

# 142

夏季  
Summer  
2023



Institute of Seatransport

海運學會

# SEAVIEW

# 海運季刊

JOURNAL OF THE INSTITUTE OF SEATRANSPORT

## Our Mission

- to promote the exchange of professional knowledge within the Hong Kong shipping industries
- to recognize the contribution of professionals within the seatransport community in Hong Kong



## VALLES STEAMSHIP CO., LTD.

[www.vallesgroup.com](http://www.vallesgroup.com)

### HONG KONG

Valles Steamship Co., Ltd.  
Room 6810-11, 68th Floor, The Center,  
99 Queen's Road Central,  
Hong Kong, China.  
Telephone: (852) 2877 9189  
Facsimile: (852) 2868 4014  
E-Mail: [hongkong@vallesfleet.com](mailto:hongkong@vallesfleet.com)

### VANCOUVER

Valles Steamship (Canada) Ltd.  
#1160 Guinness Tower,  
1055 West Hastings Street,  
Vancouver, B.C. V6E 2E9, Canada.  
Telephone: (604) 687 3288  
Facsimile: (604) 687 0833  
E-Mail: [vancouver@vallesfleet.com](mailto:vancouver@vallesfleet.com)

### MUMBAI

Valles India Tech-Services Pvt. Ltd.  
304-305 Oberoi Chamber II,  
645/646, New Link Road,  
Andheri West, Mumbai 400053, India.  
Telephone: (91-22) 6864 2189  
E-Mail: [mumbai@vallesfleet.com](mailto:mumbai@vallesfleet.com)

### SHANGHAI

Valles Steamship Co., Ltd.  
Shanghai Representative Office  
Room 1603, 16th Floor,  
Shanghai Times Square Office Building,  
93 Huai Hai Zhong Road, Shanghai 200021, China.  
Telephone: (86-21) 6445 9993 / 6472 1849  
E-Mail: [shanghai@vallesfleet.com](mailto:shanghai@vallesfleet.com)







# 香港船舶註冊處

## HONG KONG SHIPPING REGISTRY



✧ 世界級船舶註冊 優質服務享負盛名  
A world-class shipping register with a reputation  
for good quality and excellent service

✧ 排名世界四大之列 總噸位超過1.26億  
One of the world's top 4 registers with gross  
tonnage over 126 million

✧ 程序簡易 全年無休  
Straightforward and all-year-round services

✧ 立足香港 放眼全球  
Foothold in Hong Kong with global vision

**Marine Department**  
The Government of the Hong Kong  
Special Administrative Region



香港特別行政區政府  
**海事處**

**Enquiries:**

Hong Kong Shipping Registry,  
Marine Department, HKSARG  
3/F, Harbour Building, 38 Pier Road, Central, Hong Kong  
Tel: (852) 2852 4387 Fax: (852) 2541 8842  
Email: [hksr@mardep.gov.hk](mailto:hksr@mardep.gov.hk) Website: <http://www.mardep.gov.hk>

**查詢：**

香港船舶註冊處  
香港特別行政區政府海事處  
香港中環統一碼頭道 38 號海港政府大樓 3 樓  
電話：(852) 2852 4387 傳真：(852) 2541 8842  
電郵：[hksr@mardep.gov.hk](mailto:hksr@mardep.gov.hk) 網址：<http://www.mardep.gov.hk>

# EDITORIAL TIDBITS

Starting from this issue, the newly-formed editorial board would like to give readers a more in-depth understanding of the maritime and logistics sectors. As such, we welcome articles supplied by readers that discuss these sectors. Please submit your articles for consideration to our mailbox at [info@seatransport.org](mailto:info@seatransport.org)

In this issue, we have one Chinese article written by Dr Solas Y.J. Lin, the founder of SOLAS, Taiwan, who looks at innovation in the design of vessel propellers.

Fluctuating fuel prices in recent months have been causing concern among fleet operators, who have become hesitant when purchasing fuel supplies. Rory Butler and Louise Lazarou, Partner and Senior Associate at Holman Fenwick Willan LLP, provide a clear checklist for fuel buyers under the BIMCO Bunker Terms 2018. Mr Raymond Wong, FAAA FMIOs of Asia Maritime Adjusting (HK), continues in the AA Talk section to revise and expand the series of his articles on the General Average compiled and published in the Seaview in 1985/6.

In the education section, we look at the maritime industry's alarming workforce shortage. Dr T L Yip, the BBA International Shipping and Transport Logistics program leader at PolyU (one of the two undergraduate training programs for maritime graduates in local tertiary institutes), comments on the changes needed to encourage a new generation of maritime graduates.

We include a small column for the news update to keep our readers getting more information about the Institute. We hope you enjoy reading these articles, and we look forward to receiving comments from our readers.

## SEAVIEW 海運季刊

### 海運學會名譽會長如下：

蘇海文先生	董建成先生	崔崇堯先生	杜寶明先生
程義先生	曹慰德先生	顧建綱先生	潘裕國先生
顧建舟先生	蘇新剛先生	鄭承忠先生	高彥明先生
吳昌正先生	李樺先生	趙式明女士	劉海先生
顧之瀾先生	趙式慶先生		

### 海運學會2022/2024 年度理事如下：

主席	：林銘鋒	秘書	：李慶偉
副主席（外務）	：張嘉尹	司庫	：林港稀
副主席（內務）	：溫冉儒	榮譽主席	：王德超
副主席（常務）	：任梓皓		鄭端霖

其他理事：陳錦榮、陳宗佑、陳婉彤、陳富國、張迅文、周榮基、黎偉謙、蘇平治、沈曉妍、蕭樂勤、岑爾康、溫志光、黃治中、胡卓莉

法律顧問：劉瑞儀

### 編輯委員會：

黃治中、劉銳業、林傑、李耀光、馮佳培、王德超、戴錫崑、Jon W. Zinke、胡明、張嘉尹、溫冉儒、葉子良、胡卓莉、黎偉謙

本刊物為海運學會季刊，免費寄與各會員及有關團體。未經出版人書面同意不可以任何形式複製本刊物。本刊物是領導學術期刊以英文和中文述及大中華的海事和航運事宜，所有文章已經評核。本刊物所有文章只代表作者個人觀點或意見。編輯委員會並不負責文章內容所引起的一切法律責任。本刊所有文章，文責自負。 — 編輯委員會啟

非賣品 © 版權所有，不得翻載

通訊地址：香港上環德輔道中 259-265 號

海外銀行大廈 14 樓 1407 室

香港郵政總局信箱 6081 號

電話：(852) 2581 0003 傳真：(852) 2581 0004

網址：www.seatransport.org

電郵：info@seatransport.org

### Honorary Presidents of the Institute :

Dr. H. Sohmen, Mr. C.C. Tung, Mr. Tsui Shung Yiu, Mr. Du Bao Ming, Mr. Andrew Chen, Mr. Frederick Tsao, Mr. Kenneth Koo, Mr. Stephen Pan, Mr. David Koo, Mr. Su Xin Gang, Mr. Edward Cheng, Mr. Gao Yan Ming, Mr. Wu Chang Zheng, Mr. Li Hua, Ms. Sabrina Chao, Mr. Lau Hoi, Mr. Wellington Koo, Mr. Hing Chao

### 2022/2024 Executive Committee Members are as follows :

Chairman	：Lam Ming Fung, Lothair	Secretary	：Lee Hing Wai, Henry
Vice Chairman (External Affairs)	：Cheung Ka Wan, Karen	Treasurer	：Lam Kong Hei, Yale David
Vice Chairman (Internal Affairs)	：Wan Yim Yu, Brian	Emeritus Chairmen	：Wong Tak Chiu, Raymond
Vice Chairman (General Affairs)	：Yam Tsz Ho, Brian		Cheng Duen Lam, Simon

Other Executive Committee Members : Chan Kam Wing; Chan Jolyon, Mantus; Chan Yuen Tung, Tiffany; Chen Fu Guo, Ray; Cheung Shun Man, Manson; Chow Wing Ki, Stockton; Lai Wai Lim, William; So Ping Chi; Shen Xiao Yan, Audrey; Siu Lok Kan, Rocky; Shum Yee Hong; Wan Chi Kwong, Eddie; Wong Chi Chung, Peter; Wu Cheuk Li, Charade.

Legal Adviser : Rosita S.Y. Lau

### Editorial Board :

Peter Wong, Joseph Lau, Lam Kit, Li Yiu Kwong, Gilbert Feng, Raymond Wong, Tai Sik Kwan, Jon W. Zinke, Cheung Ka Wan, Eric Wu, Brian Wan, Yip Tsz Leung, Charade Wu, William Lai.

"SEAVIEW" is the official quarterly journal of the Institute of Seatransport and is distributed free of charge to all members of the Institute and related organisations. No part of this publication may be reproduced in any form without the written permission of the publishers. The Journal of the Institute of Seatransport is a leading scholarly journal in the English and Chinese languages on maritime and shipping affairs in Greater China. All contributions are refereed. All opinions or views stated in "SEAVIEW" are those of the respective authors and do not necessarily reflect the views and opinions of the editor or publishers. No responsibility can be accepted for any errors or omissions.

Not for sale ©copyright reserved

Correspondence Address: Rm.1407, 14/F., OTB Building, 259-265, Des Voeux Road, C. Sheung Wan, H.K. G.P.O. Box 6081, Hong Kong

Telephone : (852) 2581 0003

Fax : (852) 2581 0004

Website : www.seatransport.org

E-mail : info@seatransport.org

承印：鴻潤印刷公司

Printed By : Hung Yuen Printing Press

地址：香港九龍旺角西海庭道 8 號

Address : 7K, Block 12, Charming Garden, 8 Hoi Ting Road, Mongkok West, Kowloon, Hong Kong.

電話：(852) 2552 7008

Telephone : (852) 2552 7008

傳真：(852) 2552 6384

Fax : (852) 2552 6384

電郵：hungyuenprinting@gmail.com

E-mail : hungyuenprinting@gmail.com

## Law Column - Bunker Supply Contracts – Key Considerations For The Buyer

*Rory Butler & Louise Lazarou*

### Introduction

Purchase of bunkers can generate significant risks/claims and sellers' terms often incorporate fixed (often low) limits on sellers' liability, exclusions for certain types of loss (e.g. loss of time, profit, indirect or consequential loss), short time bars for buyers' claims, and evidential and law and jurisdiction clauses in sellers' favour. There have been moves to try and work towards standard bunker purchase contracts with BIMCO introducing the BIMCO Bunker Purchase Terms in 2015 which were updated in 2018. These contracts are generally more balanced than typical sellers' standard terms, and representatives from owners, charterers and bunker companies were all involved in the drafting process.

