Lloyd's Practical Shipping Guides



INTRODUCTION TO MARINE CARGO MANAGEMENT

Second Edition

Mark Rowbotham

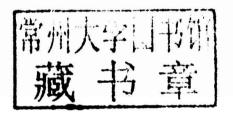
informa law from Routledge

INTRODUCTION TO MARINE CARGO MANAGEMENT

BY

J. MARK ROWBOTHAM

SECOND EDITION



informa law from Routledge

LLOYD'S PRACTICAL SHIPPING GUIDES Series editor: Peter J. McArthur Second edition published 2014 by Informa Law from Routledge 2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

> and by Informa Law from Routledge 711 Third Avenue, New York, NY 10017

Informa Law from Routledge is an imprint of the Taylor & Francis Group, an Informa business

© Mark Rowbotham 2014

First edition published by Informa Law 2008

All rights reserved. No part of this book may be reprinted or reproduced or utilised in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publishers.

While every effort has been made to ensure that the information contained in this book is correct, neither the author nor Informa Law can accept any responsibility for any errors or omissions or for any consequences arising therefrom.

Trademark notice: Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

Lloyd's and the Lloyd's crest are registered trademarks of the society incorporated by the Lloyd's Act 1871 by the name of Lloyd's.

British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

Library of Congress Cataloging-in-Publication Data Rowbotham, J. Mark.

Introduction to marine cargo management/ by J. Mark Rowbotham. – Second edition. pages cm – (Lloyd's practical shipping guides) 1. Cargo handling. I. Title. VK235.R69 2014

VK235.R69 2014 387.5'44–dc23 2013034741

ISBN: 978-0-415-73241-3 (pbk) ISBN: 978-1-31581-401-8 (ebk)

Typeset in Plantin by Florence Production Ltd, Stoodleigh, Devon, UK



Printed and bound in Great Britain by CPI Group (UK) Ltd, Croydon, CR0 4YY

ACKNOWLEDGEMENTS

In writing this book, my grateful thanks go to many people who advised, encouraged and supported me, despite the daunting challenges this project presented.

- To my colleagues Capt. Rodger MacDonald, Bill Oakes and Richard Martin, of CILT, who have mentored me and who sowed many of the seeds in my mind, which became the essence of this book.
- To Captain Russ Garbutt, who spared some of his valuable time to show me the workings of the Port of Hull and P&O Ferries.
- To Geoff Catterick, of CILT, for imparting much of his own wealth of knowledge on the freight forwarding sector.
- To Informa Group, who have shown keen interest in the project from the outset.
- To Lloyd's Maritime Academy, who spurred on my interest in the technical field of maritime operations, and to Lloyd's MIU, who gave me access to their AIS website.
- To HM Revenue & Customs, who, as HM Customs & Excise, taught me much of the profession I know today.
- To the various port authorities and shipping lines, who have kept me supplied with much valuable information.
- To Mike Toogood, formerly of the MCA, who allowed me access to various facilities at CNIS Dover to understand much more about the practice of vessel monitoring and controls.
- To my family ancestors, who, being good seafarers, ensured that sea salt and the love of the sea was already in my blood.
- To my wife, who has greatly inspired and supported me throughout this project, even when I felt short of inspiration.

Specific acknowledgements go to:

- · the Port of Liverpool;
- the Port of Tyne;
- Clydeport;
- · CMA CGM;
- · Warren Pringle at Lloyd's MIU;
- · Ian McConnell at AIS Liverpool; and
- · John Ambler.

And to all those I may have inadvertently missed out or forgotten, a big thank you to all for contributing to my knowledge and providing me with such a wealth of information.

'CARGOES'

Quinquireme of Nineveh from distant Ophir,
Rowing home to haven in sunny Palestine,
With a cargo of ivory,
And apes and peacocks,
Sandalwood, cedarwood and sweet white wine
Stately Spanish Galleon coming from the Isthmus,
Dipping through the Channel by the palm-green shores,
With a cargo of diamonds,
Emeralds, amethysts,
Topazes and cinnamon, and gold moidores.
Dirty British Coaster with a salt-caked smoke stack,
Butting through the Channel in the mad March days,
With a cargo of Tyne coal,
Road-rails, pig-lead,
Firewood, ironware, and cheap tin trays.

