THE SEAWORTHINESS: AN OLD WARRANTY FOR A NEW DUTY

Federico Franchina *

SUMMARY: 1. Introduction – 2. A (possible) definition of seaworthiness – 3. Seaworthiness in charterparty – 4. Seaworthiness in marine insurance – 5. Seaworthiness and oil pollution: An Italian history – 6. Cyber risk and seaworthiness – 7. Conclusion.

1. – The seaworthiness of the vessel is a crucial pivot through which the activity of shipping runs, going to cover the different fields and areas of maritime law.

In fact, it detects from many points, being a *quid* strongly inherent to operation of the vessel. It is related both to the relationships of a private nature and to aspects of public and international derivation that arise when, for example, we also deal with oil spill.

The purpose of this paper is to trace a logical path in order to examine the content that the term seaworthiness of the vessel carries with it, developing the scope of analysis and the areas in which this concept exerts its effects, having particular regard to the charter party and marine insurance discipline as well as the implications that pertain to marine pollution.

The survey will then be enriched by a necessary identification, from a theoretical and hermeneutic point of view, of the "level" of seaworthiness in order to understand what that term really means. It is believed, indeed, that this preliminary aspect of the present research constitutes a necessary step in order to allow a final disquisition on "new issues": technological progress is involving seaworthiness, and this implies that the future use of an old term or concept is inextricably linked to the use to which vessels are put.

* Ph.D. on Maritime, Air and Transport Law at University of Messina; Lawyer.

ISSN 1724-7322

2. – The importance of seaworthiness is clear: to operate an unseaworthy ship is a risk for human life, environment and cargo and generally for those parties that rely on shipowner's capability to protect lives and to take care of goods on board [1].

It is quite difficult to define the meaning of the term seaworthiness because it is a concept rather mutable, flexible and versatile and, at the same time, legal rules that attempt to outline the condition of seaworthiness are complicated and obviously technical [2].

In legal terms, a seaworthy ship is one ship that is in all respects fitted for a safe voyage at sea, including the condition of the vessel itself as well as any equipment on board and the skills and the crew skills.

Indeed, in the strict sense, "safe" is a different concept from "seaworthy". In fact, the term "seaworthiness", in the strict sense, should only concern matters involving the ship's ability to encounter the ordinary perils of the sea and does not concern the condition of the ship with reference to the health, welfare and safety of human lives on board.

However this term is usually understood in a broad sense [3].

There have been no changes to the traditional definition of seaworthiness, despite the amendments that laws and regulations governing the shipping industry have undergone. What has changed is the nature of the shipowner's duty and, therefore, the cases in which he is liable for the unseaworthiness of the vessel [4].

[1] They represent the typical obligations that fall on shipowner in a case of contract of transport. See to this end A. Lefebvre d'Ovidio, L. Tullio and G. Pescatore, *Manuale di diritto della navigazione*, (13th ed., Milan, Giuffré, 2013), 282.

[2] It was also noted, C. Haselgrove-Spurin, *The importance of seaworthiness*, (1996), 1, available on website www.nadr.co.uk, that "*Parties to contracts frequently specify duties which may or may not be covered by seaworthiness, on order to inject a degree of certainty into their relations. On times legal requirements are imposed by law whilst at the other times the parties are free to determine who must bear the consequences of unseaworthiness or the circumstances when unseaworthiness will or will not attract liability*". More recently this concept has been underlined also in Maritime Labour Convention 2006 (see P. Zhang, E. Phillips, *Safety first: Reconstructing the concept of seaworthiness under the maritime labour convention 2006*, *Marine Policy*, 67 (2016): 54.

[3] See S. Hodges, *What is a 'seaworthy' vessel'*, in *The Carriage of Bulk Oil and Chemicals at Sea* (edited by K. Rawson), Rugby, Wawickshire, 1994, 51.

[4] In the case *Kopitoff v. Wilson* (1867) 1 QBD 377 (QBD). See R. Aikens, R. Lord, M. Bools, *Bills of lading,* Abingdon, Oxon, II ed., 2016, 315.

In general terms, seaworthiness can be defined as a "quality" of the vessel, or the element whose presence can be deduced from the existence of the minimum conditions required for safe maritime navigation in respect of passengers, cargo and the ship itself [5].

The generic nature of such a formulation leads to an approach to the problem of seaworthiness in relative terms. In fact, seaworthiness is a relative term that is impossible to be measured or defined in the abstract.

It is, therefore, appropriate to consider the different meanings of this word in consideration of many different factors. The seaworthiness can be interpreted differently depending upon the class of vessel, the type of cargo, the places and times of navigation, having regard also to equipment, crew and, finally, to the shipowner's cognitive and entrepreneurial skills.

In the field of the carriage of goods by sea, common law Courts have tried to develop a broad legal definition of seaworthiness. For instance, in the classic case law *Dixon v. Sader* [6] a seaworthy ship was defined one which is in a '*fit state as to repairs, equipments, crew and in all other respects, to encounter the ordinary perils of the sea'*. But in the case *Kopitoff v. Wilson* [7] the Court supported a broader definition: "*The shipowner is, by the nature of the contract, impliedly and necessarily held to warrant that the ship is good, and is in a condition to perform the voyage then about to be undertaken, or, in ordinary language, is seaworthy, that is, fit to meet and undergo the perils of the sea and other incidental risks which of necessity she must be exposed in the course of voyage*". Similarly, in the case *McFadden v. Blue Star Line* [8] seaworthiness has been defined as "*that degree of fitness which an ordinary careful and prudent owner would require his vessel to have at the commencement of her voyage having regard to all the probable circumstances of it*". It seems clear that English Courts did not establish a specific and fixed content of seaworthiness but they had pointed out only the final result that has to be reached.

