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Canada

STOWAGE OF GOODS IN INTERNATIONAL MARITIME TRANSPORT

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Abstract

The paper presents and discusses the carrier's stowage duties under the Hague and Hague/Visby Rules and contrasts them with similar duties created in the Hamburg Rules. Particular attention is paid to stowage responsibilities in relation to the carriage of dangerous goods. A subsidiary examination considers the extent to which international stowage regulations adopted to protect safety and the environment may affect what constitutes proper stowage under the contract of carriage.

Ce mémoire a pour objet de présenter et d'analyser les responsabilités d'arrimage du transporteur sous les règles de la Convention de Bruxelles de 1924 et celles de la convention la Hague/Visby eu les comparant notamment aux responsabilités similaires établies par la nouvelle Convention de Hambourg. Une attention particulière est attribuée aux responsabilités d'arrimage par du transport de biens-dangereux. Finalement, une étude subsidiaire considère également l'impact que pourrait avoir la réglementation internationale adopté sur l'arrimage pour garantir la sécurité et projeter l'environnement, dans l'évaluation de ce que constitue un arrimage valable sous un contrat de transport.

TABLE OF CONTENTS

INTRODUCTION 1
I. THE TOPIC 1
II. PURPOSES AND APPROACHES OF THE STUDY 2
III. THE SCOPE 3
A. A Definition of Stowage 3
B. Stowing Is Not Loading or Caring for Cargo 4
C. Limitation as to Type of Damage 5
IV. NOTES ON SOURCES OF LAW AND INTERPRETATION 6
A. Sources of Law 6
B. Interpretation 7

STOWAGE & THE CONTRACT OF CARRIAGE 9
I. INTRODUCTORY REMARKS 9
A. Survey of Potential Claims Arising From Stowage 9
B. The Contract of Carriage 10
1. The contractual context 10
2. Parties 11
a. "Shipper" 11
b. "Carrier" 11
c. Other parties 13
3. Bills of lading 13
4. Stowage responsibilities 14
C. Historical Background 15
II. APPLICABILITY OF THE RULES TO STOWAGE 17
A. The Mandatory Character of the Rules 18
B. To What Types of Contracts Do the Rules Apply ? 18
C. Deck Carriage 19
D. Period of Responsibility 20
III. CARRIER'S RESPONSIBILITY UNDER THE HAGUE AND HAGUE/VISBY RULES 21
A. Stowage Duties 21
1. The responsibilities of the carrier 22
2. Effects of bad stowage and unseaworthy stowage 23
B. Proof and Burden of Proof 24
1. Evidentiary problems 24
2. Special problems in multimodal transport 25
3. Proving the damage - bill of lading as prima facie evidence 25
4. Proving the cause of the damage 27
5. Burden of proving seaworthiness 28
7. An example in relation to stowage 30
C. Causation 31
D. General Remarks on Stowage and the Duty to Exercise Due Diligence to Make the Ship Seaworthy - Art. 3(1) 32
1. The standard of due diligence 32
2. Who must exercise due diligence 33
3. Before and at the beginning of the voyage 34

E. Stowage and the Safety of the Ship - Art. 3(1)(a) 35
1. How stowage may affect the safety of the ship 35
2. Objective requirements to safe stowage 37
a. Distribution of cargo 39
b. Inadequately secured cargo 41
c. Dangerous cargo 43
3. The subjective element - due diligence 47
a. The carrier's knowledge of safe method of stowage 47
b. Performance of safe stowage 48
F. Stowage and Cargoworthiness - Art. 3(1)(c) 49
1. Can bad stowage amount to 'uncargoworthiness'? 50
a. Two interpretations of art. 3(1)(c) 50
b. The pre-Hague Rules position 51
c. Cases under the Hague Rules 53
d. Legal theory 56
e. Which rule should prevail ? 57
2. How may stowage affect cargoworthiness 58
a. Requirements - "fit and safe" 58
b. Incompatible cargoes and the order of loading 59
c. Insufficient securing of cargo 60
3. Jurisprudential reluctance to consider bad stowage under art. 3(1)(c) 61
G. The Duty to Properly and Carefully Stow the Goods - art. 3(2) 64
1. The extent of the carrier's duty 64
2. The carrier does not have to perform the stowage 65
3. Liability for damage caused by stowage 66
a. Mandatory liability 66
b. Validity of agreements qua shipper 67
c. The effect of FIOS clauses 68
4. The standard of proper stowage 69
a. "Properly" and "carefully" 69
b. Not a perfect standard 71
c. Customary stowage 72
d. The effect of agreements on method of stowage 73
e. Reliance on experts and surveyors 75
f. The significance of stowage 75
g. Proper stowage as a developing concept 76
5. Factors to consider for proper stowage 77
a. Special characteristics of the goods 77
b. Lashing, dunnaging and securing of cargo 80
c. Stowage in tiers 81
d. The expected weather and sea conditions 82
6. Stowage on deck 83
a. Applicability of art. 3(2) 83
b. Is deck stowage improper stowage per se? 84
c. Special considerations in relation to deck

stowage 85
7. Containers and stowage 86
a. Containers as deck stowage 87
b. Proper stowage of containers 87
c. Stowage inside the container 88
d. Stowage on trucks 90
H. The Carrier's Immunities and Defences 91
1. Damage not caused by the carrier's privity 92
a. Error in management of the ship - art. 4(2)(a) 92
b. The fire exception - art. 4(2)(b) 93
c. No excuse for carrier's personal fault 95
2. Circumstances outside the carrier's control 95
a. Perils of the sea - art. 4(2)(c) 95
b. Inherent vice - art. 4(2)(m) 97
c. Insufficiency of packing - art. 4(2)(n) 98
d. Insufficient marking - art. 4(2)(o) 99
e. Act or omission of the shipper 100
3. Shippers Responsibility for Dangerous Goods - art. 4(6) 100
a. What are dangerous goods under art. 4(6) ? ... 102
c. Is the shipper strictly liable? 103
d. Dangerous goods and seaworthiness 104

IV. THE CARRIER'S STOWAGE RESPONSIBILITIES UNDER THE HAMBURG RULES 107
A. General Responsibility for Stowage 107
1. The burden of proof is on the carrier 108
2. The standard of duty as to stowage 108
a. A uniform standard of liability 108
b. Stowage Duties 108
3. Defences under the Hamburg Rules 109
4. Stowage on deck 110
B. Shipper's responsibilities under the Hamburg Rules 111

V. COMPARATIVE EVALUATION OF STOWAGE UNDER THE HAGUE, HAGUE/VISBY AND HAMBURG RULES 113

PUBLIC LAW STANDARDS IN THE PRIVATE SPHERE? 115
I. STOWAGE AND INTERNATIONAL SAFETY REGULATIONS 115
A. SOLAS 1974 116
B. The IMDG Code 117
A. Attitudes in jurisprudence 118
1. Cases on non-compliance 118
2. Compliance with public law standards 120
B. Arguments for Transposing Public Law Requirements to the Private Sphere 121

CONCLUSION 122

TABLE OF CASES

British

Albacora SRL v. *Westcott & Laurance Line Ltd*, [1966] 2 Lloyd's Rep. 53 (H.L.) 25, 27, 70, 78, 98

The Ardennes (1950), [1951] 1 K.B. 55, 84 Ll. L. Rep. 340 13

Actis Co. v. *The Sanko Steamship Co. (The Aquacharm)* (1981), [1982] 1 Lloyd's Rep. 7 (C.A.) 54, 59, 93

Balli Trading Ltd. v. *Afalona Shipping Co. (the Coral)* (1992), [1993] Lloyd's Rep. 1 (C.A.) 66, 67

Bank of Australasia v. *Clan Line*, [1916] 1 K.B. 39 32

Bernhard Blumenfeld K.G. v. *Sheaf Steam Shipping Co.* (1938), 62 Ll. L. Rep. 175 ..... 40, 96

Blackwood Hodge v. *Ellerman Lines*, [1963] 1 Lloyd's Rep. 454 (Comm. Ct.) 24, 41, 72, 75, 77, 81

Blandy Bros & Co. v. *Nello Simoni Ltd*, [1963] 2 Lloyd's Rep. 393 (C.A.) 14

Bruce, Mariott v. *Houlder Line*, [1917] 1 K.B. 72 34

Canadian Transport Co. v. *Court Line*, [1940] A.C. 934 (H.L.) 68, 82

Coventry Sheppard v. *Larrimaga S.S. Co.* (1942), 73 Ll. L. Rep. 256 18

Elder, Dempster v. *Paterson, Zochonis*, [1924] A.C. 522, All E.R. Rep. 135 (H.L.) 51, 52, 54, 55, 56, 65

The Evgrafov, [1987] 2 Lloyd's Rep. 635 (Adm. Ct.) 81

The Friso, [1980] Lloyd's Rep. 469 (Adm. Ct.) 35, 38, 41, 42, 96, 119

The Good Friend, [1984] 2 Lloyd's Rep. 586 (Comm. Ct.) 49, 51, 53, 57

Gosse Millerd v. *Canadian Government Merchant Marine* (1927), 29 Ll. L. Rep 190 93

Grain Growers Export Co. v. *Canada Steamship Lines Ltd.* (1918), 43 O.L.R. 330 32

International Packers v. *Ocean S.S. Co.*, [1955] 2 Lloyd's Rep. 218] 37, 42, 43, 75

Ismail v. *Polish Ocean Lines*, [1976] Q.B. 893. (C.A.) 66, 68, 73

Kopitoff v. *Wilson* (1876), 1 Q.B.D. 377 ..... 36, 42

Maxine Footwear Co. v. *Canadian Government Merchant Marine Ltd.*, [1959] A.C. 589, [1959] 2 Lloyd's Rep. 105 (P.C.) 23, 34, 59, 91, 94, 105

McFadden v. *Blue Star Line*, [1905] 1 K.B. 697 22

Mediterranean Freight Services Ltd. v. *BP Oil Intl. Ltd. (The Fiona)*, [1993] 1 Lloyd's Rep. 257 (Comm. Ct.) 23, 46, 104, 105

The Morviken, [1983] 1 Lloyd's Rep. 1 (H.L.) 8

Newall v. *Royal Exchange Shipping* (1885), 1 T.L.R. 178 111

The Polar, [1993] 2 Lloyd's Rep. 479 (Comm. Ct.) 71, 73, 74, 77, 80

Pyrene Co. v. *Scindia Steam Navigation Co.*, [1954] 2 Q.B. 402, 1 Lloyd's Rep. 321 .... 18, 20, 65

Raymond & Reid v. *King Line Ltd.* (1939), 64 Ll. L. Rep. 254 79

Renton & Co. v. *Palmyra Trading*, [1956] 2 Lloyd's Rep. 379 70

Riverstone Meat Co. v. *Lancashire Shipping (The Muncaster Castle)*, [1961] 1 Lloyd's Rep. 57, [1961] A.C. 807 (H.L.) 33, 34

David McNair & Co. v. *The Santa Malta*, [1967] 2 Lloyd's Rep. 391 94

Silver v. *Ocean Steamship Co.* (1929), [1929] All E. Rep. 611, [1930] 1 K.B. 416 (C.A.) 26, 30

Stag Line Ltd. v. *Foscolo, Mango & Co.*, [1931] All E.R. Rep. 666, [41 Ll. L. Rep. 165 (H.L.). .. 8

Studebaker Distributors v. *Charlton Steam Shipping Co.* (1937), 59 Ll. L. Rep. 23 (K.B.) 75

Svenska Traktor Aktiebolaget v. *Maritime Agencies Ltd.*, [1953] 2 Lloyd's Rep. 124. ..... 83, 85

The Makedonia, [1962] 2 All E. Rep. 614 34

The Standale (1938), 61 Ll. L. Rep. 223 (Adm. Ct.) 36, 37, 38, 41, 42

Tattersall v. *National S.S. Co.* (1884), 12 Q.B.D. 297 53

The Thorsa, [1916] P. 257, 13 Asp. M.L.C. 592 ..... 30, 52, 78

The Torenia, [1983] 2 Lloyd's Rep. 210 31

Union of India v. *N.V. Reederij Amsterdam*, [1963] 2 Lloyd's Rep. 223 47

The Waltraud, [1991] 1 Lloyd's Rep. 389 (Adm.Ct.) 41, 42, 63, 88, 93

Werner v. *Bergensk Dampskibsselskab*, [1926] 42 T.L.R. 265 (K.B.) 52, 56

White & Son v. *Owners of Hobson's Bay* (1933), 47 Ll. L. Rep. 207 27

Canadian

Bruck Mills Ltd. v. *Black Sea S.S. Co.*, [1973] F.C. 387, 2 Lloyd's Rep. 531 (T.D.) 5, 79, 99

Canada Steamship Lines Ltd. v. *Desgagné*, [1967] Ex.C.R. 234 38

Canastrand Industries Ltd. v. *Lara S*, [1993] 2 F.C. 553 (T.D.) 62, 99

Cargil Grain Co. v. *N.M. Paterson & Sons*, [1966] Ex.C.R. 22 27

Carling O'Keefe Breweries v. *CN Marine Inc.* (1989), 104 N.R. 166, 1990 AMC 997 (F.C.A.D.) 63, 81, 85, 86, 88, 93

The Continental Shipper, [1976] 2 Lloyd's Rep. 234 (F.C.A.D.) 72, 76, 99

The Continental Shipper, [1976] 1 Lloyd's Rep. 482 (F.C.T.D.) 76, 97

Farr Inc. v. *Tourloti Compania Naviera S.A.*, [1985] F.C. 602 (T.D.) 31

The Farrandoc, [1967] 2 Lloyd's Rep. 276 (Ex.Ct.) 25, 28

Franco Steel Corp. v. *Fednav Ltd.* (1990), 37 F.T.R. 184 (F.C.T.D.) 26, 30, 97

Grace Plastics Ltd. v. *The Bernd Wesch II*, [1971] F.C. 273 ..... 54, 61

The Hamildoc, 1950 AMC 1973 (Ct. of Appeal of Quebec) 32

Heath Steel Mines Ltd. v. *The Erwin Schroder*, [1970] Ex.C.R. 426 102

The Hellenic Dolphin, [1978] 2 Lloyd's Rep. 336 28

The Mahia (1954), [1955] 1 Lloyd's Rep. 264 (Sup. Ct. of Montreal) 46, 48, 74, 103

Mannix Ltd. v. *N.M. Paterson & Sons Ltd.*, [1965] 2 Ex.C.R. 107; [1966] 1 S.C.R. 180, 1 Lloyd's Rep. 139 ..... 73, 74

Produits Alimentaires Grandma Ltée. v. *Zim Israel Navigation Co. et al.* (1988), 86 N.R. 39 (F.C.A.D.) 26, 78, 80, 97

The Split (1972), [1973] 2 Lloyd's Rep. 535 (F.C.T.D.) 80

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NDS Nordiske Domme i Sjøfartsanliggender. Scandinavian maritime law decisions.
Rt. Norsk Retstidende. Norwegian Law Reporter (Supreme Court Decisions since 1836).
UfR Ugeskrift for Retsvæsnet (UfR). Danish Weekly Law Reporter.

SHT Sø- og Handelsretstidende. Journal for the Danish Admiralty and Commercial Court, 1862-1968.

Højesteret	Supreme Court of Denmark
Høyesterett	Supreme Court of Norway
Byrett	Norwegian Municipal Court
Sø- og Handelsretten	Danish Admiralty and Commercial Court
Lagmannsrett	Norwegian District Court

Andersen & Mørck A/S v. *Wasa International Forsäkring AB* (21 August 1992), Oslo No. 90-00516 A (Eidsivating Lagmansrett) [unpublished] 90

Gards Rederi A/S v. *UNI Storebrand A/S*, 1992 Rt. 1157 (Supreme Court of Norway) 41

Bergen byrett, 1972 NDS 413 38

Højesteret, 1945 UfR 44 68

Højesteret, 1983 UfR 906 96

Sø- og Handelsretten, 1948 UfR 725 69

Sø- og Handelsretten, 1974 NDS 229 ..... 62, 64, 74

"NH Atna", 1929 NDS 401 42

"NH Sunny", 1975 NDS 85 42

Højesteret, 1966 UfR 581 28

"M/S Dixie", 1967 NDS 24 (Supreme Court of Norway) 80

"M/S Tor Mercia", 1977 NDS 1 (Supreme Court of Sweden) 91

Sø- og Handelsretten, 1969 NDS 330 81

"M/S Ton S", 1948 UfR 1146 (Danish Adm. Comm. Ct.) 81

Sø- og Handelsretten, 1958 SHT 164 93

United Sates

A.J. Cunningham v. *Australian Exporter*, 1989 AMC 2748 (S.D.N.Y.) 89

American Tobacco Co. v. *S.S. Troubador*, 1951 AMC 662 (S.D.N.Y.) 69

Amorex Marine v. *Maersk Mango*, 1991 AMC 294 (S.D.Tex.) 89

Argit International v. *Gina S.*, 1989 AMC 1037 89

Armour & Co. v. *Compania Argentina de Nav.* (1957), 1958 AMC 332 (S.D.N.Y.) 73

Artemis Maritime Co. v. *South Western Sugar Co.*, 1951 AMC 1833 (4. Cir.) 33

Asbestos Corp. v. *Cie de Navigacion*, 1973 AMC 1683 (2. Cir.) 38

Associated Metals v. *M/V Arktis Sky*, 1993 AMC 509 (2. Cir.) 28, 67, 68, 81, 100

Blanchard Lumber Co. v. *S.S. Anthony II* (1966), 1967 AMC 103, [1966] 2 Lloyd's Rep. 437 (S.D.N.Y.) 54, 61, 75, 83

Blommer Choc. v. *Nosira Sharon*, 1994 AMC 1807 (S.D.N.Y.) 68

Bunge Corp. v. *Alcoa Steamship Co.*, 1955 AMC 725 (S.D.N.Y.) 31

The California, 1948 AMC 622 (3. Cir.). 86

California Pack. Corp. v. *Matson Nav. Co.*, 1962 AMC 2651. 69

Calmaquip. Eng. v. *West Coast Carriers*, 1984 AMC 839 (5. Cir.) 84

The City of Khios, 1936 AMC 1291 (S.D.N.Y.) 73, 82

Coca Cola Co.,Tenco Division v. *S.S. Norholt* (1971), 1972 AMC 388 (S.D.N.Y.) 78

Constructores Tecnicos v. *Sea-Land*, 1992 AMC 1284 (5. Cir.) 83, 84, 85

Continex Inc. v. *S.S. Flying Independent*, 1952 AMC 1499 at 1503 (S.D.N.Y.) 99

Cordis Dow v. *Pres. Kennedy*, 1985 AMC 2756 (N.D.Cal.) 74

Damodar Bulk Carriers v. *People's Ins.*, 1990 AMC 1544 (9. Cir.) 29, 63

Demsey & Assoc. v. *S.S. Sea Star*, 1972 AMC 1440 (2. Cir.) 68

English Elec. v. *Hoegh Mallard*, 1987 AMC 1351 (2. Cir.) 87

The Ensley City, 1947 AMC 568 (D.Md.) 78

GF Co. v. *Pan Ocean Shipping*, 1992 AMC 2298 (C.D.Cal.) 89

Glidden Co. v. *The Vermont*, 47 F. Supp. 877, 1942 AMC 1407 (E.D.N.Y.) 5

Hasbro Industries v. *St. Constantine*, 1980 AMC 1425 (D.Ha.) 94

Ingersoll Milling v. *Bodena*, 1988 AMC 223 (2. Cir.) 19, 84

Inst. of London Underwriters v. *Sea-Land*, 1989 AMC 2516 ..... 85, 86

International Produce Inc. v. *Frances Salman*, 1975 AMC 1521 (S.D.N.Y.) 29, 30, 48, 54, 78, 93

Ionmar Cia Naviaera S.A. v. *Central of Georgia Railroad Co.*, 1979 AMC 1747 (S.D.Ga) 45

Irish Shipping Ltd. Lim. Procs. 1975 AMC 2559 (S.D.N.Y.) 32

Kapetan Antonis (1988), 1989 AMC 551 (Arb.N.Y.) 102

Knott v. *Botany Mills* (1900), 179 U.S. 69, 21 S.Ct. 30, 45 L. Ed. 90 ..... 4, 52

The Lake Fontanet, 1923 AMC 500 (5. Cir.) 77, 79

Louisiana v. *M/V Testbank*, 1984 AMC 112 (E.D.La) 118

Nichimen Co. v. *M.V. Farland*, 1972 AMC 1573 (2. Cir.) 67

The Oberlin Victory, 194 F. Supp. 615, 1961 AMC 2350 (E.D.La.) 5

The Ocean Liberty (1952), 1952 AMC 1681, [1953] 1 Lloyd's Rep. 38 (4. Cir.) 37, 46, 47, 95, 104

Ocean Eagle Lim. Procs., 1974 AMC 1629 (D.P.R.) 29, 36, 40

O'Connel Machinery Co. v. *Americana*, 1986 AMC 2822 (2. Cir.) 87

Peter Fabrics v. *S.S. Hermes I*, 1984 AMC 1685 (S.D.N.Y.) 89

Phillip Holzman v. *S.S. Hellenic Sunbeam*, 1977 AMC 1731 (S.D.N.Y) 24

Polskie Line Oceanicze v. *Hooker Chemical Corp.*, 1980 AMC 1748 (S.D.N.Y.) 101

Procter & Gamble v. *Fort Fraser*, 1992 AMC 1575 (E.D.La) 57

Prudential Guarantee v. *Bum Ju*, 1988 AMC 1332 (D.Ore.) 26

Quigley Co. v. *Safir*, 1990 AMC 2104 (S.D.Tex.) 96

The Red Jacket (1977), [1978] 1 Lloyd's Rep. 300 (S.D.N.Y.) 86, 90

Reechel v. *Italia di Nav.*, 1988 AMC 2748 (D.Md) 88

Renfield Importers Ltd. v. *Anchor Line*, 1957 AMC 1505 (S.D.N.Y.) 26

Sail America v. *T.S. Prosperity*, 1992 AMC 1617 (S.D.N.Y.) 83

The Sargent, 1940 AMC 670 (E.D. Mich.) 33

Schnell & Co. v. *S.S. Vallescura*, 1934 AMC 1573 31

Siderius Inc. v. *Amilla*, 1989 AMC 2533 80

Sigri Carbon Corp. v. *Lykes Bros. S.S.* (1987), 1988 AMC 1787 (W.D.Ky.) 67, 69

Silvercypress, 1944 AMC 895 (2. Cir.) 91

The Silversandal, 110 F. 2d 60, 1940 AMC 731 (2. Cir.) 5, 71, 73, 82

The Silverteak, 1941 AMC 647 at 648 (E.D.La.) 30

The Silvia (1891), 171 U.S. 462 37

Skibs A/S Gylfe v. *Hyman-Michaels Co.*, 1971 AMC 2070 (6. Cir.) 103

Skibs A/S Jolund (1957), 1958 AMC 277 (2. Cir.) 38

The Skipsea, 1926 AMC 71 (2. Cir.) 82

Socony Mobil v. *Tex. Coast & International*, 559 F.2d 1008, 1977 AMC 2598 (5. Cir.) ..... 25 , 26

The Southern Cross (1939), 1940 AMC 59 (S.D.N.Y.) 5

The Soyo Maru, 1937 AMC 642 at 647 (4. Cir.) 79

Standard Brands Inc. v. *Brocklebank*, 1948 AMC 1624 (S.D.N.Y.) 79

Standard Commercia v. *Recife*, 1994 AMC 1208 (S.D.N.Y.) 120

Sucrest Corp. v. *M/V Jennifer*, 455 F. Supp. 371, 1978 AMC 2520 (N.D.Me.) 44, 102, 104

Tenneco Resins v. *Atl. Cargo Services*, 1988 AMC 2559 (S.D.Tex.) 27, 99

Tenneco Resins v. *Davy International*, 1990 AMC 402 (5. Cir.) 99

The Ternefjell, 1961 AMC 1231 (N.D.Ill.) 5, 79

Trade Arbed. Inc. v. *Swallow*, 1989 AMC 2218 (E.D.La) 29

Tuxpan Lim. Procs., 1991 AMC 2432 (S.D.N.Y.) 28, 96

United States v. *Central Gulf Steamship Corp.*, 1975 AMC 2254 (5. Cir.) 98

United States v. *Ultramar*, 1988 AMC 527 (S.D.N.Y.) 40, 41

Vana Trading Co. v. *S.S. Mette Skou*, 1977 AMC 702 (2. Cir.) 31, 97, 99

Veerbeeck v. *Black Diamond Steamship (the Black Gull)*, 1960 AMC 163 (2. Cir.) 43, 101

Waterman Steamship Co. v. *Virginia Chemicals Inc.* (1987), 1988 AMC 2681 (S.D. Ala.) 44, 94, 95, 101

Westway Coffe Corp. v. *Netuno*, 1982 AMC 1640 (2. Cir.) 26

Australian

Great China Metal Industries Co. v. *Malaysian International Shipping Corp.* (1993), [1994] 1 Lloyd's Rep. 455 (S.C.N.S.W.) 40, 96, 120

Shipping Corporation of India Ltd. v. *Gamlen Chemical Co.* (1980), 147 CLR 142 (High Court of Australia) 77

French

Cour de Cassation de France, 5. July 1988, [1990] 25 ETL 904 83

INTRODUCTION

I. THE TOPIC

While stowage is an integral part of any undertaking to transport goods, its significance is probably most noticeable in the carriage of goods by sea. The exceptional stresses to which cargo can be exposed during a maritime voyage make proper stowage of the goods a task of utmost importance. However, many factors which contribute to the complexity of the transport operation can make stowage difficult:

Technological development has lead to an ever-increasing variety of goods being transported, many of them dangerous[1]. In order to properly deal with the cargo, the carrier must be aware of the sensitivities and the special treatment required for a plethora of different types of goods. Dangerous goods demand a particularly high degree of vigilance as even small oversights may result in catastrophic damage to the ship and the environment and may even take a toll on human life.

Furthermore, the long chain of persons who are likely to handle the cargo in the course of a typical transport operation poses problems both with respect to the communication of special handing requirements, and with regard to the allocation of responsibility for damage caused by poor handling.

Finally, poor stowage may also result from the breakdown or misuse of machinery or other equipment used increasingly in modern transport.

The turn of the century has marked an increase in government regulation of maritime activity, exemplified in part by the adoption of numerous international

---

1 It has been estimated that as much as 50% of cargo transported at sea today may be characterized as "dangerous", "hazardous" or "harmful". See H. Wardelman, "Transport by Sea of Dangerous, Hazardous, Harmful and Waste Cargoes" (1991) 26 European Transport Law 116 at 116.

conventions on the area. This regulation has been fuelled by a heightened social sensitivity to environmental and safety issues and a trend towards government intervention in the commercial sphere.

In the area of private law, stowage is an essential part of the carrier's obligation to properly deal with the cargo and may also be relevant to the obligation to provide a seaworthy vessel. Proper stowage, especially that of dangerous goods, is also the subject of public law regulation designed to avoid and/or limit environmental damage and ensure safety.[2]

II. PURPOSES AND APPROACHES OF THE STUDY

The focus of this paper is the presentation and discussion of the carrier's stowage responsibilities imposed in international regimes such as the Hague, Hague/Visby and Hamburg Rules. A subsidiary examination will consider the extent to which public law stowage rules, enacted with a view to protect public health and safety, may be transplanted into the private law sphere to be used as evidence of contractual breach on the part of the carrier to properly deal with the cargo.

---

2 See e.g. *International Convention for the Safety of Life at Sea*, 1 November 1974, 1184 U.N.T.S.2, with *Protocol*, 17 February 1978, 32 U.S.T. 5577, Chapter VII.

III. THE SCOPE

A. A Definition of Stowage

Stowage has been defined as "[t]he storing, packing, or arranging of the cargo in a ship [or other vessel of transportation], in such a manner as to protect the goods from friction, bruising, or damage from leakage".[3]

This definition both contains a description and sets out the purpose of stowage. While one purpose is to reduce the risk of damage to the goods during transport, the manner is which cargo is "stowed, packed and arranged" may also affect the safety of the ship, crew and passengers as well as the release of polluting cargo in the environment. Consideration should therefore be given to safety and environmental issues as well as to matters affecting the security of the goods exclusively.

