財團法人驗船中心
CR CLASSIFICATION SOCIETY

75th ANNIVERSARY

歡慶75週年 與您攜手續航

Celebrating CR 75th anniversary,
continuing our journey with you together.

CR Annual Report 2025

台北總部
HEADQUARTERS

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財團法人驗船中心
CR CLASSIFICATION SOCIETY

www.crclass.org

CR 官方臉書粉絲專頁

CR 官方 LINE 帳號

克服挑戰，CR 邁向高峰
您在航運與風能產業的好夥伴

Conquer Challenges, Head to the High CRest.
Your Reliable Partner in the Shipping and Wind Energy Industry.

Annual Report 2025

contents

CR 簡介

鑒於船舶檢驗與航行安全息息相關，世界各航運大國均設立本國驗船機構以嚴格執行船舶檢驗，我國航運業、保險業及造船業各界有識之士，為求航業蓬勃發展，驗船中心成立始於民國 40 年 2 月 15 日，迄今已 75 年。

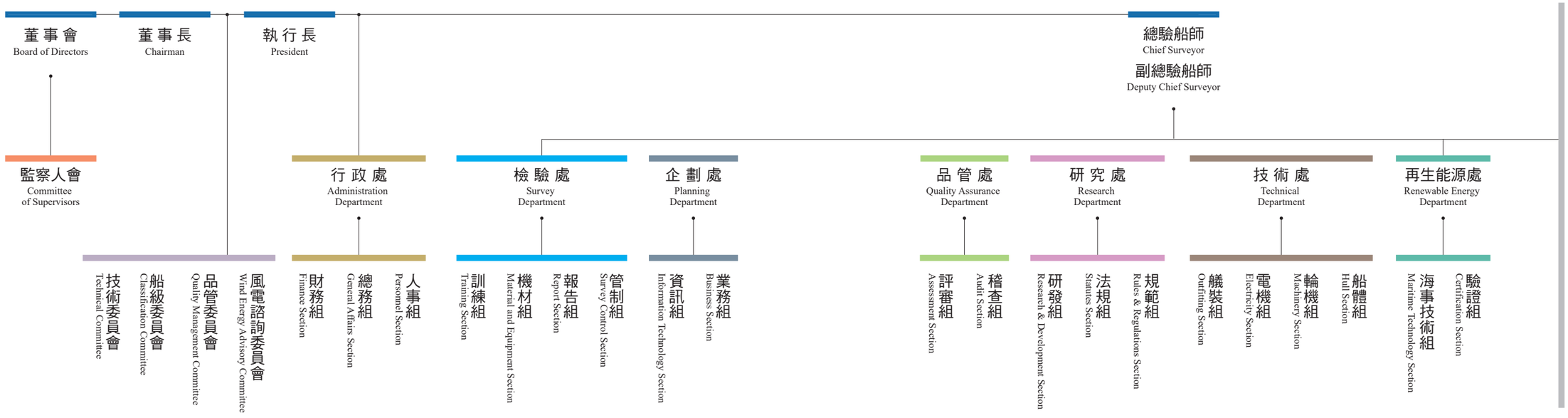
驗船中心為一民間純技術性，不以營利為目的之服務事業機構，目標為提供優良技術、高度效率與熱忱之服務，組織型態及工作內涵一如世界各大驗船機構，其工作據點遍及世界各重要港口，為船東、造船廠及機材製造廠商提供最便捷之服務。

Brief Introduction of CR

Recognizing the close ties between ship inspection and maritime safety, major maritime nations around the world have established their own classification societies to strictly enforce inspection standards. In Taiwan, prominent figures from the shipping, insurance, and shipbuilding industries jointly founded the CR Classification Society on February 15, 1951, with the shared vision of advancing the maritime sector. Now marking its 75th anniversary, CR proudly celebrates this milestone.

CR Classification Society is a private, non-profit technical service organization. Its mission is to deliver excellent technical expertise, operational efficiency, and dedicated service. Its structure and scope of work are in line with those of leading international classification societies. With service stations located in major ports worldwide, CR provides shipowners, shipbuilders, and equipment manufacturers with efficient and accessible services across the globe.

組織架構 Organization



基隆連絡處
Keelung Office

台中連絡處
Taichung Office

高雄連絡處
Kaohsiung Office

日本代表處
Japan Office

大陸代表處
China Office

香港代表處
Hong Kong Office

新加坡代表處
Singapore Office

南非代表處
South Africa Office

董事長感言

感謝交通部、航港局、海巡署、航商及各界在 2025 年一如既往支持驗船中心 (CR)，去年 CR 在業務成長、檢驗成果、技術能量方面皆有亮眼的成績，除我船旗國持續於東京備忘錄 (Tokyo MOU) 名列「白名單」，CR 於認可機構評比亦維持「高表現度」，特別是國輪已連續 2 年無留置紀錄，由衷感謝交通部與航港局的督導以及所有船東的努力，使我船旗國與 CR 能順利維持我國良好的海運安全管理績效。

回顧 2025 年，CR 在本業船舶檢驗議題上積極與各國海事局、船級協會進行交流，包括 2 月與巴拿馬海事局 (PMA) 舉行授權合約簽署儀式，進一步鞏固雙方長達 63 年的緊密合作關係、6 月與義大利驗船協會 (RINA) 針對節能減碳及綠色燃料應用等議題進行討論，並達成加強合作之共識、7 月拜會香港海事處及 CCS 香港分社就替代燃料推動、船舶檢驗方向、PSC 制度與合作模式等多面向深入探討、於 9 月與諾魯海事管理局（NMA）及吐瓦魯船舶註冊局（TSR）正式簽署授權機構合約，可為懸掛諾魯及吐瓦魯船旗之商船及漁船提供公約檢驗及發證服務，進一步拓展對船東服務範圍。過去一年交流與合作的積極成果，再次彰顯了 CR 在國際海事領域的專業地位與影響力，並為 CR 持續提供更全面、更專業的船舶檢驗與發證服務奠定了堅實的基礎。

作為台灣海運產業的重要技術智庫及工作夥伴，CR 除持續提供航港局國際公約諮詢、配合落實公約內國法化作業程序，針對國際最新海運議題，亦定期發行舉辦技術研討會並發行技術通報；為協助我國航商第一時間掌握國際趨勢，CR 於國際海事組織 (IMO) 海洋環境保護委員會第 83 屆會議 (MEPC 83)、海事安全委員會第 110 屆會議 (MSC 110)、第二次特別會議（MEPC ES/2）後立即於會議隔日發布中文會議結論快報，且舉辦 MEPC 83 產業趨勢研討會，邀請各航運公司高階管理及技術主管探討溫室氣體減排中期措施，透過實務經驗交流與掌握最新國際規範動向、研析對策，並共同研討我國航運產業永續轉型之路，期盼藉由研討會活動強化與航運界交流，全力協助我國航商與國際法規接軌，鞏固台灣在全球航運中的重要地位。

2025 年也是 CR 於再生能源領域持續深耕的一年，包含 8 月前往荷蘭、比利時及法國，與港務公司共同考察當地海運產業與綠色能源推動現況。期間拜訪鹿特丹港務局、安特衛普港務局、比利時 DEME 集團、法國電力公司（EDF），並與長榮海運及陽明海運歐洲代表處進行交流，重點討論永續燃料、氫能應用與離岸風電等相關議題，有助於了解歐洲在能源轉型與低碳運輸方面之實務作法，並作為後續業務推動與國際合作之重要參考；另，為共同推動我國船舶航運與港口營運導入新能源，CR 與航港局及港務公司，加速能源轉型，並促進航港相關產業之永續發展，簽訂合作備忘錄 (MOU)，善用各自於航港政策、港口營運管理、船舶檢驗之專業優勢，共同推動整體航港體系邁向淨零排放目標。