[5] One of the first definition of seaworthiness was given by Lord Wansleydale in the case *Dixon v. Sandler* (1839) 5M&W 405, 414, by which "*A ship is seaworthy when she is in fit state a stowage repairs, and crew, and in all other respects, to encounter the ordinary perils of the voyage insurer at the time of sailing upon it".*

[6] This definition, formulated in 1839 (5 *M&W*, 414), was approved by the House of Lords in *Steel v. State Line* (1873, 3 *App. Cas*., 72). See S. Hodges, *What is a 'seaworthy' vessel'*, in *The Carriage of Bulk Oil and Chemicals at Sea* (ed. by K. Rawson), *supra cit*., 51.

[7] See above footnote 4.

[8] See *McFadden v Blue Star Line* [1905] 1 KB 697.

In addition, it is clear that this obligation does not mean that the vessel must be perfect but she should be made "*as seaworthy as she reasonably can be or can be made by known methods"* [9] to take that particular voyage.

The classic definition of seaworthiness, under which vessel is seaworthy when it is reasonably fit in all respects to encounter ordinary perils of the sea [10], is contained in the UK Marine Insurance Act (MIA) [11].

It is, indeed, a definition that looks only at the risk of navigation, while the complexity of the definition is emphasized when the term seaworthiness intersects with international conventions by virtue of the varying legal conditions in which it is called to operate, differently from the more ductile and flexible private contracts.

These considerations lead to a cautious approach to the concept of seaworthiness that is being interpreted in different ways depending on either environmental or technical elements, including legislative and regulatory provisions.

However, differences in meaning of the term seaworthiness do not concern the general definition, but they emerge when there has been a breach of this duty. We may consider, indeed, that in the contract of carriage of goods, the carrier has to ensure that the vessel is fit to carry the cargo and complete the voyage in a safely manner, whereas in the insurance contract the insurer is concerned that vessel should be fit for the voyage [12].

[9] See *McFadden v Blue Star Line, ibid* and also *The Glenfruin* (1885) QBD 103.

[10] The UK MIA at S. 39**:** Warranty of seaworthiness of ship

(1) In a voyage policy there is an implied warranty that at the commencement of the voyage the ship shall be seaworthy for the purpose of the particular adventure insured.

(2) Where the policy attaches while the ship is in port, there is also an implied warranty that she shall, at the commencement of the risk, be reasonably fit to encounter the ordinary perils of the port.

(3) Where the policy relates to a voyage which is performed in different stages, during which the ship requires different kinds of or further preparation or equipment, there is an implied warranty that at the commencement of each stage the ship is seaworthy in respect of such preparation or equipment for the purposes of that stage.

(4) A ship is deemed to be seaworthy when she is reasonably fit in all respects to encounter the ordinary perils of the seas of the adventure insured.

(5) In a time policy there is no implied warranty that the ship shall be seaworthy at any stage of the adventure, but where, with the privity of the assured, the ship is sent to sea in an unseaworthy state, the insurer is not liable for any loss attributable to unseaworthiness.

[11] The Marine Insurance Act (MIA) 1906 (8 *Edw*. 7 c.41) is a UK Act of Parliament regulating marine insurance. See R. Merkin, *Marine Insurance Legislation*, London, 2014, 161.

[12] See S. Hodges, *Cases and Materials on Marine Insurance Law*, London, 1999, 41.

In the event of a breach of the duty to make the vessel seaworthy, the carrier will not be liable if unseaworthiness is not the cause of the loss, or if it is, the carrier should be able to prove that he has exercised due diligence in order to make the ship seaworthy. On the other hand, the insurer does not have to pay if the vessel was unseaworthy, even if unseaworthiness was not the cause of the loss [13].

Over and above the individual differences, we may recognize that the meaning of the term seaworthiness has retained a certain level of "steadiness" both if used in marine insurance [14] and in the carriage of goods [15], allowing to draw up a general definition by which seaworthiness is *the fitness of the vessel in all respects, to encounter the ordinary perils of the sea, that could be expected on her voyage, and deliver the cargo safely to its destination* [16].

Generally, the word "seaworthy" is also intended as the "warranty of seaworthiness" [17]. Warranty of seaworthiness refers to a warranty whereby the shipowner agrees to provide a seaworthy vessel to carry the goods specified in the transportation contract.

Probably seaworthiness is neither a condition nor a warranty [18], but it could be considered as an atypical [19] obligation whose effects depend upon

[13] See B. Soyer, *Warranties in marine insurance*, (London, Routledge, 2006) 71.

[14] See *Becker, Gray and Company v. London Assurance Corporation*, [1918] A.C. 101, 114.

[15] See *Hedley v. The Pinkney and Sons Steamship Company*, [1892] 1 Q.B. 58, 64, and also *Dixon v. Sadler*, 5 M. &W. 405.

[16] These are the words of A.H. Kassem, *The Legal Aspects of Seaworthiness, Current Law and Development*, Swansea University, Swansea, 2006, 22.

[17] Basically it is used in the case of marine insurance contract as a "warranty" that shipowner has to guarantee. See D.P. Langhauser, *Implied warranties of seaworthiness: applying the knowing neglect standard in time hull insurance policies*, *Maine Law Review*, (1987): 443.

