NSR, packing becomes relevant where heated containers are involved. A container is considered a packing if it is not provided by the ship.[87] In such a case, a defect affecting the container's heating equipment could, it is submitted, be regarded as insufficiency of packing.

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85. R.H. Brown, *Marine Insurance*, vol. 2, "Cargo Practice," 2nd ed. (London: Witherby, 1975) at 140.

86. *Silver* v. *Ocean Co.*, [1930] 1 K.B. 416 (C.A.); *ibid.*

87. Otherwise, it is treated as a part of the ship and must be made seaworthy by the shipowner/carrier: see Part I, A), above.

## E) Act or omission of the shipper exception

The exception at article 4(2)(*i*) of the Hague-Visby Rules appears to be essentially a residuary paragraph.[88] It refers to noxious acts or omissions of the shipper/consignee which cause the loss or damage. Insufficient packing by the shipper is one such act or omission.[89]

Article 4(2)(*i*) has been invoked to protect the carrier from liability where the shipper persuaded the captain to adopt an unsound method of stowage.[90] Similarly, if the NSR shipper persuades the captain to carry the cargo in unheated space, the carrier, it is submitted, should be exonerated from liability for freezing damage.

## F) Inherent vice exception

The shipper bears responsibility for cargo damage "... arising from inherent defect, quality or vice of the goods..."[91] This provision corresponds to the common law inherent vice exception.[92]

Can cargo's vulnerability to freezing be characterized as an inherent vice? Let us first look at what these terms mean.

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88. *Carver, supra* note 20 vol. 1, § 537.

89. See Part I, D), above.

90. *Ismail* v. *Polish Ocean Lines*, [1976] 1 Q.B. 893 (C.A.). See *Scrutton, supra* note 4 at 449.

91. Hague-Visby Rules, art. 4(2)(*m*).

92. *Carver, supra* note 20 vol. 1, §§ 15-16 and 539.

Inherent vice is defined by Scrutton as the unfitness of the cargo to withstand the ordinary incidents of the voyage.[93]

Tetley distinguishes between "hidden defect" and "inherent vice," both of which are covered by article 4(2)(*m*) of the Hague-Visby Rules. A hidden defect is "... something that is hidden and defective in the cargo and not normally expected to be found there...;" an example is given of larvae contained in flour. An inherent vice is "... one which is an innate or natural or normal quality of the goods," such as the propensity of flour to shrink or lose weight with the passage of time.[94] Clearly inherent vice, not hidden defect, matters for our purposes.

Inherent vice is a question of fact. Each case turns on its own particular circumstances.[95] Among these circumstances is the voyage in question. Thus, in *Eastwest Produce Co.* v. *S.S. Nordnes*,[96] onions were held to be unfit for a long voyage at the end of the season through tropical climates from Melbourne to Vancouver.[97]

The inherent vice exception cannot be examined, however, without reference to the shipowner's/carrier's duty of care towards cargo.[98] If the shipowner/carrier knows or ought to know the nature of the cargo, the inherent vice exception does not protect against lack of care for the cargo.[99] On the other hand, in certain cases, the shipowner/carrier cannot be

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93. *Scrutton, supra* note 4 Art. 109.

94. W. Tetley, *supra* note 27 at 479-480.

95. *Ibid.* at 486.

96. [1956] Ex. C.R. 328. See also *ibid.* at 483, note 18.

97. See also *Brækhus & Rein, supra* note 64 at 153.

98. *Ibid.* See Part I, B), above. As to the duty of cargoworthiness, see Part I, A), above.

99. But see *Gould* v. *S.E. and Chatham Ry. Co.*, [1920] 2 K.B. 186, and *Barbour* v. *S.E. Ry.* (1876), 34 L.T. 67 (Div. App.), where it was held that the shipowner's knowledge of the nature of the cargo was not a bar to the exception although it affected the degree of care required of him. Further, some

expected to know about the nature of the cargo and it will be incumbent upon the shipper to inform the former of any special requirements of care; in the absence of such notification, the shipowner/carrier may be discharged by the inherent vice exception. In summary, it can be said that the inherent vice exception does not avail if the carrier was bound to guard against its consequences by applying special care to the cargo, either by virtue of the explicit terms of the contract or implicitly, due to the well-known nature of the cargo and the practices and customs of the past.[100]

It is submitted that the exception of inherent vice does not really describe proneness of cargo to frost damage: such proneness is not really a vice *per se*, but a lack of adaptation of the cargo to cold weather. Inherent vice is something which is bound to happen to the goods because of their nature, regardless of the precautions taken. Freezing damage is really caused by the lack of heating of the cargo, not its inherent nature.

But accepting that freezing damage could in some circumstances be characterized as an inherent vice in relation to an NSR voyage, the following considerations should be taken into account. Obviously cargo of such a vulnerable nature as is known or ought to be known by the shipowner/carrier, by reason of the explicit or implicit terms of the contract, will not qualify under the inherent vice exception. One can think here of agricultural produce. Even in the absence of special requirements by the shipper, the shipowner/carrier should be aware of the produce's fragility when exposed to very low temperatures; the shipowner/carrier should therefore provide for and operate heated holds when accepting such cargo. On the other hand, the shipowner/carrier might not be expected to know about the nature of certain other kinds of cargo. For example, it was held that where tractor

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inherent vices cannot be guarded against; in such cases, the shipowner/carrier will always be protected on the basis of this exception.

100. W. Tetley, *supra* note 27 at 483-485.

radiators which contained water froze and cracked, and there had been no special recommendation concerning the cargo, the carriers were not responsible.[101]

## G) Negligence in navigation or management of ship exception

Negligence in the navigation or management of the ship is the first exception provided for at article 4(2)(*a*) of the Hague-Visby Rules.[102] The exception covers essentially neglect to take reasonable care of the ship, even if this includes both vessel and cargo. But where "... the cause of the damage is solely or even primarily a neglect to take reasonable care of the cargo, the ship is liable."[103]

It is submitted that a default of the heating machinery causing the cargo to freeze could be considered as a neglect in the management of the ship pursuant to article 4(2)(*a*) of the Hague-Visby Rules if it were caused by negligence affecting both the ship and its cargo. For example, where the same machinery is designed to heat the holds of the ship as well as the crew space and negligence is committed by the shipowner's employee, causing the apparatus to break down and leave the cargo unprotected from the cold, the shipowner/carrier will be exonerated.

Thus in *Rowson* v. *Atlantic Transport Co.*,[104] where butter was damaged by the negligent working of refrigerating machinery, the casualty was held to be a "fault in management," because the refrigerating machinery was used to cool the ship's provisions as well as the

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101. Paris, 4 February 1953, DMF 1953.385.

102. The exact wording is "Act, neglect, or default of the master, mariner, pilot, or the servants of the carrier in the navigation or in the management of the vessel."