The danger of personal injury, damage to the goods, and damage to other property may require special stowage precautions. Such precautions may easily conflict with the commercial interest of having loading and stowage performed rapidly in order to minimize the time the ship spends in port and the attendant loss of profits. Moreover, it is important that the ship's cargo space is used efficiently, so that a maximum load can be carried.

The stowage operation also includes "trimming", the operation of evenly distributing the cargo throughout the holds so as to ensure the maintenance of the ship's balance.[4] The trim of cargo is not only necessary to preserve the safety of

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3 See Campbell Black, *Black's Law Dictionary*, 5th ed. (St. Paul, Minn.: West Publishing, 1979).

4 See B. Reynolds, "Stowing, Trimming and Their Effects on Delivery, Risk and Property in Sales "F.o.b.s.","F.o.b.t."and "F.o.b.s.t."(1954) Lloyd's Maritime and Commercial L. Quart. 119 at 120.

the ship, but may be required to optimize the vessel's seagoing capabilities and thus minimize fuel consumption as well as increase her speed.

In light of the above, it appears more appropriate to define stowage as: The storing, packing, arranging and distribution of the cargo in a ship in such a manner as to protect the goods from damage, preserve the safety of the ship and prevent pollution, taking into the account the need for a speedy and efficient transport.

B. Stowing Is Not Loading or Caring for Cargo

Stowage being the "storing, packing, arranging and distribution of goods in the ship", it may, in principle, be distinguished from loading and "caring for" the goods. Loading refers to the physical transfer of the goods onto the ship and immediately precedes stowage while "care of" the goods begins after stowage, once the ship has left the port of loading. Although an independent exposition of rules relating to loading and care for the goods is beyond the scope of this paper, in practice, it is difficult to draw a sharp distinction between stowage and other cargo operations, especially with respect to finding the cause of damage.[5] Because many of the same considerations apply to several or all cargo operations, the discussion of stowage may overlap with loading and caring for the goods where appropriate.

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5 See e.g. *Knott* v. *Botany Mills*, 179 U.S. 69, 21 S.Ct. 30, 45 L. Ed. 90 (1900), where wool and wet sugar were stowed in the same compartment separated by a non-watertight bulkhead. The cargo was trimmed in such a way that liquid drainage from the sugar was to flow aft, away from the wool, and there be pumped out of the ship. On a later stage of the voyage, aft cargo was discharged causing the drainage to flow forward and thereby damaged the wool. In this case it might be difficult to decide whether it was negligent stowage, loading, caretaking or discharging which caused the damage. However, it was of no legal significance to decide which cargo operation had caused the damage. The issue was to determine whether the damage had been caused through the negligent management of the ship, for which the shipowner was not liable, or through the negligent handling of the cargo, for which he was liable.

C. Limitation as to Type of Damage

There is almost no limit to the number of ways cargo can become damaged within the confines of the ship. Liquid cargo may leak out of its package and thus damage dry cargo,[6] food-stuffs may become contaminated,[7] cargo may become misshaped or crushed by the pressure of other cargo stowed on top,[8] become scratched,[9] or be damaged by heat.[10] It is therefore virtually impossible to exhaustively survey all possible causes of damage and the stowage precautions which may be taken to avoid them. Examples will be provided to illustrate the most significant causes of cargo damage due to improper stowage.

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6 *The Ternefjell*, 1961 AMC 1231 (N.D. Ill.); *Bruck Mills Ltd.* v. *Black Sea S.S. Co.*, [1973] F.C. 387, 2 Lloyd's Rep. 531 (T.D.)

7 *Glidden Co.* v. *The Vermont*, 47 F. Supp. 877, 1942 AMC 1407 (E.D.N.Y.).

8 *The Silversandal*, 110 F. 2d 60, 1940 AMC 731 (2 Cir.); *G.E. Crippen* v. *Vancouver Tug Boat Co.*, [1971] 2 Lloyd's Rep. 207 (Ex.Ct.).

9 *The Southern Cross* (1939), 1940 AMC 59 (S.D.N.Y.).

10 *The Oberlin Victory*, 194 F. Supp. 615, 1961 AMC 2350 (E.D.La.).

IV. NOTES ON SOURCES OF LAW AND INTERPRETATION

A. Sources of Law

The conventions relevant to the contractual aspect of stowage are the Hague Rules[11], the Hague/Visby Rules (the Hague Rules as amended by the Visby Protocol)[12] and the Hamburg Rules.[13] While each was intended as an "improvement" upon its predecessor, all three are currently in force and thereby create parallel regimes.

National law and jurisprudence must be examined for two reasons: Firstly, states which have a "dualistic" view of international and domestic law require the adoption of a domestic act which transforms or incorporates the international rules into domestic law. Secondly, whether in monistic or dualistic legal systems, juridical interpretation is essential to elucidate the content of the international rule. The domestic laws surveyed will, for practical reasons such as language and

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11 *International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading*, 25 August 1924, 120 L.N.T.S.155.

12 *Protocol to Amend the International Convention for the Unification of Certain Rules of Law Relating to Bills of Lading*, 23 February 1968. The Visby Protocol cannot be applied independently, but creates together with the Hague Rules one single instrument, see art. VI of the Protocol. It should also be mentioned that an additional protocol was adopted in 1979, making Special Drawing Rights the unit of account in art. 4(5) of the Rules.

13 *United Nations Convention on the Carriage of Goods by Sea*, 31 March 1978, UN Doc. A/CONF/89/13, 17 I.L.M. 608, entered into force 1. November 1992.

accessibility to material, be limited mainly to those of Canada, the U.S., the U.K. and the Scandinavian countries.[14]

B. Interpretation

The aforementioned international conventions all seek to promote uniformity on their respective area of law.[15] In order to achieve this goal, it is vital that the courts consider the interest of uniformity when interpreting convention provisions. Fortunately, national courts have been sensitive to this aim, although perhaps not to the extent that one might wish.

As a general rule, a convention must be interpreted "in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose".[16] The courts might therefore find that terms and expressions which had a particular meaning in domestic law preceding the convention, should be given a different interpretation under the

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14 The Scandinavian countries (Denmark, Norway and Sweden) will be treated as a single "jurisdiction" due to the near uniformity of their maritime law. The Scandinavian maritime codes are virtually identical and it is common for one country to draw upon judicial decisions rendered in another with respect to maritime matters.

15 In the Hague and Hague/Visby Rules the purpose of uniformity follows from their title:" International Convention for the *Unification* of Certain Rules of Law Relating to Bills of Lading" [Emphasis added]. The Hamburg Rules art. 3 explicitly provides that the goal of uniformity must be regarded in the interpretation and application of the Rules. The preambles of SOLAS 1974 and MARPOL 73/78 also state the aim of uniformity.

16 *The Vienna Convention on the Law of Treaties*, 23 May 1969, 8 ILM 679 art. 31(1). The Convention is considered to a large extent to be a codification of international customary law. Its principles are therefore applicable to treaties adopted prior to the Vienna Convention and are binding upon states not party to it.

convention.[17] Moreover, a court should if possible follow an interpretation of the convention which has been broadly accepted in other convention states.[18]

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17 See thus *The Morviken*, [1983] 1 Lloyd's Rep. 1 at 5 (H.L.), Lord Diplock:

> "[The Rules] should be given a purposive rather than a narrow literalistic construction, particularly wherever the adoption of a literalistic construction would enable the stated purpose of the international convention, *viz.* the unification of domestic laws of the Contracting States relating to bills of lading, to be evaded by the use of colourable devices that, not being expressly referred to in the Rules, are not specifically prohibited."

18 See *Stag Line Ltd.* v. *Foscolo, Mango & Co.*, [1931] All E.R. Rep. 666, [41 Ll. L. Rep. 165 at 174 (H.L.), Lord Macmillan:

> "It is important to remember that the [1924 Carriage of Goods by Sea Act] was the outcome of an international conference and that the Rules in the schedule have an international currency. As these Rules must come under the consideration of foreign courts it is desirable in the interests of uniformity that their interpretation should not be rigidly controlled by domestic precedents of antecedent date, but rather that the language of the Rules should be construed on broad principles of general acception."

STOWAGE & THE CONTRACT OF CARRIAGE

I. INTRODUCTORY REMARKS

Damage caused by improper stowage may give rise to a multitude of private claims, which in many jurisdictions may be framed either in contract or in tort. The following discussion will concentrate on those claims arising under contracts for the carriage of goods as regulated by the Hague and Hague/Visby Rules. A comparison with the Hamburg Rules will follow. Personal injury claims are regulated by other conventions and national law and therefore lie outside the ambit of this discussion.[19]

A. Survey of Potential Claims Arising From Stowage

Cargo owners are some of the most frequent claimants for losses occasioned by stowage problems. Improper stowage may result in cargo damage either during the stowage operation itself or in the course of the voyage. Moreover, if the agreed amount of cargo cannot be carried due to poor space management during stowage, shippers whose cargo is left unloaded may claim damages.

The *carrier* may demand compensation from stevedores or longshoremen to whom the task was assigned when inefficient stowage results in reduced freight earnings.

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19 Personal injury claims in maritime transport have been dealt with to some extent in international conventions, (ie. Athens Convention relating to the Carriage of Passengers and their Luggage by Sea, Athens, December 13, 1974; Protocol to the Athens Convention relating to the Carriage of Passengers and their Luggage by Sea, London, November 19, 1976) but the law in this area is far from uniform, relying as it does mostly on national tort law.

Related claims may arise from unduly slow or poorly planned stowage which increases the time the ship must spend at the port of loading or subsequent ports.

Furthermore, *stevedores, longshoremen and crew members* may claim for personal injuries sustained either during the stowage operation, *en route* or during discharge operations. Improper stowage may also endanger the ship's safety. Should the ship suffer damage as a result, a multitude of other claims are foreseeable: damage or loss of the ship and cargo, death or injury to persons on board and ashore and environmental damage. Cargoes of dangerous or harmful goods require particular attention because even minor oversights can have dire and far reaching consequences.[20]

B. The Contract of Carriage

1. The contractual context

The typical international maritime carriage will involve a large number of contractual relationships. The contract of carriage will often be part of a sales contract between a buyer and seller in different countries. Depending on the terms of the sales contract, the buyer or the seller will contract with the carrier for the transport of the goods. This duty will be performed either directly or may be delegated to a freight forwarder. On the other side of the equation, the carrier will often be the charterer rather than the owner of the ship to be used for the carriage. In that event, a contractual relationship will exist between the shipowner and the carrier. Other contracts accessory to the contract of carriage may exist as well: Loading, stowage and discharge duties are often contracted out to

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[20] A striking example is the tragedy which took place when the *Mont Blanc*, overloaded with ammunition, exploded in the Port of Halifax in 1917. 3,000 people were killed, 9,000 were injured and 6,000 homes were destroyed.

stevedoring companies, and insurers will be involved in both the cargo and the carrier sides of the contract of carriage.

2. Parties

a. "Shipper"

The parties to the contract of carriage are the "shipper" and the "carrier". In general terms, the shipper is the person who is sending the goods. The Hamburg Rules provide a more detailed explanation at art. 1(3) where "shipper" is defined as "any person by whom or in whose name or on whose behalf a contract of carriage of the goods by sea has been concluded with a carrier, or in whose name or on whose behalf the goods are actually delivered to the carrier in relation to the contract of carriage at sea."[21] Although the shipper will *usually* be the seller of the goods, the INCO terms selected in the sales contract may delegate transport arrangements to the buyer.

b. "Carrier"

The "carrier" is the party who has contracted to transport the goods. As mentioned above, he does not necessarily own the carrying ship. The vessel may have been chartered from the shipowner. Modern shipping practice often has one person selling transport services to the public and another actually performing the carriage. Thus, two carriers may be said to be bound by the transport contract: the contracting carrier and the actual or performing carrier. Parties commonly

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21 The definition of "shipper" provided in the Hamburg Rules has been adopted in other legislative acts. see e.g. Canadian Coast Guard, *The Code of Safe Practice for Solid Bulk Cargoes*, (Ottawa: Canadian Coast Guard, 1984) at 1.16.

found to be "actual carriers" are the shipowner (when the contracting carrier is only a charterer vis a vis the ship) and stevedores hired to perform loading and stowage.

The term "carrier" is defined in the Hague and Hague/Visby Rules as including "the owner or the charterer who enters into a contract of carriage with a shipper".[22] This definition is problematic because it does not delimit the term "carrier". Instead, "carrier" is said to also include the contracting carrier.[23] Thus, under the Hague and Hague/Visby Rules, both the contracting and the actual carrier may fulfil the definition of "carrier" provided. This is a problem which has been solved in various ways in national law.

The Hamburg Rules offer more clarity because they both provide separate definitions for contracting and actual carriers[24] and indicate the periods of responsibility of each. The contracting carrier bears the primary responsibility for the performance of the carriage,[25] and remains bound even when carriage duties have been delegated or subcontracted to another. Where an actual carrier is involved, all rights and responsibility of the Hamburg Rules will apply to him during the time he has control over the goods.[26] Therefore, concurrent liability of the contracting carrier and the actual carrier is possible and the two parties may be held jointly and severally liable.[27]

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22 See art. 1(a) of the Hague and Hague/Visby Rules.

23 In practice, it may be problematic to establish who the contracting carrier is. Quite often, there are printed several names on the bill of lading, such as the name of the ship, the ship owning company and the charterer.

24 See Hamburg Rules, Arts. 1(1) and 1(2).

25 *Ibid.* art. 10(1).

26 *Ibid.* art. 10(2).

27 *Ibid.* art. 10(4).

c. Other parties

The receiver (consignee), who is often the buyer of the goods, stands at the other end of the transport. The sales contract will determine whether he becomes the owner of the cargo at the time the cargo is discharged or at some earlier period. The receiver of the goods may sometimes be referred to as indorsee or assignee depending on how he came into the position as receiver of the goods.

Other parties may also derive rights and duties from the contract of carriage, such as insurers and stevedores. Since national law determines who may sue and who may be sued under the contract of carriage, this paper will not address these issues.

3. Bills of lading

The bill of lading is an essential document in the carriage of goods by sea. While it began as mere proof of the carrier's receipt of the goods from the shipper, it has developed into a multi-functional instrument.[28] The receipt function of the bill of lading is still important - the bill of lading is evidence of the condition in which the goods were received by the carrier at the time of loading. In addition, it will contain the contractual terms and thus constitute the "best evidence" of the contract of carriage.[29] More importantly, the modern bill of lading often functions as a document of title. It may be transferred and obliges the carrier to deliver the goods to the holder of the bill of lading. The titulary function of the bill of lading allows its holder to deal with the goods even before their arrival at

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28 P. Todd, *Modern Bills of Lading*, 2d ed. (Oxford, Eng.: BSP Professional Books, 1990) at 1.

29 *The Ardennes* (1950), [1951] 1 K.B. 55, 84 Ll. L. Rep. 340 at 344.

the port of discharge. The goods may be re-sold or offered as security for a debt by the mere transfer of the bill.

4. Stowage responsibilities

Two main questions must be answered in relation to stowage responsibilities under the contract of carriage: 1) Who is bound to perform or arrange for the stowage? and 2) who is responsible for damage or loss which results from the stowage operation ?

There is rarely any uncertainty as to who is obligated to stow the cargo since the duty will be either explicitly stated in the contract or implicitly understood by the parties.[30] While stowage will usually be performed by the carrier or his delegates, the contract of carriage may alternatively provide that the shipper must arrange for stowage.

Determining who is to bear the responsibility for loss caused by improper stowage tends to be a thornier problem. Although one party may perform the stowage, responsibility for poor stowage can lie with another. For example, the carrier may have stowed cargo improperly not through his own negligence but because the shipper failed to give notice of any special handling required for the particular goods consigned. Furthermore, where stowage duties have been delegated and perhaps even sub-delegated, questions arise as to which person or persons will bear the ultimate liability for the loss.

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30 Occasionally, disputes arise as to who shall pay for loading and stowage, see e.g. *Blandy Bros.* v. *Nello Simoni Ltd.*, [1963] 2 Lloyd's Rep. 393 (C.A.).

C. Historical Background

In pre-industrial society, the terms of the contract normally depended on the type of contract entered into rather than the specific agreements made by the parties. The contractual situation was thus comparable to that of standard form contracts or adhesion contracts which are extensively used today.[31]

With the industrial revolution and the increase in trading arose the libertarian notion that contractual terms should be freely arrived at through negotiation between the parties. However, in some contractual relationships such freedom remained illusory. In liner trade, the well organized shipowners had a superior bargaining position and could almost unilaterally dictate the terms of the contract of carriage. By the end of the 19th century, shipowners had developed standard form contracts which all but completely excluded any liability for cargo damage.[32] The stronghold of shipowners was also reflected in the creation of a model bill of lading under the aegis of the International Law Association in 1882.[33] It not only contained a long list of exceptions from shipowner liability (similar to the one that can now be found in art. 4(2) of the Hague and Hague/Visby Rules) but also introduced a per package limitation clause in the remaining cases where the shipowner could be held liable.[34]

The first significant reaction to this abuse of contractual freedom came from the U.S. where cargo interests were better organized and the merchant fleet relatively

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31 See J. Ramberg, "Freedom of Contract in Maritime Law" (1993) LMCLQ 178 at 178-179.

32 The shortest of such clauses read: "Not responsible for anything", see P. Ekelund, *Transportaftaler* (Copenhagen: Jurist- og Økonomiforbundets Forlag, 1991) at 21.

33 J.C. Sweeney, "UNCITRAL and the Hamburg Rules - The Risk Allocation Problem in Maritime Transport of Goods" (1991) 22 J. M. L. C. 511 at 514.

34 Despite the carrier-friendly character of this model bill of lading, it actually contained more balanced provisions than other of its contemporaries.

small.[35] The Harter Act, [36] adopted in 1893, introduced the first mandatory regime prohibiting bill of lading clauses which unduly favoured the carrier. Of particular importance to stowage, were two provisions, now listed as sections 1 and 2 (app. 190 and 191) of the Act: Section 1 declares void all stipulations which relieve the shipowner from liability for damage caused by negligent loading, stowage, custody, care or proper delivery and Section 2 prohibits stipulations which lessens the shipowner's obligation in exercising due diligence to furnish a seaworthy vessel and to carefully stow and deliver the cargo.

The Harter Act was, to a great extent, used as a model for the Hague Rules which where adopted some 30 years later. One example of the influence of the Harter Act can bee seen when comparing sections 190 and 191 of the Act with articles 3(2), 3(1) and 3(8) of the Hague Rules.[37] Because of the historical bond between the Harter Act and the Hague Rules, cases decided under the Harter Act will be relevant in interpreting the similar provisions of the Hague Rules.

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35 J. Ramberg, *supra* note 35 at 179.

36 46 U.S.C. Appendix 190-196 (1988).

37 The *Harter Act* still applies to domestic carriage in the U.S. and to international carriage before loading and after discharge, see the *Carriage of Goods by Sea Act*, 16 April 1936, c. 229, 49 Stat. 1207-1213, 46 U.S. Code Appendix 1300-1315 [hereinafter *U.S. COGSA*] ss. 12-13 and *Harter Act* s. 1.

II. APPLICABILITY OF THE RULES TO STOWAGE

Although the Hague, Hague/Visby and Hamburg Rules all regulate contracts for the international carriage of goods by sea, their respective provisions are neither perfectly equivalent nor all encompassing. The following discussion will contrast the general mandatory scope of the three conventions, paying particular attention to the provisions which are of special relevance to stowage.

It is well established international law that only states which are parties to a convention are bound by it.[38] However, it is noteworthy that a significant number of countries which are not parties to any of the conventions have adopted domestic versions of the Hague or Hague/Visby Rules[39]. States have also, through national law, provided for the mandatory application of the Rules to contracts for the purely domestic carriage of goods by sea.[40] Even in the absence of governmental action making the Rules mandatory, parties to a contract may take the initiative to stipulate their applicability to a particular contract for the carriage of goods.

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38 Art. 34 of *The Vienna Convention on the Law of Treaties*, 23 May 1969, 8 ILM 679: "A treaty does not create either obligations or rights for a third State without its consent". See also L. Henkin *et al.*, *International Law*, 2d ed. (St.Paul, Minn.: West Publishing Co., 1987) at 64-66.

39 E.g. Canada has neither ratified nor acceded to any of the conventions, but the Hague/Visby Rules have nevertheless been given the force of law in the *Carriage of Goods by Water Act*, S.C. 1993, c. 21 [hereinafter *COGWA*], s. 7(1). It is interesting that the Act also contains provision for replacing the Hague/Visby rules with the Hamburg Rules at a later stage, see *COGWA*, ss. 3(b), 4 and 8(1).

40 E.g. COGWA, ss. 7(2)(b) and 7(4) which expands the scope of the Hague/Visby Rules to cover intra-Canadian transport. The Scandinavian countries, all parties to the Hague/Visby Rules have also expanded the scope of the Rules to cover domestic transport, see thus *Lov om Sjøfarten* [The Norwegian Maritime Code], 20 July 1893 nr. 1, as amended of 11 June 1993 nr.83 [hereinafter *Norwegian Maritime Code*] § 169.

A. The Mandatory Character of the Rules

Art. 3(8) of the Hague and Hague/Visby Rules and art. 23(1) of the Hamburg Rules, make null and void any contractual stipulations that lessen the responsibilities and obligations of the carrier under the respective conventions.[41] If the Rules apply, they will automatically impose minimum responsibilities on the carrier which cannot be contracted out of. Although the Rules do not prevent the carrier from increasing his responsibilities under the contract,[42] in practice, he will rarely have any incentive to do so.

B. To What Types of Contracts Do the Rules Apply ?

The mandatory scope of application of the Hague and Hague/Visby Rules is limited to "contracts of carriage covered[43] by a bill of lading or any similar document of title".[44] The Hague and the Hague/Visby Rules therefore seem inapplicable to contracts for the carriage of goods by sea where only non-negotiable documents, such as seaway bills, are issued.[45] The Hamburg Rules

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41 See e.g. *Coventry Sheppard* v. *Larrimaga S.S. Co.* (1942), 73 Ll. L. Rep. 256 where an English court applying the Canadian version of the Hague Rules held null and void a clause exempting the carrier from liability for tainted goods.

42 Hague and Hague/Visby Rules art. 5, and Hamburg Rules art. 23(2).

43 It is enough if the parties contemplated the issuance of a bill of lading even if it was never actually issued, *Pyrene Co.* v. *Scindia Steam Navigation Co.*, [1954] 2 Q.B. 402, 1 Lloyd's Rep. 321.

44 See Hague and Hague/Visby Rules art. 1(b), which gives a narrow definition of "contracts of carriage", read together with art. 2.

45 But see W. Tetley, *Marine Cargo Claims*, 3d ed. (Montreal: Yvon Blais, 1988) at 11 and 944 ff., where an argument for the mandatory application of the Rules to seaway bills is made.

have a much broader scope in this respect as they apply to all contracts of carriage,[46] even those evidenced in waybills and electronic documents.

Neither the Hague, Hague/Visby nor the Hamburg Rules apply to transport arrangements governed by a charterparty,[47] although when a bill of lading is issued under the charterparty, the rules will apply mandatorily to the relationship between the third party bill-of-lading- holder and the carrier.[48] Nevertheless, it is not uncommon for the Rules to be contractually incorporated in the charterparty by means of a clause paramount.

C. Deck Carriage

Deck carriage raises special stowage issues because of the extraordinary risks it involves and the special treatment it has received in conventions for the carriage of goods at sea.

Under the Hague and Hague/Visby Rules, the carrier can avoid the mandatory application of the Rules to goods carried on deck if deck carriage is expressly stipulated in the contract.[49] Conversely, the Hamburg Rules have removed this

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46 Hamburg Rules art. 1(6) read with art. 2(1).

47 A charterparty is a contract by which the charterer hires the ship or parts of it from the shipowner, as opposed to a contract of carriage which is a contract for the services of the ship.

48 Hague and Hague/Visby Rules arts. 1(b) and 5. Hamburg Rules art. 2(3).

49 Hague and Hague/Visby Rules art. 1(c) read with art. 2. It is noteworthy that a "clean" bill of lading is generally considered to mean that the cargo is stowed under deck, *Ingersoll Milling* v. *Bodena*, 1988 AMC 223 (2. Cir.). Thus, when a clean bill has been issued, the Hague and Hague/Visby Rules apply even if the goods were in fact carried on deck.

exclusion and apply mandatorily to deck carriage even if such is explicitly provided for in the bill of lading.[50]

D. Period of Responsibility

Stowage operations take place once the goods are loaded onto the ship and therefore fall within the period of responsibility set out by all three conventions: The Hague and Hague/Visby Rules apply mandatorily to the period between loading and discharge of the goods,[51] and the Hamburg Rules extend the period of responsibility from "port to port".[52]

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50 Since the Hamburg Rules do not exclude deck carriage in arts. 1 and 2, it follows that they also cover deck carriage. Art. 9(1) provides only that the carrier does not have the right to carry goods on deck unless according to specific agreement, trade usage or regulation.

51 Hague and Hague/Visby Rules art. 2 read with art. 1(e) and art. 7. The period of mandatory application has more specifically been defined as "tackle-to-tackle", i.e. from when the ship's tackle hooks on to the goods at port of departure until tackles are released from the goods upon discharge, see *Pyrene Co.* v. *Scindia Steam Navigation Co.*, [1954] 2 Q.B. 402, 1 Lloyd's Rep. 321.

52 See Art. 4(1). This period of responsibility is further defined in art. 4(2) as the period between the receipt of the goods until the goods are delivered.

III. CARRIER'S RESPONSIBILITY UNDER THE HAGUE AND HAGUE/VISBY RULES

A. Stowage Duties

The Hague and the Hague/Visby Rules treat the carrier's stowage duties identically. These are dealt with in arts. 3(1) and 3(2):[53]

> Art. 3(1):
>
> "The carrier shall be bound *before and at the beginning* of the voyage to *exercise due diligence* to:
> (a) *Make the ship seaworthy.*
> (b) Properly man, equip and supply the ship.
> (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." [Emphasis added].

> Art. 3(2):
>
> Subject to the provisions of Article 4, the carrier shall *properly and carefully* load, handle, *stow*, carry, keep, care for, and discharge the goods carried." [Emphasis added].

The carrier's stowage duties under arts. 3(1) and 3(2) can generally be viewed in terms of the three functions the carrier fulfils in relation to the cargo: Transporter, caretaker and stevedore.[54]

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53 Stowage is also mentioned parenthetically in a number of other provisions of lesser importance. Art. 2 refers to stowage as one of the carrier's undertakings to which the Rules apply. Stowage also appears in Art. 6, a seldom used provision which permits the carrier to stipulate freely as to his responsibility for cargo in "extraordinary" carriage of specific goods.

54 See the distinction made in N.J.J. Gaskell, C. Debattista & R.J. Swatton, *Chorley and Giles' Shipping Law*, 8th ed. (London, Eng.: Pitman, 1987) at 186-187.

1. The responsibilities of the carrier

As the *transporter* of the goods, the carrier has a duty to provide a seaworthy ship.[55] The term can be generally defined as the ship's fitness and safety for the contemplated voyage.[56] It regards not only the integrity and balance of the vessel itself but also the adequacy of its equipment, manning and supplies. Improper stowage may for instance destabilize the ship and thereby render it unseaworthy.

The ship's fitness for the transport of the particular goods consigned (hereinafter referred to as 'cargoworthiness')[57] reflects the carrier's *custodial* responsibility towards the cargo itself. Cargoworthiness depends typically on the working condition of equipment necessary to care for the cargo, such as cooling chambers and freezers. It appears that cargoworthiness may also have a stowage component. For instance, the placement of incompatible cargo in the same compartment could render the ship unfit for carriage of the cargo.

Cargoworthiness is generally considered to be an element of seaworthiness, and art. 3(1)(c) is thus strictly speaking covered by the general seaworthiness clause in art. 3(1)(a). However, it can be useful to treat this provision separately since cargoworthiness has a bearing on direct damage to cargo through inadequate custodial capabilities rather than cargo damage caused indirectly by defects in the vessel's sea-going capabilities (instability, structural strain on the hull, etc.).