2026 年將是 CR 成立 75 周年，秉持永續傳承之精神，未來 CR 將持續與業界保持良好交流互動，盡最大努力提供航商優質及高滿意度的技術協助與支援，同時也持續關注並發布即時國際海事組織及歐盟的法規動態與發展供業界參考，支持我國航運產業維持航行安全並兼顧高效營運，加強國際市場競爭力，促進產業升級、創造榮景。

驗船中心 董事長 林國順

Chairman's Speech

We would like to express our sincere appreciation to continuous support from Ministry of Transportation and Communications R.O.C., Maritime and Port Bureau, Coast Guard Administration, Navy Command R.O.C., shipping companies and other concerned Parties in 2025. Last year, CR achieved outstanding results in business growth, survey outcomes, and technical capabilities. Additionally, R.O.C. flag has also continuously listed in “White List” of the Tokyo MOU. CR has continuously maintained “High Performance”. In particular, R.O.C.-flagged vessels have maintained zero-detention record for two consecutive years. We heartfully appreciated guidance of Ministry of Transportation and Communications R.O.C. and Maritime Port Bureau as well as effort of all shipowners. This enables R.O.C. flag and CR to successfully maintain good performance in maritime safety management.

In 2025, CR actively engaged with maritime authorities and classification societies worldwide to enhance ship inspection practices. In February, CR and the Panama Maritime Authority (PMA) held a signing ceremony to renew our authorization agreement, further strengthening a partnership that has lasted 63 years. In June, CR met with RINA (Italy) to discuss energy-saving, decarbonization initiatives, and green fuel applications, reaching a consensus to intensify cooperation. In July, CR visited the Hong Kong Marine Department and CCS Hong Kong Branch for in-depth discussions on alternative fuels, inspection directions, PSC systems, and future collaboration models. In September, CR signed authorization agreements with the Nauru Maritime Administration (NMA) and the Tuvalu Ship Registry (TSR), enabling CR to provide convention inspection and certification services for merchant and fishing vessels flying the flags of Nauru and Tuvalu, thereby expanding our service scope for shipowners. These accomplishments highlight CR’s professionalism and growing influence in the international maritime arena, laying a solid foundation for providing more comprehensive and expert ship inspection and certification services.

As a vital technical think tank and partner for Taiwan’s maritime industry, CR stays at the forefront of international maritime trends. Beyond advising the Maritime and Port Bureau on international conventions and ensuring seamless implementation into domestic regulations, CR regularly organizes seminars and publishes technical circulars. Following the IMO Marine Environment Protection Committee (MEPC 83), Maritime Safety Committee (MSC 110), and the second extraordinary MEPC session (MEPC ES/2), CR promptly released Chinese-language summary bulletins the day after each meeting, and later organized an MEPC 83 industry seminar to discuss mid-term greenhouse gas reduction measures. Through exchanges of practical experience and analysis of emerging regulatory trends, CR worked with senior management and technical specialists from shipping companies to jointly explore Taiwan’s pathway toward sustainable maritime transformation. These initiatives have strengthened industry engagement and supported Taiwanese operators in aligning with international rules, thereby reinforcing Taiwan’s role in global shipping.

In 2025, CR also continued to deepen its involvement in the renewable energy sector. In August, CR visited the Netherlands, Belgium, and France with the Taiwan International Ports Corporation, Ltd. to study the development of local maritime industries and green energy transitions. The delegation met with the Port of Rotterdam Authority, Port of Antwerp-Bruges, DEME Group, and Électricité de France (EDF), as well as the European representative offices of Evergreen Marine Corp. and Yang Ming Marine Transport Corp., focusing on sustainable fuels, hydrogen applications, and offshore wind power. These exchanges provided valuable insights into Europe’s practical approaches to energy transition and low-carbon transport, serving as important references for future business development and international cooperation. Furthermore, to jointly promote the adoption of new energy in Taiwan’s shipping and port operations, CR, together with the Maritime and Port Bureau and the Taiwan International Ports Corporation, Ltd., signed a Memorandum of Understanding (MOU) to accelerate energy transition and foster sustainable development across the maritime and port sectors. By leveraging each party’s expertise in policy, port operations, and ship inspection, the partnership aims to support the nation’s progress toward net-zero emissions.

The year 2026 will mark the 75th anniversary of CR’s establishment. Upholding a spirit of sustainable legacy, CR will continue to maintain strong communication and collaboration with the industry, striving to provide high-quality technical support and services with utmost dedication. We will also keep monitoring and publishing timely updates on regulatory developments from both the International Maritime Organization and the European Union, helping Taiwan’s maritime industry ensure navigational safety, enhance operational efficiency, strengthen global competitiveness, and promote industrial advancement and long-term prosperity.

CR Classification Society
Chairman
Lin Kuo-shun

董事會 Board of Directors

董事會係本中心最高管理階層，共有董事 23 人，監察人 3 人。第 16 屆董事會之董事及監察人如下：

The Board of Directors, consisting of 23 directors and 3 supervisors, is the top management of CR. The name list of directors and supervisors is given below:

董事 Director	現任職務 Position
林國顯 Kuo-Shian Lin	驗船中心董事長 Chairman, CR Classification Society
韓振華 Chen-Hua Han	交通部航政司司長 Director of Department of Navigation and Aviation, Ministry of Transportation and Communications R.O.C.
葉協隆 Hsieh-Lung Yeh	交通部航港局局長 Director-General of Maritime and Port Bureau, Ministry of Transportation and Communications R.O.C.
蔡豐明 Feng-Ming Tsai	陽明海運股份有限公司董事長 Chairman, Yang Ming Marine Transport Corporation
張衍義 Yen-I Chang	長榮海運股份有限公司董事長 Chairman, Evergreen Marine Corporation
劉文慶 Wen-Ching Liu	台灣航業股份有限公司董事長 Chairman, Taiwan Navigation Co., Ltd.
盧公宇 Gong-Yeu Lu	海洋委員會海巡署後勤組副組長 Deputy Chief of Logistics Division, Coast Guard Administration, Ocean Affairs Council
黃一中 I-Chung Huang	中鋼運通股份有限公司董事長 Chairman, China Steel Express Corporation
王書吉 C. K. Ong	裕民航運股份有限公司總經理 General Manager, U-Ming Marine Transport Corporation
王文潮 Wilfred Wang	台塑海運股份有限公司董事長 Chairman, Formosa Plastics Marine Corporation
陳柏廷 Po-Ting Chen	萬海航運股份有限公司董事長 Chairman, Wan Hai Lines Ltd.
彭士孝 Shih-Hsiao Peng	中國航運股份有限公司董事長 Chairman, Chinese Maritime Transport Ltd.
藍俊昇 James Lan	慧洋海運股份有限公司董事長 Chairman, Wisdom Marine Group
黃健強 Edward Huang	台灣水泥股份有限公司資產事業群總經理兼達和航運公司董事 Senior Vice President, Taiwan Cement Corporation
梁正德 Cheng-Te Liang	兆豐產物保險股份有限公司董事長 Chairman, Chung Kuo Insurance Co., Ltd.
許金泉 Chin-Chuan Hsu	富邦產物保險股份有限公司董事長 Chairman, Fubon Insurance Co., Ltd.
陳昭鋒 Zhao-Feng Chen	台灣產物保險股份有限公司總經理 President, Taiwan Fire & Marine Insurance Co., Ltd.
蕭捷明 Jimmy C. Hsiao	明台輪船股份有限公司董事長 Chairman, MingTai Navigation Co., Ltd.
周志明 Chih-Ming Chou	台灣國際造船股份有限公司副總經理 Vice President, CSBC Corporation, Taiwan
藍心琪 Irene Lan	四維航業股份有限公司董事長 Chairman, Shih Wei Navigation Co., Ltd.
李健發 Kenneth Lee	世邦海運股份有限公司董事長 Chairman, TVL Marine Co., Ltd.
陳德勝 T. S. Chen	德翔海運股份有限公司董事長 Chairman, T.S. Lines Co., Ltd.
黃戊辰 Harry, W.C. Huang	台灣中油股份有限公司儲運處副處長 Deputy Director , Storage and Transportation Department, CPC Corporation, Taiwan

監察人 Supervisor	現任職務 Position
許志堅 Chih-Chien Hsu	益利航運股份有限公司董事長 Chairman, Eddie Steamship Co., Ltd.
程藍瑩 Lan-Ying Cheng	能源航運股份有限公司副總經理 Vice President, Energy Shipping Co., Ltd.
康江良 Jiang-Liang Kang	交通部統計處副處長 Deputy Director of Department of Statistics, Ministry of Transportation and Communications, R.O.C.