John Masefield (1878–1967)

TABLE OF CASES

199/ legal case', I Lloyd's Rep 323 (HL)	272
David T Boyd & Co Ltd v Louis Louca [1973] 1 Lloyd's Rep 209	188
Frebold v Circle Product Ltd [1970] 1 Lloyd's Rep 499	188
Mirabita v Imperial Ottoman Bank [1878] 3 Ex D 164	191
President of India v Metcalfe Shipping Co [1969] 3 All ER 1549	188
Pyrene v Scindia Navigation Co [1954] 2 QB 402	188
Sava Star, The (1995) 2 Lloyd's Rep 134	273

TABLE OF UK LEGISLATION AND INTERNATIONAL LEGISLATION

Bills of Lading Act (1855)	3
Cabotage Act (Nigeria)	3
Carriage of Goods by Sea Act (COGSA, 1971) 53, 139, 160-1,	
164–5, 171–2, 177–8 , 187,	
237, 247, 347–8, 355–6, 398	
Carriage of Goods by Sea Act (1992)	
177, 178–80 , 187, 237,	
347–8, 355–6, 398	
Section 2	
Section 2(1)	
Section 3	
Coastal and Inland Shipping Act (Nigeria)	
Customs & Excise Management Act	10
(C&E Act, CEMA, 1979)	
Sections 19–20	
Sections 27–28	
Section 35	
Section 49	
Section 64	
Section 88	
Section 167(1)	
Data Protection Act	
Financial Services Act (1988)	
Importation and Exportation by Sea Regulations (1981)	
Jones Act (USA, 1920)	
Lloyd's of London Incorporation Act (1871)	
Maritime Cabotage Act (Nigeria, 2003)	
Merchant Shipping Act (1995)	

xiv Table of UK legislation and international legislation

Merchant Shipping Act (2002) 27 Part XII	
9/11 Commission Recommendations Act (USA, 2006)	364
Protection of Military Remains Act (1986)	272
SAFE Port Act (USA, 2006)	364
Sale of Goods Act (1979)	191
Section 32(2)	188
Section 32(3)	188
Statutory Instruments	
SI 1981/1260	
SI 1986/1819	235
Territorial Sea Act (1987)	1
Theft Act	266
Trade Act (USA 2002)	362

TABLE OF CONVENTIONS, DIRECTIVES, REGULATIONS, TREATIES

Athens Convention
Brussels Convention for Unification of Certain Rules with Respect to Assistance and Salvage at Sea (1910) 267, 272 Brussels Protocol (1968)
Code for Construction and Equipment of Ships Carrying Dangerous 95, 96 Continental Shelf Convention (1958) 3 Convention on Contract for International Carriage of Goods 162, 171, 186–7, 348 Article 1 186 Article 2 160, 186 Article 6(f) 247 Article 7 247 Article 10(2) 186 Article 31(1) 186
Convention on International Multimodal Transport of Goods (UNCTAD, 1980)
EC Directives 93/75/EC
Gas Codes

xvi Table of conventions, directives, regulations, treaties

Hague Rules	180–1, 245
Hague-Visby Rules (1968)	-40, 147, 164-5, 177,
	181, 184-5, 237, 248
Article IV	178
Article VI.6	95, 247, 248
Hamburg Rules vide UN Convention on Carriage of Goods	
by Sea (1978)	
ICC/UNCTAD Rules	
Notice 298	167
International Chamber of Commerce (ICC) uniform rules	
International Code for Construction and Equipment of Ships	
Carrying Dangerous Chemicals in Bulk (International Br	ulk
Chemical Code or IBC Code)	95–6 , 97
Chapter 17	97
International Code for Construction and Equipment of Ships	
Carrying Liquefied Gases in Bulk (International Gas Ca	rrier
Code or IGC Code)	96, 121
International Convention on Civil Liability for Oil Pollution	ŕ
Damage	136
International Convention on Liability and Compensation for	
Damage in Connection with Carriage of Hazardous and	
Noxious Substances (HNS) by Sea (1996)	97–8 , 139
International Convention on Oil Pollution Preparedness, Response	onse
and Cooperation (OPRC, 1990–)	98, 136
International Convention for Prevention of Pollution from Ship	
(MARPOL, 1973)	
Annex II (Regulations for Control of Pollution by Noxious	
Liquid Substances in Bulk)	95, 96– 7
Annex II: Regulation 4 Exemptions	97
Annex III	95
International Convention for Prevention of Pollution from Shi	DS:
Protocol of 1978 (MARPOL 73/78)	95, 136
Annex I (in force 1983)	101
Annex II (in force, 1983)	101
Annex II (revised; in force 1987)	101
Annex II (Revised Matters, in force 2007)	101
International Convention on Search and Rescue (SAR, 1970s)) 136
International Maritime Dangerous Goods (IMDG) Code	
(IMO, 1965–)	43, 94, 160, 207, 247
248–50, 254.	257, 296, 301, 302-4
	13, 318, 329, 374, 399
International Maritime Organisation: Code of Safe Practice fo	
Cargo Stowage and Securing (1991–)	25
Annexes 1–13	25
Chapters 1–7	25
Chapter 2	253-