From a commercial bargaining perspective, it may be easier to negotiate more balanced terms if they are agreed in advance as part of a worldwide framework agreement to buy bunkers from a single or small number of sellers instead of making more ad hoc arrangements. This is also sensible in terms of reducing compliance/KYC/sanctions checks and risks by having a reduced number of counterparts.

The BIMCO Bunker Terms 2018 attach an Election Sheet as Appendix A which allows for easy customisation by the Parties as well as a space to add additional clauses or make amendment to the standard BIMCO text.

### Bunker supply contracts – key issues checklist

Taking the BIMCO 2018 Terms as a starting point buyers may try to negotiate on some of the following key items:

- Due diligence with respect to the seller: consider market reputation and financial standing of sellers, in terms of financial standing and insurance position (see below) and involvement in previous supply issues. Are they also a physical supplier or only an intermediary? How do they verify the quality and origin of the fuel supplied and how will they evidence this to buyers if required? What are their supply chain quality management procedures?
- Greater focus on KYC/vetting and who the seller is for sanctions purposes: this ties into conducting proper compliance checks for general KYC and for sanctions purposes.



- **Due diligence with respect to the fuel:** consider what information you need about the fuel and its origin. Are there any special parameters regarding storage, handling, treatment and use of the fuel on board? Do you require specific information in the Certificate of Quality?
- **Fuel specification:** the contract should identify the correct specification of the fuel - for example by expressly stating the relevant ISO specification. For residual fuels, the most widely used specification is ISO 8217 Table 2. ISO 8217 is periodically revised and the industry guidance recommends the most recent version, ISO 8217 2017. Check whether the fuel specified in your bunker supply terms complies with up to date IMO and Marpol regulations and any local regulations that apply to the vessel based on the trade conducted and that this also accords with charterparty and main engine maker's requirements. A further point to consider adding is an express contract term that the fuel is free of contaminants, is fit for purpose and complies with MARPOL. If the buyers have a strong bargaining position, then consider also if contractually you can negotiate that sellers will take back proven off specification bunkers.
- **Sampling and quality testing:** the contract should specify the agreed sampling and quality testing regime, including for sulphur content. Ideally, a sample from each of the bunker supplier/barge and the vessel should be analysed as opposed to only the supplier's sample. Again, insofar as possible, sampling and testing requirements need to match the charterparty so the buyers are not exposed to different test standards. Ideally, the sampling process should be set out in detail in the contract together with the agreed analysis regime that is to be used. Consideration should also be given as to whether preferred accredited labs for testing should be identified in the contract (we recommend they are). In the event there is a dispute about the quality or characteristic of the particular stem, an inability to agree to a lab for testing may complicate and delay resolution.
- **Non delivery/delayed delivery of the bunkers:** consider the delivery clauses of your contract and whether they give buyers a right to cancel the contract/bunker supply promptly in the event of a delay. Consider also specifying in the contract what constitutes a delay (by setting out the relevant period) following which a cancellation right in buyers' favour arises. Where charter rates are high buyers may not want to be obliged to "wait" for supply of bunkers if they are not ready to be supplied.

- **Force majeure duration:** consider how long the duration of a force majeure event is reasonable for the trade conducted by the vessel. The BIMCO Bunker Terms 2018 for example provide for a 10 day period. Buyers may wish to opt for a much shorter force majeure period so as to reduce delays to the vessel as much as possible.
- **Quality claims time bar:** the contract should ideally include a quality claim time bar that allows sufficient time for quality testing to be performed, taking into consideration that testing might need to take place at an accredited lab located at a place other than the place of supply. In our experience, bunker contract time bars are normally far too short, especially given that bunkers may not be immediately used (for example bunker test results may be required under the charter before the bunkers are in fact used) and even when used promptly problems may not manifest themselves immediately. We have seen cases where the bunker recourse claim against the supplier is time barred before the bunkers have been used. It is recommended to link any time bar to at least 14 days after use of the bunkers (or after test results) or alternatively to have a much longer time bar period, for example 45 days.
- **Limitation of liability:** standard bunker supply contracts usually include a low mutual limitation of liability figure (usually one or at most two times the invoiced value of the fuel). Consider negotiating increased limitation of liability sums to reflect the fact that losses arising from loading or consumption of off-specification fuel can be very high in value (e.g. there may be damage to the Vessel, loss of time and the fuel supplied may have no value and incur de-bunkering tank cleaning and disposal costs). It is suggested that at least twice the value of the fuel or more should be targeted where possible. An alternative option is to include reference to both a specific amount and at least twice the value of the fuel provision, with the highest of the two applying. Lastly, make sure that any limitation agreed applies mutually to both parties (rather than just the sellers). Buyers should be aware that loss of bunker value is not a commonly insured risk under typical insurance policies and with high bunker prices this is therefore a significant uninsured liability. Do remember though if you do raise limits and they are mutual then this applies both ways!

- The “OW Bunkers” issue: if buying direct from a physical supplier there is less risk, but if purchasing via a broker or trader there is a risk they may not have paid their counterpart for the bunkers which could, in the event of their insolvency, lead to competing payment demands and the risk for the buyers of having to pay twice. It is sensible to include provisions under which the sellers warrant they have paid for the bunkers and the buyers have a right to request evidence from the sellers that they have paid any third parties for the bunkers before the buyers are required to pay the sellers’ invoice, such that if no evidence is provided the buyers may withhold payment/hold sellers in breach.

It is further prudent to include a term that in the event of bankruptcy of the sellers, the buyers will be entitled to withhold payment for the fuel until the relevant court/tribunal determines whether sellers or the physical suppliers or any third parties have a claim directly against the buyers/vessel. If there is such a determination, the contract can also provide that payment to a party other than sellers for the fuel, as determined by the relevant court/tribunal, shall be deemed to subordinate the claim to

the rightful party in order to safeguard the buyers from having to pay more than one party (and more than once!) for the fuel.

Consider also making the contract subject to the Sale of Goods Act 1979, so as to make the contract a contract of sale (thus bringing in the Act’s protection so far as fitness for purpose and quality are concerned, **and** the requirement that the Sellers also have good title to the fuel at the time of sale to the buyers).

- **Insurance:** sellers should ideally have insurance in place and should be required to produce evidence of this. Such insurance may for example include credit, professional indemnity and product liability insurance.
- **Local rules and regulations:** most standard term contracts incorporate local rules and regulations into the bunker supply contracts. Local rules and regulations can bring about surprises that the parties to the contract might not be aware of at the time of contracting. Consideration is accordingly recommended to be given to the exclusion of local rules and regulations either in their entirety or to limit their applicability to fuel sampling only.



- **Uniform bunker supply terms:** ideally the same supply terms should be used across the board with all suppliers so as to have certainty over the risk allocation and to avoid the use of ad hoc supplier friendly terms. In effect, have a framework agreement/standard terms agreed with major suppliers which specifically excludes any additional or alternative terms applying (e.g. the risk of any extra terms referenced in bunker confirmation notes or bunker delivery receipts) unless agreed in writing and signed by both parties.
- **Lien:** try and avoid provisions that give the sellers a lien over the vessel or any rights of action against third parties (e.g. the owner if the charterer are the buyers) as this can cause serious issues under the charterparty. Indeed, ideally agree that they expressly do not have such rights. A further point to consider, is to add an express provision that the sellers must hold the buyers harmless and indemnify the buyers in the event that a third party asserts a lien or encumbrance on the vessel in relation to the fuel purchased from the sellers. Similarly, a clause can also be included by which the sellers warrant that no third party has any right to claim against the buyers in relation to the fuel, or exercise any right of lien, charge, encumbrance or arrest over the vessel or any sister vessels in respect of the fuel. Lastly, consider including a provision that if such a claim nevertheless arises, the sellers shall co-operate to allow interpleader proceedings. See also our comments on the OW Bunkers issue above.
- **Exclusions:** consider whether you wish to exclude indirect or consequential loss (as this could extend to loss of time depending on how the clause is drafted). Be careful of broad term exclusions that are usually found in bespoke sellers' contracts. Make sure that any exclusions apply mutually to both contractual parties if they are agreed.
- **Taxes:** it is recommended that sellers be required to advise of wharfage, barging or additional charges and taxes payable in advance of supply in the bunker confirmation note to avoid unexpected surprise additional costs.
- **Sanctions clause:** the sanctions clause included in the standard BIMCO Bunker Terms 2018 is somewhat outdated now and consideration should be given to updating it in contracts for bunker supplies. We say this from both a

buyers and sellers viewpoint. The origin of the fuel (due to sanctions), the person or entity from whom the fuel was purchased by sellers, the position of any bunker supply barge are all key issues to feed into any new sanctions clause. In addition, both parties will want to ensure their counterparts and the owners of any vessel (the vessel being supplied with bunkers or any bunker barge itself) are not subject to sanctions and that they are not owned or controlled directly or indirectly by persons or entities subject to sanctions (in our view this is a gap in the current Bimco sanctions clause). We are seeing updates to previous sanctions clauses to address these risks.

- **Sellers' time bar:** buyers may also wish to consider if they insert a time bar clause for claims by sellers against buyers.
- **Law and Jurisdiction:** avoid the application of US law (due to US maritime lien rights) and agree on a neutral law/jurisdiction that is not necessarily the sellers' choice. Remember that English law can also be used with LMAA Rules and alternative arbitration regimes, e.g. HKMAG, SCMA etc.

These suggestions come from our experience in advising on bunker contracts and litigating bunker disputes. It is important for buyers to understand the consequences of accepting sellers' terms and well worth the effort to attempt to negotiate a more balanced contract. Even when the terms are not negotiable, risks can be mitigated by exercising due diligence before selecting the sellers.

It is also important to note that risks can be mitigated by having prudent practices for bunkering, sampling, bunker handling and consumption regardless of bunker supply contract terms. Detailed discussion of such issues is outside the scope of this article but key items are carrying out continuous drip sampling at the Vessel manifold, always bunkering new bunkers into empty tanks whenever possible and never using new bunkers until they have been tested.

Buyers should also ensure they have suitable insurance in place and notify their insurers as soon as any issue is experienced with bunkers supplied.

### **Alternative Fuels**

As a footnote, BIMCO has recently published the LNG Bunker Terms in May 2023, which are available for use as Annex

B to the BIMCO 2018 Terms. It would certainly be helpful for the industry that a “common” bunker contract could be adopted for LNG, methanol, ammonia, biofuels etc with logical changes to reflect the different fuel types. Much of our above “checklist” would equally apply to supply of such alternative fuels.

Whilst every care has been taken to ensure the accuracy of this information at the time of publication, the information is intended as guidance only. It should not be considered as legal advice.

**First published March 2023 and updated in May 2023. Republished with kind permission of Gard.**

*HFW 夏禮文律師事務*

*hfw.com*

© 2023 Holman Fenwick Willan LLP. All rights reserved.