船級委員會 Classification Committee

職別 Title	姓名 Name	現任職務 Position
主任委員 Chairman	黃建樺 Chien-Hua Huang	驗船中心總驗船師兼管理代表 Chief Surveyor, CR Classification Society
副主任委員 Vice-Chairman	戴聖堅 James S.C. Tai	中國航運股份有限公司總經理 President, Chinese Maritime Transport Ltd.
副主任委員 Vice-Chairman	鄭正雄 James Jeng	陽明海運股份有限公司技術長暨副總經理 Chief Marine Technology Officer & Executive Vice President, Yang Ming Marine Transport Corporation
委員 Member	王士玫 Shih-Mei Wang	交通部航港局船舶組副組長 Vice Director, Vessel Management Division, Maritime and Port Bureau, MOTC
委員 Member	黃崇榮 Ron Huang	長榮海運股份有限公司船舶本部本部主管 Division chief of Ship Division, Evergreen Marine Corporation
委員 Member	林錦駿 Dennis Lin	中鋼運通股份有限公司總經理 President, China Steel Express Corporation
委員 Member	郭志成 C. C. Kuo	光明海運股份有限公司董事長 Chairman, Kuang Ming Shipping Corporation
委員 Member	謝敏雄 Alan Shieh	達和航運股份有限公司總經理 President, Ta-Ho Maritime Corporation
委員 Member	林子傑 Tzu-Jay Lin	商船三井股份有限公司董事長 Chairman, MOL(Taiwan) Co., Ltd.
委員 Member	陳俊杰 Benson Chen	萬海航運股份有限公司工務部協理 Vice President of Engineering Division, Wan Hai Lines Ltd.
委員 Member	呂學修 S. S. Lu	台塑海運股份有限公司副總經理 Vice President, Formosa Plastics Marine Corporation
委員 Member	欒文斌 Wen-Pin Luan	新興航運股份有限公司副總經理 Vice President, Sincere Navigation Corporation
委員 Member	黎錫榮 Daniel Lai	裕民航運股份有限公司營運長 Chief Operation Officer, U-Ming Marine Transport Corporation
委員 Member	林正川 J. C. Lin	四維航業股份有限公司經理 Manager, Shih Wei Navigation Co., Ltd.
委員 Member	林郁喆 Yu-Zhe Lin	明台輪船股份有限公司經理 Manager, MingTai Navigation Co., Ltd.
委員 Member	范永政 Rice Fan	世邦海運股份有限公司協理 Senior General Manager, TVL Marine Co., Ltd.
委員 Member	袁國龍 Gordon Yuan	台灣國際造船股份有限公司業務處處長 Director of Sales Department, CSBC Corporation, Taiwan
委員 Member	曹祥超 Hsiang-Chao Tsao	慧洋海運股份有限公司技術長 Chief Technology Officer, Wisdom Marine Lines Co., Ltd.
委員 Member	王紹培 Davis Wang	台灣中油股份有限公司儲運處組長 Section Manager, Marine Management Section, CPC Corporation, Taiwan

技術委員會 Technical Committee

職別 Title	姓名 Name	現任職務 Position
主任委員 Chairman	張明雄 Ming-Hsiung Chang	驗船中心研究處處長 Director of Research Department, CR Classification Society
副主任委員 Vice-Chairman	戴聖堅 James S.C. Tai	中國航運股份有限公司總經理 President, Chinese Maritime Transport Ltd.
副主任委員 Vice-Chairman	鄭正雄 James Jeng	陽明海運股份有限公司技術長暨副總經理 Chief Marine Technology Officer & Executive Vice President, Yang Ming Marine Transport Corporation
委員 Member	劉嘉洪 C. H. Liu	交通部航港局船舶組組長 Director, Vessel Management Division, Maritime and Port Bureau, MOTC
委員 Member	韓育霖 Y. L., Han	中信造船股份有限公司總經理 President, Jong Shyn Shipbuilding Co., Ltd.
委員 Member	黃仁傑 Russell Huang	德翔海運股份有限公司資深副總經理 Senior Vice President, T.S. Lines Co., Ltd.
委員 Member	吳瑞祥 Rui-Xiang Wu	海洋委員會海巡署艦隊分署副分署長 Deputy Director, Fleet Branch of Coast Guard Administration, Ocean Affairs Council
委員 Member	謝曜安 Yao-An Hsieh	財團法人船舶暨海洋產業研發中心副執行長 Vice President, Ship and Ocean Industries R&D Center
委員 Member	許家豪 Chia-Hao Hsu	龍德造船工業股份有限公司設計經理 Manager, Lung Teh Shipbuilding Co., Ltd.
委員 Member	鍾以燊 Yi-Shen Zhong	中國鋼鐵股份有限公司冶金技術處組長 Section Manager of Metallurgical Dept. , China Steel Corporation
委員 Member	辛敬業 Ching-Yeh Hsin	國立海洋大學系統工程暨造船學系副教授 Associate Professor, National Taiwan Ocean University Systems Engineering & Naval Architecture
委員 Member	顏春木 C. Y. Yen	台灣國際造船股份有限公司督導 Supervisor, CSBC Corporation, Taiwan
委員 Member	黃英泰 Ying-Tai Huang	台灣中油股份有限公司儲運處組長 Section Manager, Marine Management Section, CPC Corporation, Taiwan

品管委員會 Quality Management Committee

職別 Title	姓名 Name	現任職務 Position
主任委員 Chairman	黃建樺 Chien- Hua Huang	驗船中心總驗船師兼管理代表 Chief Surveyor, CR Classification Society
副主任委員 Vice-Chairman	黃志文 Chih-Wen Huang	經濟部標準檢驗局第六組組長 Director of 6th Division, Bureau of Standards, Metrology and Inspection, MOEA
副主任委員 Vice-Chairman	林沛樵 P. C. Lin	全國船聯會秘書長 Secretary General, National Association of Chinese Shipowners
委員 Member	呂云馨 Y. H.,Lu	交通部航港局船員組簡任技正 Senior Technical Officer, Maritime and Port Bureau, MOTC
委員 Member	仇忠林 Jong-Lin Chyu	台灣航業公司總經理 President, Taiwan Navigation Co., Ltd.
委員 Member	邱增玉 Tseng-Yu Chiu	陽明海運股份有限公司行政長 Chief Administration Officer, Yang Ming Marine Transport Corporation
委員 Member	楊弘明 Hong-Ming Yang	長榮海運股份有限公司船舶本部副本部主管 Deputy Division Chief of Ship Division, Evergreen Marine Co., Ltd.
委員 Member	劉守麟 Shou-Lin Liu	裕民航運股份有限公司專案經理 Project Manager, U-Ming Marine Transport Corporation
委員 Member	鄭尊仁 Tsun-Jen Cheng	台灣中油股份有限公司儲運處組長 Section Manager, Marine Management Section, CPC Corporation, Taiwan
委員 Member	林暐傑 Wei-Chien Lin	四維航業股份有限公司海務部襄理 Assistant Manager, Shih Wei Navigation Co., Ltd.
委員 Member	俞克維 K. W. Yu	國立高雄科技大學副校長 Vice President, National Kaohsiung University of Science and Technology.
委員 Member	林彬 B. Lin	國立臺灣海洋大學商船學系教授 Professor, Department of Merchant Marine, National Taiwan Ocean University