103. *Scrutton*, *supra* note 4 Art. 116; W. Tetley, *supra* note 27 at 398-400.

104. [1903] 2 K.B. 666.

cargo. On the other hand, in *Foreman & Ellams* v. *Federal S.N. Co.*,[105] a cargo of meat was damaged by the mis-management of the refrigerating machinery used for cooling the cargo and it was held that the injury did not occur in the management or navigation of the ship.

## H) Perils of the sea exception

The exception of "perils of the sea" is contained at article 4(2)(*c*) of the Hague-Visby Rules.[106] "Perils of the sea" denotes (1) accidents (2) peculiar to navigating the sea. The second element of the definition means that the peril must be peculiar to the sea or to a ship at sea; in other words, the peril must arise from the peculiar physical conditions under which navigation upon the sea takes place. The accidental nature of the peril means that the peril must be unforeseeable and that the shipowner/carrier could not have guarded against it as a probable incident of the adventure. Examples of perils of the sea are storms, collisions, strandings and wetting by sea water.[107]

It is submitted that the two conditions enunciated above are not apt to cover extreme cold weather on the NSR resulting in freezing damage to cargo. Cold weather on the NSR could not be treated as an accident; on the contrary, it is normal in this region to encounter extreme drops in temperature. In addition, frost is not an incident peculiar to the sea; ice, snow and cold weather occur even on land. As stated in *Scrutton*:

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105. [1928] 2 K.B. 424.

106. The exact wording is "Perils, dangers and accidents of the sea or other navigable waters." The exception encompasses perils occurring on rivers as well as seas and in harbours and docks: see *Carver*, *supra* note 20 vol. 1, § 209.

107. *Carver*, *supra* note 20 vol. 1, §§ 209-210; *Scrutton*, *supra* note 4 Art. 110.

> ... As so defined, "perils *of* the sea"... will include those "acts of God" where the effective cause is one peculiar to the sea. Thus frost or lightning, as effective causes of loss, will be acts of God, but not perils of the sea; damage by swordfish or icebergs would be a peril of the sea, if the shipowner could not have prevented it by reasonable care.[108]

Further, from the foregoing definition, it seems that "perils of the sea" may encompass a breakdown of the cargo heating equipment if it occurs as a result of interference with the sea, for instance where sea water damages the heating apparatus without there being any fault on the part of the shipowner/carrier. But where the breakdown is unconnected with events peculiar to the sea, it is submitted the exception does not avail. This is because machinery breakdown is not *per se* an occurrence peculiar to the sea; on the contrary, it is quite independent of the marine element in which the ship navigates. Support for the foregoing propositions can be found in the judgment of the Privy Council in *Canada Rice Mills* v. *Union Marine*[109] where the peril of incursion of sea water against which the ventilators had been closed, not the lack of ventilation, was considered as the peril of the sea.[110]

In Part I, the liabilities of the shipowner/carrier and cargo claimant under the contract of carriage were analyzed. In conclusion, it seems correct to say that both parties to the contract of carriage are bound by certain duties and responsibilities in order to guard against freezing damage to cargo on the NSR. The remainder of the paper will consider the implications of those liabilities under standard P&I (I) and cargo policy rules (II).

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108. *Scrutton*, *supra* note 4 Art. 110.

109. [1941] A.C. 55 at 69-70 (P.C.), Lord Wright.

110. See *Carver*, *supra* note 20 vol. 1, § 210.

# PART II: P&I INSURANCE

In Part I, we discussed the three main duties of the shipowner/carrier with respect to freezing-sensitive cargo on the NSR. Those duties are cargoworthiness,[111] due care of cargo[112] and the obligation not to deviate.[113] Insurance for cargo damage resulting from breach of those duties is usually provided to the shipowner/carrier by its Protection and Indemnity (P&I) club.

A fundamental concern for P&I clubs as liability insurers is to find ways to induce a higher standard of care on the part of the assured with regard to freezing-sensitive cargo on the NSR and consequently minimize their exposure to P&I liability. The purpose of this Part is to examine how this objective can be attained.

The terms and conditions of P&I coverage are contained in sets of rules which are incorporated into all contracts of insurance effected by the clubs. As stated earlier, the paper will analyze the rules of three clubs, namely The Steamship Mutual, The Shipowners' Mutual and Gard.[114]

Club coverage on cargo is typically centred on the two main duties of the shipowner/carrier, i.e. cargoworthiness (A) and due care (B). Deviation is also provided for, though separately (C). For certain types of cargo, club rules give the P&I insurer the right to impose additional conditions of coverage (D).

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111. See Part I, A), above.

112. See Part I, B), above.

113. See Part I, C), above.

114. See Introduction, above.

## A) Uncargoworthiness

Standard P&I rules provide:

> The Association shall cover the following liabilities when and to the extent that they relate to cargo intended to be or being or having been carried on the Ship: liability for loss, shortage, damage or other responsibility arising... out of unseaworthiness or unfitness of the Ship...[115]

Insurance against unseaworthiness necessarily overturns the warranty of seaworthiness which the *Marine Insurance Act*[116] implies in all contracts of insurance.[117]

The words "unseaworthiness" and "unfitness" include "uncargoworthiness."[118]

In Part I above, we have seen that the absolute duty of cargoworthiness is replaced in most contracts of affreightment by an obligation of due diligence. So too the P&I cover is limited to those liabilities which would have been incurred had the contract of affreightment been governed by the Hague or Hague-Visby Rules, or their equivalent, unless the Association accepts to increase its coverage.[119] This proviso is applicable whether the contract of carriage is contained in a bill of lading, charter-party, waybill or any other contract of affreightment.[120] As a result, the P&I insurer is liable to indemnify the assured only in respect of the latter's failure to exercise due diligence to make the ship

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115. Gard, *supra* note 15 rule 34(1)(a). See also The Steamship Mutual, *supra* note 13 rule 25(xxiv)(a); The Shipowners' Mutual, *supra* note 14 rule 2, section 14(A).

116. *Supra* note 18, s. 39.

117. *Arnould*, *supra* note 4 vol. 2, § 706.

118. *Ibid.* § 735; see Part I, A), above.

119. Gard, *supra* note 15 rule 34(1)(ii); The Steamship Mutual, *supra* note 13 rule 25(xxiv)(a); The Shipowners' Mutual, *supra* note 14 rule 2, section 14(E)(i). The Gard rules provide that liability pursuant to the Hamburg Rules is covered provided they are incorporated in the contract of affreightment by operation of law: Gard, *ibid.*

120. *Brækhus & Rein*, *supra* note 64 at 174.

cargoworthy before and at the beginning of the voyage. In practice, for NSR shipments of a freezing-sensitive nature, the coverage avails against liabilities to cargo resulting from the absence or unfitness of heating equipment caused by lack of due diligence on behalf of the assured.