Americas | Europe | Middle East | Asia Pacific

#### Seaview News

First half 2023

With a view to offer Members more opportunities for the enhancement of knowledge, networking and leisure activities etc., the Institute is busy and a summary is provided below for you at a glance.

#### Ongoing/Future Activities

June, a local cocktail reception to meet each other.

July, an outing to Shenzhen to visit a smart port.

November, a shipping conference that brings practitioners from Hong Kong, Shenzhen and possibly Taipei together; this is a resumption of a series of conferences that started twenty years ago but suspended due to COVID-19.

Forthcoming courses/programmes/seminars to be conducted as follows:

July, - Ship Operations Management

- 50 hours Preparation Course for Coxswain  
Grade 3 Examination

August, Ship Finance & Ship Leasing

#### Review of Past Activities

February, a local outing to greet the Year of the Rabbit.

Courses/programmes/seminars conducted from January to June were as follows:

February, 50 hours Preparation Course for Coxswain  
Grade 3 Examination

March, Bill of Lading - Law and Practice For Tramp and Liner Personnel

May, Tanker Chartering (Voyage and Time charter)

#### Views

The Institute welcomes Members' input in whatever aspects to promote the benefits of Members





# 翟玉英律師事務所 BRENDA CHARK & CO

Maritime Law Firm

We have successfully represented substantial or state-owned shipowners, managers, charterers, P&I Clubs, hull underwriters and other related intermediaries in the shipping industry. The cases that we have handled include:

## Contentious

- Insurance covers – H&M / P&I / FD&D
- Carriage of goods-damage / short or non or mis-delivery
- Charterparty- demurrage / wrongful delivery / unsafe berth
- Defence to personal injuries by crew / stevedores

## Non-contentious

- Ship Building
- Ship Finance
- Sale of ship
- Ship Registration

## Others

- Employment Issues
- Landlords & Tenants
- Tracing of Trust Funds
- Enforcement of Awards & Judgments
- Defending claims arising from cyber crime
- Defending import & export related offences

香港灣仔軒尼詩道 338 號北海中心 26 樓 F 室

26F, CNT Tower, 338 Hennessy Road, Wanchai, Hong Kong

Tel: (852) 3590 5620 Fax: (852) 3020 4875 E-mail: [info@brendachark.com](mailto:info@brendachark.com) Website: [www.brendachark.com](http://www.brendachark.com)



## THE INSTITUTE OF CHARTERED SHIPBROKERS

(REPRESENTING SHIPBROKERS, AGENTS AND MANAGERS)

FOUNDED 1911 : INCORPORATED BY ROYAL CHARTER 21 JANUARY 1920 / SUPPLEMENTAL CHARTER 1984

“Setting the highest standards of professional service to the shipping industry worldwide through education and example”.

Membership Qualifying Examinations are held in Hong Kong every April.

Exemptions from some exams are available.

Distance learning support via text book and  
online tutoring is available to students.

Contact the Branch to register as a student.

Contact :

Honorary Secretary, Hong Kong Branch

Telephone : (852) 2866 1488

E-mail : [examination@ics.org.hk](mailto:examination@ics.org.hk)

Website : [www.ics.org.hk](http://www.ics.org.hk) also [www.ics.org.uk](http://www.ics.org.uk)

FAQ : [http://www.ics.org.hk/Examination\\_9.htm](http://www.ics.org.hk/Examination_9.htm)

如果有人問我「作怎樣的學術研究最有意義呢？」

我會回答「作可以造福人群利益眾生的研究」最有意義。我想大部分的研究者都會認為自己的研究是可以造福人群利益眾生的，其判斷方法很簡單，要看這個研究發表之後是否很快被應用到該行業上，而且深獲好評呢？我個人很榮幸在日本東京大學的博士論文就是這樣可造福人群利益眾生的代表作。在此願意和大家分享。

回想在 1978 年春天，我進博士班已經快一年了，有天指導教授突然問我「林君，你的博士論文到底想作什麼？」

我回答說「我想作貨櫃船後半部船型改良的研究」，教授差點暈倒說「你都不會走路就想飛，那個題目有多難你都不知道」，我說「來日本學習船型設計是我的夢想，碩士論文作貨櫃前半部船型改良，所以博士論文想作後半部改良，請讓我挑戰看看吧！」教授說「那你自己看著辦吧！我不管你了！」還好有一位年輕的助理教授很支持我挑戰這個題目，還特地安排我到東京都三鷹市的日本船舶技術研究所，以同一艘船 10 米長的船模作實驗，因為東京大學小水槽只能作 2.5 米的試驗。

當時業界有一套「線性興波阻力理論」，是假設理想流體中船體興波很小，且船體形狀及螺槳可用一組「等價的特異點 Source, Sink」來取代，就可計算出船體整體之性能的理論，當時大家公認說這套理論是行不通了，應該發展非線性理論，但是那幾乎是不可能的任務。在當時尚無人去研究出實用船型如何利用線性興波理論來計算的方法，我進入博士班之後，就著手研究這個題目了。以下簡單介紹當時我構想的計算方法。

- (1) 從船體線圖 (LINES) 上讀出更精細的座標，再將船體半邊切割成 364 個小方塊，螺槳 DISC 上有  $6 \times 24 = 144$  個小方塊，且先不考慮舵的存在。
- (2) 每方塊四個點並不一定在同半面上，利用最小柱腳二乘法求出平面方程式，法線向量及方塊面積，方塊重心等資料。
- (3) Source, Sink 假設集中在四方塊中心點上，去計算三次元的誘導速度表，利用三次元內差法去計算任何點的誘導速度，可以大量節省計算時間。

- (4) 利用螺槳推力係數及跡流係數先計算出螺槳上之 Sink 強度，作一系列不同船型時，此強度不變。
- (5) 船體表面 364 個方塊 Source, Sink 強度，利用船體表面條件即法線上法線上分量為 0，解聯立方程式即可求得 364 個方塊的強度。
- (6) 船體的阻力可利用 364 個方塊上之壓力的前進方向的分量加以積分，以求得壓力阻力，及興波阻力理論之波譜積分求得波形阻力。
- (7) 船體改良時，以維持一定排水量下，將船寬作有系統變化，可以計算其壓力阻力及興波阻力。但船體中間較胖船艙較瘦，以增加載櫃數量。
- (8) 最終改良船型是根據理論計算之最佳 CP 曲線分佈，加上我作一系列船模試驗之體悟，加以最適化。使流體均勻流向螺槳，減少振動且增加推進效率。

當我第一次把理論計算結果和 2.5 公尺，10 公尺船模試驗結果畫在同一張時，指導教授驚訝的說「這太神奇了，原來以為線性理論已經不適用了，竟然和 10 公尺的實驗那麼接近，林君你真是電腦程式的

鬼才！」我的改良船型也有作 2.5 公尺的船模試驗，其結果果然推進效率提昇 10% 以上，後來在博士論文口試以及關西造船協會論文發表都受到業界專家學者們很大肯定。他們說「要改善螺槳性能 0.5% 就很困難了，船型改良的效果果然很厲害，你們學術界敢去挑戰這麼實用的題目，又有這麼卓越的結果，真是不簡單！聽你口音好像不是日本人吧？」

我說「我是台灣來的！」結果我只用 2 年 10 個月就完成了博士學位。到台大任教之後，1982 年初日本造船協會就頒給我「年度優越論文獎」，現在全球商船設計都採用了我的設計，基隆海生館內也展示了一艘貨櫃船後半部模型在船舶科技館內，因為國內設計建造很多這種貨櫃船，聽說性能非常優越，而那正是我當年設計的新船型。