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55 Art. 3(1)(a).

56 More complete definitions describe seaworthiness as "[A] 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", *McFadden* v. *Blue Star Line*, [1905] 1 K.B. 697 at 706, or "the state of a vessel in such a condition, with such equipment, and manned by such a master and crew, that normally the cargo will be loaded, carried, cared for and discharged properly and safely on the contemplated voyage", see W. Tetley, *supra* note 49 at 370.

57 Art. 3(1)(c).

Thirdly, the manner in which the carrier loads and stows the goods is connected to his function as *stevedore*. The stowage of the goods should be performed carefully and properly so as to avoid damage to the goods during the stowage operation and during the course of the voyage.

2. Effects of bad stowage and unseaworthy stowage

Since the carrier's failure to perform his duties under the art 3(1) and art. 3(2) can lead to different legal result, it is important to distinguish between the duties imposed by each provision.

If the carrier breaches his art. 3(1) duty to exercise due diligence in furnishing a seaworthy vessel under, he will be held liable under art. 4(1) for damage caused by the unseaworthiness. Although the Rules are not very clear on this point, it has been established that the carrier's seaworthiness duty is an "overriding obligation", so that he cannot exonerate himself under the list of exceptions provided in art. 4(2) unless this obligation has been fulfilled.[58]

If, on the other hand, the damage is caused by carrier's failure to properly and carefully stow the goods under art. 3(2), the art. 4(2)(a) exceptions will be available.[59] From the perspective of the cargo owner, the prospects of recovery are much better when the damage is caused by initial lack of cargoworthiness

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58 *Maxine Footwear Co.* v. *Canadian Government Merchant Marine Ltd.*, [1959] A.C. 589, [1959] 2 Lloyd's Rep. 105 (P.C.) at 113; *Mediterranean Freight Services Ltd.* v. *BP Oil Intl. Ltd. (The Fiona)*, [1993] 1 Lloyd's Rep. 257 at 285-286 (Comm. Ct.). See also the *Norwegian Maritime Code* § 118(3) which states explicitly that the exceptions from liability are not available to the carrier if the damage is caused by his want of due diligence in making the ship seaworthy.

59 This follows from the opening phrase of art. 3(2); "Subject to the provisions of Article 4...".

rather than improper stowage. However, as will be shown below, it can be very difficult to distinguish between these two causes of damage.[60]

B. Proof and Burden of Proof

Although evidence is generally a matter of national law, the Rules contain some provisions on evidence which bind all contracting states. Moreover, certain rules of evidence and burden of proof can be said to follow implicitly from the system of liability set out in the Rules.

1. Evidentiary problems

Because trial may take place years after the event and because stowage procedures are very technical and complex, the testimony of the crew and stevedores will often be of limited value. Memory lapses as to the precise manner in which a particular consignment was stowed are likely.[61]

Stowage plans documenting the disposition of the cargo for a particular voyage may not always be helpful even if they can be made available at trial. They both may vary according to the style used by the particular master and are, in any event, often inaccurate as to the actual stowage. Furthermore, as Haight J. put it: "Cargo stowage plans are frequently as challenging to decipher as the Dead Sea Scrolls".[62] When sufficient evidence as to what actually happened cannot be

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60 See *infra* at 48 ff., the discussion on the distinction between cargoworthiness and improper stowage.

61 See e.g. *Blackwood Hodge* v. *Ellerman Lines*, [1963] 1 Lloyd's Rep. 454 at 461 (Comm. Ct.).

62 *Phillip Holzman* v. *S.S. Hellenic Sunbeam*, 1977 AMC 1731 at 1733 (S.D.N.Y).

found, the court may fall back on the burden of proof rules in deciding the matter.

2. Special problems in multimodal transport

Special evidentiary problems arise where the damage was caused by stowage in multimodal transport. Suppose a container is stuffed (stowed) and sealed by the shipper and then carried by rail to the harbour. From there, a ship transports it to a foreign country where a truck delivers the container to the ultimate receiver of the goods. When the container is opened, the goods are found to be damaged. It may be very difficult to discover in which leg of the voyage the damage occurred. Moreover, the damages might have been caused partly through the shipper's poor stowage of the goods inside the container and partly by the rough handling and stowage of the container by one or several of the carriers.

3. Proving the damage - bill of lading as *prima facie* evidence

The burden first lies with the cargo claimant to establish that the damage occurred while the goods where in the custody of the carrier. The simplest way to do this is to show that the carrier issued a so-called "clean bill of lading"[63] upon receiving the goods and that the goods were damaged when discharged by the carrier at their destination. Thus, the bill of lading constitutes *prima facie* evidence of the condition of the goods during the different stages of the transport.[64] The

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63 A bill of lading is customarily considered "clean" if it bears no superimposed clauses expressly declaring the defective condition of the goods or of their packaging. See H.D. Tabak, *Cargo Containers: Their Stowage, Handling and Movement* (Cambridge, Md: Cornell Maritime Press, 1970) at 369.

64 This rule on burden of proof follows implicit from the Hague and Hague/Visby Rules, arts. 3(3), 3(7) and 3(4) read together. See *The Farrandoc*, [1967] 2 Lloyd's Rep. 276 at 284; *Socony Mobil* v. *Tex. Coast & International*, 559 F.2d 1008, 1977 AMC 2598 (5 Cir.) at 2605; *Albacora SRL* v. *Westcott &*

burden will then shift to the carrier to demonstrate that at the time he received the goods, they were not actually in the condition described in or implied by the bill of lading.[65]

In relation to packaged goods, it is important to note that the bill of lading is *prima facie* evidence of only the "apparent" condition of the goods.[66] It will not be practically possible for the carrier to open all containers and packages in order to satisfy himself that the goods are in fact in the good condition asserted by the consignor. Therefore, a clean bill of lading does not constitute *prima facie* evidence as to the condition of packaged goods if the damage was of a kind which the carrier could not have discovered by a reasonable examination. In these cases the ordinary burden of proof will apply. If the goods were packed in containers by the shipper, the cargo claimant bears the burden of showing that the cargo was in a good condition at the time it was entrusted to the carrier.[67]

The Visby Rules add, in art. 3(4), sub. 2, that the carrier will not be permitted to prove that the goods were not in such a condition as stated in the bill of lading, when the document has been transferred to a third party acting in good faith.

Laurance Line Ltd, [1966] 2 Lloyd's Rep. 37 at 46.

65 See e.g. *Produits Alimentaires Grandma Ltée.* v. *Zim Israel Navigation Co. et al.* (1988), 86 N.R. 39 (F.C.A.D.).

66 Hague and Hague/Visby Rules art. 3(3)(c). "Apparent" refers to what is visible by reasonable examination, *Silver* v. *Ocean Steamship Co.*, [1929] All E.R. Rep. 611 at 614 (C.A.). See also *Prudential Guarantee* v. *Bum Ju*, 1988 AMC 1332 (D.Ore.)

67 *Westway Coffee Corp.* v. *Netuno*, 1982 AMC 1640 at 1642 (2. Cir.); *Renfield Importers Ltd.* v. *Anchor Line*, 1957 AMC 1505 (S.D.N.Y.). See also *Franco Steel Corp.* v. *Fednav Ltd.* (1990), 37 F.T.R. 184 (F.C.T.D.) where a clean bill of lading was considered insufficient proof of rust damage to packaged steel coils while in the care of the carrier. Instead, evidence as to the pre-shipment condition of the coils was permitted.

Thus, in relation to a consignee or indorsee, the bill of lading will be conclusive evidence.[68]

4. Proving the cause of the damage

The Rules do not clearly describe which party bears the onus of proving the *cause* of the damage but the burden of proof can be ascertained by implication. Most jurisdiction have, in any event, placed the burden on the carrier and thereby established a regime of *prima facie* carrier's liability.[69] Faced with circumstances which show that the damage occurred while the goods were in his charge, the carrier must establish that the damage was caused by an event for which he cannot be held liable. For example, the carrier will escape liability if he can prove that the damage occurred due to insufficient packing[70] by the shipper rather than by bad stowage on his part.[71] If the carrier is unable to identify the cause of the damage and thereby discharge his burden of proof, he will be held liable even if the damage was not actually caused by his fault.

Thus in *Quaker Oats* v. *Torvanger*,[72] the 5th Circuit stated:

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68 In Common law, this is characterized as "estoppel". The U.S. COGSA, *supra* note 49, only implements the Hague Rules, but the *Pomerene Act*, 29 August 1916, chap. 415, 39 Stat. 538-545, 49 U.S. Code Appendix 81-124 [hereinafter *Pomerene Act*], sect. 22 provides that the bill of lading constitutes such absolute proof in the hands of the *bona fide* holder of the bill of lading.

69 In English law, see *White & Son* v. *Owners of Hobson's Bay* (1933), 47 Ll. L. Rep. 207; and *Albacora SRL* v. *Westcott & Laurance Line Ltd*, [1966] 2 Lloyd's Rep. 53 (H.L.). In Canadian law, see *Cargil Grain Co.* v. *N.M. Paterson & Sons*, [1966] Ex. C.R. 22. In U.S. law, see *Socony Mobil* v. *Tex. Coast & International*, 559 F.2d 1008, 1977 AMC 2598 (5 Cir.). The rule of *prima facie* liability of the carrier applies also in Scandinavia, see the *Norwegian Maritime Code* § 118(1).

70 See Hague and Hague/Visby Rules art. 4(2)(n).

71 See e.g. *Tenneco Resins* v. *Atl. Cargo Services*, 1988 AMC 2559 (S.D.Tex.).

72 1984 AMC 2943 (5 Cir.), cert. denied, 1985 AMC 2398.

> "To rebut the presumption of fault when relying upon its own reasonable care, the carrier must further prove that the damage was caused by something other than its own negligence. Once the shipper establishes a *prima facie* case, under 'the policy of the law' the carrier must 'explain what took place or suffer the consequences.' '[T]he law casts upon [the carrier] the burden of the loss which he cannot explain or, explaining, bring within the exceptional case in which he is relieved from liability." [emphasis in original].[73]

Even though the burden of proving the cause of the damage cannot be said to follow clearly from the Rules, it has been held that it nevertheless constitutes an onus which cannot be contracted out of.[74]

5. Burden of proving seaworthiness

The Rules do not state whether the burden of proving seaworthiness is on the carrier or the cargo claimant, but simply declare that when the damage "has resulted from unseaworthiness", the carrier has the burden of proving that he exercised due diligence.[75] Jurisprudence, although not entirely consistent, has tended to put the burden of proving unseaworthiness on the cargo claimant.[76]

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73 *Ibid.* at 2949.

74 See *Associated Metals* v. *M/V Arktis Sky*, 1993 AMC 509 at 514 (2. Cir.), where the court stated:

> "Once a *prima facie* case is created, the burden shifts to the carrier to show ...that the cargo loss or damage resulted from an act or omission of the shipper or owner of the goods, ...or if the loss or damage resulted from any other cause arising without the fault or privity of the carrier ...[T]his burden [of proof] cannot be carried by contract terms or language of FIOS contained in a bill of lading. Both are barred by the non-delegable provisions of COGSA under § 1308(8) [the U.S. equivalent to Hague Rules art. 3(8)]".

The FIOS (Free In Out Stowed) clause stipulated that the shipper was to load and stow the goods under the supervision of the master.

75 See Hague and Hague/Visby Rules art. 4(1), last sentence.

76 In *The Farrandoc*, [1967] 2 Lloyd's Rep. 276 (Ex.Ct.); *Tuxpan Lim. Procs.*, 1991 AMC 2432 (S.D.N.Y.); and *The Hellenic Dolphin*, [1978] 2 Lloyd's Rep. 336, the burden of proof for showing that the ship was unseaworthy was placed on the cargo claimant by reference to the rule that the party who alleges a fact bears the burden of its proof. See also *Højesteret*, 1966 UfR 581, where the Danish Supreme

This may seem unduly harsh cargo claimant because the necessary evidence is almost always held by the carrier. Courts have therefore often modified this strict burden of proof by calling on both parties to produce all available evidence or by relying on a variety of presumptions.[77]

In any event, it is clear that when the ship was unseaworthy at the beginning of the voyage, the carrier will avoid liability only if he proves either that:

1) he was reasonably diligent in his efforts to make it seaworthy, or
2) that the damage was not causally related to the unseaworthiness but to some other event for which he is not responsible.[78]

6. Burden of proving improper stowage

If the carrier proves the damage was caused by a force for which he cannot be held responsible, he discharges his initial burden of proof and need not go on to positively establish that he properly and carefully stowed the goods. The carrier sufficiently discharges his burden of proof by establishing another cause to the damage, e.g. a latent defect in the goods.[79] It is then incumbent on the cargo

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Court relieved the carrier from liability because the cargo claimant had failed to establish that the ship had been unseaworthy upon departure from Oslo.

77 E.g., the presence of seawater in the holds, has been considered to be *prima facie* evidence of unseaworthiness, see *Trade Arbed. Inc.* v. *Swallow*, 1989 AMC 2218 (E.D.La). Moreover, the intentional destruction or withholding of evidence by the carrier may compel a strong inference against him, see *Ocean Eagle Lim. Procs.*, 1974 AMC 1629 at 1646 (D.P.R.); *International Produce Inc.* v. *Frances Salman*, 1975 AMC 1521 at 1528 n. 7 (S.D.N.Y.). See also W. Tetley, *Marine Cargo Claims*, *supra* note 49 at 372-376 who argues for placing the burden of proving unseaworthiness on the carrier.

78 See e.g. *Damodar Bulk Carriers* v. *People's Ins.*, 1990 AMC 1544 (9. Cir.) where it was shown that the damage was not caused by unseaworthiness, the carrier did not have the burden of proving seaworthiness before he could invoke the exemptions in art. 4(2)(a)-(p).

79 Hague and Hague/Visby Rules art. 4(2)(p).

claimant to prove improper stowage if he seeks to rely on it.[80] Under some circumstances, the burden may be shifted back to the carrier as soon as some initial evidence of improper stowage has been produced by the cargo claimant.[81] Such a shift can be justified since it is the carrier who is usually in a better position to produce evidence.

7. An example in relation to stowage

The operation of the burden of proof in relation to stowage may be illustrated by the following example: Suppose the shipper has undertaken to load and stow the goods himself. He stows the goods, a consignment of chocolate, in a hold where a pallet of gorgonzola cheese was already stowed by the carrier. Upon discharge, of the chocolate turns out to have been tainted by the gorgonzola.[82] It appears that the carrier will be able to avoid liability to the consignee only if he can establish that:

1) a) the hold was cargoworthy in fact for the transport of chocolate, or
   b) he had exercised due diligence to make the hold cargoworthy, and

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80 See thus *Silver* v. *Ocean Steamship Co.* (1929), [1929] All E. Rep. 611, [1930] 1 K.B. 416 at 435 (C.A.); *The Silverteak*, 1941 AMC 647 at 648 (E.D.La.); *Franco Steel Corp.* v. *Fednav Ltd.* (1990), 37 F.T.R. 184 (F.C.T.D.). See also R. Colinvaux, ed., *Carver's Carriage of Goods by Sea*, vol. 2, 13th ed. (London, Eng.: Stevens & Sons, 1982) at 510-512. But see *International Produce Inc.* v. *Frances Salman*, 1975 AMC 1521 at 1534 (S.D.N.Y.) stating that the burden of proving proper loading and stowage is on the carrier. It is submitted that the latter case is erroneous.

81 See W. Tetley, *Marine Cargo Claims*, *supra* note 49 at 542.

82 The example is a variation on the facts in *The Thorsa*, [1916] P. 257, 13 Asp. M.L.C. 592.

2) a) the cause of the damage was either the negligence of the shipper for which he is should not be held liable,[83] or

b) the shipper's insufficient packaging of the chocolate.[84]

The cargo claimant, on the other hand, would have the burden of proving that:

a) the presence of gorgonzola in the hold made the ship 'uncargoworthy', or

b) if the ship was cargoworthy, that the damage was caused by improper stowage for which the carrier is liable.

C. Causation

It must be emphasized that although the system of carrier's liability for damages "caused" by stowage appears relatively clear, the final allocation of the loss may vary depending on the domestic law of causation. Most legal systems operate with a division of liability if it can be established that there were multiple causes to the damage. Thus, depending on the law of the forum, the carrier may still partly escape his liability for bad stowage if it can be established that there was a concurrent cause to the damage for which he is not liable. In addition it may be required that the carrier prove what percentage of the damage was due to the exculpatory cause.[85] Even when bad stowage amounts to lack of due diligence

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83 Hague and Hague/Visby Rules art. 4(2)(q) read together with art. 4(3).

84 Hague and Hague/Visby Rules art. 4(2)(n).

85 In U.S. law, the so called Vallescura Rule (after *Schnell & Co.* v. *S.S. Vallescura*, 1934 AMC 1573) holds that when there are two concurrent causes to the damage out of which the carrier is liable for only one, the carrier will bear the entire loss unless he can prove how much of the damage was generated by a cause for which he is not liable. See e.g. *Bunge Corp.* v. *Alcoa Steamship Co.*, 1955 AMC 725 at 733 (S.D.N.Y.); *Vana Trading Co.* v. *S.S. Mette Skou*, 1977 AMC 702 at 709-710 (2. Cir.). A similar rule is also applied in England and Canada, see *The Torenia*, [1983] 2 Lloyd's Rep. 210; *Farr Inc.* v. *Tourloti Compania Naviera S.A.*, [1985] F.C. 602 (T.D.).

to make the ship seaworthy, the finding of a concurrent cause may relieve the carrier from full liability.[86] The seaworthiness obligation is thus not "overriding"[87] in every respect.

D. General Remarks on Stowage and the Duty to Exercise Due Diligence to Make the Ship Seaworthy - Art. 3(1)

1. The standard of due diligence

The carrier's seaworthiness duty under the Hague and Hague/Visby Rules is an obligation of means rather than result.[88] The carrier need not provide a seaworthy ship, he must merely "exercise due diligence" in his efforts to do so. The standard of due diligence amounts to more than a sincere effort to make the ship seaworthy and must be "such an intelligent and efficient attempt as shall make it .. [seaworthy] as far as diligence can serve".[89] Although, it has been held that the standard of due diligence is a duty to do everything reasonable, not everything possible,[90] it is nevertheless a high standard with which it will be

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86 See e.g. *Irish Shipping Ltd. Lim. Procs.* 1975 AMC 2559 (S.D.N.Y.).

87 See *supra* at 23.

88 In common law there is as absolute duty to provide a seaworthy ship, see e.g. *Bank of Australasia* v. *Clan Line*, [1916] 1 K.B. 39 at 55, and *Steel* v. *State Line Steamships Co.* (1877), 37 L.T. 333 at 336. The absolute duty in common law no longer has much practical significance in practice because the carrier almost always will contract out of the absolute duty in the charterparty.

89 *Grain Growers Export Co.* v. *Canada Steamship Lines Ltd.* (1918), 43 O.L.R. 330 at 345.

90 *The Hamildoc*, 1950 AMC 1973 at 1985 (Ct. of Appeal of Quebec). It should be noted that the official text of the Hague Rules in French use the term "diligence raisonnable" in art. 3(1).

difficult for the carrier to prove compliance if the ship was actually unseaworthy.[91]

In practice, only defects beyond the carrier's control will relieve him from liability. If the carrier is responsible for stowing the goods and the ship is rendered unseaworthy, the chances of his proving that he exercised due diligence to make the ship seaworthy (or cargoworthy) are slim.

2. Who must exercise due diligence

The "carrier" will usually rely on a large number of servants to help him perform the transport. Naturally, the duty to exercise due diligence to make the ship seaworthy will also apply to his employees.[92] However, it would be arbitrary to draw the line at servants who are directly employed by him, otherwise the carrier could easily escape responsibility for damages caused by unseaworthiness by exercising due diligence in hiring an independent contractor to stow the goods. Most jurisdictions therefore hold that a carrier will be considered to have exercised due diligence under the terms of art. 3(1) only if the independent contractor who performs part of the carrier's duties exercises due diligence himself.[93] For example, the carrier will be held responsible if the stevedore he

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91 See e.g. *Artemis Maritime Co.* v. *South Western Sugar Co.*, 1951 AMC 1833 (4. Cir), where neither "diligence in the acquisition of seaworthiness certificates" nor inspection of hull and machinery were considered conclusive proof of the satisfaction of the duty under art. 3(1).

92 The duty to exercise due diligence with respect to seaworthiness is explicitly extended to the servants of the carrier in the *Norwegian Maritime Code* § 118(3).

93 *Riverstone Meat Co.* v. *Lancashire Shipping (The Muncaster Castle)*, [1961] 1 Lloyd's Rep. 57, [1961] A.C. 807 (H.L.); *Artemis Maritime Co.* v. *South Western Sugar Co.*, 1951 AMC 1833 (4. Cir); *The Sargent*, 1940 AMC 670 (E.D. Mich.). The seaworthiness duty has been referred to as "non-delegable", a term which can be rather confusing. What is really meant is that the delegate must also exercise due diligence.

has diligently selected to stow the goods does not exercise due diligence in stowing and thus causes the ship to be unstable.

3. Before and at the beginning of the voyage

In the Hague and Hague/Visby Rules, the carrier's seaworthiness duty applies only "before and at the beginning of the voyage".[94] This has been held to be a continuing obligation from the beginning of loading and until the vessel has departed on her voyage.[95] During this period, the carrier must exercise due diligence in stowing both in order to ensure cargoworthiness and the safety of the ship itself. However, unloading parts of the cargo in intermediate ports or shifting of the cargo during the voyage may make it necessary to re-stow the goods.[96] Re-stowing operations will not be covered by art. 3(1) because due diligence is required only at the at the port of loading.[97] For damage caused by re-stowage, the carrier can only be held liable under art. 3(2) and may thus invoke the exception clauses in art. 4(2).

Scandinavian courts would probably impose the due diligence standard on stevedores, although the issue has not been conclusively decided. However, it is unlikely that they would go as far as *The Muncaster Castle* where the carrier was held liable for the lack of due diligence of a shipyard worker during previous repairs, see T. Falkanger, H.J. Bull & L. Brautaset, *Introduction to Norwegian Maritime Law*, (Oslo: Sjørettsfondet, 1987) at 227.

94 See art. 3(1).

95 *Maxine Footwear Co.* v. *Canadian Government Merchant Marine Ltd.*, [1959] A.C. 589, [1959] 2 Lloyd's Rep. 105 at 113 (P.C.).

96 See e.g. *Bruce, Mariott* v. *Houlder Line*, [1917] 1 K.B. 72.

97 *The Makedonia*, [1962] 2 All E. Rep. 614 at 616, the court decided that the common law doctrine of dividing a voyage into several stages was not applicable to the Hague Rules.

E. Stowage and the Safety of the Ship - Art. 3(1)(a)

The carrier must not stow so poorly as to destabilize or otherwise endanger the ship. This type of improper stowage can have disastrous consequences for the ship and may even cause the ship to wreck.

In less severe cases, poor stowage may cause cargo to fall on other goods stowed inside the hold or incompatible cargo may be stowed together and thereby be destroyed. If poor stowage only affects only the safety of the cargo, not the safety of the ship, it is 'uncargoworthiness' or improper stowage under art. 3(2). Only poor stowage which might endanger the ship which will be dealt with under this heading.

1. How stowage may affect the safety of the ship

While there are numerous ways in which poor stowage may endanger the vessel, all have the same legal consequence: they render the ship unseaworthy.[98] It is useful to distinguish between different ways unseaworthiness may result from stowage in order to better understand the factors which merit consideration.

There are primarily three ways poor stowage can endanger the ship.[99]

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98 See e.g. *The Friso*, [1980] Lloyd's Rep. 469 at 474 (Adm. Ct.), where the court held the carrier liable because:

> "On the one hand, if *Friso* had adequate stability when she sailed, then the heavy list could only have been produced by a very large shift of cargo, and such a shift of cargo could only have occurred if the cargo was so inadequately lashed as to endanger the ship. On the other hand, if the list was produced by a small shift of cargo, then *Friso* must have had inadequate stability. There is no escape from this dilemma. Whichever is the correct solution, *Friso* was not seaworthy on sailing."

99 Other types of perils to the ship may be caused by stowage (e.g. deck cargo may be stowed so high as to limit visibility from the bridge) but these are rather uncommon.

1) The stow may be unevenly distributed throughout the ship so that the vessel is unstable or has reduced structural strength upon departure.[100] The ship may develop a list which affects its ability to meet the ordinary perils of the sea. In extreme cases, the unevenly distributed cargo may put such a strain on the hull that it simply breaks under the pressure.[101]

2) Poorly secured cargo may shift due to the motion of the sea and a list may develop during the voyage. Like an initial list due to unevenly distributed cargo, it reduces the ship's ability to sail safely through rough seas and may cause her to take in water. Even if not serious at first, the list may later cause more cargo to shift so that the list gradually becomes more and more severe until the vessel eventually tips over and sinks.[102] Moreover, cargo which is poorly secured may break loose and directly damage the hull.[103]

3) The cargo may be of a dangerous type so that when stowed improperly, it may explode, start a fire or eat its way through the hull. Cargoes may endanger the ship even if they are not generally considered 'dangerous'. A radical change of consistency, (e.g. a solid cargo that turns liquid) may be dangerous to the ship by challenging her stability.

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[100] Closely related to this kind of danger is over*loading* of the ship.

[101] *Ocean Eagle Lim. Procs.*, 1974 AMC 1629 (E.P.R). The combination of overloading and uneven distribution of the cargo was held to be the cause of the vessel breaking in two.

[102] Such were facts as considered in *The Standale* (1938), 61 Ll. L. Rep. 223 (Adm. Ct.).

[103] See e.g. *Kopitoff* v. *Wilson* (1876), 1 Q.B.D. 377.

2. Objective requirements to safe stowage

Since seaworthiness can be described as "the fitness of a vessel at a particular time for a particular job",[104] a general standard for stowage with respect to the safety of the ship cannot be set out. Each case will necessarily turn on its facts.

However, it can be said generally that the best possible method of stowage need not have been used. A "proper method for this ship upon this voyage" will suffice.[105] In ascertaining the proper method of stowage, one must consider the special circumstances of each case, such as: the characteristics of the ship and its holds, the type of cargo, the length of the voyage and the expected weather and sea conditions.[106]

Moreover, it will be important to consider wether the chosen mode of stowage complies with any existing norms on stowage. Such rules can sometimes be found in conventions,[107] statutes,[108] regulations, or customary practices for stowing the particular type of cargo.[109] The numerous recommendations and guidelines adopted by the International Maritime Organization (IMO) are of particular practical importance in this respect. Recommendations from private experts on

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[104] R.E. Thomas, *Stowage: The Properties and Stowage of Cargoes*, 3d ed. (Glasgow: 1942) at 25. See also *supra* note 60.

[105] *The Standale* (1938), 61 Ll. L. Rep. 223 at 229 (Adm. Ct.).

[106] "Expected weather and sea conditions" refers to both actual weather forecasts and the weather the vessel may be expected to encounter considering the season and the waters to be traversed. See e.g. *International Packers* v. *Ocean S.S. Co.*, [1955] 2 Lloyd's Rep. 218 at 231; *The Silvia* (1891), 171 U.S. 462 at 464.

[107] E.g. SOLAS 1974, *supra* note 14, Ch. VI contains detailed regulations for the loading and stowing of grain.

[108] See e.g. *Sjødygtighedsloven* [the Norwegian Seaworthiness Act], 9 June 1903 no. 7, as amended of 16 June 1989 no. 59 §§ 69-79 where the stowage of dangerous goods is regulated.

[109] *The Ocean Liberty* (1952), [1953] 1 Lloyd's Rep. 38 at 40 (4. Cir.).

stowage, such as stevedores[110] or the Board of Underwriters,[111] can also be considered when deciding whether the chosen method of stowage was safe.