Considering the rationale upon which this paper proceeds, i.e. a higher degree of care on the NSR should be enticed by the insurance industry, it is fitting to ask whether current P&I coverage of uncargoworthiness is satisfactory.

Let us first consider the alternative of coverage, i.e. restoring the warranty of seaworthiness in the P&I policy. It might indeed be argued that preventing the assured from recovering with respect to uncargoworthiness is the best way of achieving the objective of a higher degree of care on the NSR with respect to freezing-sensitive cargo. In other words, the argument goes that the assured will know beforehand that failure to fit heating equipment or see to its proper functioning will cause coverage to be lost; the assured will therefore make sure that cargoworthiness is satisfied.

After examination, we are of the view that restoring the warranty of seaworthiness is not appropriate, for it is neither fair nor feasible. The implied warranty of seaworthiness is predicated on the idea that a strict compliance with seaworthiness is essential to commerce.[121] But uncargoworthiness can result from no negligence at all; the standard is absolute and the defence of due care does not avail.[122] This makes the warranty a harsh one for the assured. Furthermore, a P&I policy subject to a warranty of seaworthiness has no practical utility for the assured. This is illustrated by U.S. law which, unlike English law,

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121. *Arnould, supra* note 4 vol. 2, § 706. The author adds it is also essential to the preservation of human life; this aspect will not be commented on here as it exceeds the purview of the paper.

122. *Arnould, supra* note 4 vol. 2, § 708; see also Part I, A).

does not imply the warranty into the P&I policy. The reason is simple and was well explained in *C.S. Holmes*[123] in the following language:

> If a warranty of seaworthiness was implied in a P&I policy, it would mean that in practically every instance the insurance company had assumed no risk [as to cargo loss], because, generally speaking, a ship is not liable to cargo unless it is unseaworthy.[124]

It therefore became common to contractually set aside the implied warranty in contracts of insurance and today the practice is omnipresent. No reasonable shipowner/carrier would accept binding itself to an insurance contract subject to the warranty.

It is concluded that current P&I coverage of uncargoworthiness is satisfactory, but that the objective of enticing a higher degree of care on the NSR must be achieved by other means. It is submitted that the objective may be attained through some form of control by the P&I insurer over the actual cargoworthiness of the vessel, prior to sailing. This alternative will be considered in Part II, D), below.

## B) Breach of duty of care

Standard P&I rules provide:

> The Association shall cover the following liabilities when and to the extent that they relate to cargo intended to be or being or having been carried on the Ship: liability for loss, shortage, damage or other responsibility arising out of any breach by the Member, or by any person for whose acts, neglect or default he may be legally

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123. 1926 AMC 126 (9th Cir. 1925).

124. See also *Puritan Insurance Co.* v. *The 13th Regional Corp.*, 1983 AMC 298 (W.D. Wash. 1983), a personal injury case, where the court said that to read into the policy an implied warranty of seaworthiness would definitely defeat the entire object of the policy; A.L. Parks, *The Law and Practice of Marine Insurance and Average* (Centreville, Md: Cornell Maritime Press, 1987) vol. II at 965.

> liable, of his obligation properly to load, handle, stow, carry, keep, care for, discharge or deliver the cargo...[125]

Because the above clause uses the words "properly and carefully," which are contained at article 3(2) of the Hague-Visby Rules, the coverage provided the shipowner/carrier is actually wider than what is needed under the common law duty of due care. In Part I, it was indicated that the standard of care under article 3(2) is probably more stringent than the due care standard. The former requires the adoption and operation of a "sound system," whereas the latter means only reasonable care.[126]

The question again arises as to the adequacy of the above clause for NSR carriage of freezing-sensitive cargo. For the same reasons exposed in the preceding section, it is concluded that coverage is satisfactory. In the majority of cases where the shipowner/carrier is held liable, if the case is not one of unseaworthiness, bad stowage is frequently involved.[127] Shipowners/carriers would not embark on a sea journey unless they were protected against the consequences of bad stowage by their employees or agents.

## C) Deviation

We have seen in Part I that the consequences of a deviation can be very serious for the shipowner/carrier. In some cases, the latter may lose the benefit of any defences or rights of limitation which would otherwise have been available to eliminate or reduce its liability.

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125. Gard, *supra* note 15 rule 34(1)(a). See also The Steamship Mutual, *supra* note 13 rule 25(xxiv)(a); The Shipowners' Mutual, *supra* note 14 rule 2, section 14(A).

126. See Part I, B), above. See also Part II, A), above, for the P&I clause requiring the assured to seek in its contracts of carriage the protections of the Hague-Visby Rules.

127. L.J. Buglass, *Marine Insurance and General Average in the United States*, 3rd ed. (Centreville, Md: Cornell Maritime Press, 1991) at 411.

For example, the shipowner/carrier may not be entitled to rely on the defence of due diligence to make the ship cargoworthy before and at the beginning of the voyage and could be held bound by the common law absolute duty.[128]

This explains the special P&I rules covering deviation. Typical rules provide that the club is not liable to indemnify the member for the consequences of a deviation unless certain conditions are met. The Shipowners' Mutual club rules provide for instance:

> Unless the Committee in its discretion shall otherwise determine, or cover has been agreed by the Managers in writing prior to the deviation, there shall be no recovery from the Association in respect of liabilities, costs and expenses arising from a deviation, in the sense of a departure from or delay in prosecution of the contractually agreed voyage or adventure, or from events occurring during or after a deviation, if as a result of such deviation the Member is not entitled to rely on any defences or rights of limitation which would otherwise have been available to him to eliminate or reduce his liability.[129]

This clause makes it clear that, as a rule, a deviation by the ship disentitles the insured from recovering indemnity from its P&I club. There are two exceptions to the rule.

First, liability for deviation may be indemnified by the club provided special coverage is agreed to by the club and the member before the deviation intervenes. Considering the potentially higher liability on the part of the shipowner/carrier in case of a deviation, P&I clubs will generally require the payment of an additional premium in return for the coverage of this increased risk.[130] The assessment of both the risk and the additional premium by the P&I club and agreement with the member must take place prior to the deviation for the latter to be covered.

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128. See Part I, C), above.

129. The Shipowners' Mutual, *supra* note 14 rule 2, section 14(E)(iii). Note that, under the quoted clause, loss of coverage does not arise unless the deviation causes the member to lose its protections and limitations of liability. See also The Steamship Mutual, *supra* note 13 rule 25(xxiv)(h).

130. *Brækhus & Rein*, *supra* note 64 at 297.

In this respect, Gard has arranged an open deviation insurance for the benefit of its members. It is however a condition for the insurance that the member give the association notice of the deviation at once and before any loss or damage to the cargo has occurred; otherwise the insurance has no application.[131] Gard's notificiation requirement is an additional condition of coverage and is not expressed in The Shipowners' Mutual rule quoted above. Compliance with this proviso may sometimes be problematic: what if the member did not authorize or consent to the deviation by the crew, but comes to learn about it after its occurrence—on the NSR, for instance, after cargo stowed in unheated space has suffered from freezing damage? In this case, it is impossible for the member to notify the club before the occurrence of cargo loss or damage.