風電諮詢委員會 Wind Energy Advisory Committee

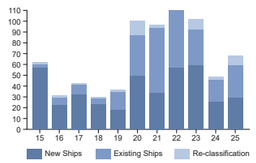
職別 Title	姓名 Name	現任職務 Position
主任委員 Chairman	黃建樺 Chien- Hua Huang	驗船中心總驗船師兼管理代表 Chief Surveyor, CR Classification Society
副主任委員 Vice-Chairman	吳志偉 Zhi-Wei Wu	經濟部能源署副署長 Deputy Director General, Energy Administration Ministry of Economic Affairs
副主任委員 Vice-Chairman	謝翰璋 Han-Chang Hsieh	經濟部標準檢驗局副局長 Deputy Director General, Bureau of Standards, Metrology and Inspection, MOEA
委員 Member	沈淑賢 Shu-Hsien Shen	交通部航港局航安組組長 Director, Maritime and Port Bureau, MOTC
委員 Member	蔡英聖 Ing-Sheng Tsay	台灣電力股份有限公司再生能源處處長 Director, Department of Renewable Energy, Taiwan Power Company
委員 Member	黃金城 Chin-Cheng Huang	國家原子能科技研究院機械及系統工程研究所所長 Director, Department of Mechanical and System Engineering, National Atomic Research Institute
委員 Member	鍾承憲 Cheng-Hsien Chung	風能協會學術委員會委員 / 財團法人船舶暨海洋產業研發海洋產業處處長 Director, Marine Industrial Department, Ship and Ocean Industries R&D Center
委員 Member	林信宏 Xin-Hong Lin	富邦產物保險股份有限公司損害防阻暨勞工安全衛生部專案協理 Manager, Department of Risk Management and Occupational Safety and Health, Fubon Insurance Co., Ltd.
委員 Member	簡連貴 Lien-Kwei Chien	國立海洋大學河海工程學系教授 / 近海防災中心主任 Professor, Department of Harbor & River Engineering, National Taiwan Ocean University
委員 Member	陳柏霖 Bo-Lin Chen	東方風能科技股份有限公司董事長 Chairman, Dong Fang Offshore Co., Ltd.
委員 Member	馬嘉良 Michael Ma	TY LIN 林同棪工程顧問股份有限公司執行副總經理 Executive Vice President, T.Y.Lin Taiwan Consulting Engineers, Inc.
委員 Member	邱華榮 Hua-Rong Chiu	中興工程顧問股份有限公司電力及能源工程部協理 Senior Manager, Power and Energy Engineering Department, Sinotech Engineering Consultants, Ltd.
委員 Member	陸俊煌 Jun-Huang Lu	富崴能源股份有限公司離岸風電技術處協理 Senior Manager, Offshore Wind Technology Department, Shinfox Energy
委員 Member	蔡亞霖 Ya-Lin Tsai	風睿能源股份有限公司資深施工經理 Senior Construction Manager, Synera Renewable Energy

新入級船舶 Newly Classed Ships

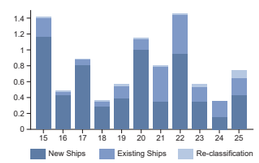
2025 年經審核後正式入級的船舶有 70 艘共計 726,022 總噸，艘數為在級船舶的 11%，其中新船入級 29 艘，現成船入級 32 艘，重新入級 9 艘。

After careful review, a total of 70 ships with 726,022 gross tonnage were formally classed with CR in 2025. The number of ships accounted for 11% of the number of those already classed with CR. Among these newly classed ships, there were 29 new ships, 32 existing ships, and 9 re-classed ships.

Number of Ships Newly Classed



GT of Ships Newly Classed (in million GT)



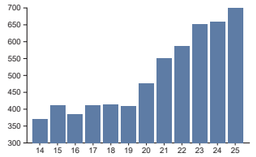
在級船舶 Classed Ships

截至 2025 年底，維持 CR 船級之船舶有 706 艘，共計 6,535,715 總噸，平均船齡為 12.2 年。

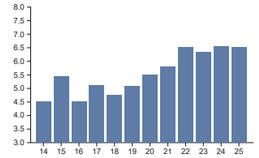
Up to the end of 2025 there were 706 ships maintaining CR class with 6,535,715 gross tonnage, and the average age of ships was 12.2 years.

歷年在級船舶艘數及總噸 The number of CR-classed ships over the years and their gross tonnage

Number of CR-Classed Ships

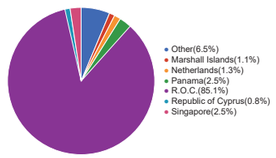


GT of CR-Classed Ships (million GT)

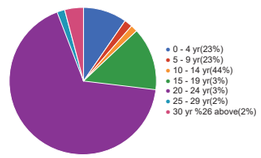


在級船舶之船旗國分析 Analysis of flag states of CR-classed ships

Breakdown, of Number of CR Fleet by Flag

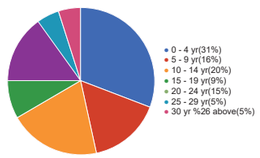


Breakdown of GT Fleet by Flag

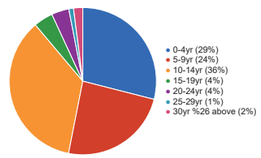


在級船舶之船齡分析 (平均船齡 12.2 年) Analysis of age of CR-classed ships (the average age of ships: 12.2 years)

Breakdown, of Number of CR Fleet by Flag

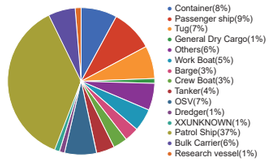


Breakdown of GT of CR Fleet by Age

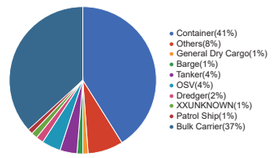


在級船舶之船型分析 Analysis of types of CR-classed ships

Breakdown of Number of CR Fleet by Ship Type



Breakdown of GT of CR Fleet by Ship Type



政府授權 Government Authorization

交通部委託 CR 承辦本國籍船舶之國際公約檢驗。此外，本中心亦符合 IMO 決議案 MSC.349(92) RO Code 之規定，並獲得巴拿馬、諾魯、吐瓦魯等國政府之授權執行各該國籍船舶之國際公約檢驗。

CR is authorized by the Ministry of Transportation and Communications to carry out statutory surveys of ROC ships. In addition, we have met the requirements of IMO Resolutions MSC. 349 (92) RO Code and obtained authorization from the governments of Panama, Nauru, Tuvalu, and other countries for conducting statutory surveys of ships registered with these governments.

交通部航港局於 9 月 24 日至 25 日辦理本中心認可機構監督稽核，認可本中心符合認可機構章程 (RO Code) 之規定，繼續授權本中心執行船舶法定檢驗及發證。

The Maritime and Port Bureau (MPB) conducted a supervisory audit of the recognized organization from September 24 to 25. CR was recognized to comply with requirements of RO Code, and authorized to conduct statutory surveys and certification.