Table	of	conventions,	directives,	regulations,	treaties	xvii
-------	----	--------------	-------------	--------------	----------	------

2.2.2
2.2.3
2.9
Chapter 4
Chapter 4
Section 5 of annex to Resolution A.581(14)
nternational Maritime Organisation Convention (1948;
effective 1958)
nternational Maritime Organisation: Facilitation of International
Maritime Traffic (1965)
314, 318, 326, 383–5 , 392, 399
nternational Mobile Satellite Organisation (IMSO)
International Salvage Convention (1989, effective 1996)
Article 13
Article 14
Article 14(1)
Article 14(2)
Article 14(5)
Article 21(1)
Article 23
International Ship and Port Security (ISPS) Code (2002,
effective 2004–)
262–4, 279–94, 310, 314, 315,
317, 318, 340, 399, 400
Chapter XI–2
Part A
Part B
Regulation XI–2/3
Regulation XI–2/7
International Standards Organisation 38
ISO 28000
343–5, 355, 400
ISO 28001 298, 315–16, 318, 341,
342–3 , 345, 355, 400
Section 3.3
Marine Environment Protection Committee (MEPC) guidelines
(wef 2007–)
(WEL MOOT)
Paris Memorandum of Understanding (Paris MoU, 1982)
Protocol on Preparedness, Response and Co-operation to Pollution
Incidents by Hazardous and Noxious Substances
(HNS Protocol, 2000)
(HNS Protocol, 2000)
Rotterdam Rules
see also UNCITRAL Convention
2 42 45 04 125 160
Safety of Life at Sea (SOLAS) Convention (1974)
183, 245–6, 248, 254, 270, 280,
289, 315, 318, 323, 329, 374, 393

xviii Table of conventions, directives, regulations, treaties

Chapter V	
Chapter V (2002 amendment)	262–3
Chapter VII	
Chapter XI	
Chapter XI–1 (2002)	
Chapter XI–2	_3, 281, 280, 281
'first agreed in 1960'	
regulations (2010)	
regulations (2010)	126
STCW Convention on Standards of Training for Seafarers	130
Territorial Sea Convention	132
Transfer of Class Agreement (TOCA)	
'two treaties' (1969, 1971; both amended 1992, 2000)	
re compensation to victims of pollution	136
re compensation to victims of ponution	
Uniform Customs and Practice for Documentary Credits,	
Series 600 (UCP 600)	220
Article 23	
Articles 24–26	221
UNCITRAL Convention	
Article 27	
Article 27(b) (draft)	245
UN Convention on Carriage of Goods by Sea	
('Hamburg Rules', 1978; effective 1992-) 140	, 147, 177, 180-5,
(Trainburg Tealed) 1970) effective 1992) minimum	186, 237
Article 1(7)	
Article 9	
Article 13.2	
Article 13.4	
Article 14	
Article 15.2	
Article 30(1)	180
UN Convention concerning international intermodal transport of goods (1980)	195
UN Convention on Law of Sea (UNCLOS, 1982)	1 5 291 304
Article 2	
Article 8	
Article 17	2
Article 38	
Article 39	3
Article 42	
Article 76	
Article 77	
UN Recommendations on Transport of Dangerous Goods 248–9	
York/Antwerp Rules (1890–)	137 . 130
TOTAL MITTER (1030-)	