The problem is partly resolved by the discretionary power of the club to indemnify the assured, which constitutes the second exception to the exclusion of cover rule. This power is specifically mentioned in the introductory words to The Shipowners' Mutual rule quoted above. In any event, the "omnibus clause" serves the same purpose.[132] It is interesting to note in this regard The Steamship Mutual's rules, which provide:

> Nevertheless the Directors shall have power to authorise payment by the Club of such a claim in whole or in part if the Directors shall determine that the Member had reasonable grounds for believing that no deviation was to be or had been made or that, having regard to all the circumstances of the case, the Member should be otherwise excused for failure to give such notice.[133]

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131. Gard, *supra* note 15 Appendix I(4).

132. The Shipowners' Mutual, *supra* note 14 rule 5; The Steamship Mutual, *supra* note 13 rule 25(xxxvi).

133. The Steamship Mutual, *supra* note 13 rule 25(xxiv)(h). Note that for reasons of limited space the paper does not discuss the assured's duty to disclose.

## D) Club's control over method of carriage

It is submitted that the optimal way for P&I clubs to induce a higher degree of care on the NSR with regard to freezing-sensitive cargo would be to exert a measure of control on the fitting of the vessel and stowage of cargo prior to sailing. This would ensure strict conditions of cargoworthiness and care are met by the ship and its crew to the club's satisfaction; at the same time, it would maintain intact the rules of P&I coverage so as not to discourage NSR shipping.

The fundamental question with regard to the type of cargo studied here is that its preservation all depends on the fitness and orderly operation of the heating equipment. A flaw in either aspect is likely to cause the equipment to falter, bringing about an unsuitable temperature for the cargo and liability for the shipowner/carrier. For P&I clubs, the best way to avert the risk of liability is to satisfy themselves by some means that no such flaws are present.

Once again, refrigerated cargo offers an apposite analogy. Refrigerated cargo receives special attention in the P&I rules, which typically provide for the club's power to control the system and method of carriage, storage, custody and handling of that type of cargo. The Steamship Mutual rules provide:

> ... [T]he Club may at any time require to be satisfied as to the spaces, plant and apparatus, and means used for the carriage of refrigerated cargo in an entered vessel, the instructions given to those on board and the terms of the contract of carriage under which the same is to be carried, and the Member shall upon such request supply the relevant information to the Club. If in this event the Club withholds its approval and so notifies the Member in writing, he shall not be entitled to recover from the Club in respect of any loss of or damage to such

> refrigerated cargo carried upon a voyage which began after the receipt by him of such notice...[134]

According to the foregoing provision, the club is entitled to ask for and obtain information on the condition and equipment of the ship, the instructions given to its crew and the terms of the contract of carriage of refrigerated cargo. Such information could be suitable to determine whether the insured member has exercised due diligence to make the vessel cargoworthy, and has set up a "sound system" of care for the cargo, as article 3(1) and (2) of the Hague-Visby Rules requires. If after receipt of the relevant information, the club is not satisfied of the condition and preparedness of the vessel and crew for the intended carriage and so notifies the member, the latter loses its right to recover in respect of the refrigerated cargo.

The American Steamship Mutual Protection and Indemnity Association, Inc., form of policy has a slightly different wording as to refrigerated cargo:

> ... *[N]o liability shall exist hereunder, for...* Loss, damage or expense arising out of or in connection with the care, custody, carriage or delivery of cargo requiring refrigeration, unless the spaces, apparatus and means used for the care, custody and carriage thereof have been surveyed by a classification or other competent disinterested surveyor under working conditions before commencement of each round voyage and found in all respects fit, and unless the Association has approved in writing the form of the contract under which such cargo is accepted for transportation.[135]

From the club's viewpoint, the American clause offers more protection than its English counterpart quoted above. Under the latter, refrigerated cargo coverage continues up until the moment the club notifies its member of its decision to withhold its approval. On the

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134. *Ibid.* rule 25(xxiv)(f).

135. Clause7(b), revised 20 February 1972, reproduced in A.L. Parks, *supra* note 124 vol. II at 969. See C. Hill, B. Robertson & S.J. Hazelwood, *supra* note 75 at 97.

other hand, the American clause conditions coverage on the obtaining of a satisfactory survey of the ship and its appliances before commencement of the voyage; coverage under the American clause is therefore *ab initio* non-existent where cargoworthiness and care are not satisfactorily surveyed prior to sailing and the club has not consented to the terms of shipment.

Proper surveying by independent professionals, disclosure of information by the assured and approval by the club seem to be the preconditions of coverage as to cargo requiring refrigeration. *Mutatis mutandis*, these features could be incorporated in P&I rules designed for the NSR in reference to carriage of freezing-sensitive cargo with the purpose of inducing on the part of the shipowner/carrier a higher degree of care.

In Part II, the adequacy of P&I conditions of cover was examined with respect to frost damage on the NSR. The next Part will focus on the marine cargo policy.

# PART III: MARINE CARGO POLICY

For a number of reasons, it is common practice for cargo owners to insure their goods against loss or damage while in transit. Cargo insurance, like any other form of insurance, reduces the financial burden of cargo owners: "... for a relatively small outlay of premium, [the merchant] can ensure himself of financial compensation for loss of or damage to his goods while in transit."[136] In other words, instead of suffering a considerable loss in the event of casualty, the shipper/consignee need only sustain a lesser financial burden represented by the amount of the premium. Moreover, insurance provides a quick and efficient means of compensation, provided the loss is caused by an insured risk; the shipper/consignee does not have to waste time and money on a lawsuit claiming indemnity from the responsible party; the shipper/consignee can carry on its usual business while the insurer, having paid its insured, takes up any necessary proceedings.[137] Finally, in many cases, the taking of insurance by the shipper is a requirement under the contract of sale of the goods.

These considerations apply to the NSR as to any other shipping route with the difference that, on the NSR, because of the high risk involved, cargo owners will be even more interested to obtain coverage for their property before accepting to ship it.[138]

Cargo insurance is generally provided by Lloyd's underwriters and by insurance companies.[139] The former are individuals or companies operating or represented on the

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136. R.H. Brown, *supra* note 85 at 1.

137. This is effected through the doctrine of subrogation: see *MIA*, *supra* note 18 s. 79.

138. See E. Gold, *supra* note 2.

139. A charterer may sometimes obtain insurance for its goods on board the chartered ship from its P&I club: see e.g. The Shipowners' Mutual, *supra* note 14 rule 4(2)(C).

London Lloyd's market. The contract of insurance on goods between insurer and insured is embodied in the marine cargo policy,[140] which is in practice a standard form containing spaces in blank intended for the particularization of the risk.