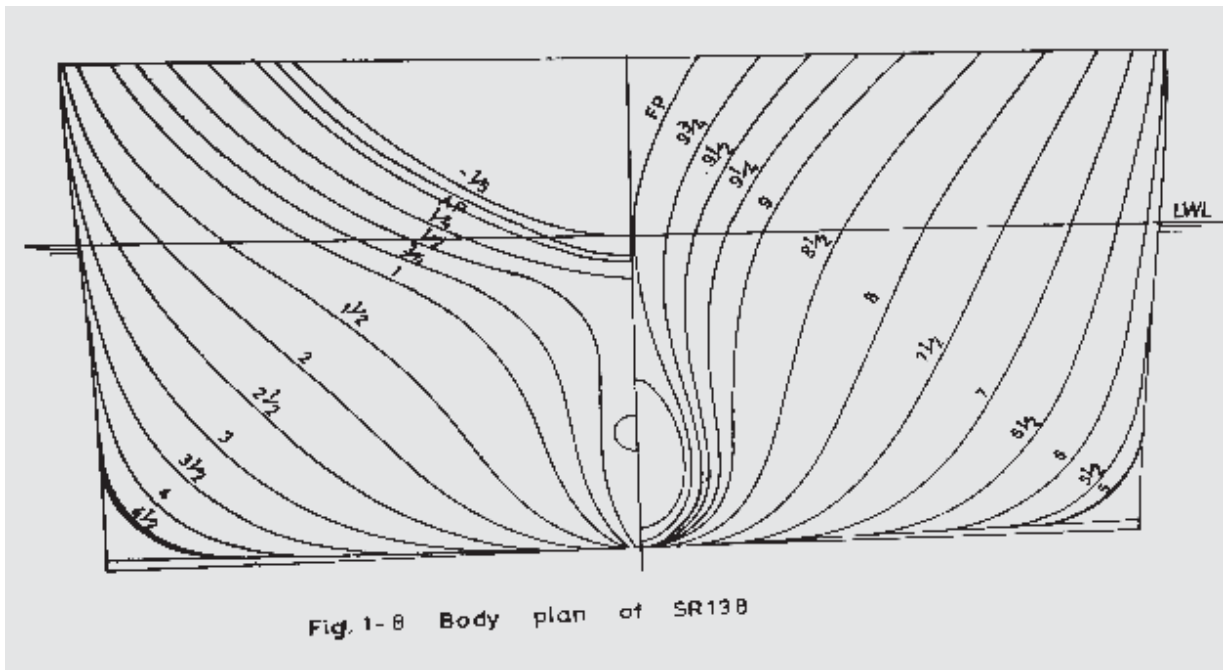


圖 1. 母船正剖面圖

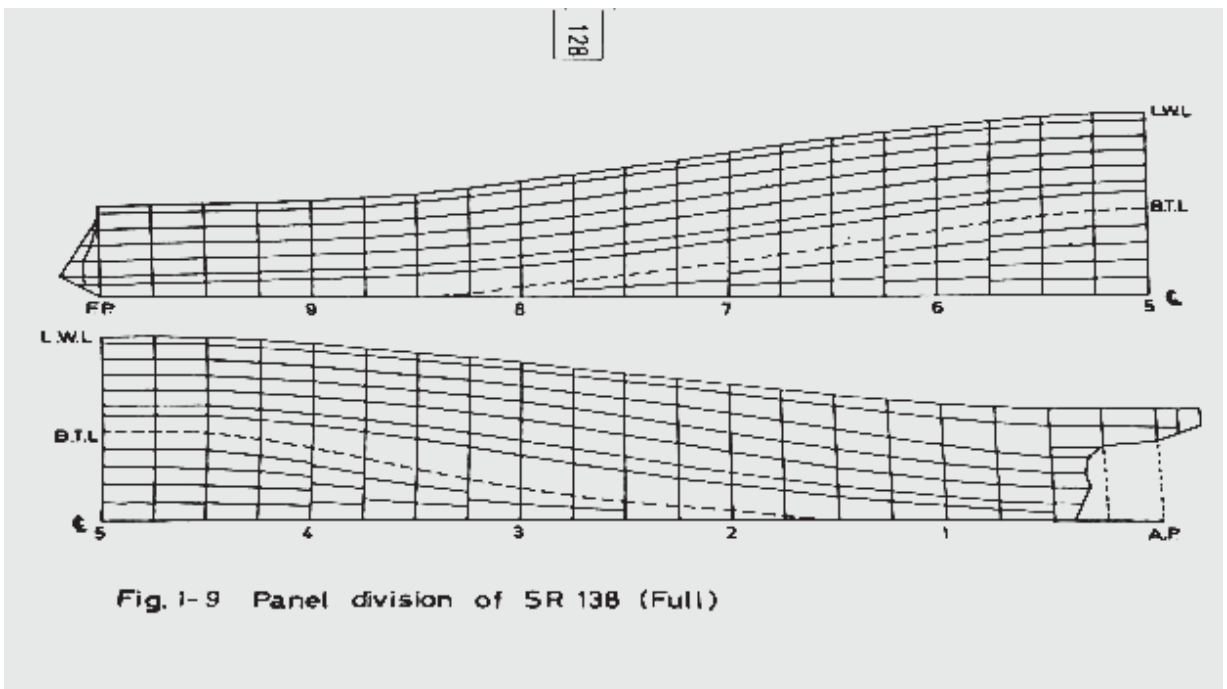


圖 2. 理論計算之船體表面四邊形方塊分佈

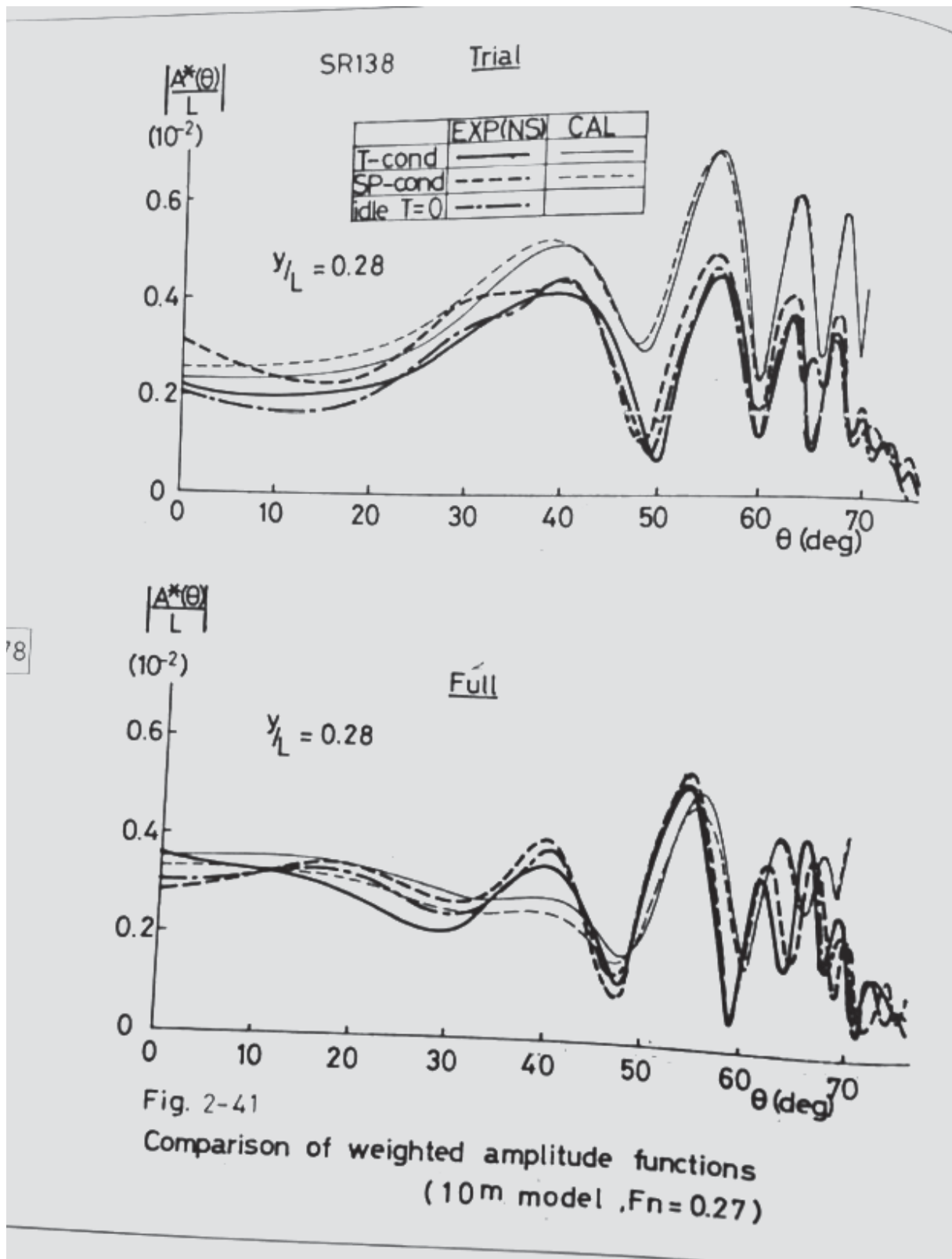


圖 3. 拖曳與自推狀態下之波譜分析與本理論計算比較

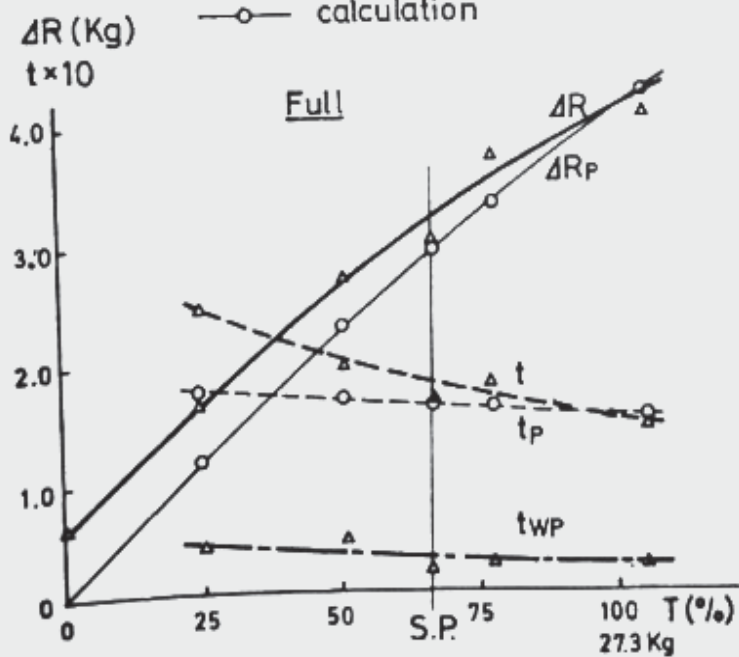
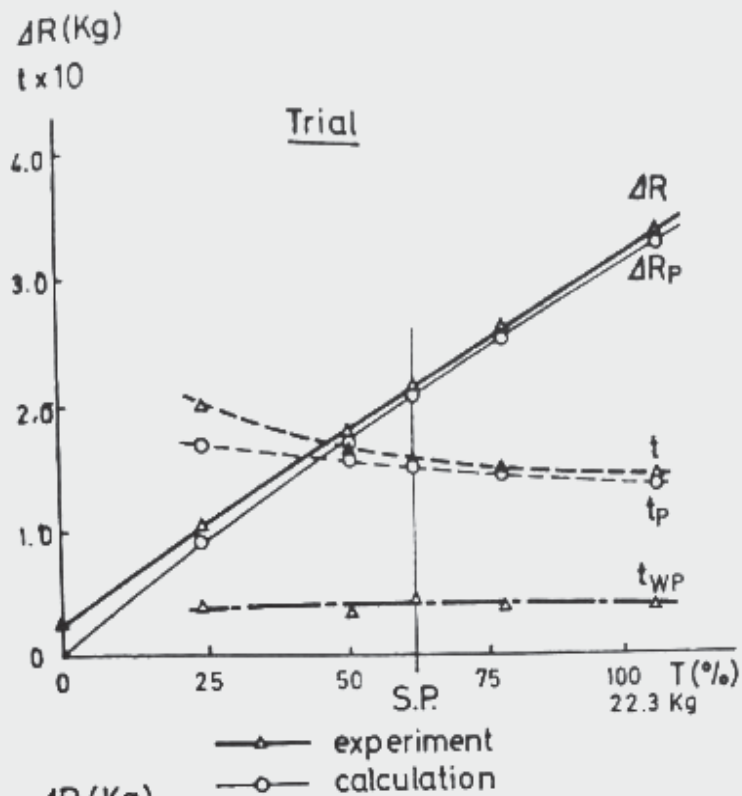
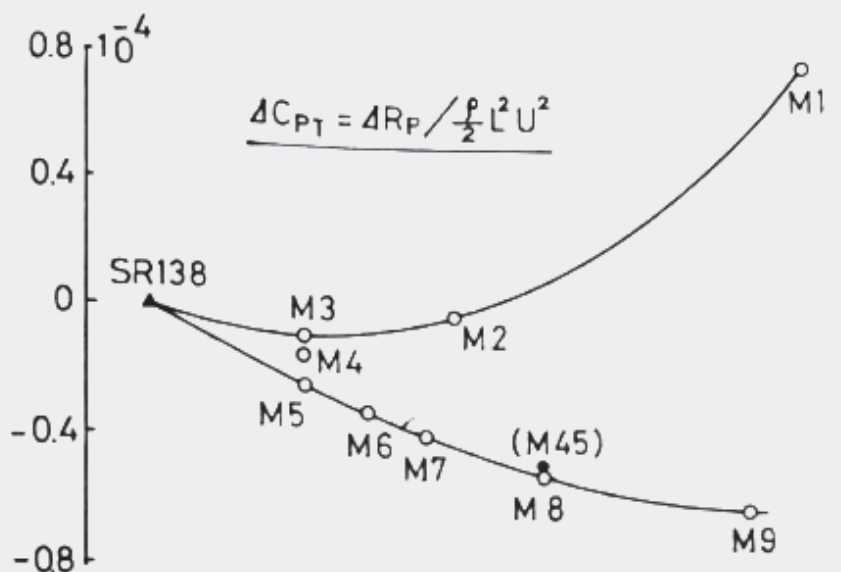