[18] The issue about the difference "warranty" and "condition" and their relation with seaworthiness arose in the case Hong Kong Fir Shipping Co. v Kawasaki Kisen Kaisha [1962] 2 QB 26. According to Lord Justice Diplock "The question whether an event which is the result of the other party's breach of contract has this consequence cannot be answered by treating all contractual undertakings as falling into one of two separate categories: "conditions" the breach of which gives rise to an event which relieves the party not in default of further performance of his obligations, and "warranties" the breach of which does not give rise to such an event. (...) Of such undertakings all that can be predicated is that some breaches will and others will not give rise an event which will deprive the party not in default of substantially the whole benefit which it was intended that he should obtain from the contract; and the legal consequences of a breach of such undertaking, unless provided for expressly in the contract, depend upon the nature of the event to which the breach gives rise and do not follow automatically from a prior classification of the undertaking as a condition or a warranty".

[19] See Kassem, *op. cit.*, 22, T.E. Scrutton, *Charterparties*, ed. A.A. Mocatta, M.J. Mustill, and S.C.

the severity of the breach and the type of contract involved [20].

It is very important to identify and define clearly the features of seaworthiness because, as mentioned above, the safety of a voyage depends on it. Equally, the interest of all parties involved in various ways, whether they are shipowners, carriers, owners of ships, consignees of goods, passengers, insurers or other stakeholders, depends on it.

3. – In every common-law contract of affreightment there is an implied obligation to provide a seaworthy vessel, but *"[…] this implied undertaking arises not from the shipowner position as a common carrier, but from his acting as a shipowner"* [21]. Under common law, "charterparties" determine the time from which the vessel chartered should be seaworthy in the absence of a contrary provision. It is a general principle that governs the carriage of goods by sea [22]. In fact, cargo-owners expect that their goods will be delivered safely to destination [23]. However, the possibility for shipowners to negotiate an express clause excluding their liability for unseaworthiness [24] does not mean that the relevance of seaworthiness seems weakened.

This is the consequence of simple considerations. Charterparties are indeed governed by the principle of contractual freedom and neither shipowners nor charterers are in a position to prevail over the other, while they are free to allocate the financial risks of contractual obligations. In other words, legislation has left wide freedom to the parties to determine the content of

Boyd (18th ed., London, Sweet & Maxwell, 1974), 80 and also M. Hamsher, "Seaworthiness and the Hong Kong Fir decision" in: *Legal issues relating to Time Charterparies*, ed. D. R. Thomas, (London, Routledge, 2008), 89.

[20] For a recent analysis about the concept of "warranty" under English Law and having in consideration also the recent English Insurance Act (2015) see A. Dani and A. La Mattina, *What's happening to warranties?*, *Marine Aviation and Transport Insurance Review*, July 2015, III: 3, available on website www.ania.it.

[21] *Kopitoff v. Wilson* [1876] 1 QBD, 377. See Scrutton, *op. cit.*, 80.

[22] English Courts have long since stated this principle, see *Steel v. State Line Steamship co.* (1877) 3 App. Cas. Cited by Scrutton, *op. cit.*, 80, nt. 50.

[23] According to J. Arnould, *Arnould's Law of Marine Insurance and General Average*, ed. J. Gilman, R. M. Merkin, C. Blanchard, M. Templeman, (18th ed., London, Sweet & Maxwell, 2016), 919, "There is no imply warranty in a policy on goods that the goods are seaworthy for the voyage, but there is an implied warranty that the ship, in addition to being seaworthy as a ship, is also reasonably fit for carry the goods to their destination".

[24] See Art. VI of United States Carriage of Goods by Sea Act (COGSA).

their contractual liability (principle of party autonomy), avoiding the need to balance the bargaining power of the parties themselves [25].

However it is possible to note that the seaworthiness duty could have a different impact depending on whether a time or voyage charter party has been concluded, because of the different obligations of the parties which have many different effects in terms of duration, purpose and consequences in case of a breach [26].

Voyage Charter

Voyage charterparties [27] frequently contain an express clause which states that the ship should be "*tight, staunch and strong and in every way fit for the voyage*" [28].

In addition, the issuance of the bill of lading has the effect to determine the application of Article III of Hague-Visby Rules [29], which provides that '*the carrier shall be bound before and at the beginning of the voyage to exercise due diligence to make the ship seaworthy*', thus reducing the possibility to discuss about an implied seaworthiness clause.

[25] It was considered by Haselgrove-Spurin, *The importance of seaworthiness, op. cit.*, 4, that this freedom *"(…) cannot be said however that shipowner always have the upper hand and can therefore dictate the terms and conditions of contracts. (…) A shipowner may find therefore that excluding liability for unseaworthiness in relation to charter still leaves him exposed to liability to the cargo owner".*

[26] This different treatment could be considered singular due to the fact that in voyage charter seaworthiness duty should be present when ship begins her trip it is not continuous one and at same time, in time charter, due diligence obligation to provide a seaworthy ship would arise in respect of each voyage especially when this contract – as it often happens - incorporates The Hague Rules. See Terrence Coghlin, Andrew Baker, Julian Kenny, John Kimball, *Time Charters*, London, 2008, p. 80.

[27] See BPVOY 4 Condition of Vessel clause by which

Owners shall, before, at the commencement of, and throughout the voyage carried out hereunder, exercise due diligence to make and maintain the Vessel, her tanks, pumps, valves and pipelines tight, staunch, strong, in good order and condition, in every way fit for the voyage and fit to carry the cargo (…).

[28] See Haselgrove-Spurin, *The importance of seaworthiness, cit.*, 6.