The conditions of coverage have come to be standardized in sets of clauses attached to and forming part of the marine policy, such as the Institute Cargo Clauses. These Clauses are approved by a Committee appointed by marine insurers in London and published by The Institute of London Underwriters. They are invariably used by underwriters and companies on the London market and form the basis of the present study.

More than a dozen sets of Institute Clauses exist. General clauses are known as Institute Cargo Clauses (A), (B) and (C).[141] Clauses (A) are known as the "all risks" form, because, subject to a few exceptions, they provide coverage against all fortuitous risks of loss of or damage to cargo. Clauses (B) and (C), on the other hand, are predicated on detailed lists of perils insured against. A perusal of these lists indicates that Clauses (B) and (C) are not wide enough to encompass in their protection cargo loss or damage resulting from freezing. Therefore, among the general clauses, the only ones studied here are the Institute Cargo Clauses (A).

In addition to the general clauses, there are various sets of Institute clauses intended for particular commodities. As yet no clauses have been devised to deal specifically with heated goods, but the Institute Frozen Food Clauses[142] provide a useful analogy.

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140. *MIA*, s. 22.

141. (Effective 1 January 1982.) Where mention is made herein of the Institute Clauses (A), (B) or (C), it is in reference to these Clauses as reproduced in *Chalmer*, *supra* note 5 at 239ff.

142. (Effective 1 August 1986, re-issued 1 January 1986.) Where mention is made herein of the Institute Frozen Food Clauses, it is in reference to these Clauses as reproduced in N.G. Hudson & J.C. Allen, *suprra* note 17 at 48ff.

The purpose of the current Part is to first ascertain the applicability of the "all risks" form to freezing damage on the NSR. After considering the "all risks" clause itself (A), it will be necessary to analyze two exclusions of cover found in the form, namely the exclusion of cargo's inherent vice or nature (B) and the exclusion of insufficiency or unsuitability of packing or preparation (C). It will appear from the analysis that freezing damage is not adequately covered by the Institute Cargo Clauses (A), hence the need for tailor-made clauses; the paper will therefore propose the "Heated Cargo Clauses," which are inspired by the Institute Frozen Food Clauses (D).

In order to induce a higher degree of care on the NSR, the paper will then consider different alternatives for cargo underwriters, such as restoring the warranty of the ship's cargoworthiness in the contract (E) or stipulating a warranty as to the goods' seaworthiness (F).

## A) "All risks" clause

By clause 1 of the Institute Cargo Clauses (A), it is provided that "[t]his insurance covers all risks of loss of or damage to the subject-matter insured..."

It is a basic principle of marine insurance law that the claimant has the onus of proving the loss under the terms of the policy.[143] An "all risks" policy makes that onus easier to discharge; this is because "'[a]ll risks' has the same effect as if all insurable risks were separately enumerated."[144]

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143. *Whiting* v. *New Zealand Insurance Co.* (1932), 44 Ll.L.Rep. 179; N.G. Hudson & J.C. Allen, *supra* note 17 at 10; J.K. Goodacre, *Marine Insurance Claims*, 2nd ed. (London: Witherby, 1981) at 34-35 and 91-93.

144. *British and Foreign Marine Insurance Co.* v. *Gaunt*, [1921] 2 A.C. 41 at 57 (H.L.), Lord Sumner.

In the leading case of *British and Foreign Marine Insurance Co.* v. *Gaunt*,[145] it was held by the House of Lords that it is enough for the cargo owner to be compensated under an "all risks" policy to show that the loss occurred fortuitously during the currency of the policy; in other words, the loss must not have been of an inevitable nature, but an external cause must have precipitated it. Lord Sumner said:

> [T]he expression ["all risks"] does not cover inherent vice or mere wear and tear or British capture. It covers a risk, not a certainty; it is something, which happens to the subject-matter from without, not the natural behaviour of that subject-matter, being what it is, in the circumstances under which it is carried. Nor is it a loss which the assured brings about by his own act, for then he has not merely exposed the goods to the chance of injury, he has injured them himself.[146]

It is submitted that freezing damage would qualify as an insured peril under the "all risks" form. In the majority of cases, freezing damage is likely to result from a breakdown of the heating equipment. Machinery breakdown is clearly a fortuitous or accidental occurrence, not being inevitable. It is also a factor external to and separate from the cargo itself.

Difficulties arise, however, when the insurer invokes one or more of the exclusions contained in the Institute Cargo Clauses (A) by claiming that breakdown of the container's heating apparatus amounts to insufficiency or unsuitability of packing,[147] or that freezing damage constitutes an inherent vice of the cargo.[148] These arguments will be analyzed below, under the headings respecting each of the two exclusions of coverage.[149]

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145. *Ibid.*

146. *Ibid.* at 57. As to the exclusion of insufficiency or unsuitability of packing or preparation, see Part III, B), below; as to the exclusion of inherent vice, see Part III, C), below.

147. Institute Clauses (A), clause 4.3.

148. *Ibid.* clause 4.4.

149. See Part III, B) (insufficient packing) & C) (inherent vice), below.

## B) Exclusion of insufficiency of packing

Excluded from coverage under the Institute Cargo Clauses (A) is insufficiency or unsuitability of packing. Clause 4.3 reads:

> In no case shall this insurance cover... loss damage or expense caused by insufficiency or unsuitability of packing or preparation of the subject-matter insured (for the purpose of this Clause 4.3 "packing" shall be deemed to include stowage in a container or liftvan but only when such stowage is carried out prior to attachment of this insurance or by the Assured or their servants)...

The exclusion is of interest on the NSR where freezing-sensitive cargo is shipped in a heated container. Malfunctioning of the container could, it is submitted, be regarded as insufficient packing[150] and be therefore excluded from coverage.

But pursuant to the foregoing provision, containers' insufficiency can only be invoked by the insurer if the cargo was stowed therein prior to the attachment of the insurance or by the assured or its servants. This means that, where the policy attaches on the loading of the pre-packed container on board the NSR vessel, the underwriter is freed from liability for damage to the goods caused by a defect in the container's heating system.

## C) Exclusion of inherent vice

The other exclusion which could affect recovery for freezing damage is contained in clause 4.4 of the Institute Cargo Clauses (A) and relates to the inherent vice or nature of the subject-matter insured.

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150. See Part I, D), above.

We have seen that, under certain circumstances, cargo's proneness to freeze on an NSR voyage could amount to inherent vice or nature. The same may be said of malfunctioning of a heated container where the latter forms part of the subject-matter insured.[151] Consequently, the current exclusion could potentially negate the assured's recourses against its insurer.

In sum, the exclusions of insufficiency of packing and inherent vice render coverage of freezing damage very uncertain under the Institute Cargo Clauses (A). It is preferable for the cargo owner to seek more specific conditions; the following section will recommend one example.