Compliance with general norms will not always be sufficient to ensure the seaworthiness of the vessel.[112] Special circumstances may require greater precautions than those found in general norms.[113] By the same token, the failure to follow general norms on stowage does not automatically render the ship unseaworthy under the Hague or Hague/Visby Rules. An individual determination remains to be made based on the facts of each case.[114] It should also be noted that the applicable standard of care for seaworthiness may change over time with new technology or new knowledge of dangerous qualities of goods.[115] Thus, a

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110 See e.g. *Bergen byrett*, 1972 NDS 413.

111 *The Standale* (1938), 61 Ll. L. Rep. 223 at 230 (Adm. Ct.).

112 In *Skibs A/S Jolund* (1957), 1958 AMC 277 (2. Cir.), compliance with 30 years of trade practice on stowage did not prevent the particular stowage from being found to constitute unseaworthiness. See also *Asbestos Corp.* v. *Cie de Navigacion*, 1973 AMC 1683 at 1686 (2. Cir.).

113 *The Standale* (1938), 61 Ll. L. Rep. 223 at 229 (Adm. Ct.), Langton J.:

> "Was the vessel properly stowed? Which does not only mean, was she stowed as other vessels have been stowed before, but was she properly stowed having regard to the danger she might be expected to encounter on the voyage which she was about to attempt and having regard to the fact that she was a vessel of age and a vessel with no great reserve of engine power?"

114 In *Asbestos Corp.* v. *Cyprien Fabre*, 1973 AMC 1683 at 1685 (2. Cir.) the court held that the ship was unseaworthy under *U.S. COGSA* with respect to her fire fighting equipment, even though the requirements for such equipment under the Safety of Life at Sea Convention (SOLAS), 1948 had been met. Unlike SOLAS which sets out general standards of safety, *U.S. COGSA* required "an independent determination, based on amongst other things expert testimony and accepted safety practices".

See also *The Friso*, [1980] Lloyd's Rep. 469 (Adm. Ct.) at 474 where the court, in considering whether the ship was seaworthy, stated:

> "There is no absolute standard by which her stability characteristics can be judged. The recommendations of the I.M.C.O. [IMO] are a useful guide".

115 See R. Colinvaux, ed., *Carver's Carriage of Goods by Sea*, vol. 2, 13th ed. (London, Eng.: Stevens & Sons, 1982) at 116, para. 148.

carrier may find himself with an unseaworthy vessel even if the chosen method of stowage formerly considered safe.

a. Distribution of cargo

Several "rules of thumb" exist for ensuring the initial stability of the ship, subject to modification to account for special circumstances.[116] One of the most traditional "rules" is that heavy goods should be stowed on the bottom, while light goods on top. Although this rule is by no means absolute, its essence is that a vessel will be unseaworthy if it is stowed so top heavy that it is unstable.[117]

An important factor to consider in this respect is the weight ratio between the cargo in the holds and cargo stowed on deck. In a Canadian case, expert witnesses declared that safe stability would be ensured if one third of the cargo weight is stowed on deck while two thirds is stowed in the holds.[118] However, this weight ratio cannot be adopted as a standard for all ships. What constitutes a safe weight ratio will depend on the type of ship in question and on the particular voyage contemplated.

A modern way of measuring stability is the calculation of a ship's metacentric height (GM). The GM designates the difference between the ship's centre of gravity (G) and her metacentre (M), i.e. M - G. In general, a ship will be slow in

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116 R.E. Thomas, *Stowage; The properties and Stowage of Cargoes*, 3d ed. (Glasgow: 1942) at 4.

117 *Canada Steamship Lines Ltd.* v. *Desgagné*, [1967] Ex.C.R. 234. In this case a number of steel plates were lost when the ship listed to starboard during the voyage. The court held that the vessel had been unseaworthy at the beginning of the voyage because it was stowed so top heavy that the ship was unstable. Although the court found that the Canadian version of the Hague Rules did not apply to the case at bar because no bill of lading had been issued, it explicitly stated that the result would have been the same under the Rules.

118 *Ibid.* In this case, 239 tons were stowed on deck while 196 tons were stowed under deck, thereby making the ship clearly too unstable.

returning to her upright position when the GM is small or zero. On the other hand, if the GM is too large, the ship will be "stiff" and roll from side to side very quickly. A ship's GM in relation to the weather and sea conditions she was expected to encounter may thus be a useful factor to consider when determining whether or not she was seaworthy.[119]

A vessel may also be considered unseaworthy if the cargo weight is distributed unevenly on port and starboard side. However, not just any list created by such uneven distribution will amount to unseaworthiness.[120] The list must actually make the ship less fit for the contemplated voyage.

Finally, a ship's seaworthiness can be affected by the manner in which the cargo is distributed along the length of the ship. Too much cargo aft or forward can obviously make a ship unfit for her voyage, but even a technically balanced distribution of the goods may not always ensure seaworthiness. It is well known to mariners that a ship's structural strength may be compromised by excessive sagging or hogging. "Sagging" occurs when too much weight is stowed in the middle and too little on each end, while "hogging" exists when too much weight is distributed at each end and too little in the middle.[121] The increased stress to which a ship is thereby exposed may weaken its structural strength to such an extent that it breaks in two.[122]

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[119] See *Great China Metal Industries Co.* v. *Malaysian International Shipping Corp.* (1993), [1994] 1 Lloyd's Rep. 455 at 463 (S.C.N.S.W.), where the Australian court found the ship's GM to be acceptable in relation to "proper standards of seamanship and the safety of the ship and her cargo for her contemplated voyage". See also *United States* v. *Ultramar*, 1988 AMC 527 (S.D.N.Y.) where the vessel was considered unseaworthy *inter alia* because the metacentric height was too low.

[120] In *Bernhard Blumenfeld K.G.* v. *Sheaf Steam Shipping Co.* (1938), 62 Ll. L. Rep. 175 at 183, it was held that a list of 3.6 degrees created by uneven distribution of cargo was not enough to make the ship unseaworthy.

[121] *Ocean Eagle Lim. Procs.*, 1974 AMC 1629 at 1652 n.7 (D.P.R.).

[122] *Ibid.* at 1652-1653.

b. Inadequately secured cargo

It is vital to adequately secure the cargo in order to avoid its shifting during the rolling movements of the ship at sea. Leaving port with improperly secured cargo might be even more dangerous to the ship than an initial list. The cargo may suddenly shift and thereby cause the ship to quickly capsize before any measures can be taken to counter the danger.

The adequate securement of the cargo may require a sufficient amount of and properly applied dunnage,[123] the use of shifting boards[124] and bulwarks, lashing the cargo,[125] applying pressure pieces and bridge fittings on containers,[126] avoiding open spaces between the cargo and numerous other precautions.[127] To determine what is adequate in each case, one must consider whether:

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123 See *Høyesteretts kjæremålsutvalg*, 1992 Rt 1157, where stowing cargo six pallets high without dunnage between the pallets and the sides of the hold was held to have made the cargo so unstable so as to render the ship unseaworthy.

See also *The Standale* (1938), 61 Ll. L. Rep. 223 (Adm. Ct.) where the court held that the failure to follow any of the recommended precautions as to how a cargo of wheat was to be secured was improper stowage. The recommended precautions in this case were the application of dunnage in a particular manner or the use of shifting boards or feeders. Due to the improper stowage, the cargo started shifting and created a list which eventually caused the ship to sink.

124 In *United States* v. *Ultramar*, 1988 AMC 527 (S.D.N.Y.), the court held that a lighter with a 7,000 ton grain cargo was unseaworthy under the *Harter Act*, *inter alia* because no shifting boards had been used.

125 See e.g. *The Friso*, [1980] Lloyd's Rep. 469 at 474 (Adm. Ct.).

126 See e.g. *The Waltraud*, [1991] 1 Lloyd's Rep. 389 at 390 (Adm Ct.).

127 See e.g. *Blackwood Hodge* v. *Ellerman Lines*, [1963] 1 Lloyd's Rep. 454 (Comm. Ct.). In this case however, the court did not consider the bad stowage to amount to unseaworthiness.

1) the cargo to be transported would represent any particular danger to the ship if it broke loose,[128]
2) special characteristics of the ship,[129] its decks and holds,[130] which require particularly stringent precautions in securing the cargo,
3) the cargo is adequately secured with regard to the expected weather and sea conditions on the contemplated voyage,[131]
4) any general norms on securing the cargo can be found in statutes, regulations, common practices or specially approved stowage plans.[132]

Courts have held that the ship may be seaworthy even if it leaves port *without* first properly securing the cargo,[133] as long as the cargo may be properly secured on

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128 In *Kopitoff* v. *Wilson* (1876), 1 Q.B.D. 377, a number of armour plates stowed inside the ship broke loose during bad weather and went through the side of the ship. The ship sank as a result.

129 See *The Standale*, *supra* note 127 at 225 were the court stated:
"[I]t is obvious that where you have so little reserve in the matter of steam power and engine power it becomes particularly imperative to pay the greatest attention to the question of stowage and to observe every one of the precautions that have been found wise and have been laid down for the guidance of mariners."

130 *Ibid.* at 228.

131 See e.g. *The Friso*, [1980] Lloyd's Rep. 469 at 472 (Adm. Ct.); *Sø- og Handelsretten*, 1957 UfR 807.

132 *The Waltraud*, [1991] 1 Lloyd's Rep. 389 at 390 (Adm.Ct.). The ship had not followed the stowage plan which was authorized by Germanischer Lloyd because it did not have the proper equipment to secure the cargo aboard. During the voyage, the containers under deck started to shift and gave the ship a serious list to starboard. The situation was aggravated when the master decided to fill ballast tanks on port, causing a new shift of the cargo towards port. The weight from the filled ballast tanks plus the cargo, now on port side, resulted in the capsize of the ship.

133 See *International Packers* v. *Ocean S.S. Co.*, [1955] 2 Lloyd's Rep. 218 at 230-231, where the question was whether a failure to secure the hatches with lashes or locking bars before leaving port amounted to unseaworthiness. The court answered in the negative, since 'good seamanship' only required that the hatches be properly secured if there was a real indication of anticipated heavy weather. Although this case assessed seaworthiness under the concept of 'cargoworthiness' the same must presumably apply to seaworthiness with regard to the safety of the ship.
To the same effect, see:
- *NH Ama*, 1929 NDS 401.
- *NH Sunny*, 1975 NDS 85 at 92, where the Norwegian court went even further by broadly stating that a "defect" at the beginning of the voyage need not be fatal with respect to seaworthiness "[If] it could reasonably be considered likely that the defect

short notice while at sea. The degree to which the unsecured cargo represents a danger to the ship must be considered when deciding whether such "initially" unsecured cargo makes the ship unseaworthy. The master's reliance on immediate weather forecasts may be used to asses the prudence of his decision to embark without first securing the cargo.[134] If a forecast of calm seas gives him reason to believe that the safety of the ship would not be compromised by leaving with unsecured cargo, the ship will not be considered unseaworthy at the beginning of the voyage, even if rough whether which is customary at that geographical area and at that time of year is actually encountered.

c. Dangerous cargo

The carrier is legally considered to have accepted the obligation to carry the cargo safely even when the cargo in question is potentially dangerous to the ship.[135] Thus, extra precautions which are required by the dangerous quality of the goods must be taken. Special precautions are not limited to particular stowage requirements to ensure the ship's seaworthiness but can extend to requirements regarding the vessel's equipment and construction as well.

It is important to note that it is the dangerous quality of the cargo in respect to the safety of the ship which is conclusive as to seaworthiness under art. 3(1)(a). Stowing goods in such a manner that a danger is created only to the environment outside the ship does not render the ship unseaworthy. For example, if drums of

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in question would be remedied or neutralized under the voyage by the tools available on the ship". [Translation]

134 *International Packers* v. *Ocean S.S. Co.*, *ibid.* at 231.

135 *Veerbeeck* v. *Black Diamond Steamship (the Black Gull)*, 1960 AMC 163 at 166 (2. Cir.).

highly toxic material are stowed on deck without being adequately secured, they might be washed overboard during the voyage. The stowage might in this way represent a danger to the environment and persons outside the ship, but will not be dangerous to the ship itself. Conversely, goods may be dangerous to the safety of the ship, even if they are innocuous to the outer environment *per se*.[136]

Even though public law regulations for the handling of dangerous goods will not automatically or conclusively create a private law standard of diligent stowage to be observed under contract, they may nevertheless be of great practical importance in this respect. Courts have often considered violations of public law regulations as evidence of the carrier's failure to exercise due diligence in making the ship seaworthy.[137]

Cargo might be dangerous in various ways. Certain substances, such as explosives or acids are inherently dangerous. Other cargoes are only dangerous when they come into contact with catalytic agents. There is no sharp distinction between these two groups of "dangerous" substances. If the catalytic agent is so common in the immediate surroundings that a risk of exposure is ever-present, the substance

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136 E.g. in *Sucrest Corp.* v. *M/V Jennifer*, 455 F. Supp. 371, 1978 AMC 2520 (N.D.Me.), a cargo of raw sugar, a normally stable and passive cargo, became semi-liquified during the voyage. The sugar had been previously damaged by salt water and the vibration from the ship caused it to change quality. The sugar started to shift, resulting in a list which endangered the safety of the ship.

137 See e.g. *Waterman Steamship Co.* v. *Virginia Chemicals Inc.* (1987), 1988 AMC 2681 at 2689 (S.D. Ala.) which involved a cargo of sodium hydrosulfite, a substance which would catch fire if it came into contact with water. The carrier was found to have violated a series of public regulations in connection with the storage, handling and stowing of the hazardous cargo. The court held that the failure to comply with the regulations was improper handling and stowage which amounted to unseaworthiness.

is better described as inherently dangerous.[138] Furthermore, inherently dangerous cargo is often also sensitive to contact with certain catalytic agents.[139]

It is obvious that inherently dangerous cargoes will always represent a certain safety risk to the ship. Hence, a complete elimination of the risk cannot be required in order to deem the ship seaworthy. The concern is that the goods be stowed in a manner which would adequately reduce the risk of the danger materializing. To decide what is adequate, each type of substance must be considered separately, taking into account the amount of the substance carried, how the danger may occur and the consequences of the danger materializing.

Due to the large variety of dangerous goods, it is impossible to prescribe any general stowage precautions applying to all cargoes. A few examples may be states here:

- explosives or inflammable cargo, or cargo which may give off flammable vapours must be protected from heat sources or friction,

- particularly unstable and dangerous substances must be stowed in such a way that they can easily be disposed of or neutralized if a dangerous situation arises,[140]

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[138] E.g. a chemical called "sodium hydrosulfite" may catch fire if it is exposed to water or moisture.

[139] See e.g. *Ionmar Compania Naviera S.A.* v. *Central of Georgia Railroad Co.*, 1979 AMC 1747 (S.D.Ga) which concerned a chemical mixture called HTH, considered to be likely to catch fire if exposed to heat or different types of organic material ranging from oil to saw dust.

[140] Thus, white and yellow phosphorus as well as calcium phosphide should be stowed on deck, see R.E. Thomas, *Stowage: The properties and Stowage of Cargoes*, 3d ed. (Glasgow: 1942) at 149.

- some substances, which have a tendency to self heat must be stowed to allow a free circulation of air,[141]

- substances which might react with air or water must be packed in water and/or air tight packages of sufficient strength to withstand ordinary rough usage and should be carried under deck[142]

With respect to cargoes which becomes dangerous when they react with other substances, it is necessary to take special precaution only when catalytic agents are carried on board or may otherwise come into contact with the cargo. The main concern will then be to ensure that the substances are properly segregated from any catalytic agents, for instance by stowing substances that may react with each other in different compartments. It may also be necessary to thoroughly wash the holds of the ship before loading a new cargo which can react with any residues.[143]

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[141] See *The Ocean Liberty* (1952), [1953] 1 Lloyd's Rep. 38 at 41 (4. Cir.), where inadequate ventilation of large amounts of Fgan (ammonium nitrate) was assumed to be the cause of the cargo's spontaneous ignition. However, the carrier was not held liable as the dangerous quality of Fgan was not known at the time. The court did not discuss whether the ship was unseaworthy because of the way the cargo was stowed, but simply held that the carrier (and stevedores) was not "negligent" and that he could, in any even, exonerate himself under *U.S. COGSA* s. 4(2)(b). It is submitted that a better *ratio* would have been to consider the ship unseaworthy, as was actually was held by the District Judge, but to relieve the carrier from liability because he had exercised due diligence.

[142] See *The Mahia* (1954), [1955] 1 Lloyd's Rep. 264 at 267 (Sup. Ct. of Montreal), where the court restated regulations on dangerous goods published in the Canada Gazette, 8 September 1945.

[143] See *Mediterranean Freight Services Ltd.* v. *BP Oil Intl. Ltd. (The Fiona)*, [1993] 1 Lloyd's Rep. 257 (Comm. Ct.), where a failure to remove residues of condensate before loading fuel oil was found to have been the main cause of an explosion during discharge. The court held that the vessel had therefore been unseaworthy at the beginning of the voyage.

3. The subjective element - due diligence

Even if poor stowage amounts to unseaworthiness, the carrier can escape liability if he proves that he exercised due diligence in his efforts to make the ship seaworthy.[144] A element of blameworthiness is thus required in addition to a factual condition of unseaworthiness causally linked to the loss.

a. The carrier'sknowledge of safe method of stowage

The carrier's diligence cannot be judged retrospectively.[145] The proper test is wether the carrier stowed diligently in the light of all information which was reasonably available to him *at the time of stowage*.[146] Thus, the carrier need not exhausts all sources in his attemp. to acquire information. He will be deemed to have fulfilled his duty if he relies on the unanimous opinion of competent authorities regarding the appropriate stowing and handling of the goods.[147] The content of the duty to exercise due diligence is more uncertain if authorities disagree on the proper method of stowage. Presumably, the carrier will be

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144 Hague and Hague/Visby Rules arts. 3(1) and 4(1).

145 As Lord Reid put it in *Union of India* v. *N.V. Reederij Amsterdam*, [1963] 2 Lloyd's Rep. 223 at 230:
> "In a great many accidents, it is clear after the event that if the defendant had taken certain extra precautions the accident would or might have been avoided. The question always is whether a reasonable man in the shoes of the defendant, with the skill and knowledge which the defendant had or ought to have had, would have taken those extra precautions."

146 *The Ocean Liberty* (1952), 1952 AMC 1681, [1953] 1 Lloyd's Rep. 38 at 42 (4. Cir.). A complete loss of cargo and ship occurred when the cargo of Fgan, an ammonium nitrate fertilizer, exploded. Even though a similar load of cargo had blown up two months before, and academic studies were being made, the dangerous quality of Fgan was not considered generally known to the commercial world. The carrier could therefore not be blamed for being ignorant of Fgan's dangerous qualities when he stowed the cargo in compliance with the advice of the Fire Department, the Board of Underwriters and the Coast Guard.

147 *Ibid.*

expected to adopt the more stringent of two recommended methods if it is prescribed by a particularly authoritative source.

On the other hand, the carrier cannot merely remain at the receiving end of the information flow - he must take positive action to keep himself informed. Particular attention must be paid to seeking out information with respect to dangerous goods that are to be taken on board.[148] A carrier who suspects that he is about to load dangerous cargo must ask the shipper for special precautions required by the goods. On the other hand, if the *shipper* fails to inform the carrier of the dangerous qualities of his goods, he may be held liable for any damage which they cause and will be barred from recovering any damages sustained by him.[149]

b. Performance of safe stowage

A carrier must both be aware of what is required to provide a safe method of stowage and exercise diligence to achieve the appropriate method. It is no excuse that the carrier lacked the equipment or tools necessary to comply if he could have reasonably been expected to possess such equipment.[150]

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[148] *Ibid.* at 44.
See also *The Mahia* (1954), [1955] 1 Lloyd's Rep. 264 at 267 (Sup. Ct. of Montreal) where the court stated that the master "reasonably ought to have known" the dangerous quality of the goods. The court did not, however, discuss unseaworthiness but only found the carrier liable for improper stowage under the Canadian version of the Hague Rules art. 3(2).

[149] Hague and Hague/Visby Rules arts. 4(6), 4(2)(i) and 4(3). See also *infra* at 98 ff.

[150] See thus *International Produce Inc.* v. *Frances Salman*, 1975 AMC 1521 at 1537 (S.D.N.Y.), where sweeping was the only method available but was insufficient to remove incompatible residues from the hold before loading new cargo.

F. Stowage and Cargoworthiness - Art. 3(1)(c)

The carrier's seaworthiness duty also includes an obligation to make the ship fit for cargo service, or more specifically, "too see that the ship is fit to carry the specified cargo on the specified voyage".[151] The requirements for cargoworthiness are set out in art. 3(1)(c) of the Rules, which provides that the carrier must exercise due diligence to:

> "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."

An issue which arises is whether stowage that affects only the safety of cargo but not the safety of the ship may amount to 'uncargoworthiness'.

Before the adoption of the Hague Rules, bills of lading frequently exempted the carrier from liability for bad stowage but not for unseaworthiness. This necessitated the drawing of a distinction between the two. The Hague and Hague/Visby Rules now hold the carrier liable for both bad stowage and lack of due diligence to make the ship seaworthy. However, because the carrier may avail himself of the exceptions in art. 4(2) when he is liable for improper stowage but not when he has breached his seaworthiness duty, the distinction continues to be significant today.[152]

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[151] See *The Good Friend*, [1984] 2 Lloyd's Rep. 586 at 592.

[152] See *supra* at 23.

1. Can bad stowage amount to 'uncargoworthiness'?

a. Two interpretations of art. 3(1)(c)

A plain reading of art. 3(1)(c) does not settle the issue because the provision refers only generally to the duty to make the ship and its parts "fit and safe" for the carriage of goods. It is unclear whether stowage operations fall under this "cargoworthiness" duty. Art. 3(1)(c) can be interpreted in at least two ways:

1. Narrow interpretation

   Since it is only *the ship and its parts* which must be "fit and safe" for the carriage of cargo, the cargo's placement in relation to each other and lashing etc. do not fall within the ambit of "cargoworthiness" as set out in art. 3(1)(c). Only stowage operations which might endanger the safety of the ship or affect her seagoing capabilities will amount to unseaworthiness under the plain meaning of 'seaworthiness' in art. 3(1)(a).

2. Broad interpretation

   Stowage operations are included in the cargoworthiness duty because "fit and safe" refers to the *total* condition of the ship and its parts. Cargo distribution, placement and other stowage operations are inseparably linked to the vessel's condition and must therefore be understood as falling within the requirements of art. 3(1)(c).

The problem can be illustrated by the following example: A noxious or odiferous substance is stowed in one compartment. Foodstuffs are later added to the compartment and become tainted. How can the cause of the damage be properly characterized ? Was it caused by the compartment itself being uncargoworthy ("unfit") or by the improper *stowage* of the foodstuffs in a hold that could legally be viewed as cargoworthy *per se* ?

b. The pre-Hague Rules position

Even before the Hague-Rules, the common law understood "unseaworthiness" as representing two separate concepts: 1) the safety and seagoing capability of the ship and 2) the fitness of the vessel to carry the contract cargo.[153] Although the second branch actually deals with uncargoworthiness, the term "seaworthiness" was used for both limbs without distinction.

The common law easily recognized that bad stowage which endangered the safety of the ship rendered the vessel unseaworthy. For some reason, the same logic was not applied to cargoworthiness. Uncargoworthiness was isolated only to instances where the fitness of the ship, equipment and holds *themselves* compromised the ship's ability to receive the goods. When bad stowage alone endangered the safety of the cargo, (eg. heavy cargo was stowed atop fragile cargo) this was deemed to constitute merely improper stowage and not "unseaworthiness" (ie. uncargoworthiness). This approach is roughly equivalent to the narrow interpretation of art. 3(1)(c) set out above.

The common law position was expressed by Lord Sumner in *Elder, Dempster* v. *Paterson, Zochonis*:[154]

> "Bad stowage, which endangers the safety of the ship, may amount to unseaworthiness, of course, but bad stowage, which affects nothing but the cargo damaged by it, is bad stowage and nothing more, and still leaves the ship seaworthy for the

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153 See *The Good Friend*, [1984] 2 Lloyd's Rep. 586 at 592 (Comm. Ct.).

154 [1924] A.C. 522, All E.R. 135 (H.L.). In this pre-Hague Rules case heavy bags of palm kernels was stowed on top of casks and butts of palm oil which were crushed under the weight. The court held that this method of stowage was merely bad stowage and did not amount to unseaworthiness. The carrier had exempted himself from liability for bad stowage in the contract of carriage and could thus escape responsibility. Such an exemption clause would not have been upheld under the Hague Rules arts. 3(2) and 3(8).

> adventure, even though the adventure be the carrying of that cargo". [155]

Viscount Cave more specifically stated:

> "There is no rule that, if two parcels of cargo are so stowed that one can injure the other during the course of the voyage, the ship is unseaworthy".[156]

In its decision, the court relied on *The Thorsa*[157] where chocolate which was stowed along with gorgonzola cheese became tainted. The court analyzed this as a matter of improper *stowage* rather than of fitness to carry the cargo and therefore did not find the vessel uncargoworthy. Furthermore, the vessel was not unseaworthy because the stowage did not endanger the ship itself.

In *Werner* v. *Bergensk Dampskibsselskab*[158] a cargo of eggs was damaged when stowed on top of rotting potatoes which had been loaded at a previous port. The plaintiffs argued that since the rotting potatoes were loaded before the eggs, the ship was in a unseaworthy condition *qua* the carriage of eggs. This reasoning hinges the determination of uncargoworthiness based on the sequence in which cargo was loaded and stowed. The court rejected the plaintiff's argument and, relying on *Elder Dempster*, held that the damage was caused merely from bad stowage and that the carrier could therefore exculpate himself under a bill of lading clause.

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155 All E.R. at 153. A similar rule seems to have been applied in U.S. law, see *Knott* v. *Botany Mills* (1900), 179 U.S. 69, 21 S.Ct. 30, 45 L. Ed. 90.

156 *Ibid.*

157 [1916] P. 257, 13 Asp. M.L.C. 592.

158 (1926), 42 T.L.R. 265 (K.B.). Although the British Carriage of Goods by Sea Act of 1924, which incorporated the Hague Rules, had entered into force, it not apply in this case which events took place before the Act had entered into force.

(1) The special case of residues

Even though the courts did not consider stowage of *incompatible cargoes* in the same hold to amount to uncargoworthiness, a different position was taken with respect to *residues* of cargo in the holds. In *Tattersall* v. *National S.S. Co.*[159] a ship was considered uncargoworthy for the transport of cattle because it had not been disinfected after an outbreak of foot and mouth disease. Thus, even if the presence of perilous cargoes in the holds could not make it uncargoworthy with respect to certain goods, the presence of cargo "left overs" could.

The paradox of this view becomes particularly striking when the ratio in *The Thorsa* is applied to the facts in *Tattersall*. If new cattle is loaded onto a ship which contains a *residue* carrying foot and mouth disease, the vessel will be uncargoworthy with respect to the cattle, but if the same cargo is loaded while the *infected cattle* is still on board, the ship will be considered cargoworthy because the problem would be characterized merely as one of poor stowage of one cargo in relation to another![160]

c. Cases under the Hague Rules

The adoption of the Hague Rules did not alter the manner in which residues were treated in relation to cargoworthiness.[161]

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159 (1884), 12 Q.B.D. 297.

160 The Hague and Hague/Visby Rules do not apply mandatorily to live animals, see art. 1(c) read with art. 2. However, the paradox will be the same with respect to other types of goods.

161 See *The Good Friend*, [1984] 2 Lloyd's Rep. 586, Q.B. (Comm. Ct.) involving a cargo of soya bean meal which was refused discharge in Cuba because it was infested with a certain type of insect. The infestation had been caused by the presence of the insect in residues left in the holds before the cargo was loaded. The court held that this rendered the ship uncargoworthy.

The effect of the Rules on the ratio in *Elder Dempster* is less clear. Cases decided after the adoption of the Hague Rules have neither expressly accepted nor disposed of the common law rule.