[29] See International Convention for the Unification of Certain Rules of Law relating to Bills of Lading (1924-1968-1979), in brief "The Hague-Visby Rules". See A. Rodriguez Palacios, A comparative analysis of the Hague/Hague-Visby Rules and the Hamburg Rules, Washington, 1990, 25; J. Richardson, *The Hague and the Hague-Visby Rules*, London, 1998, *passim*; N. J. Margetson, *The System of Liability of Articles III and IV of the Hague (Visby) Rules, Paris,* 2008, 23; F. Berlingieri, *A Comparative Analysis of the Hague-Visby Rules, the Hamburg Rules and the Rotterdam Rules,* Paper delivered at the General Assembly of the AMD, Marrakesh 5-6 November 2009, 24.

For this reason, English law has focused attention on the other issues related to the transportation contract and, on the basis of case law [30], has developed the general rule, applicable to the voyage charter party, that seaworthiness governs the voyage from port of loading to port of discharge. In addition, this element of the contract is required at the time of the beginning of the voyage.

However, it should be noted that this is not a clear duty because, if the ship becomes unseaworthy after the commencement of the voyage, this circumstance is not considered a breach of this duty.

An exception to this rule [31] applies where a voyage is divided into several parts [32], calling at several ports before arrival at final destination. In this case, each stage can be considered a separate voyage for the purpose of the seaworthiness duty but, on the other hand, the vessel must be seaworthy from the commencement of each stage of the voyage [33]. Only the unseaworthy condition at the time of departure constitutes a breach of this duty, but in this case there is the matter of any latent (hidden) defects of the vessel which, in turn, involve the due diligence duty of the shipowner [34].

Time Charter

In general terms, a time charterparty, unlike a voyage charterparty, is a contract whereby the lessor places a fully equipped and manned ship at the disposal of the lessee for a period of time. It has led to a number of complicated legal issues related to the seaworthiness duty.

In those circumstances, the issue arises when the time charter does not contain an express seaworthiness clause because, as was pointed out above, it could be not clear if the shipowner has to provide a seaworthy vessel or if he is exempted from this obligation [35].

[30] See *Steel v Stateline SS Co.* (1877) 3 App. Cas. 72, *Compagnie Algerienne de Meunerie v Katana* [1960] 1 Lloyd's Rep 132 and also *Snia Societa v Suzuki* (1924) 29 Com. Cas. 284.

[31] See Haselgrove-Spurin, *op. cit.*, 6.

[32] For general consideration about "doctrine of stages" and seaworthiness see Arnould, *Arnould's, op. cit.*, 924.

[33] For the 'doctrine of the stages' see A. Rogers, J. Chuah, M. Dockray, *Cases and Materials on the Carriage of Goods by Sea,* London, New York, 2016, 74. See also T. G. Carver, *The Carriage of Goods by Sea*, (10th ed., London, Stevenson & Son, 1957), 184 and *Reed v Page* [1927] 1 K.B. 743.

[34] A general view on due diligence in charteparties is evidenced in Scrutton, *op. cit.*, 422. See also *infra* § 5.

[35] See Kassem, *op. cit.*, 105.

An effective answer to this question was provided by an English Court that did not hesitate to recognise [36] the existence of an implied obligation of seaworthiness and to believe that there is an express clause only when the contract refers to a word that have the same meaning of seaworthiness [37].

Probably these grounds have led to a situation where the charterparty forms usually contain a general provision under which shipowner has the duty to maintain the vessel in an efficient state in hull, machinery and equipment for and during the service [38], shifting attention towards the time in which this duty is relevant for the shipowner.

But in any case, as it has been argued above, the adoption of this clause creates legal uncertainty about whether an obligation arises, requiring to maintain and operate a seaworthy vessel throughout the voyage, or whether it only requires shipowner to bear the costs necessary for restoring the efficiency of the vessel when an event has occurred which rendered the ship unseaworthy.

Giving an answer to this question is not an easy task. For this reason, the English Courts [39] have adopted an approach that considers more important to take into consideration the effects of practical arrangements, rather than the provisions contained in the charterparty form, considering to this end the seaworthiness an atypical obligation.

This approach implies the necessity to understand what the consequences of the breach are. If the breach is able to defeat the commercial purposes of the charter, then the charterparty may be terminated because of a breach of this duty, but if this breach does not affect the commercial purposes of the contract, it will be treated as a breach of warranty.

Having said that, what becomes relevant is not so much the identification and definition of seaworthiness, but rather the consequences of an incident on the prosecution of the voyage. If the unseaworthiness deprives the contract of its commercial purpose, this can be terminated, but if the unseaworthiness has a limited impact, it will give rise to a breach of warranty.

[36] See the case *Giertsen and Others v. Gorge Turnba ll & Company*, (1908) 16 S.L.T., 250.

[37] It might be the case in which the contract considers the duty of due diligence unlike seaworthiness.

[38] See Clause 6 (Owner to provide) NYPE 93 by which "(owner) *shall maintain the Vessel's class and keep her in thoroughly efficient state in hull, machinery and equipment for and during the service, and have a full complement of officers and crew".*

[39] See, above all *Hong Kong Fir Shipping Co. V. Kawasaki Kisen Kaisha* [1962] 2 QB 26.

4. – As already mentioned, seaworthiness is defined by section 39 (1-2) of the UK Marine Insurance Act (1906) [40] not in a direct way, but as the quality of the vessel which is reasonably fit in all respects to encounter ordinary perils of the sea [41].

The duty of seaworthiness attaches the contract of affreightment at (the time of) the commencement of the voyage [42] and the shipowner's efforts in order to ensure this condition of the vessel do not relieve him from liability [43].