FIGURES AND TABLES

FIGURES

2.1	Container feeder vessel JRS Capella outbound in Oslofjord	12
2.2	Cargo vessel Apollogracht at Seaforth Dock, Liverpool,	
	March 2008	14
2.3	Container vessel Candian Explorer	15
2.4	Container vessel Maersk Stralsund at Trinity Terminal,	
	Felixstowe	16
2.5	Car carrier Asian Vision at Seaforth Dock, Liverpool	18
2.6	Cargo vessel	19
2.7	Cruise ferry MV Color Fantasy in Oslofjord	20
2.8	The simplified international supply chain	42
3.1	Bulk carrier Anangel Sailor at Hunterston bulk terminal,	
	Clydeport	68
5.1	Offshore supply chain	131
6.1	Ferry Pride of York at King George Dock, Hull	161
7.1	Graphical illustration of westbound/eastbound traffic	206
8.1	The load line, or Plimsoll line	255
11.1	The DDP route	322
11.2	The EXW route	322
	TABLES	
1	AFRA scale	81
2	Flexible market scale	81
3	The community transit (CT) matrix	174
4	The EU/Far East container matrix	200
5	Westbound-eastbound trade	205
6	West/east terms of trade	205
7	East/west terms of trade	205
8	UK tonnage tax rates	214
9	Probability of defects of different Sigma levels	343

INTRODUCTION

THE MARITIME COMMERCIAL ENVIRONMENT

Two-thirds of the surface of the globe is occupied by water, either fresh or salt. Fresh water only accounts for a small percentage of this total, as the vast majority is accounted for by salt water in the form of the world's seas and oceans. These masses of water separate continents from each other, as well as providing a source of livelihood to a wide variety of people and professions, from national defence services, through the fishing industry and the offshore oil and gas sector, to the carriage of commercial goods by sea.

In some ways, the nature of the sea may seem placid and even romantic – it has spawned some of the finest literature over the past centuries, from novels, to poetry, as well as countless musical creations dedicated to its beauty, both classical and popular. But the nature of the sea can also be extremely wild, creating tempests so violent that coastlines are being steadily eroded, communities destroyed and livelihoods shattered. Every year, there are many instances of shipwrecks, founderings and sinkings of vessels as a result of what may be best described as 'force majeure'. Many lives have been lost as a result, despite the best efforts of rescue teams, including the UK's Royal National Lifeboat Institution (RNLI) ands its gallant volunteers, and such occurrences are a stark reminder to all of the sheer destructive power of nature, especially in its rawest form. Anyone who listens to the Shipping Forecast issued by the Meteorological Office on behalf of the Maritime and Coastguard Agency will equally be reminded of these natural conditions.

But behind the seemingly endless stream of lists of weather conditions around the British coastline delivered from the Meteorological Office, there lurks another major issue – that of the nature of shipping within the maritime framework, and why it is so important to the national economy and its lifeblood. The issue of maritime transport covers a variety of circumstances, from cruise vessels designed for the large-scale maritime entertainment of the international public, through the international passenger and cargo ferry network plying regional maritime routes, to the huge container ships deployed in the carriage of long-distance, deep-sea voyages around the globe.

This text seeks to address such issues and to examine and assess the nature of marine cargo management, from both a landward and a seaward perspective, as well as from both a legal and a commercial perspective. It also seeks to examine many topical and prevalent issues, as well as recommending ways in

which such management may be rendered more efficient and compliant. It addresses some of the history of the present forms of maritime commercial activity, especially the rise of the use of the container for the carriage of maritime cargoes, and seeks also to highlight the pitfalls and problems associated with such transport, while attempting to address such problems and suggest ways of preventing or avoiding them. It is said that prevention is better than cure. It is better, therefore, to understand the nature of marine cargo management in order to avoid the problems that may arise as a result of a lack of understanding of the principles of the movement of cargoes by maritime means.