交通部航港局於 12 月 17 日辦理遊艇驗證機構之年度查核，本中心已順利通過查核。

CR has smoothly passed the annual audit on yacht inspection conducted by Maritime and Port Bureau on December 17.

國家通訊傳播委員會 (NCC) 於 11 月 6 日順利完成對本中心授權無線電委辦業務查核之年度稽查工作。

CR has smoothly passed the annual audit on radio inspection conducted by National Communications Commission (NCC) on November 6.

港口國管制 Port State Control

為維持我國國輪在港口國管制 (PSC) 之檢查成績，自 2017 年起，配合主管機關政策向國輪航商宣導強化管制檢查措施，詳細檢查作業辦法刊載於本中心官網 (https://www.crclass.org/psc/)。本年度內容摘要如下 :

一、擬定管制檢查措施 (含兩岸直航航線)，針對高風險船舶，本中心驗船師將會同航務中心檢查員每 2~4 個月登輪執行預防性加強檢驗，以及每 6 個月登輪執行船舶 SMC 額外驗證。

二、高風險船舶前往澳洲、香港、新加坡、日本及韓國五處港口前，必須申請預防性加強檢驗，本中心驗船師登輪檢驗後將核發效期最長 2 個月之檢驗報告。

三、若國輪遭留置，船舶本身以「高風險船舶」標準及管理公司以「低表現度」標準予以管制至少一年。航商應依航政機關要求之期限內，提交「船隊營運績效改善計畫」予 CR 初審及航政機關複查，並續於每月提交執行情形及佐證資料，直至航政機關核定該航商之船隊營運績效已有效提升。

四、若國輪遭開列超過 5 項缺失，CR 驗船師將會同航務中心檢查員登輪確認缺失矯正及執行預防性加強檢驗，並視缺失內容決定是否執行船上 SMC 額外驗證及公司 DOC 額外驗證。

五、長期航行國內航線 (意指 2 個月未出國境) 及兩岸直航航線之非高風險船舶 2 個月內未曾駛往外國港口，於駛往外國港口前必須完成預防性加強檢驗。

本中心提供「港口國管制檢查表 (到港前使用)」及「船上保養檢查表」，請船東及船員落實使用。

本中心提供 IMO 決議案 A.1185(33) Appendix 2 所列之可留置缺失項目，提醒船東注意。

本中心於社群軟體 LINE 建立「CR PSC 應急群組」，方便船舶遇有港口國管制官員登船檢查時，船上人員可即時加入此群組以取得本中心之協助。

依東京備忘錄 (Tokyo MOU) 發布之年報，本中心十餘年來皆獲得「高表現度」之評比；國輪亦持續維持名列「白名單」，且連續 2 年無留置紀錄，足見強化管制檢查措施顯具成效。後續本中心將持續配合主管機關政策執行國輪強化管制檢查措施，以維持國輪在港口國管制的良好成績。

In order to maintain performance of R.O.C flagged vessels in Port State Control (hereinafter refers to as PSC), CR has implemented enforcement control measures in accordance with government policies and the detailed measurement is available on CR website (https://www.crclass.org/psc/). A summary of this year is as follows:

1. CR has stipulated control measures included direct cross-strait route, which for high-risk vessels, CR surveyors and administration inspectors will conduct preventive surveys onboard every two to four month and board the ship every 6 months to perform additional verification of the ship's SMC.
2. High-risk vessels must apply for additional survey requested by flag State (hereinafter refers to as ASFS) before sailing to the ports of Australian, Hong Kong, Singapore, Japan and Korea. The ASFS report with a validity period of up to two months will be issued after examination by CR surveyors.
3. If the R.O.C. flagged vessel was detained by PSC, the Company and the ship will be identified as “Low performance” and “High-risk vessel”, subject to enforcement control measures for a minimum duration of one year. The Company shall submit a 'Fleet Operation Performance Improvement Plan' to the CR for initial review and to the Maritime and Port Bureau, MOTC for further verification, within the deadline set by the Maritime and Port Bureau, MOTC. Furthermore, the Company must submit a monthly report on the implementation status and related documentation until the approval of the effectiveness of fleet operation performance is granted by the Maritime and Port Bureau, MOTC.
4. If the R.O.C. flagged vessel has more than 5 deficiencies after a PSC inspection, CR surveyor together with the inspectors from the Maritime and Port Bureau, MOTC will board the vessel to verify the correction of deficiencies and carry out the ASFS, and the additional verification of the ship’s SMC or the Company’s DOC may be required based on the result of the ASFS.
5. Vessels that have been operating on domestic routes for a period of 2 months, as well as vessels on direct cross-strait routes that have not called at a foreign ports within the preceding 2 months, shall conduct the ASFS prior to sailing to any foreign port.

CR has provided “Pre Arrival PSC Checklist” and “Checklist for Onboard Maintenance” for shipowners and crew to use. CR surveyors will check those documents when conducting surveys onboard.

CR has drawn shipowners’ attention to those detainable deficiencies listed in IMO Resolution A1185(33) Appendix 2.

CR has created a Line group link for PSC inspection. Once there are PSC officers onboard, the crew could join the group immediately to seek CR’s assistance.

According to annual reports published by Tokyo MOU, CR has been listed in “High Performance” for more than ten years, and R.O.C. flag continues to maintain its position on “White List” and has maintained zero-detention record for two consecutive years. It. It is proved that enforcement control measures are effective. In the future, CR will continue to implement enforcement control measures on R.O.C flagged vessels in accordance with government policies in order to maintain good performance of R.O.C. flagged vessels in Port State Control.

CR PSC 應急群組

溫室氣體查證 Greenhouse Gas Verification

順應國際溫室氣體減排熱潮，航運界除持續關注船舶營運過程中的碳排放外，公司整體營運活動所產生的溫室氣體排放、盤查、查證，以及長期減量規劃、環境回饋策略等議題，亦已成為航運永續的重要核心，各國對於公司所提出的溫室氣體排放數據與可驗證性也產生更高的要求，溫室氣體查證服務的需求因而大幅提升。

CR 因應航運產業對溫室氣體查證需求快速成長，積極導入國際規範並提升查證能量，CR 已於 2025 年度 7 月正式通過財團法人全國認證基金會 (TAF) 認證，取得溫室氣體查證領域的國際標準 ISO 14065 與 ISO/IEC 17029 等認證，正式成為「溫室氣體查證機構」。此認證也象徵著 CR 查證流程、團隊專業能力及服務效能全面升級，進一步強化查證服務的公正性、一致性與專業性，並充分展現 CR 在永續與減碳領域的服務能量已邁向新里程。

目前，CR 已能提供 ISO 14064-1 組織型溫室氣體盤查報告之查證服務，並已協助多家國內航運公司完成溫室氣體盤查與相關輔導工作。

未來，CR 期盼能在航運產業邁向淨零碳排的關鍵航程中扮演值得信賴的合作伙伴，透過提供更完整的查證服務、專業諮詢與客製化協助，協助國內航運公司提在全球環境法規愈加嚴謹的情勢下保持競爭優勢。

CR 誠摯歡迎航運公司與我們聯繫 (cr.tp@crclass.org)，一同攜手面對減碳挑戰，持續鞏固我國航運業在國際舞台上的領先地位。

In response to the global momentum toward greenhouse gas (GHG) reduction, the maritime industry has expanded its focus beyond emissions generated during vessel operations to include GHG emissions arising from overall corporate activities. Issues such as GHG inventory, verification, long-term reduction planning, and environmental contribution strategies have become essential components of maritime sustainability. As governments increasingly require companies to disclose transparent and verifiable GHG emission data, the demand for GHG verification services has risen significantly.