In fact, it is a logical consequence of each marine insurance contract because, from one hand, the shipowner pays a premium to protect himself and his assets, taking into account the dangers involved in maritime operations whilst, on the other hand, the insurer will determine this premium [44] on the basis of the risk that the vessel will be able or not to complete its voyage. So we can assume that a ship must be seaworthy in order to allow the marine risk assessment, to fix an insurance premium and therefore to be covered by an insurance contract [45].

Under marine insurance, seaworthiness is evaluated as an implied warranty and this leads to significant consequences because it implies that insurance

[40] As it was noted, J. Arnould, *op. cit.*, 920, MIA (UK Marine Insurance Act) provisions are recently focused in the *The Cendor Mopu*, *Global process Systems Inc v. Sayarikat Takaful Malaysia Berhad* [2011] 1 Lloyd's Rep. 560.

[41] For a general consideration about marine insurance and seaworthiness see F. D. Rose, *Marine Insurance, law and practice,* (2nd ed., London, Informa, 2012), 200, and D. Rhidian Thomas, *The modern law of marine insurance,* (Vol. 1, London, Routledge, 1996), 71.

[42] See A. Rogers, J. Chuah, M. Dockray, *Cases and Materials on the Carriage of Goods by Sea,* London, New York, 2016, 74.

[43] See Haselgrove-Spurin, *op. cit.*, 3 by which "*The duty attaches at the commencement of the voyage and in the absence of contractual provisions to the contrary is strict. The vessel must be seaworthy. Best efforts to ensure the vessel is seaworthy do not displace the duty. Extraordinary events however do not have to be guarded against. The standard required for a vessel to be seaworthy is relative, not absolute*. See also *Cantiere Meccanico v Janson* [1912] 3 KB 452.

[44] For a general consideration about the data disclosure in order to allow the underwriter to fix a premium, see Arnould, *op. cit.*, 627.

[45] To this end, Arnould, *id.*, affirms that "*So far as it is deemed to be of the essence of the contract that the subject of it shall be fit and suitable for the purpose for which the parties understand and intend that is to be used, so that the insurer may have a fair chance of earning his premium, which he would not have if there was an original and inherent vice in the thing for the loss of which he agrees to indemnify the owner, the warranty that the ship is seaworthy would seem to form as essential a part of the contract of insurance in a time policy as in a policy for voyage".*

underwriters are not liable for any loss, damage or expense caused by unseaworthy conditions [46].

The breach of this warranty does not allow the insurance policy to operate and moreover the holder is not able to recover losses.

It is indeed generally recognized that seaworthiness is an important instrument for protecting the insurer's position also because there is a strong link between this element and the knowledge of vessel from the insured person [47].

Having to say that, the real problems among seaworthiness and marine insurance arise with reference to: i) the burden of proving that the vessel was or not seaworthy at the time of the commencement of voyage (we refer to a typical case in which a latent defect would render a vessel unseaworthy); ii) the possible causal link between due diligence and loss.

In fact, if the vessel was unseaworthy when it sailed and the insured party actually or constructively knew of that unseaworthy condition, the insurer is not liable for loss caused by unseaworthiness. In any case, losses that are caused by other perils and covered by the insurance policy may nonetheless be recovered by the insured person [48]. In fact, the latter party, in order to recover under the policy, has the burden to demonstrate that the loss is due to an insured peril, although the insurer has failed to ascertain the unseaworthiness. Indeed, as English Courts has pointed out, if an initial presumption of unseaworthiness is foreseen, the insured party must show the evidence about the fact that has caused the loss [49] and its coverage by the insurance policy.

[46] *The Star Sea* [1995] 1 Lloyd's Rep 651.

[47] According to 'the doctrine of privity provides', a contract cannot confer rights or impose obligations arising under it on any person or agent except the parties to it. Applying this principle to maritime law we have that in the case in which shipowner seeks insurance for his vessel knowing that it is not fit for the voyage, he is at odds with the policy it seeks to take out. See M. J. Mustill, *Fault and Marine Losses*, [1988], *Lloyd's Maritime and Commercial Law Quarterly*: 346 and also N. Pretti, *Unseaworthiness - Turning a Blind Eye?*, *Australian and New Zealand Maritime Law Journal* 6; (2008) 22 (1): 42.

[48] This situation arose in *The Star Sea* [1995] 1 Lloyd's Rep 651 and [2001] 1 LLR 389. The House of Lords in England found that The Star Sea became a constructive total loss essentially because the master failed to extinguish a fire as a direct result of his lack of knowledge of how to use the fire extinguishing system. Underwriters resisted the claim on the basis of unseaworthiness of the vessel with the privity of the assured. The policy in question was a time policy, which is governed by s 39(5) of the Marine Insurance Act 1906.

[49] See *The Marel* [1994] 1 Lloyd's Rep 624. In this case the fact that insurer have failed to prove unseaworthiness did not lead to a successful claim for insured party. The latter indeed did not prove

In conclusion, marine insurance considers seaworthiness as a warranty because it is not economically feasible for the insurers to inspect the ship involved in commercial operations. For this reason, it becomes an extraordinary tool in determining liability for unprovable losses [50].

Obviously, several critical aspects might arise in order to determine if the conditions of unseaworthiness occurs, if this condition is known by the shipowner and, moreover, if this obligation is not respected, because, as we will explain, it would not be so simple to resolve just one of the mentioned issues having in consideration new problems that arise nowadays.

5. – The issue of seaworthiness then presents interesting aspects with reference to marine pollution. Leaving out the cases of damage due to wilful misconduct, it seems possible to point out that in many cases of marine pollution an issue of unseaworthiness of the ship may directly or indirectly emerge.