In *Grace Plastics Ltd. v. The Bernd Wesch II*,[162] the court seemed prepared to accept bad stowage as a cause of 'uncargoworthiness'. Two reactors stowed on deck broke loose during a storm, pierced a hatch covering and caused damage to goods stowed under deck by exposing them to seawater. The court found that the reactors were not properly secured in light of the reasonably foreseeable dangers of crossing the Atlantic Ocean and that the ship was therefore "unseaworthy" under art. 3(1)(c) of the Hague Rules. The carrier's contention that the damage was caused by a peril of the sea[163] was dismissed and he was held liable for having failed to exercise due diligence in making the ship "fit and safe" for the preservation of the goods.[164] It follows that the court considered the inadequately secured cargo to amount to 'uncargoworthiness' even if it did not endanger the safety of the ship.[165]

Another noteworthy case is *Actis Co.* v. *The Sanko Steamship Co. (The Aquacharm)*.[166] Here, overloading and improper distribution of the coal caused the ship to be "down by the head". She was therefore delayed (but suffered no

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162 [1971] F.C. 273.

163 Hague and Hague/Visby Rules art. 4(2)(c).

164 The loss and damage to the reactors themselves was not covered by the Rules because the bill of lading stated that they would be carried on deck; Hague and Hague/Visby Rules art. 1(c).

165 See also *Blanchard Lumber Co.* v. *S.S. Anthony II* (1966), 1967 AMC 103, [1966] 2 Lloyd's Rep. 437 (S.D.N.Y.), where improper stowage of fork-lift trucks on top of lumber carried on deck was considered to render the ship unseaworthy under the *Harter Act* even though the improper stowage only affected the safety of cargo, not the ship.

166 (1981), [1982] 1 Lloyd's Rep. 7 (C.A.). The Hague Rules did not apply mandatorily in this case but were incorporated by a clause in the charterparty.

cargo damage) when she had to reload before entering the shallow Panama Canal. The court held that the delay was caused merely by poor stowage and that the ship was therefore seaworthy. In so doing, the court referred to *Elder Dempster* but did not rely on its distinction between stowage which endanger the ship and stowage which do not. Instead the court proffered its own characterization of seaworthiness:

> "'Seaworthiness' connotes an inherent quality with which the unit comprising vessel *and cargo* is invested. So long as that unit maintains a constant character, that quality remains inherent in it. External factors cannot influence or affect the innate attribute of seaworthiness." [Emphasis added].[167]

It seems that jurisprudence under the Hague Rules is more flexible with the distinction between bad stowage and seaworthiness than was the common law. However, it is noteworthy that cargo claimants rarely raise the argument of unseaworthiness in cases involving the proximate stowage of incompatible cargoes. Judgements finding unseaworthiness because of improper stowage are even more rare.[168]

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[167] *Ibid.* at 12 as *per* Lord Justice Shaw.

[168] But see *International Produce Inc.* v. *Frances Salman*, 1975 AMC 1521 at 1535-1536 and at 1541 (S.D.N.Y.) where the court seemed to consider the placement of caustic soda and coffee in the same compartment as improper stowage which rendered the ship unseaworthy. It should be added that the judgement is unclear as the court generally refers to several circumstances of "poor stowage" which together amounts to unseaworthiness. One of these circumstances was the fact that the compartment was susceptible to leakage, (i.e. a clear example of 'uncargoworthiness' because a defect in a part of the ship itself is involved). The court did not consider whether the improper stowage of caustic soda and coffee in the same compartment alone amounted to 'uncargoworthiness'.

d. Legal theory

The opinions of legal writers have been inconsistent with regard to the question of whether bad stowage which does not endanger the ship can amount to unseaworthiness. Three general points of view may be discerned. One faction leans towards the notion expressed in *Elder Dempster* that an element of danger to the ship itself must exist in order for bad stowage to amount to unseaworthiness.[169] The opposing camp makes generous allowance for stowage being an element of cargoworthiness.[170] A third group straddles the middle line by accepting that, in principle, bad stowage may affect the ship's cargoworthiness, but is better treated under art. 3(2) rather than art. 3(1).[171]

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169 See O.C. Giles, *Chorley and Giles' Shipping Law*, 7th ed. (London, Eng.: Pitman, 1980) at 175-176 which explicitly requires an element of danger to the vessel itself in order to qualify bad stowage as 'uncargoworthiness'. However, Chorley discusses bad stowage in relation to contracts of affreightment in general and not specifically under the Hague and Hague Visby Rules. Note also that in a later edition, N.J.J. Gaskell, C. Debattista & R.J. Swatton, *Chorley and Giles' Shipping Law*, 8th ed. (London, Eng.: Pitman, 1987) at 189-191, the new authors are much more reserved in their support of the ratio in *Elder Dempster*.

170 See e.g. Lloyd's of London Press Ltd., *A Guide to the Hague and Hague/Visby Rules* (London, Eng.: Lloyd's of London Press Ltd., 1985) at 19 which describes the cargoworthiness obligation as including the "cleaning of tanks ...correct placing of cargo battens, dunnaging, kraft paper, separations and other cargo protections ...to protect against damage by other cargoes or any other source of damage to cargo". This notion of cargoworthiness seems to completely encompass stowage.

> See also T. Falkanger, H.J. Bull & L. Brautaset, *Introduction to Norwegian Maritime Law*, (Oslo: Sjørettsfondet, 1987) at 234 who suggest that if strongly odiferous cargo (such as gorgonzola cheese) is loaded in port A and chocolate is subsequently loaded in the same compartment in port B and thus becomes tainted, the ship must be considered unseaworthy with respect to the carriage of chocolate. On the other hand, if the chocolate was loaded in port A while the gorgonzola was loaded in port B, the damage would only be due to improper stowage. This is effectively the same argument as that set out by the plaintiff in *Werner* v. *Bergensk Dampskibsselskab*, see *supra* at 51.

171 W. Tetley, *Marine Cargo Claims*, *supra* note ? at 386-387; E. Flynn & G.A. Raduazzo, *Benedict on Admiralty*, Vol. 2A, 7th ed. (New York City: Matthew Bender & Co., 1993) c. IX at 9-1,9-2.

e. Which rule should prevail ?

It is submitted that the pre-Hague Rules distinction between bad stowage and uncargoworthiness as expressed in *Elder Dempster* no longer applies, for the following reasons:

1) Jurisprudence under the Hague Rules has accepted that cargo operations which are so poorly performed so as to render the ship unseaworthy may be encompassed by the term "stowage" even without any danger to the ship being present.[172]

2) It is arbitrary to find a ship unseaworthy if cargo 'residue' in the holds damages new cargo,[173] while refusing to do so if damaging qualities can be ascribed to actual cargo stowed in the hold.

3) Neither legal theory nor jurisprudence have defined "stowage" with sufficient specificity. The term may include all cargo operations in the preparation for the sea transport, for instance the cleaning of holds, applying dunnage and bulwarks, lashing and securing and other operations directly related to the condition of parts of the ship. An uncertain term cannot be a proper foundation for a test of a vessel's cargoworthiness.

4) The carrier's duty to exercise "due diligence" should include all aspects of preparing the ship for the voyage. Seaworthiness is the fitness of a vessel for the contemplated voyage and the contemplated cargo, both in relation to its seagoing and its storage capabilities. There is no reason why the

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172 See *supra* at 52.

173 See e.g. *Procter & Gamble* v. *Fort Fraser*, 1992 AMC 1575 (E.D.La); *The Good Friend*, [1984] 2 Lloyd's Rep. 586 (Comm. Ct.).

carrier should be able to invoke the exceptions in art. 4(2) in relation to, say, improper placement of cargo but not with respect to the upkeep of refrigeration equipment. His level of control is presumably the same in both cases.

A broad interpretation of art. 3(1) should be adopted. The test ought to be whether an operation renders the ship "fit and safe" for the particular cargo loaded before departure. The term "stowage" should thus not eliminate a specific operation from consideration under art. 3(1)(c). While it is admitted that this interpretation does not fall squarely within the general definition of "seaworthiness", this is of minor importance because it is the specific wording of art. 3(1)(c) which is subject to interpretation. The jurisprudential definition which has been given to seaworthiness outside the Hague Rules cannot be conclusive as to the interpretation of the convention when the plain meaning of the legislation suggests an different construction in the context of stowage.

2. How may stowage affect cargoworthiness

a. Requirements - "fit and safe"

On the basis of the foregoing proposition, a ship will be uncargoworthy if stowage is performed in such a way as to render the ship or its parts unfit or unsafe for the reception, carriage and preservation of the contract cargo. The individual cargo operation, whether labelled stowage or not, must then be assessed on its facts to determine whether the ship was in such a condition that the carrier will be held liable under art. 3(1)(c).

Since the provision focuses on the ship's "**condition**" of fitness and safety to carry the goods, it follows that damage to the individual parcel of cargo being handled

during stowage and loading operations does not amount to a breach under art. 3(1)(c).

But where improper stowage does result in uncargoworthiness, it will be irrelevant whether the *damage materialized* at the time of the stowage or later during the voyage, as long as the ship was uncargoworthy at the beginning of the voyage.[174] It also seems plausible to require that a defect in question have a constant character,[175] (e.g. a defective stow which is liable to collapse under normal weather and sea conditions).

A defect must present a danger of actual *damage* to the goods in order for it to render the vessel 'uncargoworthy'. This view was followed in *The Aquacharm*[176] were it was held that the ship *was* cargoworthy when bad stowage caused only delay, not damage to the ship or her cargo.

The carrier will be held liable for breaching his duty to stow so as to make the vessel cargoworthy only if he failed to exercise due diligence in this respect. Grounds for exculpation may exist where the carrier was unaware of the characteristics of the goods or latent defects in the stow.

b. Incompatible cargoes and the order of loading

Stowage of incompatible cargo in the same compartment will clearly fall within the broad interpretation of art. 3(1)(c). However, because the carrier's duties under

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[174] See *Maxine Footwear Co.* v. *Canadian Government Merchant Marine Ltd.*, [1959] A.C. 589 at 592-593, [1959] 2 Lloyd's Rep. 105 (P.C.).

[175] See Lord Justice Shaw's statement in *The Aquacharm*, *supra* at 53.

[176] See *supra* at 53.

art. 3(1) apply only before and until the voyage has begun, the sequence in which the cargo is loaded will be decisive as to whether or not the carrier was in breach of his duty to make the vessel cargoworthy.

For instance, if cargo A, a consignment of coffee, is loaded in Montreal and cargo B, caustic soda which is mutually incompatible with coffee, is stowed in the same compartment later in New York, the carrier will be responsibie for breach of his duty to exercise due diligence to make the ship seaworthy only in relation to cargo B. As to cargo A, he can be held liable only for improper stowage. It may seem arbitrary that the order in which cargo is loaded is decisive in this case, but this is dictated by the temporal 'two tier' system of liability created by the Rules: A defect before and at the beginning of the voyage will be classified as unseaworthiness whereas one which arises later will be considered lack of care for the cargo. If, for example, the ventilation system breaks down in New York and the carrier fails to exercise due diligence in fixing it before departure, he will have breached his duty under art. 3(1) in relation to cargo B and cannot exonerate himself under art. 4(2). In relation to cargo A, he may still avail nimself of the exceptions.

c. *Insufficient securing of cargo*

It appears settled that inadequate lashing and securing of cargo may render the ship unseaworthy, even if ship itself is not in danger. However, cases which have reached this result seem to suggest that the improper securing of cargo must at least endanger the safety of *other cargo* in order to constitute

unseaworthiness.[177] Therefore, the loss of a single parcel of cargo caused by improper stowage of *that* parcel could not fall under art. 3(1)(c).

The distinction between the risk to the improperly secured cargo itself and to other cargo is inconsistent with the interpretation of art. 3(1)(c) submitted by the author above. The standard of "danger to other cargo" can be criticized for being very difficult to apply. Assume that a stack of cartons collapses because of inadequate stability in the stow and thereby causes damage to cartons in the stack as well as stacks nearby: It will be difficult to decide what is damage to "other cargo" and what is only damage to the improperly stowed goods themselves. It seems illogical to differentiate between the stack that collapsed and the other stacks because not all of the cartons in the collapsed stack would necessarily have been improperly stowed. It may also be that other stacks were instable as well but that, due to pure chance, did not collapse first. The factual problems that this distinction would give rise to can be an argument for doing away with the distinction altogether.

3. Jurisprudential reluctance to consider bad stowage under art. 3(1)(c)

The fact remains that stowage operations are rarely considered to render the ship unseaworthy when the ship's safety has been unaffected. It is noteworthy that courts often avoid discussing whether bad stowage is to be covered by art. 3(1) or

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[177] See *Grace Plastics Ltd.* v. *The Bernd Wesch II*, [1971] F.C. 273. See also *Blanchard Lumber Co.* v. *S.S. Anthony II* (1966), 1967 AMC 103, [1966] 2 Lloyd's Rep. 437 (S.D.N.Y.) where stowage of fork-lift trucks on top of lumber cargo on deck was considered improper stowage which rendered the ship unseaworthy under the *Harter Act*. As a result, both the trucks and the lumber were lost overboard.

3(2) of the Rules by limiting their examination to the question of liability needed to decide the case at hand.[178]

Three general reasons for the courts' reluctance to hold the carrier liable for bad stowage under art. 3(1)(c) can be suggested:

1) The word 'seaworthiness' denotes a strong connection to the seagoing condition of the vessel.

2) There is a judicial tendency to rely on traditional concepts of seaworthiness rather than on an independent interpretation of art. 3(1) and art. 3(1)(c).

3) It will often be unnecessary to decide whether the carrier is held liable under art. 3(1) or art. 3(2) because the result in either case will be the same. Courts will therefore choose to apply art. 3(2) in order to avoid any uncertainty as to the applicability of art. 3(1)(c) to stowage.

The last reason merits further explanation. Because the carrier will be liable only for damages caused by the breach of his duty to furnish a seaworthy vessel,[179] the overriding character[180] of the seaworthiness obligation will rarely operate to

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[178] See thus *Canastrand Industries Ltd.* v. *Lara S*, [1993] 2 F.C. 553 (T.D.) where damage was caused by inadequate securing of bales of twine. The court did not discuss whether the carrier was liable under art. 3(1) or 3(2), but simply found that the carrier had not discharged his burden of proof to establish another cause of the damage - in this case insufficiency of packaging.

See also *Sø- og Handelsretten*, 1974 NDS 229 were the Danish court neither considered improper stowage nor unseaworthy stowage but simply found the carrier liable for having failed to stow as was explicitly agreed upon.

[179] See Hague and Hague/Visby Rules art. 4(1).

[180] See *supra* at 23.

depriving him of any defence.[181] If the carrier can establish that the unseaworthy condition did not cause the damage, he can still avail himself of the exception clauses in art. 4(2).[182] Under the various national regimes, the carrier may in any event escape liability to the extent to which he can prove the amount of the loss which arose out of an exonerating cause.[183] Thus, the real "battle" regarding the carrier's liability is fought by proving facts and any causal links.

The narrow interpretation given to exculpatory causes has further lessened the need to distinguishing between bad stowage which makes the vessel unseaworthy and that which does not. For instance, it is clear that art. 4(2)(a) which excuses an error in the management of the ship, does not include negligent stowage.[184] Thus in most cases the carrier will be liable for damages caused by bad stowage even if the court does not consider the stowage to be part of the seaworthiness/cargoworthiness obligation.

However, it is conceivable that the carrier's liability will, in some circumstances, hinge on a determination of whether bad stowage is nothing more than bad stowage or whether it is covered by art. 3(1)(c). It is suggested that a broad interpretation of art. 3(1)(c) is appropriate in such cases.

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[181] However, courts sometimes find it convenient to avoid any further discussion by simply stating that the unseaworthy condition deprives the carrier of his defence. See thus *The Waltraud*, [1991] 1 Lloyd's Rep. 389 at 390 (Adm.Ct.) were a ship capsized due to the unseaworthy securing of containers and the master's negligent actions in attempting to correct a list that occurred when cargo shifted. The court held that the unseaworthiness made it irrelevant whether or not the capsizing had taken place but for the master's negligence.

[182] See e.g. *Damodar Bulk Carriers* v. *People's Ins.*, 1990 AMC 1544 (9. Cir.).

[183] See *supra* note 89.

[184] See *Carling O'Keefe Breweries* v. *CN Marine Inc.* (1989), 104 N.R. 166, 1990 AMC 997 (F.C.A.D.).

G. The Duty to Properly and Carefully Stow the Goods - art. 3(2)

In addition to being responsible for *seaworthy* stowage, the carrier has a duty to stow the goods properly and carefully. If the carrier initially succeeded in rebutting the presumption that the damage occurred in his hands, the cargo claimant will have the burden of proving the carrier's breach of his duty to stow properly.

Art. 3(2) of the Hague and Hague/Visby Rules reads:

> "Subject to the provisions of Article 4, the carrier shall *properly and carefully* load, handle, *stow*, carry, keep, care for, and discharge the goods carried." [Emphasis added].

1. The extent of the carrier's duty

At the beginning of the voyage, the carrier has a duty both to properly and carefully stow the cargo and a duty to stow the ship so as to preserve its sea/cargoworthiness. He cannot therefore be excused from liability for cargo damage by claiming that improper stowage was necessary for the preservation of the safety of the ship. For example, if a ship is heavily loaded and in order to preserve its stability pallets of cargo are stowed in more tiers than is proper, the carrier will nevertheless be held liable for any resulting damage to the pallets.[185] The carrier ought to have distributed the cargo differently or have avoided loading the vessel so heavily that both proper loading and stowing as well

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185 *Sø- og Handelsretten*, 1974 NDS 229 at 236. The carrier was held liable for damage caused by stowage of pallets in too many tiers despite his argument that the method of stowage was necessary to ensure the ship's seaworthiness.

as a seaworthy vessel could be ensured.[186] Stowage may also be performed so poorly so as to constitute both improper stowage and a breach of the duty to make the ship sea/cargoworthy.

Unlike the carrier's duty to stow in a manner that does not compromise the ship's seaworthiness, the duty to properly and carefully stow the goods continues even after the commencement of the voyage. Stowage operations will usually take place in port, after loading but before the beginning of the voyage. However a need to re-stow the cargo before the voyage has been brought to its end may often arise, particularly when the voyage passes by several ports of call where cargo will be loaded and discharged. Such cargo operations will be covered by the responsibilities of the carrier under art. 3(2) even if he no longer has a duty to perform a seaworthy stowage with respect to a particular consignment. The carrier's duties under art. 3(2) cover *all* his acts and omissions between the time of loading and discharge which may affect the contract cargo. There is thus no need to distinguish between the different cargo operations.

2. The carrier does not have to perform the stowage

While a plain reading of art. 3(2) may indicate that the carrier is *obliged* to perform the loading and stowing of the goods, this is not the prevailing interpretation of the provision. The phrase "shall properly and carefully load" has been held to mean that whatever loading the carrier *undertakes* to do he shall do properly and carefully.[187] The parties are therefore free to agree on who shall

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[186] *Ibid.* See also *Elder, Dempster* v. *Paterson, Zochonis*, [1924] A.C. 522.

[187] *Pyrene Co.* v. *Scindia Steam Navigation Co.*, [1954] 2 Q.B. 402, 1 Lloyd's Rep. 321 at 325, Devlin J.

perform the loading. It is clear that the same applies to stowage,[188] and it is not uncommon, particularly in private carriage, for the *shipper* to agreed to "load, stow and discharge the cargo, free of expenses for the carrier".

3. Liability for damage caused by stowage

a. Mandatory liability

Although the parties may agree that the shipper shall perform the stowage, this does not mean that they are free to stipulate who will be *liable for damage* caused to *others* by the stowage. On the contrary, even if the shipper has agreed to stow his goods, the carrier will still be deemed responsible for the stowage in relation to preserving a seaworthy and cargoworthy ship.[189] A contractual stipulation with one consignor cannot relieve a carrier from his responsibility towards other cargo owners.

If the shipper has undertaken to stow his own goods and stows them improperly to the detriment of other cargo on the ship the carrier will still be primarily liable. However, as long as the bad stowage did not amount to unseaworthiness, the carrier may exonerate himself from liability by proving that the damage to the other cargo occurred without his fault or privity.[190]

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188 See thus *Balli Trading Ltd.* v. *Afalona Shipping Co. (the Coral)* (1992), [1993] Lloyd's Rep. 1 at 5 (C.A.).

189 The carrier's duty to exercise due diligence to make the ship seaworthy cannot be contracted out of, see Hague and Hague/Visby Rules arts. 3(1), 4(1) and 3(8). Moreover, in common law, the master always remains responsible for seaworthy stowage, see *Ismail* v. *Polish Ocean Lines*, [1976] Q.B. 893 at 902 (C.A.).

190 Hague and Hague/Visby Rules art. 4(2)(q).

b. Validity of agreements qua shipper

The question nevertheless persists whether the shipper and carrier may validly agree to shift the responsibility for damage caused by bad stowage, at least with respect to the shipped cargo, when the shipper or the shipper's stevedore performs the stowage. The answers given in jurisprudence have been equivocal. [191]

It would be contrary to the intention of the Rules to permit such a transfer of liability because this would limit the rights of a consignee against the carrier. Moreover, it would allow the carrier to lessen his liability contrary to the plain language of art. 3(8). The carrier should therefore not be permitted to contract out of his responsibility for operations that fall within art. 3(2). This proposition is consistent with the recent decision in *Associated Metals* v. *M/V Arktis Sky*[192] where the Second Circuit court stated that:

> "[t]here should be little dispute that the purpose of [U.S.] COGSA is to place primary responsibility for the safety of the cargo upon the vessel, its operators and owners. The parties cannot by private arrangement circumvent the legislative purpose of the Act. 46 U.S.C. App. §1303(8). [The equivalent to the Hague Rules art. 3(8)]. The vessel may exonerate its

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[191] See *Sigri Carbon Corp.* v. *Lykes Bros. S.S.* (1987), 1988 AMC 1787 at 1791 (W.D.Ky.) which held that "[t]he inclusion of a FIOS term in a bill of lading should not be disregarded as inconsistent with [U.S.] COGSA so long as it is understood that the term in no way relieves the carrier of responsibility for its own acts or for the acts of others under its control". This statement would imply that the carrier would not be held liable for damage caused by stowage performed without the supervision of the Master. See also *Balli Trading Ltd.* v. *Afalona Shipping Co. (the Coral)* (1992), [1993] Lloyd's Rep. 1 at 6-7 (C.A.), which seems to allow a shift of liability by narrowing the mandatory period of responsibility under the Rules. This decision has been criticized in N. Gaskell, "Shipowner Liability for Cargo Damage Caused by Stevedores" (1993) 2 Lloyd's Maritime and Commercial L. Quart. 170.

> On the other hand, in *Nichimen Co.* v. *M.V. Farland*, 1972 AMC 1573 at 1587-1588 (2. Cir.) the court stated that "in any event, under ...[art. 3(2) of the Hague Rules], the carrier's duty to 'properly and carefully load ...[and] stow ...the goods carried' is non-delegable".

[192] 1993 AMC 509, reversing the decision in the district court 1992 AMC 1217 (S.D.N.Y.). It is noteworthy that the court at 512 explicitly finds the *ratio* in *Sigri Carbon Corp.* v. *Lykes Bros. S.S.*, *ibid.* to be erroneous.

> responsibility by carrying its burden of proof that the damage did not occur because of its own acts."[193]

It is therefore submitted that the carrier remains responsible for all damage caused by stowage, even when the stowage is performed by the shipper. The carrier may of course escape this liability if he can establish that the damage was caused without his actual fault or privity,[194] or by the shipper's act or omission.[195]

c. Specifically on the effect of FIOS clauses

A particular issue arises from the practice of inserting a so-called "FIO" (Free In and Out) or "FIOS" (Free In, Out and Stowed) clause in the contract of carriage. These clauses regulate the distribution of *costs* between the shipper and the carrier. However, an FIOS clause in a contract of common carriage is null and void as far as it shifts *liability* contrary to the mandatory provisions of the Rules.[196] [197] The dependability of the bill of lading would be compromised

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[193] *Ibid.* at 516.

[194] Hague and Hague/Visby Rules art. 4(2)(q).

[195] Art. 4(2)(i).

[196] This position was taken by the Supreme Court of Denmark in *Højesteret*, 1945 UfR 44, and in *Associated Metals* v. *M/V Arktis Sky*, 1993 AMC 509 (2. Cir.); *Demsey & Assoc.* v. *S.S. Sea Star*, 1972 AMC 1440 (2. Cir.); *Blommer Choc.* v. *Nosira Sharon*, 1994 AMC 1807 (S.D.N.Y.). See also S. Dor, *Bill of Lading Clauses & the International Convention of Brussels, 1924 (Hague Rules)* (Gateshead on Tyne, Eng.: Witherby & Co., 1960) at 127-128. A FIOS clause could possibly be given the effect of shifting liability where the Hague or Hague/Visby Rules are not mandatorily applicable but are incorporated only by a contractual stipulation. To this effect see *Ismail* v. *Polish Ocean Lines*, [1976] Q.B. 893. (C.A.).

[197] Only in the charterparty context have FIOS clauses occasionally been interpreted as regulating the "risk" (liability) between the shipper and the carrier with regard to damage caused by improper stowage. See e.g. *Canadian Transport Co.* v. *Court Line*, [1940] A.C. 934 (H.L.). The Hague Rules did not apply in this case as the carriage was regulated by a charterparty. See also *Ismail* v. *Polish*

if a shift of liability in an FIOS clause could be opposed against a *bona fide* holder of a "clean" bill of lading who relies on the Rules and looks to the carrier for compensation.[198] Thus, the only way for the carrier to avoid liability is to prove that the damage was caused by the negligence of the shipper or the shipper's agents.[199]

4. The standard of proper stowage

a. "Properly" and "carefully"

Art. 3(2) requires that the carrier stow "properly" and "carefully". These two terms have caused some confusion in their practical application. The issue has been whether the terms refer to the same or two different requirements which the carrier must meet.

In a series of U.S. cases, the courts have interpreted both terms to mean "due diligence".[200] The use of the "due diligence" label in these cases appears to be

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Ocean Lines, [1976] Q.B. 893. (C.A.) and *Sø- og Handelsretten*, 1948 UfR 725, where the presence of a FIO clause in the charterparty was not considered to alter the carrier's responsibility for proper stowage. The clause was not considered to cover stowage in this case, but only the loading and discharging of the goods. As the damage was caused by negligent stowage, the carrier was held liable. The court left it open wether a FIOS clause would have shifted liability from the carrier to the shipper.

198 Hague/Visby Rules (but not the Hague Rules) art. 3(4), subpara. 2, estop the carrier from proving that he did not receive the cargo in a good condition if he has issued a clean bill. The same rule applies in the U.S. under the *Pomerene Act*, supra note 72. See also Hamburg Rules art. 16(3)(b).

199 Hague and Hague/Visby Rules art. 4(2)(i). See thus *Sigri Carbon Corp.* v. *Lykes Bros. S.S.* (1987), 1988 AMC 1787 (W.D.Ky.) were the carrier was relieved from liability under *U.S. COGSA* s.4(2)(i) when improper stowage by the shipper's stevedore caused the damage.

200 See e.g. *American Tobacco Co.* v. *S.S. Troubadour*, 1951 AMC 662; *California Pack. Corp.* v. *Matson Nav. Co.*, 1962 AMC 2651.

based on an inaccurate reading of the Rules rather than on a conscious analysis of the meaning of "due diligence" in art. 3(1) and of "properly" and "carefully" in art. 3(2).[201] These should therefore not be used as authority for the interpretation of the Rules on this point because they fail to distinguish between the carrier's duties in respect to seaworthiness and his other duties under the Rules.[202]

On the plain meaning of the words, the duty to stow "carefully" seems to dictate a subjective standard, (i.e. the carrier, according to his knowledge and abilities, actually tried stow prudently). To stow "properly" suggests a pure *objective* standard or even an obligation as to the result rather than merely a sincere effort in achieving a sound stow.

The duty has not been stringently interpreted. To stow "properly" has been held to mean stowage "in accordance with a sound system".[203] Moreover, the House of Lords incorporated a subjective element in the evaluation by stating that the "obligation is to adopt a system which is sound in the light of all the knowledge which the carrier has or ought to have about the nature of the goods".[204] The term "carefully" therefore seems to add little to the obligation, other than setting a

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201 See also the discussion of W. Tetley, *Marine Cargo Claims*, *supra* note 49 at 552-553.