To address the maritime sector's rapidly growing need for GHG verification, CR has proactively aligned with international standards and enhanced its verification capabilities. In July 2025, CR officially obtained accreditation from the Taiwan Accreditation Foundation (TAF), fulfilling the requirements of ISO 14065 and ISO/IEC 17029 and becoming a formally recognized GHG verification body. This achievement reflects a comprehensive upgrade of CR's verification procedures, team competency, and service performance, further strengthening the impartiality, consistency, and professionalism of our verification services. It also marks a new milestone in CR's development within the sustainability and carbon-reduction domains.

Currently, CR provides verification services for organizational GHG inventory reports in accordance with ISO 14064-1, and has assisted numerous domestic shipping companies with GHG inventories and related advisory support. Looking ahead, CR aspires to serve as a trusted partner as the maritime industry navigates the critical journey toward net-zero emissions. Through comprehensive verification services, professional consultation, and customized support, CR aims to help domestic shipping companies maintain their competitive edge amid increasingly stringent global environmental regulations.

CR sincerely welcomes shipping companies to contact us at cr.tp@crclass.org to jointly address decarbonization challenges and continue strengthening the international leadership of Taiwan's maritime industry.

ISM, ISPS 及 MLC 評鑑
ISM, ISPS & MLC Verifications

2025 年 CR 辦理航業公司及其所屬船舶申請國際安全管理章程 (ISM) 及國際船舶與港口設施保全章程 (ISPS) 及海事勞工公約 (MLC) 之驗證 / 檢查及發證工作，共計符合文件 (DOC) 驗證 45 家，船舶管理 (SMC) 驗證 62 艘，國際船舶保全 (ISPS) 驗證共 61 艘及海事勞工公約 (MLC) 檢查共 60 艘。

In 2025, CR conducted ISM, ISPS and MLC verification / inspection and certification work, carrying out DOC verifications for 45 companies, SMC verifications for 62 ships, ISPS verifications for 61 ships, and MLC inspections for 60 ships.

技術服務 Technical Services

ETAS 緊急技術評估服務
Emergency Technical Assessment Service (ETAS)

本中心提供各航運公司船舶之緊急技術評估服務 (ETAS)，截至 2025 年服務中船舶共計有 28 艘次。

CR provides Emergency Technical Assessment Service (ETAS) to shipping companies. Up to the end of 2025, 28 ships have applied to CR for this service.

工廠認可及型式認可
Works Approval and Type Approval

2025 年 CR 執行船舶用品工廠認可及產品型式認可共計 88 家 152 型，並執行危險品容器之檢驗業務，共計廠商 48 家，小型容器 128 型及中型容器 4 型。

In 2025, CR conducted works approval of 88 companies and type approval of 152 products for use on vessels, and also carried out certification of packagings for dangerous goods for 48 companies and 128 small types and 4 medium type.

研究發展 Research Results

(1) IMO 重要決策研析與整合
Analysis and Integration of Key IMO Decisions

國際海事組織 (International Maritime Organization, IMO) 是聯合國轄下負責海洋及船舶事務的專門機構，於 1959 年成立，成員有 176 個國家、88 個非政府組織 (NGOs)、及 67 個政府間組織 (IGOs)。迄今已通過超過 50 個相關公約及議定書等。IMO 由大會、理事會和 5 個主要委員會組成，其中海事安全委員會 (MSC) 及海洋環境保護委員會 (MEPC) 每 2 年共召開 6 次會議，以掌管與船舶安全及海洋環境污染有關之重要決策，顯著地影響航運整體未來的發展。因此即時掌握 IMO 的最新規定即可積極地預先規劃行動，以及早因應未來的航運環保法規要求的變化。

為此目的，驗船中心於 IMO 的第 110 屆海事安全委員會、第 83 屆海洋環境保護委員會及第 2 屆海洋環境保護委員會特別會議之隔天，立即發布會議重點，其中：

- 「MSC 110 會議重點」包括強化引水人登離船裝置之安全要求、繼續研議「非強制性的海上自主水面船舶 (MASS) 章程」草案、持續推動新興技術與替代燃料的安全監管框架，並批准「船員在使用替代燃料與新技術船舶上的通用訓練臨時準則」。
- 「MEPC 83 會議重點」包括批准 IMO 淨零框架之法律草案文本、決定 2027 年至 2030 年之碳強度指標 (CII) 折減係數，以及採納「2008 年氮氧化物技術章程（NOx Technical Code 2008）」修正案；
- 「MEPC/ES.2 會議重點」包括審議防止船舶污染國際公約 (MARPOL) 附錄 VI 修正案草案有關 IMO 淨零框架之採納事宜。IMO 同意本次特別會議暫時休會，並將於 12 個月後再度召開 (2026 年 10 月)。在此期間，各會員國將持續進行協調，以在 IMO 淨零框架相關規定上達成共識。

The International Maritime Organization (IMO) is the United Nations' specialized agency responsible for maritime and shipping affairs. Established in 1959, the IMO comprises 176 Member States, 88 non-governmental organizations (NGOs), and 67 intergovernmental organizations (IGOs). To date, it has adopted more than 50 relevant conventions and protocols. The IMO structure includes the Assembly, the Council, and five main committees. Among these, the Maritime Safety Committee (MSC) and the Marine Environment Protection Committee (MEPC) hold six meetings every two years to address key decisions on ship safety and marine pollution, significantly impacting the future development of the entire marine industry. Keeping abreast of the IMO's latest regulations allows for proactive action planning and prepares for future adjustments to environmental regulations in the marine industry.

For this purpose, CR promptly released a briefing on key points the day following the IMO's 110th session of Maritime Safety Committee meeting and the IMO's 83rd session of Marine Environment Protection Committee meeting, and the 2nd extraordinary session of Marine Environment Protection Committee meeting, highlighting the main points discussed, including:

- The highlights of the MSC 110 Meeting include the enhancement of safety for pilot transfer arrangements, the advancement of the development of a non-mandatory Code for Maritime Autonomous Surface Ships (MASS), the development of a safety regulatory framework to support the use of new technologies and alternative fuels for reducing GHG emissions from ships, and the approval of the generic interim guidelines on training for seafarers on ships using alternative fuels and new technologies.
- The highlights of the MEPC 83 Meeting include the finalization and approval of the draft legal text for the "IMO Net-Zero Framework", the definition of new CII reduction factors for 2027 to 2030, the adoption of amendments to the NOx Technical Code 2008.
- The highlights of the MEPC/ES.2 Meeting include the consideration of the adoption of draft amendments to MARPOL Annex VI, including the IMO Net-Zero Framework. IMO has agreed to adjourn the extraordinary session and the extraordinary session will be reconvened in 12 months' time (October 2026). In the interim, Member States will continue to work towards consensus on the IMO Net-Zero Framework.

此外，驗船中心今年度所發布的各期技術通報內容，詳細說明 MSC 及 MEPC 所發布的決議案與通函之重點內容以及中華民國與巴拿馬的旗國最新規定，提供航商參考，以利未來即時因應。

In addition, the technical circulars issued by CR this year provide detailed explanations of the key points from the resolutions and circulars released by MSC and MEPC, as well as the latest flag state regulations from the Republic of China and Panama. These technical circulars serve as a reference for shipping companies, enabling them to respond promptly to future requirements.