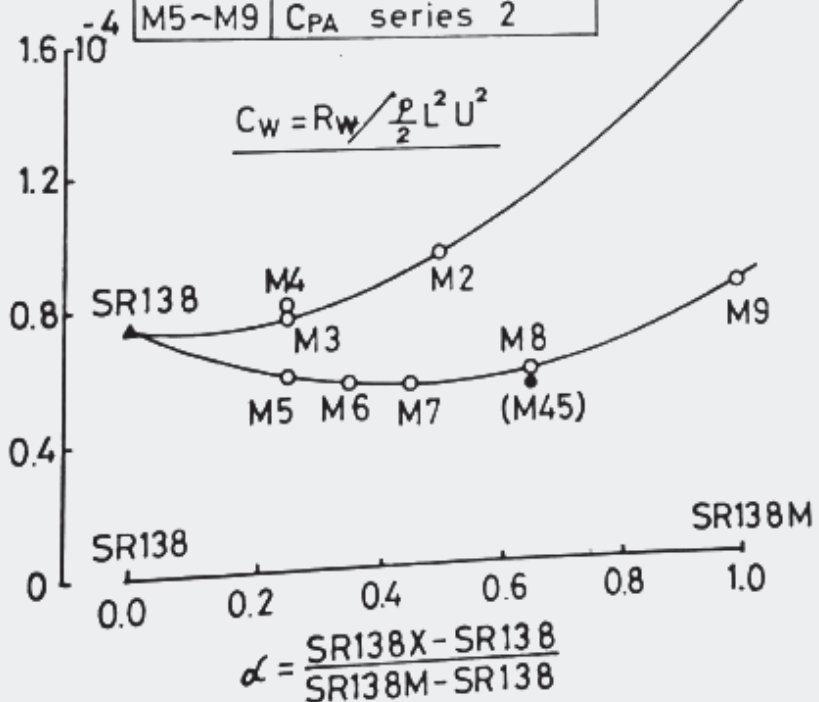
Fig. 2-5  
 Increment of resistance by the presence  
 of a propeller (10<sup>m</sup> model,  $F_n = 0.27$ )