## D) "Heated Cargo Clauses"

The Institute Frozen Food Clauses offer a good example of tailor-made clauses designed to meet the special requirements of a particular kind of commodity, which must be maintained at a certain temperature throughout the carriage in order to arrive in good condition. This characteristic applies to cargo of a vulnerable nature requiring a heated environment while in transit on the NSR.

It is submitted that, in order to address the special needs of such cargo, conditions of cover be modelled on the Institute Frozen Food Clauses.

Two provisions will attract our attention, the Risks Clause and the General Exclusions Clause.[152] The first clause would provide:[153]

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151. See Part I, F), above.

152. The study of the other provisions of the Institute Frozen Food Clauses goes beyond the limits of the present paper.

**Clause 1 — Risks Clause**

**1** This insurance covers, except as provided in Clauses 4, 5, 6 and 7 below,

**1.1** all risks of loss of or damage to the subject-matter insured, other than loss or damage resulting from any variation in temperature howsoever caused,

**1.2** loss of or damage to the subject-matter insured resulting from any variation in temperature attributable to

**1.2.1** breakdown of <u>heating</u> machinery resulting in its stoppage for a period of not less than 24 consecutive hours

**1.2.2** fire or explosion

**1.2.3** vessel or craft being stranded grounded sunk or capsized

**1.2.4** overturning or derailment of land conveyance

**1.2.5** collision or contact of vessel craft or conveyance with any external object other than water

**1.2.6** discharge of cargo at a port of distress

The fact that clause 1.1 retains an "all risks" coverage,[154] excluding of course the risk of variation of temperature which is dealt with in the following sub-clause, is an inducement for shippers on the NSR. It means that they are given substantially the same protections as any other shippers.

By clause 1.2, the underwriter sets out specifically what is covered in respect of freezing damage. This specification is of enormous importance, because it clarifies the risks borne by the underwriter. Many of the characterization difficulties are thus excluded.

Probably the most useful provision in the context of freezing damage is clause 1.2.1, because it centres solely on machinery breakdown. This means that the real cause behind

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153. Proposed adaptations of the Institute Frozen Food Clauses are underlined. The number quoted against each clause is the number in the Institute Frozen Food Clauses.

154. See Part III, A), above.

the breakdown is of no avail; frost damage due to machinery breakdown will always give rise to indemnity, regardless of the cause.

The fact that "breakdown of machinery" is followed by the words "resulting in its stoppage" makes it clear that what is covered by the policy is cargo damage attributable to interruption of heating and not a mere reduction of the machinery's output. Of course, this restriction could be revisited as an even minor disruption of the heating system could potentially lead to frost damage under extreme NSR conditions.

Similarly, the restriction of cover to heating stoppage for at least 24 consecutive hours could be modified or deleted. The purpose of such a restriction is presumably to limit recoveries under the policy to serious cases of damage. Consequently, the assured must, in order to succeed on its claim, show that freezing occurred as a result of an interruption of the heating equipment for not less than 24 consecutive hours. This proof will arguably much depend on the goodwill of the shipowner/carrier and its servants,[155] who are frequently the only persons conversant with the incidents encountered on the voyage. The cut-off figure of 24 hours appears in any event arbitrary to both underwriter and cargo owner and deserves serious examination.

As for the General Exclusions Clause, the latter could read:

**Clause 4 — General Exclusions Clause**

**4** In no case shall this insurance cover

...

**4.3** loss damage or expense caused by insufficiency or unsuitability of packing or preparation of the subject-matter insured (except loss damage or expense resulting from variation in temperature specifically covered under Clause 1.2 above) (for the purpose of this Clause 4.3 "packing" shall be deemed to include stowage in a

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155. N.G. Hudson & J.C. Allen, *supra* note 17 at 48.

container or liftvan but only when such stowage is carried out prior to attachment of this insurance or by the Assured or their servants)

**4.4** loss damage or expense caused by inherent vice or nature of the subject-matter insured (except loss damage or expense resulting from variation in temperature specifically covered under Clause 1.2 above)

...

**4.8** loss damage or expense arising from any failure of the Assured or their servants to take all reasonable precautions to ensure that the subject-matter insured is kept in heated or, where appropriate, properly insulated and warmed space

...

The first two exclusions have already been studied; it has also been stated that they are a possible obstacle to recovery for frost damage on the NSR under the "all risks" policy.[156] This obstacle is done away with by the proviso appearing in brackets and beginning with the words "except loss damage or expense."[157] The purpose of this proviso is to make it clear that freezing damage is intended to be covered, pursuant to clause 1.

On the other hand, clause 4.8 stipulates a logical exclusion. Insurance is meant to cover cargo loss, but not when the assured itself causes the loss. The exclusion would for example exempt the underwriter from liability where cargo suffers frost damage as a result of its being unheated, the NSR shipper having failed to inform the carrier of the cargo's vulnerability to cold weather and the carrier not being otherwise able to ascertain this fact.

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156. See Part III, B) & C), above.

157. The proviso is only contained at clause 4.4 of the Institute Frozen Food Clauses, but, for the reasons set out above, we have seen it appropriate to include it in clause 4.3 as well.

These are just a few of the provisions which could form part of the "Heated Cargo Clauses." Development of a comprehensive set of clauses is left for later researchers and/or the market itself.

The following sections will discuss alternatives for cargo insurers to induce a higher degree of care by their insureds.

## E) Warranty of cargoworthiness

Implied in every voyage policy on cargo is a "... warranty that at the commencement of the voyage the ship is not only seaworthy as a ship, but also that she is reasonably fit to carry the goods or other moveables to the destination contemplated by the policy."[158]

In insurance law, breach of a warranty discharges the insurer from liability as from the date of the breach.[159] This means that if the vessel is in fact uncargoworthy at the commencement of the voyage, the insurer is not liable on the policy, regardless of the cause of the damage. The responsibility of the ship's cargoworthiness is, in other words, placed on the insured.

In practice, insurers have taken the habit of inserting a clause in the cargo policy which negatives the implied warranty of cargoworthiness, the so-called "seaworthiness admitted" clause. Such a clause typically reads:

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158. *MIA*, s. 40(2).

159. *Ibid.* s. 33(3).

> The Underwriters waive any breach of the implied warranties of seaworthiness of the ship to carry the subject-matter insured to destination, unless the Assured or their servants are privy to such unseaworthiness or unfitness.[160]

As a result of this clause, cargo coverage is not affected by the uncargoworthiness of the vessel, unless the assured or its servants are privy to such uncargoworthiness.

Considering the objective of the insurer with respect to freezing-sensitive cargo on the NSR, i.e. to induce a higher degree of care on the part of the assured, is it appropriate to restore the warranty of cargoworthiness in the cargo policy? In other words, should the insured's right to recover under the policy depend on the ship's being fitted with proper heating equipment at the commencement of the voyage so as to make it cargoworthy, regardless of the insured's innocence? Let us first elucidate the reasons underlying the insertion of the "seaworthiness admitted" clause.