In fact, in the famous *Hong Kong Fir* case [51] (a breach of duty case), it was argued that there is an implied obligation on the shipowner to ensure the seaworthiness of the ship: it is broken even when he appoints crew members that are not fit and competent to exercise their duties and tasks in a manner which ensures safety at sea.

In addition, as mentioned above, it is also possible that the vessel, at the time of departure, was seaworthy, but nevertheless can conclude from certain circumstances that the original quality might be compromised during the voyage, with consequences relating to insurance as well as third party liability.

Therefore, there is the matter of latent defects [52]: owners and/or

that the vessel was lost due to a peril of the sea or due to a risk covered by insurance policy.

[50] In *The Star Sea* [1995] 1 Lloyd's Rep 651, The House of Lords held that insurers can avoid their liability only if there are three elements: first, there must be unseaworthiness at the time the vessel was sent to sea; second, the unseaworthiness must be causative of the relevant loss; third, the assured must be privy he was sending the vessel to sea in that condition.

[51] *Hong Kong Fir Shipping Co. v Kawasaki Kisen Kaisha* [1962] 2 QB 26.

[52] The complex interactions among latent defect, insurance, seaworthiness and doctrine of inherent vice are well described in Arnould, *op. cit.*, 921: "The doctrine of inherent vice operates at a different level, in cases where inherent characteristics of or defects in the insured vessel or cargo lead to it causing loss or damage itself, without any fortuitous external accident or casualty. In such case, the insured property might equally be described, in a narrow sense, as unseaworthy but the implied warranties with which this Chapter is principally concerned, and which relate only to voyage policies and to seaworthiness and fitness of the vessel, are not directed simply to the general debility of a vessel.

classification societies would have to detect the presence of hidden defects and exercise an "extraordinary" due diligence considering that such defects can be really hidden and not easily discovered.

It should be stressed that there could be unreported cases, based on latent defects of the vessel, combined with the low level of education of crew members and their malpractice, that give rise to harmful consequences not only for the parties involved in shipping, but also, as mentioned above, for third parties.

Such a situation, in our view, has occurred in the *Marine Star* case, decided by the Italian Supreme Court [53].

In short, this Court of Cassation has considered responsible for marine pollution damage caused by a ship not only the shipowner, but also any other party, such as the charterer, who, at the time of the event, would take an objective economic advantage.

In other words, the Italian Court has criticized the mechanism of the channeling of liability [54], which make only one person/entity, the owner of the ship, liable for an event and, on the contrary, confirmed the extension of liability to all stakeholders involved in various ways in navigation and ship management.

They are concerned, as we have seen, with the seaworthiness of the vessel in the sense of reasonable fitness to encounter the ordinary perils of the seas-and as we have also seen, there is no implied warranty in a cargo policy that the insured goods are seaworthy".

[53] See to this end, F. Berlingieri, *Alcune osservazioni su una sentenza contraria al diritto ed al buon senso*, *Dir. mar.*, II, (2013): 455.

[54] The channelling system of liability for marine oil spill has been established by International Convention on Civil Liability for Oil Pollution Damage (CLC), adopted on 29 November 1969 and entry into force on 19 June 1975. It was adopted to ensure that adequate compensation is available to persons who suffer oil pollution damage resulting from maritime casualties involving oil-carrying ships. The Convention places the liability for such damage on the owner of the ship from which the polluting oil escaped or was discharged. Subject to a number of specific exceptions, this liability is strict; it is the duty of the owner to prove in each case that any of the exceptions should in fact operate. On this theme see, above all, R. Williams, *The Liability of Charterers for Marine Oil Pollution*, in B. Soyer, A. Tettenborn eds., *Pollution at Sea: Law and Liability*, London, 2013, 191; M. Comenale Pinto, *La responsabilità per inquinamento da idrocarburi nel sistema della C.L.C. 1969*, Padova, 1993; ID, *Inquinamento del mare fra disciplina nazionale, convenzioni internazionali e diritto comunitario*, in *Dir. trasp.*, 1995, II, p. 495; F. Pellegrino, *Sviluppo sostenibile dei trasporti marittimi comunitari*, Milano, 2009; ID, *La risarcibilità allo Stato del danno da inquinamento del mare territoriale: tra esperienza italiana e normativa internazionale*, in *Dir. trasp.*, 1990, II, p. 247.

In short, all parties involved in the accident [55] have been sentenced to pay compensation for environmental damage caused by a large oil spill from the ship *'Marine Star'*, during loading operations, near the central coast of Italy, even though the actual cause of the damage was not found with certainty.

In this judgment in fact, it is believed that the oil spill into the sea has been a consequence of one of the following two options: 1) hydrocarbons transferring in the ballast tanks, designed to contain only clean ballast; 2) the master's failure to order the emptying of the ballast tanks, believing they contained only ballast water.

This case was characterized by a breach of the seaworthiness, as correctly pointed out [56]. However, if it is easier to identify the breach of that obligation in the case of a technical defect of the ballast tank, the issue is more complex when the fault lies with the conduct or behaviour of the master.

In particular, it is very complex to understand the extension of a 'due diligence' duty of the shipowner.

To this end, we could assume, as a general test that shipowner might follow to comply with his obligation (duty), the question raised by authoritative doctrine [57]: "*Would a prudent owner have required that it (the defect) should be made good before sending his ship to sea had he known of it? If he would, the ship was not seaworthy within the meaning of the undertaking*".

The test takes in consideration the conduct of a 'prudent owner' and what he should do if he discovers a defect of his vessel. In fact, if he envisages that

[55] The case law was complex. It involved three different parties: i) the first which was the owner of ship; ii) the second that has chartered the vessel form the owner with a tanker time charter party; iii) the third which has chartered the vessel from the second one with a tanker voyage charter party.