圖 4. 自推狀態之推力減少率  $t$  之試驗與計算之比較





M1~M3	CPA series 1
M3~M5	Frame line series
M5~M9	CPA series 2



209

Fig.3-4 Calculated resistance coefficients for modified hull forms

圖 5. 變形 9 條船形之壓力阻力與波阻力之變化

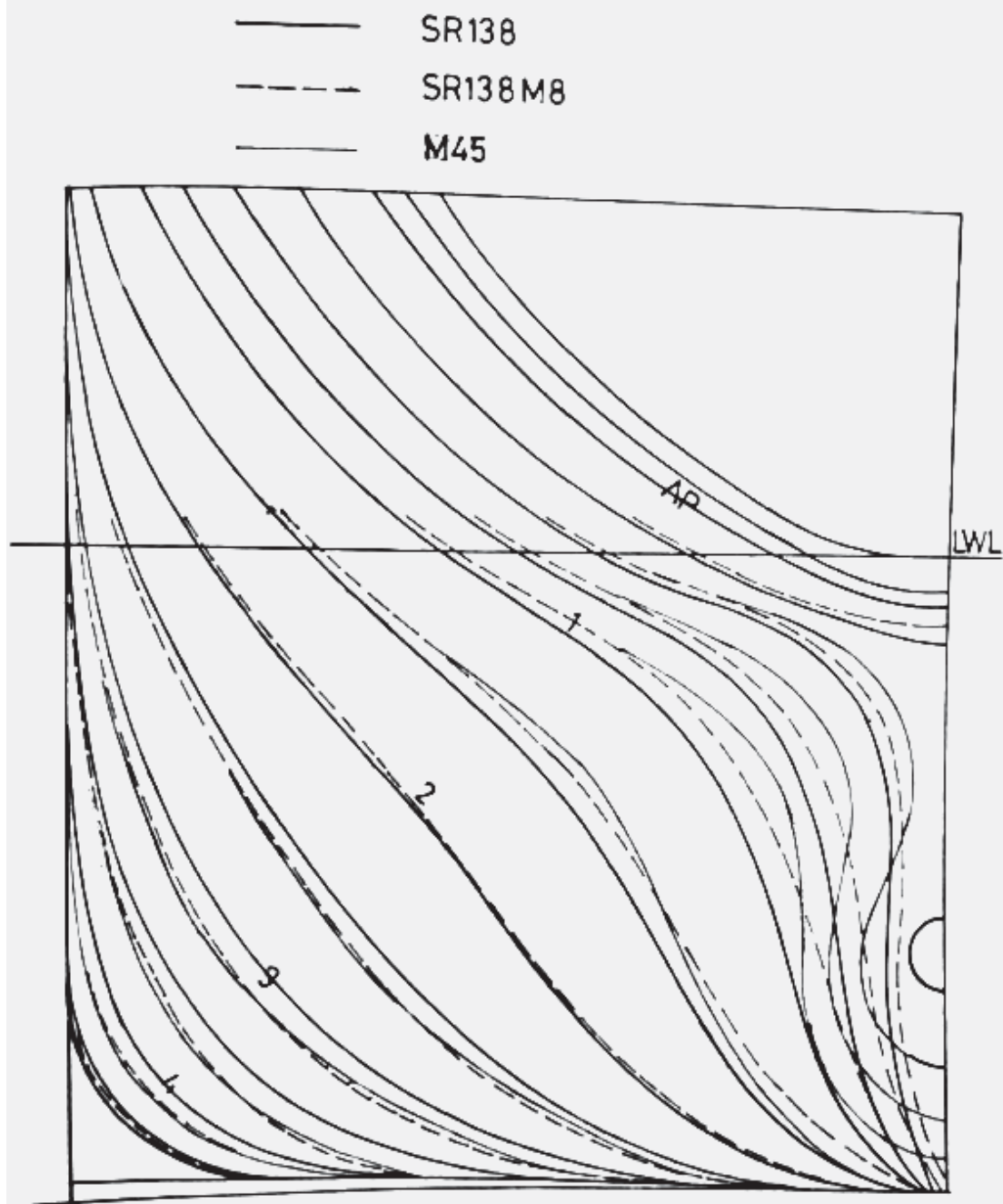


Fig. 3-14 Comparison of aft-part

圖 6. SR138M8 維持斷面積改變船尾形狀得到改良船 M45

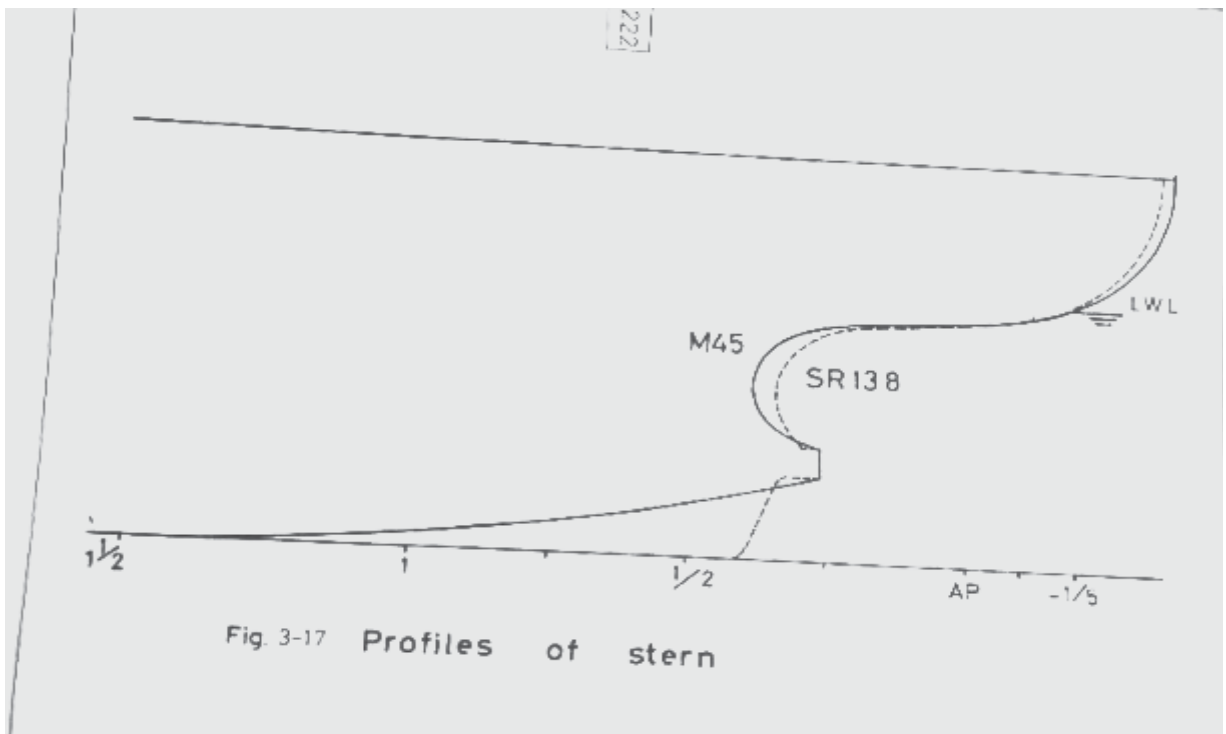


圖 7. 為船艉側視圖之比較

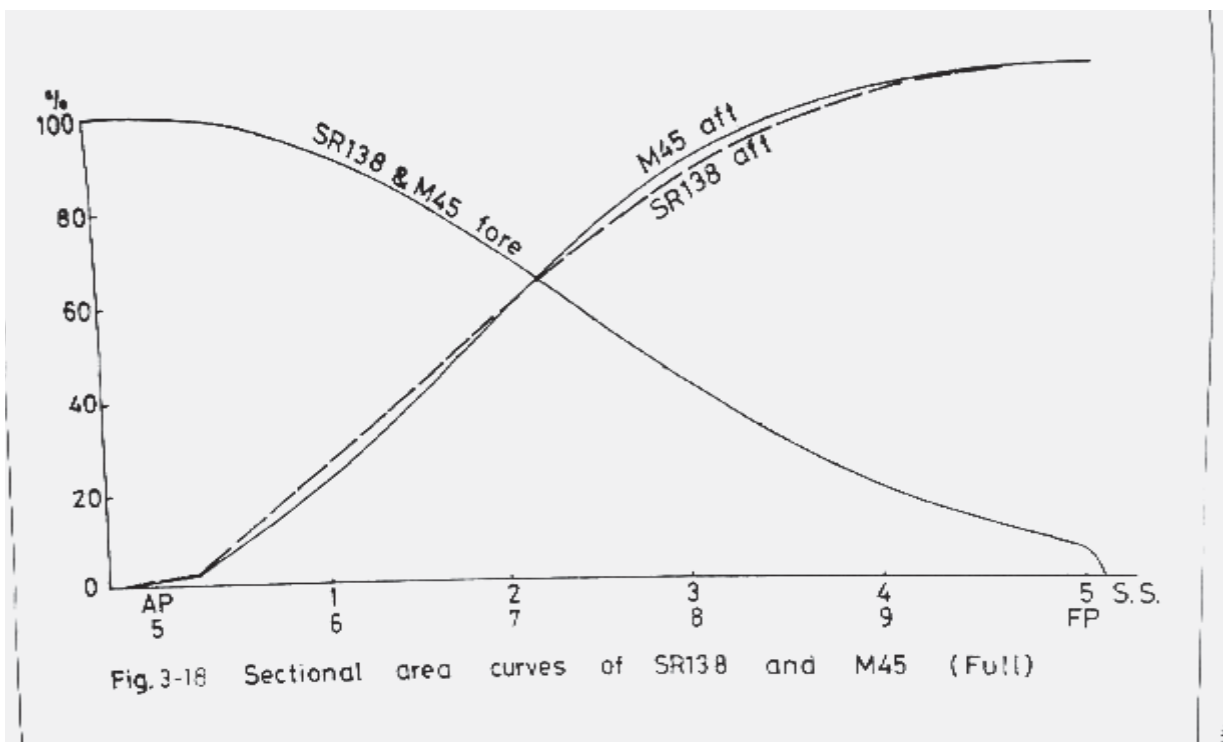


圖 8. 縱向 CP 曲線圖比較

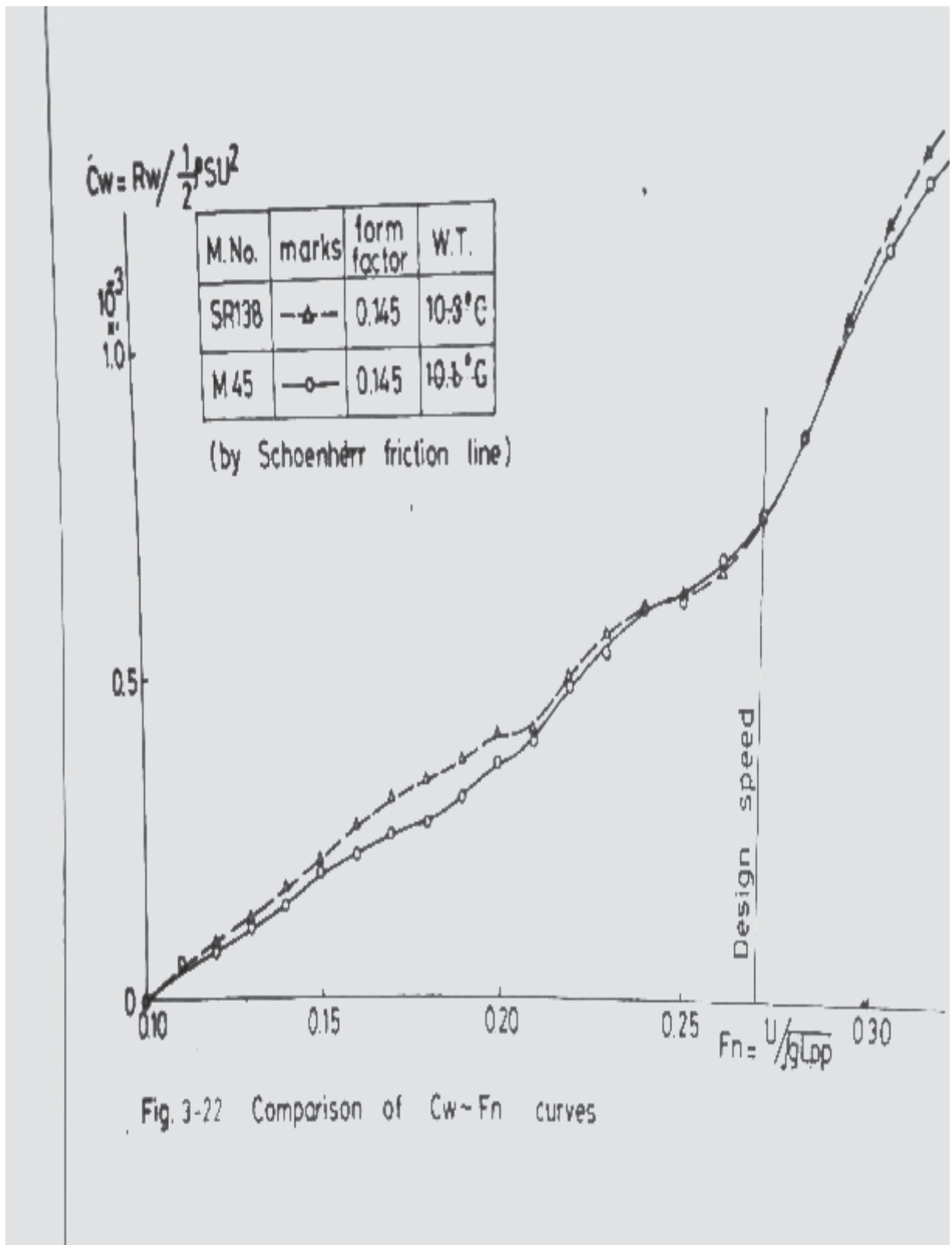


圖 9. 2.5 米模型之興波阻力曲線比較



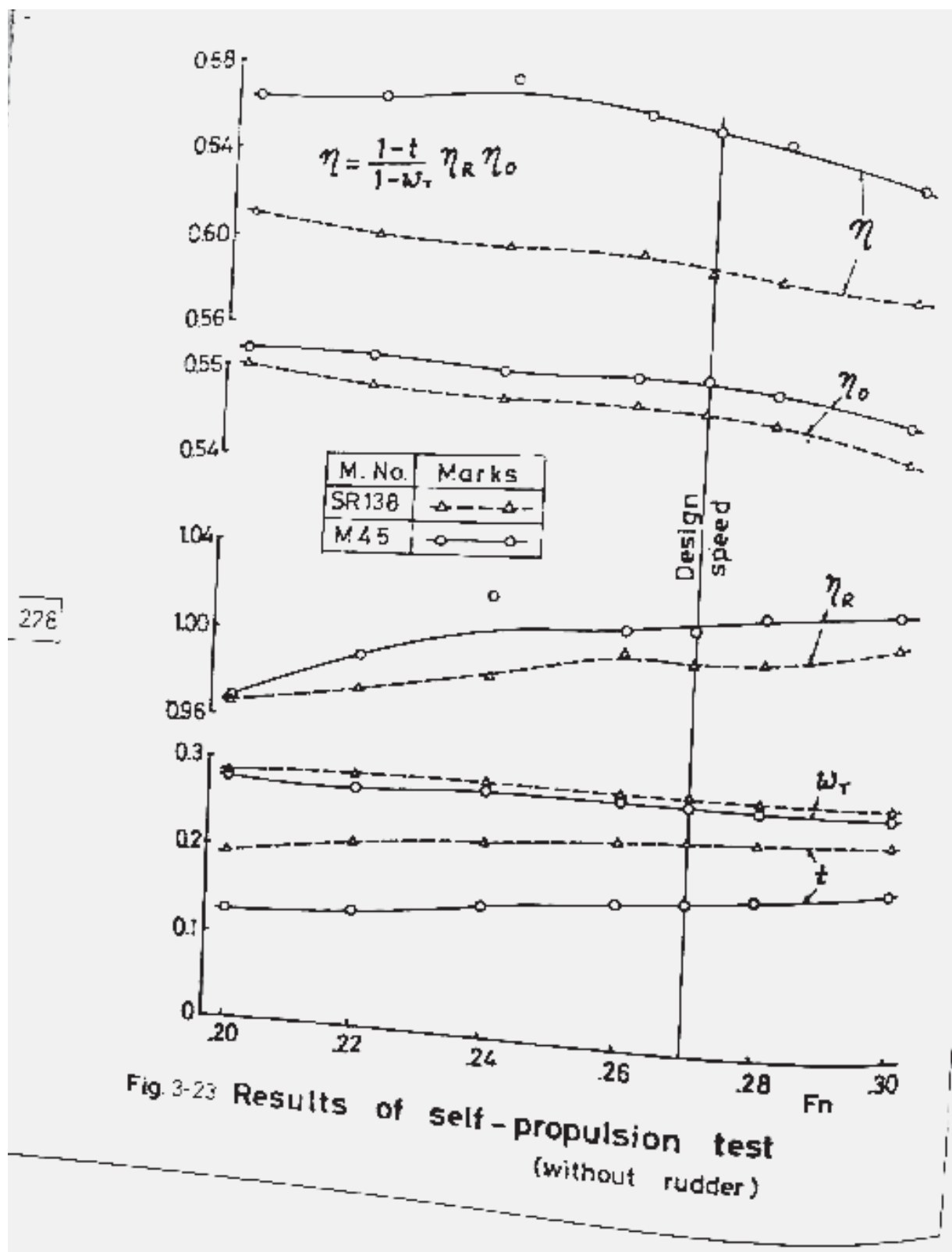


圖 10. 推進係數之比較改良船由 0.60 提昇至 0.66

# 賞 状

正会員 林 允 進 君  
正会員 梶 谷 尚 君  
正会員 宮 田 秀 明 君  
正会員 足 達 宏 之 君

昭和55年5月春季講演会 昭和55年  
11月造船3学会連合大会及び昭和56年  
5月春季講演会において発表されました論文

「On the Optimization of the Aft-Part  
of Fine Hull Forms (First Report)  
(Second Report)(Third Report)」は

関西造船協会賞授賞審査委員会において  
審査の結果極めて優秀であつて関西造船  
協会賞に値するものと認定しました  
よつて理事会の決議により本賞状並びに  
賞牌及び賞金10万円を贈呈しこれを表彰します