To say the least, the effect of the implied warranty appeared unfair for cargo owners. The latter had frequently no means to verify the condition of the vessel, being miles apart from the loading port. Even if the ship were accessible, it would have required in most cases a specialized surveyor to check the fitness of the ship for the intended carriage, for cargo owners, although cognizant of the nature of their goods, are no specialists in their carriage. The latter activity is proper to the shipowners'/carriers' profession.[161]

In our view, these reasons support the removal of the implied warranty even on NSR voyages. Take for instance an FOB shipment of bananas leaving South-East Asia for the port of Tiksi on the Laptev Sea. It is impossible for the Russian consignee to control the cargoworthiness of the ship prior to sailing. In such case, as in many others, the implied

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160. Institute Cargo Clauses (A), clause 5.2; Institute Frozen Food Clauses, clause 5.2.

161. R.H. Brown, *supra* note 85 at 105; J.K. Goodacre, *supra* note 143 at 61.

warranty would unfairly penalize the insured and deprive it of all practical benefits expected from the policy.

Surely the insurer should not be held liable under the policy where the cargo owner knowingly loads its cargo on board an uncargoworthy vessel. But the proviso to the "seaworthiness admitted" clause provides the needed safeguard in such case. The word "privy" appearing therein has been interpreted as meaning that the assured has actual positive knowledge of the uncargoworthiness or, being suspicious of the true situation, "turns a blind eye" to it and refrains from enquiry.[162]

It is concluded therefore that restoring the warranty of cargoworthiness is an inappropriate means to induce a higher degree of care on the part of the assured.

## F) Warranty of cargo's seaworthiness

Another possibility is to introduce in the contract of insurance a warranty as to the goods' seaworthiness. Section 40(1) of the *MIA* contemplates this warranty, though in order to negate it as an implied term in the policy on goods.

There are two difficulties with such an option. The first is that coverage is already excluded as to cargo's insufficient or unsuitable packing or preparation and inherent vice or

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162. N.G. Hudson & J.C. Allen, *supra* note 17 at 21. The "seaworthiness admitted clause" is reinforced by clause 5.1, which reads:

> In no case shall this insurance cover loss damage or expense arising from unseaworthiness of vessel or craft, unfitness of vessel craft conveyance container or liftvan for the safe carriage of the subject-matter insured, where the Assured or their servants are privy to such unseaworthiness or unfitness, at the time the subject-matter insured is loaded therein.

In an "all risks policy," clause 5.1 does not add much to the risks insured against, save an *a contrario* confirmation of coverage against the risk of unseaworthiness; but the true purpose of the clause seems to be to clarify exclusion of coverage against unseaworthiness to which the assured or its servants are privy: N.G. Hudson & J.C. Allen, *ibid.* at 21.

nature under clauses 4.3 and 4.4 of the Institute Cargo Clauses (A) and Institute Frozen Food Clauses. Although the concepts of insufficient packing, lack of preparation and inherent nature are not *stricto sensu* equivalent to unseaworthiness, it remains that the latter covers the impropriety of the goods for the intended voyage, which seems to correspond to the content of the exclusions. Unless the exclusions are removed, the warranty of the goods' seaworthiness would create a contradiction in the terms of the policy.

Another difficulty is that the warranty is too harsh as far as the assured is concerned. It is one thing to exclude liability for loss resulting from inherent vice, but if the loss is caused partly by the negligence of the shipowner/carrier and partly by the cargo's inherent vice the warranty would discharge the cargo insurer from all liability.

It is therefore our view that this warranty should not be inserted in the NSR policy.

# CONCLUSION

This paper has tried to set the legal framework respecting NSR shipments of cargo requiring heating in order to be protected against freezing damage. The rationale adopted throughout the paper has been that insurers, both P&I clubs and cargo underwriters, need first to assess the risk incurred and second to adopt appropriate conditions of cover.

Many factors must be taken into account when approaching the issue of cargo frost damage on the NSR: cargo's nature; packing; weather and ice flow predictions; ship technology; terms of the contract; representations; human error, etc. Too many variables render it impossible to answer the question of the distribution of liabilities at large. Every case will depend on its own facts, but it is paramount that, in the perspective of an expanding traffic of goods moving on the NSR, the way is at least cleared.

Application of the traditional law of carriage on the NSR is in itself an unknown. Until recently, ice navigation has been very limited and even today shipping on ice-bound waters is still in its infancy. This uncertainty of the law adds costs for all the parties to the NSR adventure: shipowner/carrier, cargo owner and marine insurer.

Nevertheless, certain aspects of NSR carriage law can be predicted with sufficient certainty. One of them is the higher standard of care which will be imposed by the courts on NSR voyages. Increased care is necessitated by the harsh conditions present on the NSR.[163] The rationale adopted in this paper is that this higher standard of care should be induced by insurers accepting to underwrite the NSR risk.

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163. See Part I *passim*, above.

True, it has been said that "[i]n attempting to determine the effect marine insurance has on regulating arctic shipping, it became clear that insurance does not lead the activity but merely follows it."[164] The foregoing statement, it is submitted, should not be taken too widely; rather, it should be recognized that marine insurance, being the condition *sine qua non* for viable commercial shipping on the NSR, empowers the underwriter to exert a measure of control and oversight on the activity.

Insofar as P&I clubs are concerned, it was found that the current conditions of cover are satisfactory and could be used on the NSR without substantial modification. However, P&I clubs should exercise their power under the rules of cover to control the cargoworthiness of the vessel and ensure its proper fitting.[165]

Cargo insurers need, however, to adopt new rules respecting NSR cargo requiring heating. This is because existing sets of clauses do not offer sufficient protection for frost damage on the NSR. The paper proposed the so-called "Heated Cargo Clauses," which offer a good starting point.[166]

Increased care on the NSR should not be equated with an absolute requirement of fitness. The discussion of cargoworthiness has demonstrated that absolute standards are neither fair nor practical even in the harshest environments. Due diligence is often a good alternative.

If one thing has been achieved by the paper, it is surely the complexity a small issue of liability can take when human activity is transposed in a new environment characterized by special attributes. These attributes are harsh and extreme natural conditions. The key words are therefore "extra caution." For the lawyer, this translates into a challenge as to

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164. K.J. Spears, *supra* note 1 at 6.

165. See Part II *passim*, above.

166. See Part III *passim*, above.

how this extra caution can be conceptualized and organized amongst existing rules and, in some cases, how new rules can be created to address new problems.

The fact that what is proposed here needs to be examined further could not be emphasized enough. It is important to carry out further research on the law of carriage as it relates to NSR shipments. The drafting of insurance clauses should on the other hand require the collaboration of scholars and insurers. The latter are the ones who will eventually underwrite the risk and they are its best assessors.

Insurance is a discipline where one needs to learn from the experience of the past even where new risks are contemplated. It is hoped this paper has considered past experiences and that it might stimulate further thinking.