202 On the other hand, one may properly argue that the "standard" to which the carrier is held under arts. 3(1) and 3(2), is essentially the same. It is noteworthy that the term "tilbørlig omhu" [due diligence] is applied in both provisions in the Scandinavian maritime codes, see *Lov om Sjøfarten* [the Norwegian Maritime Code], 20 July 1893 no. 1, as amended of 11 June 1993 no.83, §§ 101(1), 118(3).

203 *Renton & Co.* v. *Palmyra Trading*, [1956] 2 Lloyd's Rep. 379 at 388.

204 *Albacora SRL* v. *Westcott & Laurance Line Ltd*, [1966] 2 Lloyd's Rep. 53 at 58 (H.L.). Here the carrier was to transport a party of wet salted fish. No instructions had been given by the shipper other than to keep the fish away from engines and boilers. The fish was then carried without refrigeration from Glasgow to Genoa resulting in a case of severe deterioration ("reddening") upon arrival. Despite lack of refrigeration, the House of Lords found the stowage to have been performed 'properly' as carrier's duty was to adopt a sound system of stowage in the light of all knowledge which he had or ought to have had about the nature of the goods. The circumstances were here such that the carrier could not have been expected to have known that the salted wet fish should have been refrigerated.

requirement for the manner in which the proper system must be implemented. The discussion that follows will use "proper" as including both terms.

When deciding whether the carrier has stowed properly, two separate questions must be answered: 1) Was the chosen system or mode of stowage proper for the voyage? and 2) was the chosen mode properly executed ? If the answer to one of the questions is negative, the carrier will have breached his obligations under art. 3(2).

b. Not a perfect standard

Although optimum stowage would be the ideal standard, in real life, ideals form excessively high criteria. One must rather arrive at a compromise after considering the need for a safe stowage and the desirability of performing the stowage quickly and efficiently. Furthermore, conflicting interest are not isolated to those between a safe and an efficient stow. Different safety concerns might conflict between themselves as to the best method of stowage.[205] The stevedore therefore has a difficult task and compromises will necessarily have to be made depending on the chosen method.

The standard of stowage as a compromise was recognized in *The Silversandal*[206] by Learned Hand J.:

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[205] *The Polar*, [1993] 2 Lloyd's Rep. 479 at 482 (Comm. Ct.), where bags of potatoes could be stowed "bag on bag" or by using the interlocking method. The advantage of the latter method is that the stow becomes stable and unlikely to fall over. The former method is better from the point of view of preserving the potatoes as it allows cool air from the refrigerators to pass through the cargo.

[206] 110 F. 2d 60, 1940 AMC 731 (2 Cir.).

> "In the carriage of goods the trade must always come to some accommodation between ideal perfection of stowage and entire disregard of the safety of the goods; when it has done so, that becomes the standard for that kind of goods. Ordinarily it will not certainly prevent any damage, and both sides know that the goods will be somewhat exposed; but if the shipper wishes more, he must provide for it particularly".[207]

Several methods may therefore satisfy the requirement of proper stowage. That fact that one method turns out to be somewhat better than another does not necessarily disqualify the first. The carrier must have some discretion[208] and the mere fact that the cargo was damaged will not be conclusive proof of improper stowage.[209]

c. Customary stowage

If the cargo claimant can prove that the chosen method of stowage was contrary to common practice in the trade he is likely to have a strong case against the carrier. In the absence of a specific agreement on the method of stowage, the court will usually take the customary method of stowage of the particular cargo as a point of departure in its search for the standard of proper stowage.[210]

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207 *Ibid.* at 734.

208 See thus *Blackwood Hodge* v. *Ellerman Lines*, [1963] 1 Lloyd's Rep. 454 at 465 (Comm. Ct.) on the choice of method of stowage:

> "I am certainly not prepared to hold the chief officer negligent because he adhered to what I have called the belt school rather than the belt and braces school."

209 *Ibid.*: "[hindsight] is a dangerous guide in litigation, and always a dangerous guide in litigation concerning standards of duty and care in relation to highly technical matters. I am quite clearly of the view that I ought not to determine this issue against the defendants merely because of the fact that the four unlashed pieces were damaged."

210 See e.g. *The Continental Shipper*, [1976] 2 Lloyd's Rep. 234 at 236 (F.C.A.D.).

However, it is clear that the requirement stow properly is not necessarily met by customary stowage[211] or as it was said in *The Silversandal*:[212] "the mere fact that the trade sanctions a practice does not excuse it". Customary stowage which the court considers to expose the cargo to too high of a risk may thus be considered inadequate.[213] Hence, proper stowage does not necessarily equal customary stowage - it depends on a consideration of all circumstances.

d. The effect of agreements on method of stowage

The shipper will often have greater knowledge than the carrier as to how his goods must be treated to avoid damage. It may therefore be useful for the parties to agree upon a specific method of stowage. Such an agreement can arguably relieve the carrier from his responsibility for damage caused by stowage. Thus, it has been held that if the shipper insists on a mode of stowage which turns out to be improper and thereby damages his goods, he will have lost his right to complain.[214]

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211 See e.g. *The Polar*, [1993] 2 Lloyd's Rep. 479 at 482 (Comm. Ct.) where the court questioned whether stowage in compliance with common practice was proper stowage. However, it declined to decide the matter, but instead chose to consider the method of stowage a breach of a specific stowage stipulation in the contract of carriage.

212 110 F. 2d 60, 1940 AMC 731 at 733 (2. Cir.).

213 See *Armour & Co.* v. *Compania Argentina de Nav.* (1957), 1958 AMC 332 at 335 (S.D.N.Y.) where the court stated:

> "A general practice or custom which fails to measure up to the standard of reasonable and prudent conduct cannot serve to exonerate a carrier simply because it and the others in the industry engage in it."

See also *The City of Khios*, 1936 AMC 1291 (S.D.N.Y.), where customary stowage of rubber bales in 17 tiers was considered to be improper stowage.

214 *Ismail* v. *Polish Ocean Lines*, [1976] Q.B. 893. (C.A.) The Hague Rules were incorporated through a stipulation in the charterparty. The court found that the scope of the Hague Rules had been limited through a clause in the charterparty and thus did not apply to the question of improper stowage. See also another charterparty case *Mannix Ltd.* v. *N.M. Paterson & Sons Ltd*, [1965] 2 Ex.C.R. 107 at 113

It is submitted that to give this effect to stowage agreements would lessen the carrier's responsibilities beyond "proper stowage" and would therefore be prohibited by art. 3(8). The carrier should remain liable if the mode of stowage which was agreed upon is anything less than "proper" as stated in art. 3(2).[215]

On the other hand, the carrier is free to increase his responsibilities under the Rules[216] and can be held liable for damages caused by a deviation from the agreed mode of stowage, even if the actual mode of stowage could be considered "proper" under art. 3(2).[217]

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in which the view was expressed that even less than an explicit agreement would suffice to relieve the carrier from liability:

> "It may well be that there are cases in which the shipper, who has participated in or approved the stowage and securing of the cargo, is precluded from later complaining of such stowage. For example, when the shipper is fully aware, or it is patent, that stowage of a particular type of cargo in a particular manner or place will expose that cargo to damage, e.g.,contamination, and nevertheless participates in and approves stowage in that manner, such shipper may be precluded from claiming in respect of damage to cargo due to said stowage."

215 In *The Mahia* (1954), [1955] 1 Lloyd's Rep. 264 at 266-267 (Sup. Ct. of Montreal) drums of sodium chlorate (dangerous goods) had been improperly carried on deck. Although the court was not satisfied that the shipper had instructed the carrier to stow the goods in this way, it held that:

> "[T]he master did not have to stow them on deck if he considered it dangerous, even if he had been instructed to do so. ... [T]he master ... either knew, had the means of knowing, or reasonably ought to have known, the nature of sodium chlorate and the proper method of stowing and carrying such goods and the quantity which may be carried in any ship."

See also *Cordis Dow* v. *Pres. Kennedy*, 1985 AMC 2756 (N.D.Cal.), where a stipulation obliging the shipper to advise the carrier on the appropriate stowage method was not held to relieve the carrier from his duty to know the necessary precautions for proper stowage. The carrier was therefore found to be at fault when he did not adequately protect the cargo from freezing.

216 See art. 5.

217 *Sø- og Handelsretten*, 1974 NDS 229. The carrier had agreed to stow a cargo of cement in pallets in not more than three tiers but actually stowed the pallets up to twelve tiers. Bad weather was encountered during the voyage and upon arrival in Puerto Rico, 40% of the cargo was found damaged. The Danish court declined to consider wether the stowage was proper and simply held the carrier liable because his deviation from the agreed mode of stowage was deemed a contributing cause of the damage. See also *The Polar*, [1993] 2 Lloyd's Rep. 479 (Comm. Ct.).

e. Reliance on experts and surveyors

The opinion of surveyors and experts on stowage will naturally be important in determining the proper method of stowage. Testimonies from such expert witnesses are often used in court both to prove the customary method of stowage and to decide whether the actual method of stowage was proper.[218] If the carrier relied on expert advice in performing the stowage he may be considered to have discharged his duty to stow properly. On the other hand, since the carrier's stowage duties (like his duty to ensure seaworthiness) are considered "non-delegable", he may still be held liable if the expert was negligent in his advisory capacity.[219] Even a "proper stowage" certificate from a surveyor will be inconclusive evidence as to the discharge of the carrier's duty.[220] This is true even when the certificate is issued by public or semi-public authorities.[221]

f. The significance of stowage handbooks

Recommendations and handbooks on stowage published by private specialists are an important practical source of information for carriers and stevedores. While they no doubt have a significant influence on the practice of stowage, they must be

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[218] See e.g. *Blackwood Hodge* v. *Ellerman Lines*, [1963] 1 Lloyd's Rep. 454 (Comm. Ct.).

[219] *International Packers* v. *Ocean S.S. Co.*, [1955] 2 Lloyd's Rep. 218 at 236. See also *Associated Metals* v. *M/V Arktis Sky*, 1993 AMC 509 at 513 (2. Cir.).

[220] See *Studebaker Distributors* v. *Charlton Steam Shipping Co.* (1937), 59 Ll. L. Rep. 23 (K.B.), where a surveyor's certificate was held not to be conclusive evidence as to the discharge of the carrier's stowage duties under the *Harter Act*.

[221] *Blanchard Lumber Co.* v. *S.S. Anthony II* (1966), 1967 AMC 103, [1966] 2 Lloyd's Rep. 437 (S.D.N.Y.). Certificates issued by a Canadian Government surveyor and the port warden were not considered to discharge the carrier's duties of seaworthiness and proper stowage under the Harter Act.

read only for what they are: general recommendations which cannot eliminate the need to consider the special circumstances of each case.[222]

The texts on stowage published by public bodies[223] may, depending on their nature, exert greater influence. They either restate regulations and/or have a purely recommendatory or informative value. The binding or non-binding nature of stowage norms expressed in "official" publications may be explicitly stated or follow implicitly.[224] Even where it is clear that the publication is not a regulation, it may still influence and be evidence of the relevant trade custom. The same applies to publications of purely private bodies.

g. Proper stowage as a developing concept

What was once considered a proper method of stowage may later become unacceptable because of new technology or knowledge. If a new method of stowage is developed which drastically reduces the risk of damage to the goods during stowage, the old way of stowing will suddenly appear to engender a relatively high risk which might make it improper. The change of standard will naturally be gradual because the improved method of stowage must be given some

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222 *The Continental Shipper*, [1976] 2 Lloyd's Rep. 234 at 237 (F.C.A.D.),restating the decision in the trial division [1974] 1 Lloyd's Rep. 482 at 486 (F.C.T.D.). The carrier claimed unsuccessfully that his reliance on instructions from *Thomas on Stowage* as to the stowing of unpacked cars would prevent him from being considered negligent. The court was not convinced, even after a marine surveyor characterized this text as the "seaman's bible".

223 See e.g. Mariport Group Ltd., *Safe Stowage* (Ottawa: External Affairs and International Trade Canada, 1990).

224 *Safe stowage*, *ibid.* at 45 ff. presents a number of norms to shippers regarding stowage inside containers. It is clear that the text cannot be considered to impose absolute standards of conduct on the shipper - it's heading is: "*Hints* on Stowing Your Cargo [emphasis added]". Moreover, it follows that the text is merely a recommendation from a note added on the back of the cover page stating : "External Affairs and International Trade Canada (EAITC) has commissioned this *guide* for Canadian shippers and exporters to facilitate their international cargo movements."

time to become well known and commonly used in the market.[225] Thus, for a period of time, both the old and the new method must be considered proper.

5. Factors to consider for proper stowage

A detailed definition of the carrier's duty to stow properly will depend on the circumstances of each case, much in the same way as the seaworthiness duty. The level of care due by the carrier will usually depend on the special characteristics of the cargo,[226] the ship, its holds and equipment.[227] Moreover, the expected weather and consequent stresses to which the cargo will likely be exposed are also factors which may require additional precautions beyond the customary method of stowage.[228]

a. Special characteristics of the goods

In order to properly stow the goods, the carrier must be aware of the nature of his cargo. The transport of frozen fish naturally requires a completely different

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225 See thus *Blackwood Hodge* v. *Ellerman Lines*, [1963] 1 Lloyd's Rep. 454 at 464 (Comm. Ct.), Roskill J. on the question of whether the new method of lashing the cargo was better than the old:

> "There may come a point ... when one method [of stowage] in the eyes of informed and experienced minds so replaces the other method which been hitherto used without complaint, that adherence to the old rather than adoption of the new may be a legitimate ground of complaint. However, before this point arises, it seems to me it must be clear that the method in the eyes of those best qualified to judge really wholly replaces the other."

226 See also *The Lake Fontanet*, 1923 AMC 500 (5. Cir.) where customary dunnage was considered insufficient to protect cargo against expected sweat. The carrier knew of the risk for sweat damage but nevertheless failed to stow the cargo in compliance with the shipper's request.

227 See e.g. *The Polar*, [1993] 2 Lloyd's Rep. 479 (Comm. Ct.) where bags of potatoes were stowed in such a way that they interfered with the proper working of the refrigeration system.

228 See e.g. *Shipping Corporation of India Ltd.* v. *Gamlen Chemical Co.* (1980), 147 CLR 142 at 150 (High Court of Australia).

method of stowage and care than the transport of ore. The carrier is generally expected to have or obtain the necessary information and provide the stowage which is required by the specific cargo.[229] He will be held to have breached his duty if he fails to provide the required method of stowage when the carrier should have known the characteristics of the cargo.[230]

(1) Incompatible cargoes

Generally speaking, the carrier must avoid stowing cargoes which are dangerous to each other.[231] Cargoes are "incompatible" in this respect if one may affect the other so as to cause tainting, contamination, heating, combustion, accelerated decay or otherwise reduce the quality or quantity of the cargo in question. Such incompatible cargoes may not only represent a risk to each other but may sometimes even endanger the safety of the ship.[232] Depending on the facility with which such processes are triggered, the carrier must provide for the necessary separation of the cargoes. In some cases, ensuring extra packaging or stowing the cargo in different compartments of the ship will suffice. The following are examples of incompatible cargoes:

- Easily taintable foodstuffs and odoriferous cargoes[233]

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229 See *The Ensley City*, 1947 AMC 568 at 576 (D.Md.) where the court stated that shipowners must use:
> "all reasonable means to ascertain the nature and the characteristics of goods tendered for shipment, and exercise due care in their handling and stowage, including such methods as their nature requires."

230 *Albacora SRL* v. *Westcott & Laurance Line Ltd*, [1966] 2 Lloyd's Rep. 53 at 58 (H.L.); *Produits Alimentaires Grandma Ltée.* v. *Zim Israel Navigation Co. et al.* (1988), 86 N.R. 39 (F.C.A.D.).

231 *Coca Cola Co.,Tenco Division* v. *S.S. Norholt* (1971), 1972 AMC 388 (S.D.N.Y.).

232 See *supra* at 42.

233 Taint damage was the issue in *The Thorsa*, [1916] P. 257, 13 Asp. M.L.C.592 (cheese and chocolate); *International Produce Inc.* v. *Frances Salman*, 1975 AMC 1521 (S.D.N.Y.)(coffee, quebracho, caustic soda).

- Foodstuffs and noxious/poisonous cargoes
- Oxidizing cargoes and cargoes liable to rust
- Dry and wet cargoes[234]
- Moisture sensitive cargoes and cargoes emitting large amounts of moisture[235]

(2) Cargo which is at risk of heating

A common reason for cargo damage is inadequate stowage and care of cargoes which have a tendency to self-heat when transported in large bulk quantities. Seemingly "innocent" cargoes like fish meal or maize can start a chemical process producing heat which may in turn lead to the decomposition of the cargo or even a danger to the ship. To prevent such a process, it is of utmost importance that the cargo be stowed with adequate ventilation.[236]

(3) Protection from moisture (sweat)

Most goods require protection from exposure to seawater. In addition, many types of goods may emit moisture ("sweat")[237] during the voyage which will

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[234] Wet or liquid cargoes should be stowed so that leakage cannot damage other cargo, see *Bruck Mills Ltd.* v. *Black Sea S.S. Co.*, [1973] F.C. 387, 2 Lloyd's Rep. 531 (T.D.). The damage of dry cargo by leakage has been held to raise an inference of bad stowage, see thus *The Ternefjell*, 1961 AMC 1231 (N.D.Ill.).

[235] E.g. jute and tea, see *Standard Brands Inc.* v. *Brocklebank*, 1948 AMC 1624 (S.D.N.Y.);wheat and wet lumber/wood pulp, see *Raymond & Reid* v. *King Line Ltd.* (1939), 64 Ll. L. Rep. 254.

[236] See thus *The Soyo Maru*, 1937 AMC 642 at 647 (4. Cir.).

[237] E.g. nuts, see *The Lake Fontanet*, 1923 AMC 500 (5. Cir.).

eventually damage them unless special precautions are taken.[238] Even if the particular cargo is not likely to sweat, condensation may arise in a shift from cold to warm air or vice versa, such as during a transport from colder areas to a tropical region.[239] Condensation from the ship's structure may also cause moisture problems. Rust, mold and discolouration are the usual results of sweat damage.

The carrier must therefore stow so as to provide adequate ventilation and a free circulation of air in order for the moisture to escape.[240] If the stow is too compact, proper ventilation may be impeded.[241]

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238 Cargoes can generally be characterized as hygroscopic or non-hygroscopic. Hygroscopic substances (typically of vegetable origin) contain moisture and will absorb or release moisture depending on the surrounding atmosphere. Non-hygroscopic material (mostly of mineral origin) contains no moisture itself and moisture problems usually arise only due to changes in temperature. See L.G. Taylor & F.H. Trim, *Cargo Work; The Care, Handling and Carriage of Cargoes* (Glasgow: Brown, Son & Ferguson, 1964) at 25.

239 See e.g. *Siderius Inc.* v. *Amilla*, 1989 AMC 2533, where steel sheets were transported from Argentina to Great Lakes ports. Rust damage was caused because of the ship's inadequate ventilation system. She was therefore deemed uncargoworthy for the transport.

240 See e.g. *Produits Alimentaires Grandma Ltée.* v. *Zim Israel Navigation Co. et al.* (1988), 86 N.R. 39 (F.C.A.D.). A cargo of pepper was subject to spoilage when its level of moisture surpassed a certain amount. The carrier was held liable because he had improperly stowed the goods inside a container which had no forced ventilation although he ought to have known that such ventilation was necessary.

241 See *M/S Dixie*, 1967 NDS 24 (Supreme Court of Norway) where mold damage on bags of fish meal was held to have been caused by too compact a stow; *The Split* (1972), [1973] 2 Lloyd's Rep. 535 at 538 (F.C.T.D.)where it was held to be improper to stow crates of melons in a solid block without any dunnage between as melons require air circulation to dissipate heat. The lack of air circulation resulted in an accelerated ripening and spoilage of the melons in the middle of the stow. See also *The Polar*, [1993] 2 Lloyd's Rep. 479 (Comm. Ct.).

b. Lashing, dunnaging and securing of cargo

To avoid damage arising from shifting of the cargo, the goods must be properly lashed and secured.[242] As a general rule, a stow should be stable and tight in order to resist shifting.[243] When the appropriate stowage method dictates that cargo should be stowed in a "sound block", gaps between the cargo will constitute improper stowage.[244] The weather expected during the voyage will play an important role in determining how the cargo must be secured.[245]

Dunnage should be provided to protect the goods from friction or impact damage during the rolling movements at sea.[246] Particularly fragile cargoes (e.g. eggs, glass, ceramics) may require extra care in this respect.

c. Stowage in tiers

The carrier must not stow cargo in so many tiers (cargo unit on cargo unit) that the pressure exerted on lower tiers causes crushing. The number of allowable tiers will depend on how solidly the cargo is packaged and the manner in which

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[242] See e.g. *"M/S Ton S"*, 1948 UfR 1146 (Danish Adm. Comm. Ct.), where a cargo of bricks was insufficiently lashed and fell over nearby motor cars during rough seas; *Associated Metals* v. *M/V Arktis Sky*, 1993 AMC 509 (2. Cir.), involving improperly lashed steel sheets which shifted during the voyage and were thereby damaged.

[243] See thus *The Evgrafov*, [1987] 2 Lloyd's Rep. 635 at 643 (Adm. Ct.), where chafing damage arose because the cargo was not tightly stowed.

[244] *Blackwood Hodge* v. *Ellerman Lines*, [1963] 1 Lloyd's Rep. 454 (Comm. Ct.).

[245] Thus in *Carling O'Keefe Breweries* v. *CN Marine Inc.* (1989), 104 N.R. 166, 1990 AMC 997 (F.C.A.D.), the lashing of containers on deck with wire rope was considered insufficient in light of the kind of weather which could be expected on a voyage from New Foundland to Labrador during the month of November. Instead, the cargo should have been secured with container "fittings".

[246] See e.g. *Sø- og Handelsretten*, 1969 NDS 330. Lack of dunnage between cargo in sacks and hardware cargo making the surface on which the sacks were stowed uneven, was considered improper stowage.

the different tiers are separated with dunnage.[247] The carrier must consider any particular weaknesses in the packaging of the cargo that he is aware of; he cannot disregard this special knowledge and continue stowing in the customary manner. The need for a free circulation of air may also affect the number of tiers the cargo can be stowed in.

d. The expected weather and sea conditions

The stress that the goods and ship are exposed to during the voyage will vary greatly depending on the weather and sea conditions. In order to stow properly, the carrier must stow the cargo so that it is able to withstand "the ordinary incidents" of the voyage.[248] The collapse of a stow during weather which could be expected for the given voyage may raise an inference of poor stowage.[249]

A mid-winter trans-Atlantic transport will naturally require much more attention to lashing, dunnage and securing of cargo than a mid-summer transport in the Aegean Sea. Moreover, if a shift in temperature is expected during the voyage, the carrier must be more attentive to possible condensation problems than if stable temperatures are expected.

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247 See e.g. *The Silversandal*, 110 F. 2d 60, 1940 AMC 731 (2. Cir.). Customary stowage of rubber bales in nine to seventeen tiers without dunnage in between, was held proper and reasonable although a certain risk of damage was inherent in the customary method of stowage. See on the other hand *The City of Khios*, 1936 AMC 1291 (S.D.N.Y.) where stowage of rubber bales up to 17 tiers high was considered improper stowage.

248 *Canadian Transport Co.* v. *Court Line*, [1940] A.C. 934 at 938 (H.L.).

249 *The Skipsea*, 1926 AMC 71 (2. Cir.).

6. Stowage on deck

Deck stowage has traditionally been associated with exceptional risks of cargo damage and requires special consideration of what precautions are necessary. It also raises an issue as to the applicability of the Hague and Hague/Visby Rules.

a. Applicability of art. 3(2)

If the contract of carriage does not contain a deck carriage clause, the carrier's stowage responsibilities will be governed by the Rules.[250] "Liberty clauses", stating that the carrier may stow the goods on deck at his choice, have been held not to eschew the application of the Rules even when the goods were actually carried on deck.[251] An explicit statement in the bill of lading that the goods will be carried on deck is required.[252]

If on-deck carriage has been explicitly agreed, the parties are free in principle to agree upon the nature and extent of the carrier's stowage responsibilities.[253] On the other hand, if the Rules apply mandatorily or are incorporated into the

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250 Hague and Hague/Visby Rules art. 1(c) read with art. 2.

251 See *Svenska Traktor Aktiebolaget* v. *Maritime Agencies Ltd.*, [1953] 2 Lloyd's Rep. 124, and W. Tetley, *Marine Cargo Claims*, *supra* note 45 at 658-661.

252 U.S. courts have interpreted this to mean that the shipper expressly consents to deck stowage, see *Constructores Tecnicos* v. *Sea-Land*, 1992 AMC 1284 (5. Cir.). Moreover, it has been held that it is not sufficient that all parties intended for the goods to be carried on deck as long as a written clause has not been incorporated in the contract of carriage, see *Sail America* v. *T.S. Prosperity*, 1992 AMC 1617 (S.D.N.Y.).

253 National law will usually provide that the carrier in any event must exercise due care in loading and stowing the goods. See e.g *Blanchard Lumber Co.* v. *S.S. Anthony II* (1966), 1967 AMC 103 at 117 (S.D.N.Y.). It is also noteworthy that in multimodal transport, responsibilities in relation to deck cargo may be regulated by other conventions, such as the *International Carriage of Goods by Road Convention*, 1956 (CMR). See thus *Cour de Cassation de France*, 5. July 1988, [1990] 25 ETL 904.

contract by express stipulation, a question arises as to whether deck carriage constitutes proper stowage under art. 3(2).

b. Is deck stowage improper stowage per se?

There general situations can raise the issue of whether deck stowage is proper:

1) The cargo is carried on deck under a clean bill of lading and no consent to deck stowage has been given. A clean bill of lading, (i.e. one which does not explicitly provide for on-deck carriage) is legally presumed mean that the goods will be carried under deck.[254] If, in spite of the issuance of a clean bill of lading, the carrier stows the cargo on deck he will be in breach of his obligations under the contract of carriage and may be held liable for any resulting damages.[255] In some jurisdictions, such unwarranted deck stowage is considered a fundamental breach of the contract (quasi-deviation) which deprives the carrier of the right to limit his liability under art. 4(5) of the Rules.[256]

2) The contract of carriage explicitly stipulates deck carriage and incorporates the Hague or Hague/Visby Rules. In this situation the carrier must fulfil his duty

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254 *Ingersoll Milling* v. *Bodena*, 1988 AMC 223 (2. Cir.).

255 See e.g. *Constructores Tecnicos* v. *Sea-Land*, 1992 AMC 1284 (5. Cir.). A truck stowed on deck under a clean bill of lading was damaged when containers broke loose during bad weather. The carrier was held liable because the damage would not have occurred had the truck been stowed under deck.

256 In U.S. law see e.g. *Phillip Holzman* v. *S.S. Hellenic Sunbeam*, 1977 AMC 1731 (S.D.N.Y); *Ingersoll Milling* v. *Bodena*, 1988 AMC 223 (2. Cir.). The carrier's unlimited liability for unreasonable deviation (quasi-deviation) will be particularly clear if the carrier has not only stowed the cargo on deck without the consent of the shipper but also contrary to the shipper's explicit instructions, see *Calmaquip. Eng.* v. *West Coast Carriers*, 1984 AMC 839 (5. Cir.). The unwarranted deck stowage will not amount to a quasi-deviation if the carrier can prove that the on-deck stowage did not expose the cargo to any greater risks than under deck stowage, see *Constructores Tecnicos* v. *Sea-Land*, 1992 AMC 1284 (5. Cir.).

as to proper deck stowage under art. 3(2).[257] To properly perform his duty, the carrier must consider factors such as customary stowage, expected weather and special characteristics of the goods.