昭和57年1月22日

関西造船協会

会長 長谷川 健二

圖 11. 博士論文榮獲造船協會之優越論文獎

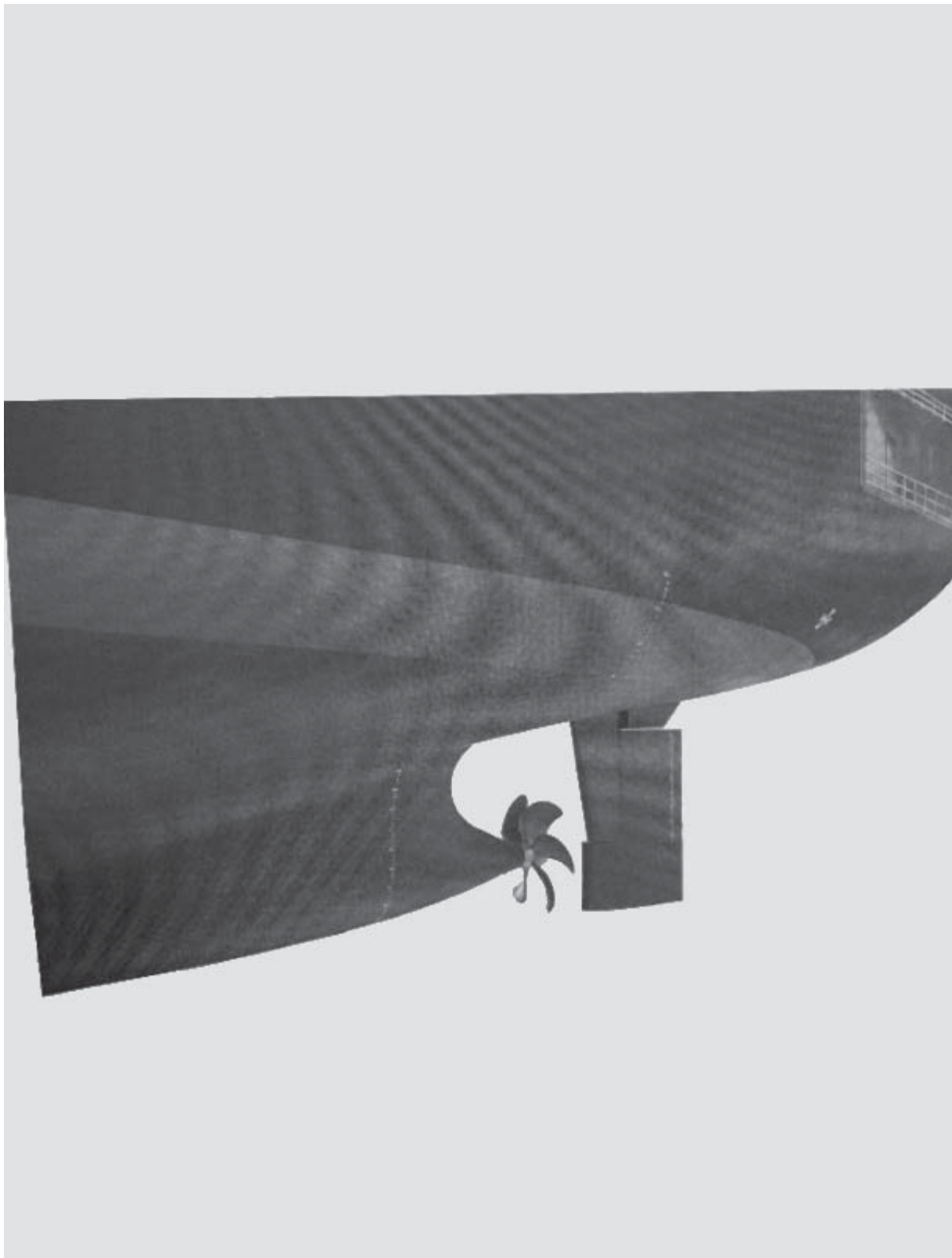


圖 12. 聯設設計 8250TEU 貨櫃船船艏形狀 (此照片展示於海科館船舶科技館內)

**OCTAMAR™ INNOVATION ENDORSEMENT FROM CLASS NK**

Innospec Fuel Specialties and Class NK are proud to announce that **Octamar™ Fuel Technology** has received Class NK's prestigious 'Innovation Endorsement' for reducing fuel consumption and improving emissions in vessels using Octamar™ performance packages. Class NK has independently verified Innospec's product performance claims regarding SFOC and PM reduction.



- **Improved Fuel Economy SFOC**  
(Reduction of between 2.3 % -3.9 %)
- **Reduced Emissions**  
(60 % by mass of Particulate Matter)

Speak to one of our teams to find out more on how to improve your SFOC saving.

Email: [globalservice@hostmostgroup.com](mailto:globalservice@hostmostgroup.com)

HOSTMOST GROUP Hong Kong Office 12/F, Yan's Tower, 27 Wong Chuk Hang Road  
Hong Kong Phone: +852 2554 9207 (24 hours) Fax: +852 2554 5152

Source: <https://innospec.com/fuel-additives/marine/>



**[www.crump-co.com.hk](http://www.crump-co.com.hk)**

35+ years Hong Kong and Regional Experience

- Insurance Claims
- Personal Injury & Life
- Ship & Aircraft Transactions
- Risk Management & Casualty
- Dispute Resolution

Chris POTTS: [chris.potts@crumpslaw.com](mailto:chris.potts@crumpslaw.com) M: (852) 9461 4377

Peter LAU: [peter.lau@crumpslaw.com](mailto:peter.lau@crumpslaw.com) M: (852) 9683 7439

1103 Jubilee Centre, 18 Fenwick St., Wan Chai, Hong Kong

Tel: +852 2537 7000 Fax: +852 2804 6615

Admiralty Firm with broad and deep knowledge and experience in Transport Law and Civil Dispute Resolution and strong network of Correspondents Worldwide.



Hong Kong's trading and logistics industry stands as the leading economic pillar, making a substantial contribution to the city's gross domestic product ("GDP") and employment rates. In 2019, it accounted for 21% of the city's GDP and provided jobs for 19% of the total workforce (Lam, 2020). Of particular importance within the logistics sector is the maritime and port industries, which alone contributed 3.1% (approximately \$85 billion) to the GDP and employed around 180,000 individuals, comprising 6% of all total employment (THB, 2020).

For years, the majority of freight volume passing through Hong Kong has been transported via water, making the maritime sector a key driver of the city's economic development and manpower needs. The maritime and port industries directly contributed 1.1% (around \$28 billion) to the GDP and employed approximately 87,000 people in 2018, accounting for 2.3% of total employment (THB, 2019). However, these statistics fail to encompass the contributions made by other industries in the maritime sector, such as maritime services, which are likely included within services sectors like financial and legal services. Additionally, the maritime and port industries indirectly contribute to supporting sectors like trading and

professional services, although the exact estimation of these contributions proves challenging.

Hong Kong possesses a competitive advantage in providing high value-added maritime services, thanks to its strong cluster of maritime services companies. Among these services, ship finance exhibits significant growth potential, accounting for over half of the added value within the maritime services sector. Ship financing activities in Asia are expected to experience even more rapid growth in the near future, propelled by the shift in the global economic centre of gravity from the West to the East, as well as the concentration of major contributors to ship ownership and shipbuilding activities in Asia. Notably, China, South Korea, and Japan accounted for over 90% of all global shipbuilding activities in 2018. The development of sea transport in mainland China presents lucrative business opportunities for the Hong Kong Shipping Register and its maritime services, subsequently benefiting other maritime industries.

Ship leasing has emerged as a new model for ship finance, playing a pivotal role in facilitating ship ownership and operations (THB, 2019). Furthermore, ship leasing generates demand for other

maritime business services, making its development in Hong Kong vital for the growth of the shipping core and maritime cluster. Recognizing the competitive landscape in the region, the Hong Kong government announced a package of initiatives in its 2018 Policy Address to support the development of maritime services (Lam, 2018). Among these initiatives, the use of tax incentives to foster ship leasing business in Hong Kong aims to enhance the city's position as a ship leasing centre in the Asia-Pacific region.

The Greater Bay Area ("GBA") Development Plan, promulgated in February 2019, further commits to consolidating and enhancing Hong Kong's status as an international maritime centre. Hong Kong can leverage its well-developed legal system and institutional infrastructure to form a complementary and mutually beneficial system within the GBA development, thereby strengthening the global competitiveness of the area's port cluster (HKSAR, 2019).

Despite its longstanding status as an international maritime centre, Hong Kong faces challenges in meeting the demand for high-quality maritime professionals. Structural changes in the sector, including adopting the latest technologies and rapidly growing maritime services, have intensified the existing manpower problems. Moreover, like other mature economies, Hong Kong contends with low awareness

among its young citizens regarding the benefits and rewards of pursuing careers at sea. Addressing these issues and attracting young talent to the maritime industry is crucial for sustaining and further developing Hong Kong's position as a maritime hub (HKMPB, 2019).

In conclusion, the maritime industry is undergoing a digital transformation, and maritime education and training is evolving accordingly. The integration of new technologies and developments in maritime services into educational curricular ensures that future maritime professionals are equipped with the necessary knowledge and skills to navigate the changing landscape. By embracing these changes, the industry can foster innovation, enhance operational efficiency, and maintain its position as a leading sector in the global economy.

#### *References:*

*HKMPB (2019). The Hong Kong Maritime Hub: Taking It to the Next Level. Hong Kong Maritime and Port Board*

*HKSAR (2019). Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area. Hong Kong SAR Government.*

*Lam, C. (2018). The Chief Executive's 2018 Policy Address. The Hong Kong SAR.*

*Lam, C. (2020). HK a logistics and maritime hub. news.gov.hk, 17 November.*

*THB (2019). Legislative Council Panel on Economic Development: Development of Hong Kong Port and Maritime Industry cum Staffing Proposal in Support of the Maritime Industry. LC Paper No. CB(4)130/19-20(03), 26 November. Transport and Housing Bureau.*

*THB (2020). Legislative Council Panel on Economic Development: The 2020*

*Policy Address Policy Initiatives of the Transport Branch of the Transport and Housing Bureau. CB(4)267/20-21(04), 14 December.*



隆 星 航 業 有 限 公 司  
**Grand Seatrade Shipping Company Limited**

3107 Alexandra House,  
16-20 Chater Road, Central, Hong Kong  
Tel : ( 852 ) 2526 4294-7  
Fax : (852) 2810 6780  
Telex : 85146 SETRA HX  
E-mail address : [gstrade@netvigator.com](mailto:gstrade@netvigator.com)

香港中環遮打道 16-20 號  
亞歷山大廈 3107 室  
電話 : ( 852 ) 2526 4294-7  
傳真 : ( 852 ) 2810 6780  
電傳 : 85146 SETRA HX  
電郵 : [gstrade@netvigator.com](mailto:gstrade@netvigator.com)



## **Tai Chong Cheang Steamship Co. (H.K.) Ltd.** **泰昌祥輪船(香港)有限公司**

Suites 3002-04, 30/F., South Island Place,  
8 Wong Chuk Hang Road, Wong Chuk Hang,  
Hong Kong.  
Tel : (852) 2522 5171  
Fax:(852) 2845 9307

香港黃竹坑道 8 號  
South Island Place  
30 樓 3002-04 室  
電話 : (852) 2522 5171  
傳真 : (852) 2845 9307

### **萬邦集團** **IMC Group**



Founded in 1966, the IMC Group comprises companies with diverse interest worldwide.