(2) CRVO 航行最佳化程式精進
Technical Upgrade of the CRVO Voyage Optimizer

驗船中心研發組自主研發的 CRVO (CR Voyage Optimizer) 航行最佳化程式，過去已發表兩篇論文於學術水準極高的 SCIE 期刊 Journal of Marine Science and Engineering (JMSE)，獲得了國際學術界的認可與肯定。今年，我們持續深化技術能量，將研究領域擴展至更全域性的航行最佳化應用。

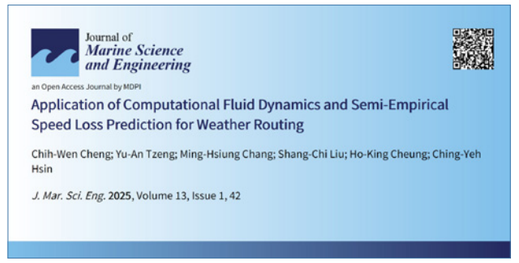
CRVO 過去的研究成果結合運用基因演算法及考量區域性的規定，如歐盟 (EU) 規定及航程上的氣候變化，以求取船速與雙燃料比例的最佳化方案。本次研究除延續過去研究成果外，再加入即時氣象導航的功能，能根據即時氣象資訊，動態調整航程路線，計算出最省油、省成本的最短路徑，為船舶制定出最佳的航行策略。該研究成果再次成功發表於 JMSE 期刊，展現中心在航行最佳化領域的持續深耕與技術累積。此外，也更新優化了使用者介面，提供更直觀且便捷的操作體驗。無論是航行路徑規劃還是燃料消耗預測都能一目了然。

CRVO 持續因應實務需求、法規更新等趨勢進行多項功能強化，進一步提升程式的完整性與實用性，未來可望成為航商決策的重要輔助工具，協助降低碳排放、掌握營運成本，為航運業的可持續性發展提供有力支援。

The CRVO (CR Voyage Optimizer), developed in-house by the R&D section of CR, has previously been featured in two papers published in the prestigious SCIE journal, Journal of Marine Science and Engineering (JMSE), earning international recognition and acclaim. This year, we have continued to strengthen our technical capabilities and further expanded CRVO into a broader, globally oriented application for voyage optimization.

Our previous research utilized genetic algorithms while accounting for regional regulations (such as EU policies) and climate variability along the route, to optimize ship speed and dual fuel ratio. Building on this work, we have now incorporated real-time weather routing, allowing the application to dynamically adjust the voyage route based on live meteorological data. It provides the optimized voyage with the shortest path and the lowest fuel consumption and cost, thus advising the optimal voyage strategy for ships. The results of this research have once again been successfully published in the JMSE, demonstrating our continued commitment to advancing the field of voyage optimization and contributing valuable insights for future maritime planning. Furthermore, we have improved the user interface to provide a more intuitive and convenient experience. Voyage plans and fuel consumption predictions are now clear and easy to understand at a glance.

CRVO continues to evolve in response to operational demands and regulatory developments, with ongoing feature enhancements that improve both system completeness and practical utility. Looking ahead, CRVO is expected to become a key decision-support tool for shipping operators—helping reduce carbon emissions, manage operational costs, and support the sustainable development of the maritime industry.


Journal of Marine Science and Engineering
an Open Access Journal by MDPI
Application of Computational Fluid Dynamics and Semi-Empirical Speed Loss Prediction for Weather Routing
Chih-Wen Cheng; Yu-An Tzeng; Ming-Hsiung Chang; Shang-Chi Liu; Ho-King Cheung; Ching-Yeh Hsin
J. Mar. Sci. Eng. **2025**, Volume 13, Issue 1, 42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(3) 計算流體動力學 (CFD) 和半經驗公式速降 (Speed Loss) 預測在氣象導航的應用

Application of Computational Fluid Dynamics and Semi-Empirical Speed Loss Prediction for Weather Routing

本研究提出了一個精進的船舶航線規劃系統，利用計算流體力學模擬改進了 Kwon 的半經驗速降估算方法，使其能夠在多變的海況下更有效地規劃航線。研究主要針對貨櫃船在不規則波浪中的速降進行預測，改進後的速降預測結果與模擬結果高度吻合，並將這一預測結果應用於航線規劃系統中。系統可以根據即時的氣象數據調整船舶航向，從而在保證航行安全的同時，達到最佳的燃油效率。透過對跨太平洋及跨大西洋航程的案例研究，我們發現航行最佳化程式能顯著縮短航行時間。研究結果顯示，這套程式具有根據即時天氣更新航行規劃的能力，對船隊管理者和航海人員而言，是一個有價值的工具。未來，若能針對不同船型進行進一步驗證，將有助於擴大其應用範圍。

論文之刊登網址如下，您可透過線上連結或掃描下方 QR Code 即時閱讀，歡迎參閱以深入了解相關內容。我們也樂於與各界交流想法與觀點，如有任何問題或合作意願，歡迎聯繫 CR。

This study presents an optimized system for ship route planning. Computational fluid dynamics simulations were used to modify Kwon's semi-empirical speed loss estimation method, enabling efficient route planning under variable sea conditions. The study focused on improving the prediction of speed loss in irregular waves for container ships. The modified speed loss predictions aligned closely with simulation results, and further applying this to ship route optimization. The system can modify the ship course in response to weather data; this could balance both fuel efficiency and safety. Case studies for trans-Pacific and trans-Atlantic voyages demonstrated that the proposed system can achieve notable time savings. The findings underscore the potential for real-time updates in voyage planning, and the system is a valuable tool for fleet managers and navigators. Further validation for different ship types should broaden the system's applicability.

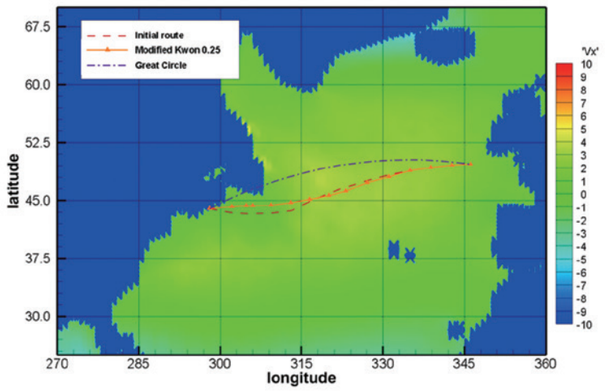
The URLs for our published papers are provided below. You may access the articles online or scan the QR code below for immediate viewing. We invite you to explore them for further reading and insights. We welcome discussions and engagement with the broader community to exchange ideas and perspectives. For any inquiries or collaboration opportunities, feel free to contact CR.

航速演算 - 結合 CFD 與經驗模型的航速預測

Application of Computational Fluid Dynamics and Semi-Empirical Speed Loss Prediction for Weather Routing

https://doi.org/10.3390/jmse13010042

論文連結



	Optimal Route (Speed Calculated by Modified Kwon's Method)	Initial Route
Distance (miles)	4015	4109
Voyage Duration (days)	7.5	7.8
% of voyage duration compared to the initial route	−3.8	0

規範發展 Rules Development

本中心自行開發所有入級規範與認證規範，並因應最新國際法規及技術發展，每年實行規範之修訂與更新並經本中心技術委員會審查通過。目前本中心所編撰之規範有：

All the CR Classification Rules and Certification Rules are self-developed by the Society (CR) and would be revised and updated every year in response to the latest International Conventions and the development of technology. In addition, the amendments to CR Rules are to be validated by the Technical Committee of CR. At the moment, we are compiling the Classification and Certification Rules listed below:

- **鋼船建造與入級規範**
  Rules for the Construction and Classification of Steel Ships
- **高速船建造與入級規範**
  Rules for the Construction and Classification of High-Speed Craft
- **海巡艦艇建造與入級規範**
  Rules for the Construction and Classification of Coast Guard Ships
- **玻璃纖維強化塑膠船舶建造與入級規範**
  Rules and Regulations for the Construction and Classification of Ships of Fibreglass Reinforced Plastics
- **貨櫃建造與發證規範**
  Rules for the Construction and Certification of Freight Containers
- **起重設備構造與檢驗規範**
  Rules for the Construction and Survey of Lifting Appliances