3) The bill of lading does not explicitly provide for deck stowage but either the bill of lading contains a liberty clause, or the shipper has accepted deck carriage by verbal contract, or deck carriage is customary in the trade. In this case, the Rules will apply but unlike situation 1) above, the shipper may be considered to have accepted deck stowage implicitly.[258] Thus, the deck stowage cannot be said to constitute a breach of duty *per se*. Rather, the carrier's duty must be to stow "properly" according to art. 3(2) and the evaluation must consider all factors.

c. Special considerations in relation to deck stowage

Deck stowage will expose the cargo to wind and weather, sea water and waves. The carrier must therefore pay particular attention to the additional hazards of

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257 See thus *Carling O'Keefe Breweries* v. *CN Marine Inc.* (1989), 104 N.R. 166, 1990 AMC 997 (F.C.A.D.); *Inst. of London Underwriters* v. *Sea-Land*, 1989 AMC 2516.

258 In *Svenska Traktor Aktiebolaget* v. *Maritime Agencies Ltd.*, [1953] 2 Lloyd's Rep. 124, the insertion of a liberty clause was considered sufficient to constitute consent to deck stowage. To Similarly, *Consumers Glass Co. Ltd.* v. *Farrell Lines Inc.* (1985), 53 O.R. (2d) 230 (H.C.).

See also *Constructores Tecnicos* v. *Sea-Land*, 1992 AMC 1284 (5. Cir.): Although it was customary practice for the carrier to stow vehicles on deck, the shipper did not know of the practice and could not therefore be considered to have consented to the deck stowage of his truck. Consent based on customary stowage seemed to have been implied.

Custom is explicitly recognized as permitting deck stowage in Scandinavia, see the *Norwegian Maritime Code* art. 91.

It is disputed, however, whether a liberty clause in the bill of lading may constitute implicit consent to deck stowage, see the discussions in J.F. Wilson, *Carriage of Goods by Sea*, (London, Eng.: Pitman, 1988) at 171-173 and W. Tetley, *Marine Cargo Claims*, *supra* note 45 at 658-662.

deck carriage and take necessary precautions as to securing, lashing,[259] packing and protecting the cargo.[260] The appropriate standard will be that of proper deck stowage. It is irrelevant that the cargo might have been better protected under deck as long as proper precautions were taken to protect the cargo on deck.[261]

Particularly fragile or moisture-sensitive cargo may be unsuited for deck carriage and therefore deck stowage will be improper. However, many ships have special storage rooms on deck which can offer as good a protection against sea, wind and moisture as under deck compartments. These special circumstances must be considered when deciding whether or not deck stowage was proper in the particular instance.

7. Containers and stowage

The advent of containerization has brought many benefits to the carriage of goods: Reduced damage rates, quicker loading and shorter time spent in port, drastic simplification of stowage and discharge operations, facilitation of multimodal transport and improved treatment of special cargoes by storage in containers constructed specifically to accommodate their needs.

Containerization also raises particular issues with regard to the carrier's responsibility for stowage.[262]

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259 See e.g. *Carling O'Keefe Breweries* v. *CN Marine Inc.* (1989), 104 N.R. 166, 1990 AMC 997. (F.C.A.D.).

260 See e.g. *Inst. of London Underwriters* v. *Sea-Land*, 1989 AMC 2516 where carriage of a yacht on deck protected only by a cradle was considered improper.

261 *The California*, 1948 AMC 622 (3. Cir.).

262 The container is often recognized as a part of the ship rather than just 'packaging'. The carrier may thus be required to exercise due diligence in providing a cargoworthy container under art. 3(1)(c) of the Rules. See *The Red Jacket* (1977), [1978] 1 Lloyd's Rep. 300 (S.D.N.Y.) where structural damage

a. Containers as deck stowage

Containers are frequently carried on deck so problems of deck stowage discussed above apply to containers as well. Deck stowage of containers is recognized as customary in certain trades and on certain types of vessels.[263] Courts may thus imply the shipper's consent to deck stowage if he ought to have known that the goods were likely to be stowed on deck.[264] The shipper's consent does not necessarily mean that the carrier has met his duties as to stowage; only that the deck carriage can not automatically be considered to be a breach of the contract. If the Hague or Hague/Visby Rules apply, the stowage must in any event be proper[265] and seaworthy.[266]

b. Proper stowage of containers

One of the carrier's duties is to properly stow containers *aboard the ship*. Containers will often, but not always, offer the necessary protection from sea and weather and adequately separate incompatible cargoes. The carrier's main concern will therefore be to ensure that the container is properly secured against

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to a container rendered it unseaworthy. The carrier was held liable when the container broke loose, causing a total collapse in the stow and 43 containers to be swept overboard.

263 For instance, deck stowage of containers on Cellular Containerships which are specifically designed to carry large numbers of containers on deck must be considered customary. In *O'Connel Machinery Co.* v. *Americana*, 1986 AMC 2822 (2. Cir.), stowage of containers on deck was recognized as customary from a port in Italy.

264 In *English Elec.* v. *Hoegh Mallard*, 1987 AMC 1351 (2. Cir.), the shipper was aware of the carrier's practice of stowing open-top containers on deck and failed to object to it. The carrier was therefore held not to have unreasonably deviated from the contract by stowing the shipper's container on deck. The carrier was held liable because the stowage had nevertheless actually been improper, but was permitted to limit his liability.

265 Art. 3(2).

266 Art. 3(1).

shifting. Containers stowed on deck naturally require more attention in this respect than containers carried under deck.[267] The expected weather and the type and weight of the container will also have to be considered.[268]

c. Stowage inside the container

In addition to proper stowage of the container itself, it is important for the safety of cargo that the goods are properly stowed *inside* the container.

Subject to alternative arrangements, it is usually the shipper or freight-forwarder who stows ("stuffs") the container. If the *carrier* himself has stuffed the container and damages arise because this task was poorly performed, he may obviously be held liable under art. 3(2) of the Rules.

Unlike in the case of liability for improper stowage of the container itself, courts have consistently relieved the carrier from liability for damage caused by improper stowage *inside* the containers when this task was performed by the shipper.[269] The carrier may in principle avoid liability in two ways:

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[267] Securing containers that are to be carried under deck is also important. See thus *The Waltraud*, [1991] 1 Lloyd's Rep. 389 (Adm.Ct.) where a ship eventually capsized because of a shifting of inadequately secured under-deck containers.

[268] See *Carling O'Keefe Breweries* v. *CN Marine Inc.* (1989), 104 N.R. 166, 1990 AMC 997 (F.C.A.D.). In order to utilize all space available, the containers were stowed athwartships on deck so that each container protruded more than two feet over the ships' sides and was lashed with wire rope. During the voyage, three containers were lost overboard as waves hit their underside and broke the wire rope. The method of stowage was considered improper for the foreseeable heavy weather and the carrier was held liable.

[269] See *Reechel* v. *Italia di Nav.*, 1988 AMC 2748 (D.Md). In a wrongful death claim, the carrier was held not liable for the death of a tractor driver caused by improperly braced and secured cargo inside a container. The container had been stuffed and sealed by the shipper, thus the carrier neither knew nor could have known that the container was improperly stuffed.

1) The value of the bill of lading as *prima facie* evidence of the condition of the goods upon loading may be negated because the carrier guarantees no more than the "apparent" condition of the goods when issuing a clean bill of lading.[270] The carrier cannot be expected to open and inspect every container before loading.[271] Without the bill of lading as *prima facie* evidence, the cargo claimant will bear the burden of proving that he delivered the cargo in good condition.[272] If he is unable to do so, the carrier will not be held liable for the damage.[273] Certain circumstances, such as broken seals[274] or damaged containers,[275] may help the cargo claimant raise an inference that the goods were damaged while they were in the carrier's possession.

2) If the cargo claimant succeeds in establishing that the cargo was in a good condition upon delivery, the onus will shift back to the carrier. He will

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[270] See art. 3(3)(c). Improper stowage inside the container is rarely discernable from the outside.

[271] Imposing such a duty on the carrier would not be in no one's advantage. It would increase the amount of time spent in port, expenses and, consequently, freight rates.

[272] See *Amorex Marine* v. *Maersk Mango*, 1991 AMC 294 (S.D.Tex.).

[273] See *A.J. Cunningham* v. *Australian Exporter*, 1989 AMC 2748 (S.D.N.Y.) where the cargo of frozen meat stuffed in containers and sealed by the shipper turned out damaged. The clean bill of lading could not be relied upon and the claimant failed to prove that the cargo had been in good order upon delivery to the carrier.

[274] *Peter Fabrics* v. *S.S. Hermes I*, 1984 AMC 1685 (S.D.N.Y.). Such an inference may be countered by the submission of other evidence: e.g. a photograph take of the contents of the container after discharge, see *Argit International* v. *Gina S.*, 1989 AMC 1037.

[275] In *GF Co.* v. *Pan Ocean Shipping*, 1992 AMC 2298 (C.D.Cal.), external damage to cargo crates was held to raise an inference that the goods inside had been damaged by the same cause that damaged the crates while in the hands of the carrier.

then have to show that the damage was caused by the shipper's negligent stowage in order to avoid liability.[276]

Cargo damage caused by improper stowage inside a container will often be due to:[277]

- inadequate strapping, lashing and blocking
- heavy loads on top
- insufficient or incorrect use of dunnage and separation
- loose stow[278]
- poor or lacking layering
- mixing of incompatible cargoes

d. Stowage on trucks

It is interesting to note that courts have not been as lenient in relieving carriers from liability for improper stowage on trucks carried on "ro-ro" (roll on roll off)

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276 Negligent stowage by the shipper can be covered either by art. 4(2)(i) (shipper's act or omission), art. 4(2)(n) (insufficiency of packing), or art. 4(2)(p) (latent defects not discoverable through due diligence). In *The Red Jacket* (1977), [1978] 1 Lloyd's Rep. 300 (S.D.N.Y.),tin ingots were improperly stowed inside a container, but the carrier failed to prove that this improper stowage caused the damage. Instead lack of due diligence in detecting structural damage in the container rendered the container unseaworthy was held to be the proximate cause of the damage.

277 See Mariport Group Ltd., *Safe Stowage*, *supra* note ? at 21-24, 34-35.

278 *Andersen & Mørck A/S* v. *Wasa International Forsäkring AB* (21 August 1992), Oslo No. 90-00516 A (Eidsivating Lagmansrett) [unpublished]. Rolls of paper stowed in a container with space between them became damaged due to rubbing during the trans-Atlantic voyage. The court held that the mode of stowage was improper considering the stress that the goods would foreseeably be exposed to during such a voyage.

vessels.[279] One reason for this might be the fact that stowage on trucks is partly visible from the outside and easily inspectable by the carrier.[280]

H. The Carrier's Immunities and Defences

The Hague and Hague/Visby Rules provide the carrier with certain exceptions from liability which he may avail himself of even if he has failed to properly and carefully stow the goods. Some of the exceptions relieve the carrier from liability for the negligent actions of his servants. These seem anachronistic as they are contrary to modern day notions of *respondeat superior* liability and fair contract terms.

The exceptions will provide the carrier with immunity only as long as the poor stowage does not amount to lack of due diligence to make the ship seaworthy under art. 3(1).[281] However, since the carrier is liable for the breach of his seaworthiness duty only when the damage was caused by the unseaworthy condition, he may still avail himself of the exceptions if he can disproving a causal link between the unseaworthiness and damage.[282]

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279 See e.g. *"M/S Tor Mercia"*, 1977 NDS 1 (Supreme Court of Sweden) which held the carrier liable for improper stowage in one truck causing its cargo to fall over and damage cargo on another truck, even though it was the truck owner who had stowed the goods before the vehicle was brought onto the ferry. It should be added that the stow in this case was not covered up so defects in the stow were apparent and could have been discovered by the carrier.

280 *Ibid.*

281 See *Maxine Footwear Co.* v. *Canadian Government Merchant Marine Ltd.*, [1959] A.C. 589, [1959] 2 Lloyd's Rep. 105 (P.C.) and the discussion *supra* at 23.

282 See e.g. *Silvercypress*, 1944 AMC 895 (2. Cir.).

The exceptions most often plead by the carrier in connection with poor stowage will be discussed individually below. In general, these can be divided into two classes: 1) exceptions which shield the carrier from the negligence of persons for whom he is responsible, and 2) exceptions for damages caused by circumstances outside carrier's control. As a special subgroup of the latter, the shipper's responsibility for dangerous goods will be considered.

The carrier bears the burden of proving the applicability of an exonerating cause. If several causes have combined in causing the damage, (eg. improper stowage as well as an exonerating cause), national laws usually provide that a carrier will be held liable for the entire loss unless he can establish the extent to which the damage was caused by a factor for which he is not responsible.[283]

1. Damage not caused by the carrier's privity

a. Error in management of the ship - art. 4(2)(a)

The carrier will not be responsible for damage resulting from:

> "Act, neglect, or default of the master, mariner, pilot, or the servants of the carrier in the navigation or in the management of the ship"

It follows from a plain reading of the provision that error in the management of the cargo is not covered by the exception in art. 4(2)(a). The problem raised is to distinguish between those acts directed towards the management of the ship and those which concern the care of cargo. The test which has been adopted is whether the negligent act was done *primarily* with the *intention* to care for the

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[283] See *supra* at 31.

cargo or care for the ship and its parts.[284] Although the distinction may be a difficult one to make in relation to care of cargo in general, few problems arise when the issue arises in relation to *stowage* operations directly related to the *safety* of cargo.[285]

Some stowage operations, such as trimming, are performed primarily in concern for the safety of the ship and are therefore characterized as acts in the "management of the ship". The carrier may be exonerated if damage occurs during or later materializes because of the trimming. Of course, this is subject to the condition that the negligent act not make the ship unseaworthy.[286]

b. The fire exception - art. 4(2)(b)

The carrier may be relived from liability for poor stowage if he proves that the damage is caused by:

> "Fire, unless caused by the actual fault and privity of the carrier."

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284 See *Gosse Millerd* v. *Canadian Government Merchant Marine* (1927), 29 Ll. L. Rep 190, Greer L.J., upheld by the House of Lords [1929] A.C. 223.

285 In *Carling O'Keefe Breweries* v. *CN Marine Inc.* (1989), 104 N.R. 166, 1990 AMC 997 (F.C.A.D.) it was held that the negligent stowage of containers on deck, did not qualify as an error in the management of the ship. See also *So- og Handelsretten*, 1958 SHT 164; *International Produce Inc.* v. *Frances Salman*, 1975 AMC 1521 (S.D.N.Y.).

286 In *The Waltraud*, [1991] 1 Lloyd's Rep. 389 (Adm.Ct.), the improper securing of containers under deck was held to render the ship unseaworthy. The carrier could therefore not rely upon the master's negligent act in filling the port ballast tank to counter the serious list which occurred when the cargo shifted and eventually caused the ship to capsize. See also *Actis Co.* v. *The Sanko Steamship Co. (The Aquacharm)* (1981), [1982] 1 Lloyd's Rep. 7 (C.A.). Due to improper distribution of cargo and overloading, the ship was "down by the head" and had to discharge and reload part of the cargo before sailing through the Panama Canal causing a delay. The court considered that the ship was nevertheless seaworthy and relieved the shipowner from liability under art. 4(2)(a).

Fire may break out when the carrier stows incompatible cargoes together, improperly stows hazardous cargoes or fails to provide sufficient ventilation to self heating substances. The provision could therefore apply to a large number of cases involving improper stowage.

Nevertheless, the provision is of limited value as a defence.[287] This is primarily because improper stowage which results in a fire will usually also constitute unseaworthiness which deprives the carrier of his defence.[288] Even if the improper stowage does not amount to unseaworthiness, (e.g. it takes place after the vessel has started on its journey), art. 4(2)(b) may not always be relied upon. Jurisprudence has interpreted the fire exception narrowly as excluding damages caused only by heat or smoke.[289] The provision is only applicable if there has been actual flaming. The destruction of fish meal because of self-heating will thus not be exempted under art. 4(2)(b).

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[287] It should be noted that many countries have adopted special legislation exempting carrier's from liability for fire damage, e.g. the U.S. *Fire Statute*, 46 U.S. Code Appendix 182. The Hague Rules provision in art. 4(2)(b) may therefore have little independent significance.

[288] See thus *Waterman Steamship Co.* v. *Virginia Chemicals Inc.* (1987), 1988 AMC 2681 (S.D. Ala.). Because the damage was caused by the unseaworthy stowage of hazardous hydrosulfite, the carrier could not rely upon the fire exception. See also *Maxine Footwear Co.* v. *Canadian Government Merchant Marine Ltd.*, [1959] A.C. 589, [1959] 2 Lloyd's Rep. 105 (P.C.); *Hasbro Industries* v. *St. Constantine*, 1980 AMC 1425 (D.Ha.).

[289] *David McNair & Co.* v. *The Santa Malta*, [1967] 2 Lloyd's Rep. 391.

c. No excuse for carrier's personal fault

Although arts. 4(2)(a)-(b) provide defences for certain damages caused by negligence, the carrier may rely on them only if the negligence is not attributable to his personal "fault or privity".[290] The provisions protect only against the neglect and fault of the carrier's servants or other persons. Thus, the carrier may be excused if stevedores at an intermediate port negligently stow cargo which leads to a fire but will not be excused if the improper stowage is instructed by him personally.

2. Circumstances outside the carrier's control

a. Perils of the sea - art. 4(2)(c)

The carrier frequently contends that the cargo damage was not caused by the poor stowage but from a peril of the sea. A peril of the sea refers to an extraordinary, unexpected maritime danger.[291] There is no single test for what constitutes a peril of the sea - each case must be decided on its facts. It

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290 When the carrier is a company or another legal entity, a question arises as to which of the persons acting on the behalf of the company will be considered "carrier" in this context. See thus *The Ocean Liberty* (1952), 1952 AMC 1681, [1953] 1 Lloyd's Rep. 38 at 51-52 (4. Cir.), where Soper J. (dissenting) wanted to deprive the carrier of the fire defence because the managing agent of the carrier had instructed the stevedores on the method of stowage. Similarly, in *Waterman Steamship Co.* v. *Virginia Chemicals Inc.* (1987), 1988 AMC 2681 at 2688 (S.D. Ala.) the actual fault of the managing officers of the carrier company in planning and leading the stow was equated with the fault of the carrier.

291 See Lloyd's of London Press Ltd., *A Guide to the Hague and Hague/Visby Rules* (London, Eng.: Lloyd's of London Press Ltd., 1985) at 30 and W. Tetley, *Marine Cargo Claims*, *supra* note 45 at 432.

should be noted that the courts around the world have differed in their opinions of what circumstances qualify as a peril of the sea.[292]

Fouls weather is the most commonly argued peril of the sea. It is also the one which would most easily exonerate the carrier from liability for poor stowage.[293] Not just any bad weather will qualify as a peril of the sea. The carrier is not excused if the weather is no worse than could be expected in the specific area at that time of year.[294] Courts have demonstrated a willingness to find the existence of a peril of the sea if the bad weather resulted not only in cargo damage but also structural damage to the ship.[295]

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[292] See the discussion in *Great China Metal Industries Co.* v. *Malaysian International Shipping Corp.* (1993), [1994] 1 Lloyd's Rep. 455 at 469 (S.C.N.S.W.)which concludes that Canadian and U.S. courts have adopted more stringent interpretations of "perils of the sea" than Australian courts. The court states at 470 that bad weather may qualify as a peril of the sea even though it could be reasonably anticipated as long as the manner in which the weather caused damage could not be expected. In contrast, *Tuxpan Lim. Procs.*, 1991 AMC 2432 (S.D.N.Y.) held that winds up to hurricane force in mid-winter in the North Atlantic did not qualify as a peril of the sea as they could reasonable be expected.

[293] See e.g. *Højesteret*, 1983 UfR 906. A helicopter packed in a special box, placed between two containers and stowed on deck, was destroyed when the containers broke loose during a storm. The court considered that the loss was not caused by poor stowage but was due to the unforeseeably bad weather.

[294] See thus *The Friso*, [1980] Lloyd's Rep. 469 at 472 (Adm. Ct.) were the court stated:

> "At the time when Friso took a list to port the weather was bad, but it was not unusually bad. It was just the sort of weather which any mariner would expect to encounter in the Bay of Biscay during the month of November. In truth the real cause of the damage and loss suffered by the cargo-owners was not the weather but the fact that Frisco took an unusually heavy list to port."

In any event, the carrier could not have relied upon the peril of the sea exception since the court found the damage to have been caused by unseaworthiness at departure due to poor lashing of the cargo and/or slack double bottom tanks.

In *Bernhard Blumenfeld K.G.* v. *Sheaf Steam Shipping Co.* (1938), 62 Ll. L. Rep. 175, on the other hand, the court rejected an allegation of unseaworthiness due to poor stowage. It was held that the cause of damage was a peril of the sea since the weather was so bad that a seaworthy vessel would also have been wrecked.

[295] See e.g. *Quigley Co.* v. *Safir*, 1990 AMC 2104 (S.D.Tex.).

Unusual weather may also constitute a peril of the sea even if neither wind nor rough seas are involved. For example, unseasonably warm weather may amount to a peril of the sea exonerating the carrier from liability for rust damage caused by moisture.[296]

b. Inherent vice - art. 4(2)(m)

The carrier is not responsible for loss caused by:

> "Wastage in bulk or weight or any other loss or damage arising from inherent defect, quality or vice of the goods."

The exception in art. 4(2)(m) encompasses normal deterioration as well as damage caused by inherent defects in the goods.[297] The carrier is generally expected to know the character of the goods and provide such care as the goods require. The carrier can rely on art. 4(2)(m) only if he properly dealt with the goods according to the information he was reasonably expected to possess regarding their nature.[298] However, if the goods have special characteristics

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296 *Franco Steel Corp.* v. *Fednav Ltd.* (1990), 37 F.T.R. 184 (F.C.T.D.).

297 *Vana Trading Co.* v. *S.S. Mette Skou*, 1977 AMC 702 at 706 (2. Cir.) interpreted art. 4(2)(m) as covering:

> "any existing defects, diseases, decay or the inherent nature of the commodity which will cause it to deteriorate with a lapse of time".

298 *Produits Alimentaires Grandma Ltée.* v. *Zim Israel Navigation Co. et al.*(1988), 86 N.R. 39 (F.C.A.D.). A cargo of pepper arrived in Halifax damaged by moisture. The court held that the carrier had failed to prove damage caused by inherent vice (insufficient drying before shipment). It concluded instead that the carrier had breached his duty to inform himself as to the characteristics of the cargo and afford the stowage required. See also *The Continental Shipper*, [1976] 1 Lloyd's Rep. 482 at 486 (F.C.T.D.),upheld by the Court of Appeal, where uncrated automobiles were held to be a usual cargo that required no special attention. The carrier could therefore not rely on the exception of "inherent vice" to excuse his improper stowage.

known of it and must take it into account when deciding how to stow the cargo.[301]

The same applies if the packaging method is apparent to the carrier[302] or has been communicated to him. It has even been suggested that with respect to goods which are insufficiently packaged *per se*, the carrier cannot rely on the defence if he is aware of the deficient packaging but nevertheless stows in the customary manner without taking any special precautions.[303]

d. Insufficient marking - art. 4(2)(o)

Closely related to insufficient packaging is the defence of insufficient marking of the goods. Special handling and stowage requirements are often indicated on the package itself. Insufficient marking will thus represent a failure to communicate to the carrier the need for special precautions.[304]

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301 See *The Continental Shipper*, [1976] 2 Lloyd's Rep. 234 at 236 (F.C.A.D.) where the practice of shipping automobiles uncrated was considered a customary way of packaging of which the carrier should have knowledge. He could therefore not rely upon the insufficiency of packing defence, and was held to have stowed improperly. See also *Continex Inc.* v. *S.S. Flying Independent*, 1952 AMC 1499 at 1503 (S.D.N.Y.); *Vana Trading Co.* v. *S.S. Mette Skou*, 1977 AMC 702 at 707 (2. Cir.).

302 The carrier can thus be exonerated if the goods are improperly packaged inside a container.

303 See *Bruck Mills Ltd.* v. *Black Sea Steamship Co.*, [1973] F.C. 387, 2 Lloyd's Rep. 531 at 533 (T.D.). See also *Canastrand Industries Ltd.* v. *Lara S*, [1993] 2 F.C. 553 (T.D.) where the court mentioned the proposition but declined to decide on its validity. Lloyd's of London Press Ltd., *A Guide to the Hague and Hague/Visby Rules* (London, Eng.: Lloyd's of London Press Ltd., 1985) at 33. To the contrary, see W. Tetley, *Marine Cargo Claims*, *supra* note 45 at 496.

304 In *Tenneco Resins* v. *Davy International*, 1990 AMC 402 (5. Cir.) the court relieved the carrier from liability for water damage to chemical cargo packed in steel drums because the drums had not been marked with an umbrella symbol warning that they were not waterproof. Similarly in *Tenneco Resins* v. *Atl. Cargo Services*, 1988 AMC 2559 (S.D.Tex.).

e. Act or omission of the shipper

According to art. 4(2)(i) the carrier may also escape liability if he proves that the damage is caused by the:

> "Act or omission of the shipper or owner of the goods, his agent or representative."

This defence encompasses the exonerating causes of insufficient packaging, insufficient marking, and inherent vice but goes further: If the shipper has agreed to stow the goods on the ship himself, the carrier will be exonerated if the damage is caused by shipper's bad stowage.[305] Art. 4(2)(i) also provides the carrier with a defence against the shipper's improper stowage inside the containers. It should be noted that the carrier may not avail himself of the defence if the shipper's poor stowage amounts to unseaworthiness.

3. Shippers Responsibility for Dangerous Goods - art. 4(6)

Closely related to art. 4(2)(i) regarding the shipper's acts and omissions is the special provision on dangerous goods found in art. 4(6). This may be used both to hold the shipper liable for damage caused by the dangerous nature of the goods and as a carrier's defence against allegations of improper stowage.[306]

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[305] It is submitted that the carrier is responsible for proper stowage even when it is the shipper who performs the stowage and that any agreement between shipper and carrier to the contrary will be void under art. 3(8). A correct application of the Rules will therefore be to exonerate the carrier for damages caused by the shipper's improper stowage under art. 4(2)(i), and not shift the risk from the carrier to the shipper due to a contractual stipulation on stowage. See *Associated Metals* v. *M/V Arktis Sky*, 1993 AMC 509 at 511 (2. Cir.).

[306] Whether art. 4(6) may also be used as a defence against third party claims (e.g. other cargo owners, passengers and crew) will depend on the national law of torts/delict. W. Tetley, *Marine Cargo Claims*, *supra* note 45 at 462.

Art. 4(6) reads:

> "Goods of an inflammable, explosive or dangerous nature to the shipment whereof the carrier, master or agent of the carrier has not consented with knowledge of their nature and character, may at any time before discharge be landed at any place, or destroyed or rendered innocuous by the carrier without compensation and the shipper of such goods shall be liable for all damages and expenses directly or indirectly arising out of or resulting from such shipment. If any such goods shipped with such knowledge and consent shall become a danger to the ship or cargo, they may in like manner be landed at any place or destroyed or rendered innocuous by the carrier without any liability on the part of the carrier except to general average, if any."

The provision deals both with cases where the carrier knowingly accepted to carry dangerous goods and cases where he was not aware of the cargo's dangerous qualities.

If the carrier was not aware of the dangerous nature of the cargo, he may rely on art. 4(6) either as a defence or as a basis to claim compensation for damage caused by the goods. The carrier also has the right to destroy the goods without incurring liability towards the shipper.

If on the other hand, the carrier has consented to transport the dangerous goods with full knowledge of their character, he may not exculpate himself under art. 4(6) for damage caused by his disregard of their dangerous nature when stowing.[307] He may still destroy the goods if a dangerous situation has arisen without having to compensating the shipper directly; he need only contribute his share of general average expenses.

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307 When the carrier has accepted to transport of dangerous goods, he undertakes to carry such goods safely, see *Veerbeeck* v. *Black Diamond Steamship (the Black Gull)*, 1960 AMC 163 at 166 (2. Cir.); *Waterman Steamship Co.* v. *Virginia Chemicals Inc.* (1987), 1988 AMC 2681 at 2688-2689 (S.D. Ala.). On the other hand, the shipper may be held liable for his negligence under art. 4(3) even if the carrier agreed to carry dangerous goods. See *Polskie Line Oceanicze* v. *Hooker Chemical Corp.*, 1980 AMC 1748 (S.D.N.Y.) where the shipowner sued the shipper of a cargo of sulphur dichloride for damages. Although the carrier knew the goods were dangerous, the court held the shipper liable because the damages were caused by the shipper's negligent stowage inside the container.

a. What are dangerous goods under art. 4(6) ?