The major strategic business interests which are core to the IMC Group include the industrial group - a leading integrated maritime and industrial solutions provider in dry bulk shipping, industrial logistics, chemical transportation, shipyard and marine engineering, offshore assets and services, consumer logistics and palm oil plantations.

Other IMC businesses include investments, lifestyle and real estate development, and social enterprises.

The IMC Group is a global company with offices in China, Hong Kong, Indonesia, Singapore, Malaysia, Vietnam, Thailand, India, Japan, Korea, Myanmar, Philippines, South Africa, UAE and USA.

#### **Contacts:**

Address: 9 Temasek Boulevard Level 11-01  
Suntec Tower Two Singapore 038989  
Telephone: (65) 6336 2233  
Email : [groupcomm@imcindustrialgroup.com](mailto:groupcomm@imcindustrialgroup.com)  
Website : [www.imcindustrialgroup.com](http://www.imcindustrialgroup.com)



*Editor's Note: -*

*As noted in Issue 139, notes on "General Average in relation to Marine Insurance" which were compiled by the Editor and published in the Seaview in 1985/6, are now being revised and expanded.*

### **Part I - Introduction and Outline of the Discipline of General Average** (continued)

#### **Adjustment of General Average**

Anybody sustaining a loss in general average can claim for it. This might be the ship-owners, the time charterer, cargo owner, container owner or other owner of maritime property involved in a common maritime adventure. General average is contributed to rateably by the parties who own property that has survived and benefited by the general average act. As will be noted later in Part III – Application to Insurance, these contributions will in most cases be paid by the insurers involved.

The settlements, the movements of money between the parties, which is the whole point of the exercise and what, strictly, we mean by the adjustment of general average could be illustrated by the following much simplified example.

A vessel laden with general cargo loaded at Far East ports bound for European ports stranded in the Malacca Straits on 1<sup>st</sup> June and sustained damage to her forward bottom plating, with leakage into Nos. 1 and 2 holds. Lloyd's Form of Salvage Agreement was signed with professional salvors and the vessel was refloated on 6<sup>th</sup> June with the assistance of several tugs and after jettisoning part of the cargo and working her engines. The vessel was towed to Singapore, port of refuge and there the salvage services terminated. Part of the cargo was discharged ashore and the vessel drydocked and carried out permanent repairs to the bottom and to the main engine. The cargo was then reloaded and the vessel resumed her voyage on 1<sup>st</sup> July.

#### **The Contracts of Carriage provide for:**

1. General Average to be adjusted in accordance with York-Antwerp Rules 1994
2. Freight to be prepaid and non-returnable, ship and/or cargo lost or not lost.



The GENERAL AVERAGE is made up of the following items:

#### SHIP-OWNERS' LOSSES

1. Pilots, tugs and port charges etc. at port of refuge	\$ 24,000	(say)	\$ 20,000
2. Discharging, stowing and reloading cargo	\$ 100,000		\$ 100,000
3. Repairs to: Bottom	\$ 160,000		
Main Engines	\$ 40,000		\$ 40,000
	=	\$ 200,000	
4. Wages and Maintenance of Crew – 1 month	\$ 45,000		\$ 37,500
5. Bunkers and Stores consumed – 1 month	\$ 11,000		\$ 10,000
6. Salvage Award (2/5ths x \$250,000)	\$ 100,000		\$ 100,000
7. Commission and Interest	\$ 32,500		\$ 32,500
			\$ 340,000

#### CARGO OWNERS' LOSSES.

8. Value of Cargo Jettisoned	\$ 130,000	GENERAL AVERAGE	\$ 130,000
9. Salvage Award (3/5ths x \$250,000)	\$ 150,000		\$ 150,000
10. Commission and interest	\$ 20,000		\$ 20,000
			\$ 300,000

#### ADJUSTMENT CHARGES etc.

\$ 20,000	\$ 20,000
	\$ 660,000

#### APPORTIONED

SHIP – Sound Value	\$ 2,000,000		
<u>Deduct: Damage</u>	\$ 211,000		
	\$ 1,789,000		
<u>Add: Made Good</u>	\$ 50,000		
	\$ 1,839,000	pays	\$ 242,748
CARGO – Arrived Value.	\$ 3,031,000		
<u>Add: Made Good</u>	130,000		
	= \$ 3,161,000	pays	417,252
	\$ 5,000,000		\$ 660,000

#### FINANCIAL SETTLEMENT

THE SHIP-OWNERS WANT his Losses	\$ 340,000
<u>Less: Proportion of General Average</u>	\$ 242,748
	\$ 97,252
THE ADJUSTER WANTS his Charges	\$ 20,000
	\$ 117,252

THE CARGO PAYS Proportion of General Average	\$ 417,252
<u>Less: Their own Losses</u>	300,000
	\$ 117,252

## **Rights to Contribution**

The obligation to contribute to general average is not derived from the contract of carriage but arises from the general maritime law irrespective of such contract. The parties may, however, make special provisions in the contract regarding general average, the most common being a clause to the effect that general average is to be adjusted in accordance with York-Antwerp Rules. Such stipulations may be contained in the charter parties if any, or in bills of lading, or in both documents.

Once it is known that there is a general average, it is necessary to consider how to safeguard the right to contribution. The York-Antwerp Rules say nothing specific concerning declaration of general average and security, which is left to the national law.

Under most jurisdictions, a general average situation and the rights/liabilities arising from this, exist without anyone formally declaring it. However, some localities have strict rules about the declaration of general average having to

be given in the local ports within a certain time after the vessel's arrival if there is to be a valid claim for contribution from cargo interests. Ship agents should be able to advise ship-owners of the local requirements. In great majority of cases, however, a declaration of general average means no more than a decision by the ship-owner to collect general average security from the concerned in cargo.

The Common Law gives the ship-owner a possessory lien which he can exercise until reasonable security has been given. A cargo claimant has no such lien, but is protected in that the ship-owner is bound to exercise his lien, if required, in the interests of cargo to procure proper security and to see that an adjustment is prepared (*Cooks v. Allan* – 1879).

The security must not be unreasonable, but it must be adequate in amount and must be one that can be enforced. The form of general average security required will be decided by the ship-owners in consultation with the general average adjusters. Security is provided usually in the form of:

- a) A Lloyd's Average Bond signed by the cargo receiver which promises to pay a general average contribution in consideration for obtaining release of cargo, together with
- b) Payment of cash deposit or provision of an unlimited Average Guarantee signed by a reputable cargo insurer in lieu of such deposit, which undertakes to settle the contribution due from the cargo.

The Comité Maritime International [CMI], the custodian of the York-Antwerp Rules, have adopted new forms of General Average bonds and guarantees for cargo as well as for (Charterers') bunkers and freight, which have received official approval from International Union of Marine Insurance [IUMI] and International Chamber of Shipping [ICS]. The documents are now available on the CMI website ([www.comitemaritime.org](http://www.comitemaritime.org)). It is anticipated that with the strong industry backing they will be widely used and become market standard.

The Average Bond constitutes a separate contract from the contract of carriage and, in giving up the possessory

lien, the ship-owner accepts a document under which the cargo consignee agrees to pay a liquidated sum at a future date, which sum can only be ascertained when the adjustment of general average is completed.

The reason why the guarantee should be unlimited is that property, though insured, may not be insured for its full market value (which includes the cost of insurance and freight unless and insofar as such freight is at the risk of interests other than the cargo) – the basis of contribution – and if a guarantee limited to the insured value is accepted the claimant will have no collateral security beyond the Average Bond to the extent that the property is insured.

Understandably, Cargo's response to request for security from Ship is likely to be an immediate one of considering whether there are any defences to a claim for contribution in general average. The defences available depend on the terms of the contract of carriage – this is however not an issue that will affect the adjustment of general average, as provided by Rule D of the York-Antwerp Rules:

“Rights to contribution in general average shall not be affected, though the event which gave rise to the sacrifice or expenditure may have been due to the fault of one of the parties to the common maritime adventure, but this shall not prejudice any remedies or defences which may be open against or to that party in respect of such fault.”

**何 恩 洪 律 師 行**  
**JAMES HO & CO.**  
**Solicitor**

Rm. 1403 14/F., Blissful Bldg.,  
243-7 Des Voeux Rd Central,  
Hong Kong

地址：

香港上環德輔道中243-7號  
德佑大廈1403室

Tel: (852) 3421 1330

Fax: (852) 3421 1339

Mobile Phone: 9034 3360

E-Mail: [james.ho@yanhung.com](mailto:james.ho@yanhung.com)

Lawyer of Guangdong- Hong Kong-  
Macao Greater Bay Area  
Senior consultant of Wang Jing & Co.,  
Shenzhen Office

**Contact:**

**James Ho, Chartered Shipbroker**

LL.M.(Lond), LL.B., F.I.C.S.,

M.C.I.Arb., ANZIFF (Fellow).

Practice Area:	業務範圍:
• Arbitration	仲裁
• Civil litigation	民事訴訟
• Personal Injury	工傷賠償
• Criminal litigation	刑事訴訟

粵港澳大灣區律師

廣東敬海(深圳)律師事務所高級顧問





# 招商局

CHINA MERCHANTS GROUP

Since 1872

**招商局** 創立於一八七二年晚清洋務運動時期，是中國近代民族工商企業的先驅，在中國近現代化進程中起到過重要推動作用。

賴於幾代人的努力，現已成長為一個實力雄厚的綜合性大型企業集團。其交通運輸及相關基礎設施建設、經營與服務，金融資產投資與管理，房地產開發與經營等三大核心產業，在業內居領先地位。

集團總部位於香港，業務分佈於香港、中國內地、東南亞等極具活力和潛力的新興市場，被列為香港『四大中資企業』之一，在國際工商界有著廣泛影響。







Institute of Seatrtransport

海 運 學 會

*SEAVIEW*

海 運 季 刊

JOURNAL OF THE INSTITUTE OF SEATRANSPORT