[56] Judgment no. 902 of 16.01.2013 stated by Italian "Corte di Cassazione". On this argument see also F. Berlingieri, *ibid.*, 458.

[57] See Carver, *op. cit.,* 500 and also *McFadden v. Blue Star Line*, [1905] 1 K.B. 697, 703. In this last case Channell J., citing Carver, said: '*A vessel must have that degree of fitness which an ordinary careful and prudent owner would require his vessel to have at the commencement of her voyage having regard to all the probable circumstances of it. To that extent the ship-owner, as we have seen, undertakes absolutely that she is fit, and ignorance is no excuse. If the defect existed, the question to be put is, would a prudent owner have required that it should be made good before sending his ship to sea had he known of it? If he would, the ship was not seaworthy within the meaning of the undertaking.'* See also N. J. Margetson, "Duties of carrier", in: *Aspects of Maritime Law: Claims under Bills of Laiding*, ed. M. L. Hendrikse, N. H. Margetson and N. J. Margetson (Alphen aan den Rijn, Kluwer Law International, 2008), 52, about the "material content" of seaworthiness.

this defect should be repaired before the ship sails and then she leaves without repair, the vessel would be unseaworthy. On the other hand, if he considers that this defect does not need of any repair and he believes that the vessel is able to safely sail, she would be seaworthy.

As we said before, it is often difficult (if not impossible) to check every part of the vessel and make her completely sure and fit for the voyage but, on the other hand, it is necessary to refer to the 'careful and prudent shipowner criterion' for determining what to do to comply with seaworthiness duty.

6. – As anticipated, seaworthiness is a concept that embraces many areas not only related to maritime law, but also to *all risks* that affect shipping.

Usually, we consider seaworthiness as a paradigm of traditional risks affecting shipping since long time, like defects in the hull or structural failure or incompetence and negligence on the part of the crew etc., but in recent decades, the computer controls have been integrated into the business and operational processes across industries, including the shipping industry, providing relevant results in terms of safety.

There is no doubt that shipping companies rely on information technology in order to deal with daily operational tasks, but the increased reliance on new technology can leave businesses exposed to a break, in a worst-case scenario, a failure in the activity.

All high-tonnage ships (of 300 gross tonnage and upwards), engaged in international trade, are required by the International Maritime Organization (IMO) to be fitted with an Automatic Identification System (AIS), an automatic tracking system used for collision avoidance on ships and by vessel traffic services (VTS).

Modern vessels are equipped with complex software systems for navigation, cargo-handling, communication, on-board management, that via an interface communicate with other systems: AIS, ECDIS (Electronic Chart Display and Information System), etc.

By each of the above mentioned systems, a range of problems affecting seaworthiness [58] may arise: breach of contract, breach of law, arrest of the captain and crew members, ship detention, loss of personal data, misdeclared

[58] For example, a breaking of AIS could change ship details, position, speed, name; false weather information; false collision warning alert.

goods in cargo, delay, reputational damage, protection of business secrets, litigation, sanctions.

For these reasons, integration of IT systems in maritime business is an imperative and can quickly become a competitive advantage.

However by virtue of dissemination and application of modern IT communication means [59] to maritime operations, which have reduced the tasks of the captain and crew members [60], the cyber security risks have increased.

In fact, many problems arise as a result of nasty accidents caused by hacker attacks against information systems. In such cases, the damaged party could litigate a case of negligence on the part of the shipowner.

[59] The issue of information technology and reliability of vessel's systems have recently arising in *El Faro* case. The ship, which left Jacksonville (USA) on Sept. 30 2015, sank Oct. 1 2015 near the Bahamas en route to Puerto Rico during Hurricane Joaquin. Investigations are showing that vessel's weather monitoring program received a forecast which might have been 10 hours old. The witnesses confirmed that the projected path for Hurricane Joaquin was out-of-date by at least ten hours when El Faro was already long on its voyage; therefore, the vessel's crew did not have an n accurate track of the storm.

[60] It is not a case, therefore, that BIMCO (Baltic and International Maritime Council is the largest of the international shipping associations representing shipowners) has issued last January (2016) *The Guidelines on Cyber Security on board Ships*. According to these guidelines, there are three different level of cyber risk in maritime industry: a) *Low* by which "The loss of confidentiality, integrity, or availability could be expected to have a limited adverse effect on company and ship, organisational assets, or individuals. A limited adverse effect means that a security breach might: (I) cause a degradation in ship operation to an extent and duration that the organisation is able to perform its primary functions, but the effectiveness of the functions is noticeably reduced; (ii) result in minor damage to organisational assets; (iii) result in minor financial loss; or (iv) result in minor harm to individuals." b) *Moderate* by which "The loss of confidentiality, integrity, or availability could be expected to have a substantial adverse effect on company and ship, company and ship assets, or individuals. A substantial adverse effect means that a security breach might: (I) cause a significant degradation in ship operation to an extent and duration that the organisation is able to perform its primary functions, but the effectiveness of the functions is significantly reduced; (ii) result in significant damage to organisational assets; (iii) result in significant financial loss; or (iv) result in significant harm to individuals that does not involve loss of life or serious life threatening injuries." And c) *High* by which "The loss of confidentiality, integrity, or availability could be expected to have a severe or catastrophic adverse effect on company and ship operations, company and ship assets, or individuals. A severe or catastrophic adverse effect means that a security breach might: (I) cause a severe degradation in or loss of ship operation to an extent and duration that the organisation is not able to perform one or more of its primary functions; (ii) result in major damage to organisational assets; (iii) result in major financial loss; or (iv) result in severe or catastrophic harm to individuals involving loss of life or serious life threatening injuries."