As the provision applies to "[g]oods of an inflammable, explosive or dangerous nature", an *ejusdem generis* interpretation of "dangerous" could be applied. However, the scope of art. 4(6) ought not to be limited to the kinds of dangerous goods explicitly listed since cargo may prove to be dangerous in other ways. It is preferable to use a purposive interpretation which would encompass all goods which may create a special danger to the safety of the ship or its surroundings because of their characteristics. Thus, substances which may liquify and thereby endanger the safety of the ship would be included in such a broader interpretation.[308]

b. Shipper's liability

The shipper will be held liable for damages if his failure to warn the carrier of the dangerous quality of the goods causes the carrier to load and stow without particular precautions and damage results.[309]

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308 See *Sucrest Corp.* v. *M/V Jennifer*, 455 F. Supp. 371, 1978 AMC 2520 (N.D.Me.).

309 *Heath Steel Mines Ltd.* v. *The Erwin Schroder*, [1970] Ex. C.R. 426. The ship was a dry cargo vessel which carried a load of wet copper concentrate. During the voyage, the concentrate liquified, causing the vessel to list heavily to port. The shifting boards that had been installed to prevent the cargo from shifting had been approved by the Port Warden but were not rigid enough and did not fulfil the requirements from the Department of Transport. The court nevertheless relieved the carrier from any liability since he neither knew nor should have known the dangerous qualities of the cargo in light of "expert knowledge" at the time.

In an arbitration case, *Kapetan Antonis* (1988), 1989 AMC 551 (Arb.N.Y.), the panel held the shipper liable for damages to the ship arising from a fire caused by dangerous cargo. The shipper was considered to have been in breach of his duty to provide a "safe cargo" when he delivered metal turnings which in preceding months had degraded by exposure to rain.

On the other hand, it is clear that the shipper will not be held liable for his failure to warn the carrier if the carrier was actually aware of the danger and nevertheless stowed improperly.[310] The same applies where the dangerous quality of the goods is well known or apparent so that the carrier cannot plead ignorance as an excuse.[311] The carrier is expected, to some extent, to inquire about the characteristics of the goods he is about to load in order to fulfil his duties as to proper stowage and exercise due diligence to make the ship seaworthy.[312] However, the shipper will not be excused if the carrier knows the *general* characteristics of the cargo, but the shipper fails to inform him of the particular consignment's special characteristics which require extra precautions.

c. Is the shipper strictly liable?

Art. 4(3) reads:

> "The shipper shall not be responsible for loss or damage sustained by the carrier or the ship arising or resulting from any cause without the act, fault or neglect of the shipper, his agents or his servants"

Despite its negative formulation, art. 4(3) contains the general rule of the shipper's liability. The shipper will be held liable only if he has acted *negligently*. If art. 4(6) is read in conjunction with art. 4(3) liability would attach only when there was negligence and art. 4(6) would have no independent significance in defining the shipper's liability. In light of this, it is probably most reasonable to

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310 See e.g. *Skibs A/S Gylfe* v. *Hyman-Michaels Co.*, 1971 AMC 2070 (6. Cir.).

311 *The Mahia* (1954), [1955] 1 Lloyd's Rep. 264 at 267 (Sup. Ct. of Montreal).

312 U.S. courts tend not to hold the shipper liable unless he has *negligently* failed to warn the carrier of the dangerous nature of the goods. British courts rely more heavily on the notion of the shipper's implied warranty of safety and require less from the carrier in terms of keeping himself informed. See L.C. Bulow, "'Dangerous' cargoes: the responsibilities and liabilities of the various parties." (1989) Lloyd's Maritime and Commercial L. Quart. 342 at 361.

read art. 4(6) as an exception to art. 4(3) so the shipper can be held *strictly* liable for the damage caused by his dangerous goods. The shipper's negligence or lack thereof in failing to warn will be irrelevant.[313] He can be held liable even if neither the carrier nor the shipper could be expected to know the dangerous character of the cargo.[314] It should be noted that not all countries have imposed strict liability on the shipper.[315]

The carrier can rebut his prima facie liability by proving that he did not consent to the carriage of dangerous goods and that he was not in breach of his duty to stow properly and make the ship seaworthy.

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313 Scandinavian law has imposed a statutory duty on the shipper to warn of the dangerous properties of his goods, *Norwegian Maritime Code* § 92. However, breach of this duty is not automatically sanctioned with liability for the shipper. Instead, § 97(2) provides that the shipper may be held strictly liable for damages caused by the loading of dangerous goods without the carrier's knowledge.

314 See *Mediterranean Freight Services Ltd.* v. *BP Oil Intl. Ltd. (The Fiona)*, [1993] 1 Lloyd's Rep. 257 at 273, 284 (Comm. Ct.) where an explosion was caused by a cargo of fuel oil. At the time, the dangerous quality of this cargo was little known. Diamond, Q.C., stated that "the carrier's right to an indemnity does not involve any enquiry as to whether the shipper had knowledge of the dangerous nature and character of the goods or was at fault in permitting their shipment or in not warning the carrier before shipment of the dangerous nature or character of the goods". Nevertheless, the carrier in this case was held liable because he had otherwise breached his overriding obligation to exercise due diligence in making the ship seaworthy. See also *The Ocean Liberty* (1952), 1952 AMC 1681, [1953] 1 Lloyd's Rep. 38 (4. Cir.) where the cargo claimants could not recover even though the dangerous character of the cargo was unknown at the time. However, the carrier exonerated himself under the fire exception, art. 4(2)(b), and not art. 4(6).

315 In the U.S., courts will not hold the shipper liable unless there was negligence on his part. See, for example, *Sucrest Corp.* v. *M/V Jennifer*, 455 F. Supp. 371, 1978 AMC 2520 (N.D.Me.) where the danger of raw sugar liquifying was unforeseeable by both the carrier and the shipper. Cargo's claim against the carrier therefore failed as did the carrier's counterclaim against cargo.

d. Dangerous goods and seaworthiness

Some legal writers believe that the carrier can invoke the special provision on dangerous cargo in art. 4(6) to exculpate himself even when he has breached his seaworthiness duties.[316]

This author disagrees. The qualifying phrase of art. 3(2), ("Subject to the provisions of Article 4..."),which has caused seaworthiness to be interpreted as an overriding obligation,[317] refers generally to art. 4; it does not limit itself to art. 4(2). Moreover, it is logically inconsistent to preserve the carrier's right to exonerate himself under the dangerous goods defence while other defenses, such as that of insufficiency in packing, is lost. Such an interpretation is further supported by a recent English decision which clearly held that art. 4(6) is subject to the overriding obligation to exercise due diligence in making the ship seaworthy.[318] Although the shipper's failure to properly warn the carrier of the cargo's dangerous properties contributed to the cause of the damage, the carrier

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316 See *Scrutton on Charterparties*, 19th ed. (London, Eng.: Sweet & Maxwell, 1984) at 457, where it is presumed that the carrier's defence under art. 4(6) remains unaffected by a failure to comply with the art. 3(1) seaworthiness duties.

317 *Maxine Footwear Co.* v. *Canadian Government Merchant Marine Ltd.*, [1959] A.C. 589, [1959] 2 Lloyd's Rep. 105 at 113 (P.C.).

318 See *Mediterranean Freight Services Ltd.* v. *BP Oil Intl. Ltd. (The Fiona)*, [1993] 1 Lloyd's Rep. 257 at 286 (Comm. Ct.), Diamond J. :

> "It would be wholly contrary to the scheme of the rules and likewise inconsistent with equity and commercial common sense that a carrier should be entitled to destroy dangerous goods without compensation and without liability except to general average if the cause of the goods having to be destroyed was a breach by the carrier of his obligations as to seaworthiness. The exceptions in art. IV, r. 6. are clearly in my judgement subject to the performance by the carrier of his overriding obligation set out in art. III, r. 1. So also in my judgement is the right to an indemnity conferred by the first paragraph of the rule.
>
> For these reasons I conclude that it constitutes a defence to a claim made by a carrier under art. IV, r. 6 that the relevant damages and expenses were incurred through a breach by the carrier of his overriding obligation under art. III, r. 1 to exercise due diligence to make the ship seaworthy."

was held liable for the whole loss because he did not exercise due diligence to make the ship seaworthy.

IV. THE CARRIER'S STOWAGE RESPONSIBILITIES UNDER THE HAMBURG RULES

The Hamburg Rules[319] entered into force on November, 1 1992 as a third alternative to the international regime for the carriage of goods by sea. So far, the Hamburg Rules are in force in only a minority of states with small merchant fleets. Jurisprudence on point has therefore been sparse and will not be considered here.

A. General Responsibility for Stowage

The Hamburg Rules contain no specific provisions on stowage. The relevant portions of the Hague and Hague Visby Rules have been replaced art. 5(1), a general presumption of the carrier's fault or negligence:[320]

> "The carrier is liable for loss resulting from loss or damage to the goods, as well as from the delay in delivery, if the occurrence which caused the loss, damage or delay took place while the goods were in his charge as defined in art. 4, *unless the carrier proves that he , his servants and agents took all measures that could reasonably be required to avoid the occurrence and its consequences*." [Emphasis added].

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[319] *United Nations Convention on the Carriage of Goods by Sea*, 1978.

[320] See also Annex II of the Rules.

1. The burden of proof is on the carrier

Art. 5(1) clearly places the onus on the carrier to exculpate himself if the damage occurred while the goods were in his custody. A clean bill of lading and damaged goods upon discharge constitute *prima facie* evidence that the damage occurred in his hands. In this respect, the Hamburg Rules are similar to the Hague and Hague/Visby Rules. Unlike the latter, the burden of proof remains entirely with the carrier until he has exculpated himself.

In order to avoid liability, the carrier must prove that he took all reasonable measures when stowing to ensure the safe carriage of goods. This need only be demonstrated with respect to the cause the loss - he does not have to show an absence of fault in every respect.

2. The standard of duty as to stowage

a. A uniform standard of liability

"[A]ll measures that could be reasonably required" includes precautions both to the ship's sea-and-cargoworthiness and to proper stowage per se. Since the Hamburg Rules do not refer independently to seaworthiness, it is not necessary to operate with a distinction between initial bad stowage which may amount to unseaworthiness and bad stowage which does not. A uniform test of liability applies to all types damage regardless of which act or omission they arise from.

b. Stowage Duties

The assessment of what constitutes proper stowage under art. 5(1) of the Hamburg Rules depends on special circumstances as well as established stowage

norms. The factors be considered in determining whether the carrier has fulfilled his stowage duties under Hamburg Rules are therefore identical to those examined under the Hague and Hague/Visby Rules.

3. Defences under the Hamburg Rules

The long and complicated list of exculpating causes in the Hague and Hague/Visby Rules has been dropped in the Hamburg Rules. The carrier has been granted a more limited set of defences.

1) He is not liable for damages arising from "any special risks inherent in" the carriage of live animals.[321]

2) If the damage is caused by fire, the burden of proof shifts to the cargo claimant to prove neglect on the part of the carrier.[322] The cargo claimant may require that a survey is performed in order to help him make his proof.[323]

Unlike under the Hague and Hague/Visby Rules,[324] the carrier may not raise the fault of someone within his control as a defence to his own liability. Instead the carrier's defences will flow from the main liability scheme: if the occurrence which caused the damages could not reasonably be avoided, the carrier will not be held liable. The carrier may thus continue to argue peril of the sea, inherent vice

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321 Hamburg Rules art. 5(5).

322 Art. 5(4)(a)(i).

323 Art. 5(4)(b).

324 Eg. art. 4(2)(a) of the Hague and Hague/Visby Rules.

and insufficient packaging defences as he could under the previous Rules. The evaluation will presumably be the same.

It is noteworthy that art. 5(7) of the Hamburg Rules provides an explicit rule regarding contributory causes - the carrier may avoid liability to the extent to which he can prove the amount of damage not attributable to his own or his servants' fault or neglect.

4. Stowage on deck

The Hamburg Rules deal with deck carriage[325] more specifically than did the Hague and Hague/Visby Rules. Unlike the latter, the Hamburg Rules apply mandatorily to deck carriage even when it has been explicitly agreed in the bill of lading.[326]

The carrier is still not entitled to stow the goods on deck unless warranted by a specific agreement with the shipper, trade usage or regulations.[327] If the shipper's consent to deck carriage does not appear on the bill of lading, the carrier will have the burden of proving the agreement with the shipper and may not rely on it against a transferee of the bill of lading.[328] Where the carrier argues that deck stowage of the consignment is customary in the trade,[329] he must show that the practice is "so general and universal in the trade, and in the

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325 Hamburg Rules art. 9.

326 Arts. 1(5) and 9 read in together.

327 Art. 9(1).

328 Art. 9(2).

329 In this approach, it is irrelevant whether the shipper implicitly consented to deck carriage.

particular port from which the goods were taken, that everyone shipping goods there must be taken to know that other people's goods, if not his goods, might probably be stowed on deck".[330] The goods may also be stowed on deck if required by public regulations.[331]

The consequences of unjustified deck stowage may be severe. Not only will the carrier be liable for any damages resulting from deck carriage,[332] but he will also lose the right to limit his liability if the deck carriage was contrary to an express agreement[333] or if it amounts to serious misconduct. Proving serious misconduct can be very difficult: the cargo claimant must show that the carrier either intentionally caused the damage by stowing the goods on deck or at least did so "recklessly and with knowledge" that the specific damage would probably result.[334] Thus in practice, the carrier will more often be held liable for breaching an explicit agreement to carry under deck.

B. Shipper's responsibilities under the Hamburg Rules

Art. 13 of the Hamburg Rules deals with the shipper's responsibility for dangerous goods very much like art. 4(6) of the Hague and Hague/Visby Rules. The difference under the Hamburg Rules is that an explicit duty is imposed on the shipper to warn the carrier about the dangerous character of his goods and to

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330 *Newall* v. *Royal Exchange Shipping* (1885), 1 T.L.R. 178. This century-old definition of customary deck stowage continues to be valid today.

331 See e.g. IMDG Code which requires that Hafnium (a black amorphous powder) be carried on deck due to its dangerous properties. Regulations in the IMDG are often made mandatory in national law.

332 Art. 9(3).

333 Art. 9(4). This is similar to national doctrines of fundamental breach and quasi-deviation under the Hague and Hague/Visby Rules.

334 Arts. 9(3) and 8(1).

properly mark or label the dangerous goods. It seems that, also under the Hamburg Rules, the shipper may be held liable for damages in the rare case were neither the carrier nor the shipper knew of the dangerous character of the goods.[335]

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[335] It appears that the general rule in art. 12 which requires negligence on the part of the shipper in order to hold him liable, does not apply to art. 13, so that art. 13 represents an exception to art. 12. This is supported by the titles of the two provisions.

V. COMPARATIVE EVALUATION OF STOWAGE UNDER THE HAGUE, HAGUE/VISBY AND HAMBURG RULES

The Hamburg Rules have greatly simplified the system of liability created in the Hague and Hague/Visby Rules. The subtle distinction between due diligence to make the ship seaworthy and the duty to properly and carefully stow and care for the goods has been removed. Gone is also the long list of specific exceptions, replaced by a single scheme that holds the carrier liable unless he can prove that he took all steps which could reasonably be required to avoid the damage.

Under the Hague and Hague/Visby Rules, the carrier can not raise any of the exceptions from liability if he has failed to exercise due diligence in performing a seaworthy stowage. This rule has also been excluded from the Hamburg Rules. Nevertheless, the carrier's duties in this context are not lessened - in order to take all precautions which could reasonably be expected, the carrier must have also, *de facto*, exercised due diligence in making the ship seaworthy with respect to the cause of the damage.

Despite the similarities, the Hamburg Rules impose stricter stowage responsibilities on the carrier in two respects:

1) The onus remains on the carrier to exonerate himself if a *prima facie* case has been established. Under the Hague and Hague/Visby Rules, the burden may shift to the cargo claimant to prove negligence on the part of the carrier if the carrier has established an applicable exception of liability.

2) The carrier may not be excused for the negligence of his servants and agents as he sometimes can be under the Hague and Hague/Visby Rules.[336]

[336] In the Hague and Hague/Visby Rules, arts. 4(2)(a)-(b), the carrier may be exonerated for the negligence of his servants and agents when the fault was an error in management rather than a failure to care for the cargo.

PUBLIC LAW STANDARDS IN THE PRIVATE SPHERE?

I. STOWAGE AND INTERNATIONAL SAFETY REGULATIONS

Stowage regulations can be found in a number of international instruments dealing with pollution and the safe transport of dangerous goods. The most significant of these is the *International Maritime Dangerous Goods Code* (IMDG Code)[337] and SOLAS 1974.[338] Also noteworthy are: MARPOL 73/78,[339] the *Code of Safe Practice for Solid Bulk Cargoes* (BC Code)[340] and the Load Line Convention.[341]

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337 *The International Maritime Dangerous Goods Code*, 27 September 1965, IMO Res A. 81. The Code has been amended numerous times since its adoption. The latest consolidated edition dates from 1990 and consists of four loose-leaf and one supplemental volume.

338 *International Convention for the Safety of Life at Sea*, 1 November 1974, 1184 U.N.T.S.2, with *Protocol*, 17 February 1978, 32 U.S.T. 5577.

339 *International Convention for the Prevention of Pollution from Ships*, 2 November 1973, IMO Doc. 520.77.14.E.with *Protocol*, 17 February 1978, IMO Doc. 088.78.09.E. MARPOL 73/78 entered into force on 2 October 1983. See the optional (i.e. subject to separate ratification) Annex III, Regulation 5 which provides:

> "Harmful substances shall be both properly stowed and secured so as to minimize the hazards to the marine environment without impairing the safety of the ship and persons aboard."

Moreover, Regulation 1(3) requires that Governments supplement the Annex with detailed regulations on, *inter alia*, stowage.

340 1983, IMO Doc. 254.81.E. The BC Code can be found in the supplemental volume of the IMDG Code. See *supra* note 337. The BC Code contains detailed rules on stowage of solid bulk cargoes excluding grain which is subject to separate regulation under SOLAS 1974, Chapter VI.

341 *International Convention on Load Lines*, 5 April 1966. The convention regulate minimum free-board on ship to prevent overloading of cargo, and also contains provisions regarding the stability and structural strength of the ship. Specific stowage requirements for timber are provided in its Annex I, Regulation 44. See thus para. 4 which states:

> "The timber deck cargo shall be compactly stowed, lashed and secured. It shall not interfere in any way with the navigation and necessary work if the ship."

A. SOLAS 1974

The safety of life at sea has been the subject of several conventions since 1914.[342] SOLAS 1974 entered into force on 25 May 1980 and applies to nearly 100% of the world's merchant fleet.[343] The convention regulates many aspects of safety at sea, such as navigation and safety equipment. In relation to stowage, the most important provisions are those dealing with the carriage of dangerous goods.[344]

Ch. VII, Regulation 6 of SOLAS 1974, sets out general stowage requirements for the carriage of dangerous goods:

> Stowage Requirements
> (a) Dangerous goods shall be stowed safely and appropriately according to the nature of the goods. Incompatible goods shall be segregated from one another.
> (b) Explosives (except ammunition) which present a serious risk shall be stowed in a magazine which shall be kept securely closed while at sea. Such explosives shall be segregated from detonators. Electrical apparatus and cables in any compartment in which explosives are carried shall be designed and used so as to minimize the risk of fire or explosion.
> (c) Goods which give off dangerous vapours shall be stowed in a well ventilated space or on deck.
> (d) In ships carrying inflammable liquids or gases special precautions shall be taken where necessary against fire or explosion.
> (e) Substances which are liable to spontaneous heating or combustion shall not be carried unless adequate precautions have been taken to prevent the outbreak of fire.

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342 SOLAS 1914 has never entered into force, partly due to the outbreak of World War I. However, the convention was largely used as a model for SOLAS 1929, which in turn was succeeded by SOLAS 1948 and SOLAS 1960. See International Maritime Organization, "The Safe Transport of Dangerous, Hazardous and Harmful Cargoes by Sea" (1990) 25 European Transport Law 747 at 747-748.

343 *Ibid.* at 749.

344 It should also be noted that SOLAS 1974 set out requirements in Chapter VI regarding the loading and trimming of grain cargo. For instance, Regulation 3 provides that:

> "All necessary and reasonable trimming shall be performed to level all free grain surfaces and to minimize the effect of grain shifting."

Chapter VII of SOLAS 1974 applies mandatorily[345] and contains general rules regarding the packaging[346] and marking[347] dangerous goods. It also provides that the contracting states are to later issue detailed instructions on safe packaging and stowing.[348]

B. The IMDG Code

The IMDG Code was adopted by the International Maritime Organization[349] and is thus not a treaty instrument *per se*. Its main purpose is to provide a uniform alternative to the regulations issued by governments, (like under SOLAS 1974), pursuant to SOLAS 1960.[350] The Code contains many detailed, technical regulations which partly elaborate and partly supplement the duties imposed by SOLAS 1974.

Because the IMDG Code does not constitute an integral part of SOLAS 1974, contracting states are under no obligation to adopt the code. Today, the IMDG Code is applied in more than 50 states representing approximately 83% of the

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345 Regulation 1(c).

346 Regulation 3.

347 Regulation 4.

348 See Regulation 1(d).

349 The International Maritime Organization is a specialized agency of the United Nations and the UN's main body on maritime matters, see *Convention on the International Maritime Organization*, 6 March 1948, IMO Doc. 019.81.11.E.art. 59. Until 1982, the organization was called the Inter-Governmental Maritime Consultative Organization (IMCO).

350 See C.E. Henry, *The Carriage of Dangerous Goods by Sea: The Role of the International Maritime Organization in International Legislation* (London, Eng.: Frances Pinter Ltd., 1985) at 125.

world's gross tonnage.[351] The different implementation methods chosen by the states has resulted in the Code applying mandatory in some states and merely as a recommendation in others. [352]

II. CAN PUBLIC LAW STOWAGE REGULATIONS DEFINE CONTRACTUAL DUTIES ?

A. Attitudes in jurisprudence

International public law stowage requirements which address safety and environmental concerns are often considered by courts when evaluating private law stowage duties. However, the legal significance of public regulations in the private law context is not altogether clear.

1. Cases on non-compliance

Louisiana v. *M/V Testbank*[353] is a case which illustrates this uncertainty. A collision between the *M/V Testbank* and another vessel caused a chemical spill of PCP in the Mississippi Gulf River Outlet. A series of claims arose, *inter alia*, for cargo damage and clean up costs. One of issues presented was whether failure

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351 H. Wardelmann, "Transport by Sea of Dangerous, Hazardous, Harmful and Waste Cargoes", *supra* note 1 at 119.

352 For example, Australia has incorporated the IMDG Code into national law by reference and has thus made it mandatory as a statutory provision. The United States, on the other hand, partly restates the IMDG Code in regulations by the Department of Transport and partly allows compliance with the IMDG Code as an alternative to national regulations on dangerous goods. See C.E. Henry, *The Carriage of Dangerous Goods by Sea: The Role of the International Maritime Organization in International Legislation*, *supra* note 350 at 132.

353 1984 AMC 112 (E.D.La).

stow according to the IMDG Code regulations was a violation of a standard imposed by law or whether the IMDG Code had a purely recommendatory effect.

The Code defined PCP as a hazardous material to which special stowage and packaging requirements applied. At the time of the collision, the U.S. Coast Guard had not yet implemented the relevant part of the IMDG Code. The court held that the Code did not apply mandatorily to substances which were not (yet) regulated by federal law. However, it expressed "no opinion" as to whether non-mandatory regulations could be considered to establish a standard of conduct for trade purposes.

The court found that the method of stowage used complied with the Code but that the packaging of the PCP did not. Since the damage in this case was not caused by the non-conforming packaging, the court refrained from deciding whether a violation of the IMDG Code packaging requirements represented a breach of a private law duty.

Some judgements have concluded that the IMDG Code and other IMO regulations are merely recommendations but that a failure to conform with such recommendations can amount to a breach of a private law duty.
In considering whether the vessel was unseaworthy because of instability when she left port, the court in *The Friso*[354], commented on the stability tests developed by the IMO:

> "There is no absolute standard by which [the vessels] stability characteristics can be judged. The recommendations of [IMO] are a useful guide."[355]

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354 [1980] Lloyd's Rep. 469 (Adm. Ct.).

355 *Ibid.* at 474.

However, the court went on to hold that the failure to comply with IMO recommendations on the calculation of a vessel's stability constituted a failure to exercise due in making the ship seaworthy.[356]

2. Compliance with public law standards

Compliance with public law stowage requirements will often be enough to fulfil a private law duty. In *Standard Commercia* v. *Recife*[357] the court held that the carrier's stowage of a container of calcium hypochlorite on the top outer tier was proper because it complied with the IMDG Code. However, the court used compliance with customary stowage as an additional reason for accepting the stowage method.

On the other hand, courts occasionally find that compliance with a public law requirement is not enough to discharge a duty under the contract of carriage. This view appears in *Great China Metal Industries Co.* v. *Malaysian International Shipping Corp.*,[358] where it was clear that the carrier fulfilled the IMO load-line requirements for stability. The court nevertheless went on to consider other factors, such as the standard customarily used by the carrier. The court did not actually state that the IMO standard was too low, but the discussion seems to indicate that this might be the case.

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356 *Ibid.* at 476.

357 1994 AMC 1208 (S.D.N.Y.).

358 (1993), [1994] 1 Lloyd's Rep. 455 at 463 (S.C.N.S.W.).

B. Arguments for Transposing Public Law Requirements to the Private Sphere

The international stowage regulations found in SOLAS 1974 and the IMDG Code were adopted with the primary objective of protecting human lives not cargo. Nevertheless, courts ought to consider such public law requirements as a point of departure in ascertaining the appropriate standard for stowage in the private law context for the following reasons:

1) International public law stowage requirements, particularly those found in SOLAS 1974 and the IMDG Code, represent uniform standards on proper stowage. The application of such standards to contractual matters would aid in promote uniformity in the private law sphere.

2) Public law regulations on stowage methods are often specific and detailed. Transposed to the private law sphere, these rules would clarify the content of the duty under the contract of carriage, promote predictability and prevent litigation.

3) The great risk to which dangerous goods exposes not only the hull and cargo but also human lives and the environment, justifies a broader approach to what standards should prevail in a otherwise strictly private law context.

4) If public regulations require particular stowage methods, such stowage will presumably become customary in the trade.

CONCLUSION

It is clear that the carrier has the primary responsibility for stowage under the Hague, Hague/Visby and the Hamburg Rules. He cannot employ contractual stipulations to escape this responsibility or liability for cargo damage caused by improper stowage. However, the carrier's liability depends not only on his own acts, but will vary with the shipper's performance of his duties with respect to packaging, stowage inside containers and communication to the carrier of the special characteristics of the goods. Responsibility is divided particularly in relation to dangerous goods, where the shipper may, in some circumstances, be held liable for damage even when the dangerous character of the goods was uknown to him.

The carrier's stowage duties under the Hague and Hague/Visby Rules are two tiered: He must stow so that he has exercised due diligence to make the ship seaworthy and he must stow properly and carefully. There is no reason to require that bad stowage affect the safety of the ship in order to find that it rendered the ship unseaworthy. Bad stowage can also affect the other aspect of seaworthiness, namely, the fitness to carry the contracted cargo. The pre-Hague Rules conception which distinguished between cargoworthiness and bad stowage is no longer tenable.

As to the content of the duty to stow, whether with respect to seaworthiness or the duty to 'properly and carefully' stow, a separate assessment must be made in each case. The point of departure is usually customary stowage, but this may be modified by special circumstances. Courts often rely on public law stowage requirements if such exist, but are reluctant to hold them definitively binding as to the carrier's stowage responsibilities *qua* shipper.

It seems that the carrier can more easily be held liable for improper stowage under the Hamburg Rules than under the Hague and Hague/Visby Rules. The Hamburg Rules place a heavier burden of proof on the carrier and deprive him of a defence against the fault of his servants.

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