The world of maritime cargo has changed over the centuries concerning the types of vessels used and the quantities of cargo they carry. And yet, the basic principles of cargo management have remained the same throughout the centuries, namely the need by commerce to send goods by sea from the seller to the buyer by using some form of maritime vessel. Maritime trade has become the instrument of matching demand with supply, and being paid for the privilege. International trade trends have, however, changed over the decades, with raw materials being shipped in bulk in one direction, and finished products being shipped in the other direction. There is, seemingly, a gigantic trade imbalance between the Far East and Europe and the Americas, with the latter two becoming reliant on products originating in the former. What is not appreciated is that the Far East relies on the import of bulk shipments of raw materials from the Americas and Europe in order to manufacture products for shipment elsewhere. To this extent, there is therefore an oblique trade balance, with bulk raw materials being exchanged for large quantities of finished products. And the vast majority of this is carried by maritime means.

The UK is an island. It relies on maritime means for its overseas trade. And yet, considering that it was once one of the prime maritime powers in the world, it has lost most of its maritime industry, sold to overseas bidders. The UK now relies on shipping lines based elsewhere in the world to satisfy its demands. One of the latest class of Maersk Line vessels, the 12,000 TEU (Twenty-Foot Equivalent Unit) 'Emma Maersk', called in late 2006 at the Port of Felixstowe for the first time on her way from the Far East to the Northern European Ports. As a member of the newest class of Maersk vessels, the PS-class, she is one of the world's largest container vessels in one of the world's largest shipping lines. At over 150,000 tonnes, she dwarfed the terminal where she was berthed, unloading a vast variety of cargoes destined for the retail shelves to satisfy pre-Christmas demand for stocks. In itself, this was a significant milestone in the sense that the Port of Felixstowe was able to handle such a leviathan of the seas, but very definitely a portent of things to come, as well as a measure of how international trade is managed in the present day.

The shipping magazine *Fairplay* warned in 1975 that if the situation of allowing the European ports of Rotterdam, Antwerp, Hamburg and le Havre to overtake London (once seen as the maritime centre of Europe) prevailed, the Port of London, already relocated down the River Thames to Tilbury in

Essex, would slip down the 'big league' of major ports, and would face the grim prospect of being relegated to the role of feeder port to the continent, whereas the port of Felixstowe would surge forward. In reality, this prediction has come true, and risks applying to the other southern UK major ports as well, as tonnages of container vessels rise further and the requirement for the use of hub European ports by the major global shipping lines becomes more prevalent.

Due to the introduction of containers as a means of maritime cargo transport in the 1960s, the port system had to change radically within its own confines, especially with the construction of new container terminals at several major UK ports, particularly those in the south of England. But even as these new terminals were being completed for use, the maritime container market was also changing, with the arrival on the scene of ever-larger vessels capable of carrying twice the original capacity of containers. The volume of containers carried rose from 2,500 TEU to 5,000 TEU per vessel, then to 8,000 TEU and now to 12,000 TEU, with the latest vessels weighing in at in excess of 150,000 grt (gross registered tonnage). The latest question is not so much how large vessels will become as whether the ports they serve will be able to handle the sheer volume of containers they carry. The relative ease of construction of the present-day container vessel allows vessels of over 150,000 grt with a capacity of 11,000 TEU+ on the high seas with equal comparative ease. The constraining factor remains the capacity of the port to deal with the sheer volume of containers carried by these leviathans of the high seas. In reality, the solution being considered is that of the hub-and-spoke network, where the shipping lines owning the large container vessels choose the ports where they can operate a successful hub-and-spoke network, such as Rotterdam/ Europoort, transferring containers on to other feeder vessels for shorter voyages to regional ports such as those in the UK, Scandinavia or the Baltic. It will simply become impractical and unviable for the larger vessels to call at these ports, especially in the UK, on their way to the larger European ports where they can be handled more efficiently.

On the continent, this expansion in volume is not a problem. The Dutch port of Rotterdam/Europoort and the Belgian port of Antwerp have gained substantial government grants to improve their infrastructure, from container handling facilities, to road and rail access to and from the ports, along with extensive dredging of the channels into and out of the ports. The channels of both the rivers Maas/Rijn (Rotterdam) and Schelde (Antwerp) have been extensively dredged to allow for such increasing tonnage, thus allowing for large increases in the volume of maritime container traffic into and out of the respective ports. New container terminals at both Rotterdam and Antwerp have also been constructed to allow for increased container movements, partly with government assistance, and these are designed specifically to handle the new, larger container vessels.

In the UK, the issue is more critical, as the issue of funding UK ports to facilitate such improvements is much less positive. Although, in theory, the