This situation leads inevitably to a sensitive question. Could the risks of cyber crime affect the duty seaworthiness duty?

The answer could be positive. In fact, if we consider the seaworthiness as a general obligation that has to adapt to a rapidly changing society, it can therefore be understood as the capacity of the vessel also to be potentially subject to cyber attack [61].

In relation to this new risk, it seems that, from a general point of view, we have to consider that the duty of seaworthiness concerns not only the vessel, but also the shipowner as a single entity, *i.e.* as shipping company (and not as a single person). In other words, cyber risk would impose to interpret the concept of seaworthiness in a broader sense because breach of this duty may arise from a shipping company and also affect the vessel [62].

In our opinion, especially from an insurance point of view, it would be fair that the shipowner complies with the seaworthiness duty in relation to both his conduct and the vessel.

7. – In conclusion, clear answers to the above questions cannot be provided because, as already mentioned, the shipping industry has changed. Nowadays, we are confronted with a complex system, strongly linked to new business models.

In this context, the shipping companies face a wide range of changes, mainly related to information technology developments.

Under this scenario, it would be a mistake to consider the concept of seaworthiness in its traditional meaning and, furthermore, address outstanding issues with the usual approach, ignoring the new matters derived from technological improvements [63].

[61] Indicative in this respect are the insurance policies. See, for example, Institute Cyber Attack Exclusion Clause CL380 available on website www.bimco.org.

[62] Arnould, *op. cit.*, 933, well describe this concept when affirm: "It is obvious that there can be no fixed and positive standard of seaworthiness, but that it must vary with the varying exigencies of mercantile enterprise".

[63] The relevance of cyber risk is clear and it is becoming one of the future challenges of national as well as international legislation. In Italy, for example, government has recently issued the general legal framework on cyber risks and cyber-attacks (Decree on 17 February 2017, published on *Gazzetta Ufficiale* n. 87 on 13th April 2017). At European Union level there is the Directive (EU) 2016/1148 of the European Parliament and of the Council of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union and, moreover, EU is

Currently, any event which might affect this sector should not be treated as an isolated case but as an accident that affects business continuity of the shipping companies [64].

Pursuing this approach, it should increase the resilience and responsiveness of the shipping companies in order to safeguard the interests of stakeholders, reducing risks and its likely consequences [65].

continuing developing a cyber security initiatives in a broad sense (see https://ec.europa.eu/digital-single-market/en/news/eu-cybersecurity-initiatives-working-towards-more-secure-online-environment). Among other things, EU Directive 2016/1148 provides that sector-specific factors should also be considered in order to determine whether an incident would have a significant disruptive effect on the provision of an essential service. With regard to maritime ports, it should be noted the proportion of national traffic volume and the number of passengers or cargo operations per year. Furthermore, the above mentioned EU Directive, also considers that in the transport sector, security requirements for companies, ships, port facilities, ports and vessel traffic services under Union legal acts cover all operations, including radio and telecommunication systems, computer systems and networks, according to Regulation (EC) n. 725/2004 of the European Parliament and of the Council of 31 March 2004 on enhancing ship and port facility security and even to Directive 2002/59/EC of the European Parliament and of the Council of 27 June 2002 establishing a Community vessel traffic monitoring and information system and repealing Council Directive 93/75/EEC. See also Cyber Security and Resilience of Intelligent Public Transport Good practices and recommendations, available on www.enisa.europa.eu.

[64] Business Continuity is a technical concept defined as the capability of the organization to continue delivery of products or services at acceptable predefined levels following a disruptive incident (see International Organization for Standardization ISO 22301:2012). Business Continuity Management is defined as a holistic management process that identifies potential threats to an organization and the impacts to business operations those threats, if realized, might cause, and which provides a framework for building organizational resilience with the capability of an effective response that safeguards the interests of its key stakeholders, reputation, brand and value-creating activities (See International Organization for Standardization ISO 22301:2012). On this topic A. McGee, *Business Continuity in the Supply Chain: Planning for Disruptive Events*, 2008; M. Wieczorek, U. Naujoks, B. Bartlett, *Businees Continuity: IT RisksManagement for International Corporations*, 2012.

[65] To this end, Arnould, *ibid.*, 936, affirms: "The standard of seaworthiness has been gradually raised from a more perfect knowledge of ship-building, a more enlarged experience of maritime risks, and an increased skill navigation. Thus, what is required in order to comply with the warranty of seaworthiness is relative, among other things, to the state of knowledge and the standards prevailing at the date of sailing".

Abstract

The seaworthiness of the vessel is a crucial pivot through which the activity of shipping runs and covering the different fields and areas of maritime law.
The purpose of this paper is to trace a logical path in order to examine the content that the term seaworthiness of the vessel carries with it, developing an analysis of those areas in which this concept exerts its effects. In particular, the article regards the effects of seaworthiness duty on charterparty, marine insurance as well as the implications that pertain to marine pollution.
Finally, the paper deals with a "new issue". Technological progress is affecting shipping, involving seaworthiness and its inextricably links to the vessel's exercise.
To this end, cyber risk is an aspect that sea transport is compelled to keep in high regard by virtue of the almost total informatization of communications and maritime operations in which the role of the crew seems more and more limited to supervisory tasks. The connection between seaworthiness and cyber risk needs to interpret in a broader sense the concept of seaworthiness itself because a fault of this duty may arise within shipping company and then move about vessel causing delays, business disruption, contractual claims. These considerations may then provide an approach that makes an old warranty fit for new duty.