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The INSROP Secretariat
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Your Ref:
Our Ref: KE-hmp
Date: 16 October 1996

Dear Sirs,

**FREEZING DAMAGE TO NORTHERN SEA ROUTE CARGO: LIABILITY AND INSURANCE CONSIDERATION**

We refer to your letter of 18 September 1996.

We have reviewed the report and have the following comments:

1 The Northern Sea Route will be outside the trading limits currently laid down for ordinary hull and machinery insurance.

2 Even if there is no trading limit under a standard P&I entry in Gard, the insured has a duty prior to the conclusion of the contract of insurance to make full disclosure to the Association of all circumstances which would be of relevance to the Association in deciding whether and on what conditions to accept the entry. The intended trading area of the vessel is one of the items which are listed in the Association's questionnaire sent to new Members. As we see it, it is of vital importance for the Association to know on beforehand whether or not the vessel shall be used in the Northern Sea Route in order for the Association to assess the premium. If the insured has neglected his duty of disclosure it may prejudice the cover. We refer to Rule 6 in Gard's Rules for Ships.

3 If the vessel's trading area is changed during her period of entry in the Association, it may also affect the cover. If for example the vessel's trading area is changed from the ordinary European trade in the North Sea and the Baltic to the Northern Sea Route, the Association should be informed without undue delay. If the insured fails to inform the Association of such a change in the vessel's trading area, it may be deemed to be an alteration of the risk agreed to by the insured and it may affect the cover. We refer to Rule 7.2 in Gard's Rules for Ships.

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4 We would also believe that a vessel which shall sail in the Northern Sea Route needs ice class. Rule 8.1 in Gard's Rules for Ships requires that the Member shall comply with, inter alia, all rules recommendations etc. of the vessel's classification society. Without going into details, we feel it is correct to say that any circumstances which may affect the vessel's class may also have an impact on the vessel's P&I cover. We refer to Rule 8 in Gard's Rules for Ships.

5 The Northern Sea Route is currently deemed to be outside the ordinary trading area. If the Northern Sea Route shall be used as an alternative to Suez, it will require that the contract of carriage expressly allows the shipowner (i.e. the carrier) to use it.

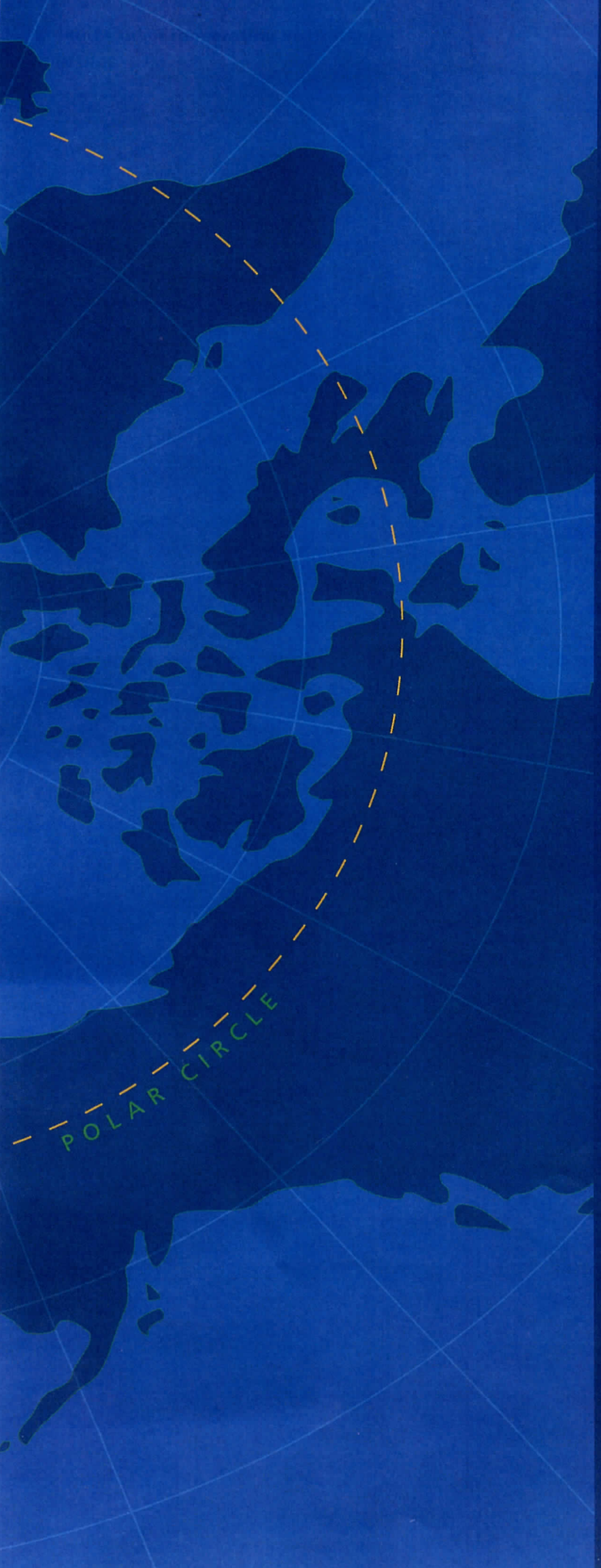
* * *

We feel the above comments should be reflected in the report.

Yours faithfully,

**ASSURANCEFORENINGEN GARD**
-gjensidig-

Kjetil Eivindstad
Asst. Director




**The three main cooperating institutions of INSROP**

**Ship & Ocean Foundation (SOF), Tokyo, Japan.**

SOF was established in 1975 as a non-profit organization to advance modernization and rationalization of Japan's shipbuilding and related industries, and to give assistance to non-profit organizations associated with these industries. SOF is provided with operation funds by the Sasakawa Foundation, the world's largest foundation operated with revenue from motorboat racing. An integral part of SOF, the Tsukuba Institute, carries out experimental research into ocean environment protection and ocean development.

**Central Marine Research & Design Institute (CNIIMF), St. Petersburg, Russia.**

CNIIMF was founded in 1929. The institute's research focus is applied and technological with four main goals: the improvment of merchant fleet efficiency; shipping safety; technical development of the merchant fleet; and design support for future fleet development. CNIIMF was a Russian state institution up to 1993, when it was converted into a stock-holding company.

**The Fridtjof Nansen Institute (FNI), Lysaker, Norway.**

FNI was founded in 1958 and is based at Polhøgda, the home of Fridtjof Nansen, famous Norwegian polar explorer, scientist, humanist and statesman. The institute spesializes in applied social science research, with special focus on international resource and environmental management. In addition to INSROP, the research is organized in six integrated programmes. Typical of FNI research is a multi-disciplinary approach, entailing extensive cooperation with other research institutions both at home and abroad. The INSROP Secretariat is located at FNI.