準則發展 Guidelines Development

為因應最新國際技術發展與業界實務需求，本中心持續開發相關準則，以提供明確的標準及依據供海運業界先進參考使用。本中心於今年度所發布的準則如下：

In response to the latest international technological advancements and practical needs of industry, the Society continuously develops relevant Guidelines that provide clear standards and references for maritime professionals. The Guidelines published by the Society this year are listed below:

- **船舶使用 LPG 燃料準則**
  Guidelines for Ships Using LPG as Fuel
- **船舶使用氫燃料準則**
  Guidelines for Ships Using Hydrogen as Fuel
- **船上碳捕捉與儲存準則**
  Guidelines for Onboard Carbon Capture and Storage
- **水下無人載具準則**
  Guidelines for Unmanned Underwater Vehicles

再生能源服務 Renewable Energy Services

(1) 海事工程技術服務 Maritime Engineering Technical Services

CR 憑藉超過 75 年的船舶與海事領域經驗，以及累積逾 15 年的離岸風場實務成果，結合與國際知名機構 ABL Group 的合作，於臺灣提供離岸風電全生命週期之海事工程技術服務。服務內容包含海事保證鑑定與客戶代表工作，涵蓋專案開發、建設、運維至除役階段，與多座離岸風場之水下基座、風力機、外部與陣列電纜運輸安裝工程均有參與實績。CR 並已與在地重件運輸業者合作，獨立完成大型基樁運輸作業之海事保證鑑定。擔任客戶代表，CR 協助客戶執行工程現場監督與溝通、環安衛監督並提供即時技術諮詢，服務範圍涵蓋離岸地質鑽探作業、鋼結構製造監督、水下基座、風力機及外部與陣列電纜運輸安裝等，以確保工程品質與人員安全，維護客戶最大化利益。

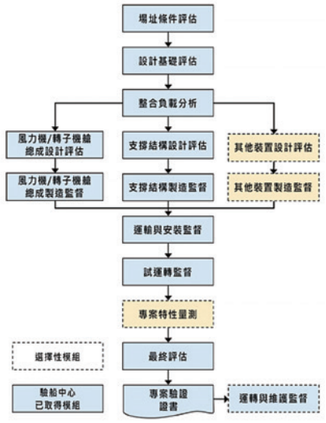
Leveraging over 75 years of experience in the maritime sector and more than 15 years in offshore wind, CR, in collaboration with ABL Group, provides comprehensive maritime engineering technical services for offshore wind projects in Taiwan throughout the full project lifecycle, from development and construction to operation, maintenance, and decommissioning. Our services include Marine Warranty Surveys (MWS) and Client Representative support, covering transportation and installation of foundations, wind turbines, and export and inter-array cables for multiple offshore wind farms. CR has also independently cooperated with local heavy transport operators to successfully conduct MWS for monopile transport operations. Acting as Client Representatives, we assist our clients with on-site supervision and coordination, HSE oversight, and timely technical support. Our scope of services spans offshore geotechnical drilling operations, steel structure fabrication supervision, underwater foundations, wind turbines, and external and inter-array cable transportation and installation, ensuring both project quality and personnel safety while safeguarding our clients' best interests.

(2) 專案驗證 Project Certification

CR 為通過 ISO/IEC 17065 認證之離岸風力發電專案驗證單位，係經濟部標準檢驗局離岸風場專案驗證審查成員，亦曾執行台電二期等離岸風場專案驗證。

CR is an offshore wind farm project certification body accredited under ISO/IEC 17065, a member of the BSMI (Bureau of Standards, Metrology and Inspection) offshore wind farm project certification review committee, and has conducted project certifications for Taiwan Power Company Phase 2 wind farm.


TAF
財團法人全國認證基金會
Taiwan Accreditation Foundation
Certificate of Accreditation
(Certificate No : PC065-230649)
This is to certify that
CR Classification Society
8F., No.103, Sec 3, Nanking East Rd., Zhongshan Dist., Taipei
is accredited in respect of
Product Certification Work
Accreditation Criteria : ISO/IEC 17065:2012
Accreditation Number : PC065
Originally Accredited : July 10, 2020
Effective Period : July 10, 2023 to July 09, 2026
Accredited Scope : See described in the Appendix
Ching-Chang Lien
Ching-Chang Lien
President, Taiwan Accreditation Foundation
June 19, 2023
P1, total 2 pages
This Appendix forms an integral part of the Certificate, which shall be invalid when use without the Appendix.



CR 可協助客戶針對國內法規、開發風險等議題進行評估，並憑藉對臺灣本土特殊環境之熟稔，能提供從場址條件評估、設計基礎評估、整合負載分析、風力機 / 轉子機艙總成與支撐結構設計評估、風力機 / 轉子機艙總成與支撐結構製造監督、運輸與安裝、試運轉與運轉維護等專案驗證服務，為客戶有效控管專案之風險。

另在標準檢驗局指導下，CR 自 2020 年起主責編撰「離岸風力發電技術運轉及維護技術指引」，此指引考量臺灣特殊場址條件及本土議題，如颱風、腐蝕、地震與地質條件等，並整合國內外法規與標準，成為臺灣離岸風場運維之重要參考依據。

CR provides comprehensive support to clients, including evaluation of domestic regulations and development risks, and, with our in-depth knowledge of Taiwan's unique environment, offers project certification services such as site conditions assessment, design basis evaluation, integrated load analysis, wind turbine/RNA and support structure design evaluation, wind turbine/RNA and support structure manufacturing surveillance, transportation and installation surveillance, commissioning surveillance, operation and maintenance surveillance, helping clients effectively manage project risks.

Additionally, under the guidance of the BSMI, CR has been responsible for drafting the "Technical Guideline for Operation and Maintenance of Offshore Wind Farms" since 2020. This guideline considers Taiwan's unique site conditions and challenges, such as typhoons, corrosion, earthquakes, and specific soil conditions, and integrates both domestic and international regulations and standards, serving as an important reference for offshore wind farm operation and maintenance in Taiwan.

(3) 技術盡職調查 Technical Due Diligence

CR 可依客戶需求提供風場與船舶技術盡職調查、技術諮詢等相關服務，範圍包含風場發電量評估、風場設計、專案團隊能力、品質管理系統、工程技術供應能力、許可與法規、環境與社會影響等方面的評估與審查。

透過 CR 專業人員審核與分析，可替客戶揭露專案中各面向潛在技術風險，以協助客戶在專案執行過程中做出正確決策。此外， CR 可提供持續性的專案風險監控服務，精準掌握專案實務風險。

CR can provide wind farm and ship technology due diligence, technical consulting and related services according to customer needs, covering wind farm power generation evaluation, wind farm design, project team capabilities, quality management systems, engineering technology supply capabilities, permits and regulations, and environment and social impact evaluation.

Through CR's review and analysis, potential technical risk in various aspects of the project can be disclosed, helping clients make informed decisions during project execution. CR also provides continuous project risk monitoring throughout all phases, accurately identifying and reporting risks to clients.

實務經驗
Practical Experiences

國際交流 International Exchange

巴拿馬海事局 (Panama Maritime Authority, PMA)

CR 與巴拿馬海事局 (Panama Maritime Authority, PMA) 於 2 月 12 日舉行授權合約簽署儀式，此儀式由 CR 執行長鄭志文與 PMA Director General of the Merchant Marine, Mr. Ramón Franco 代表簽署。PMA 持續授權 CR 針對巴拿馬籍船舶進行公約檢驗與發證，此次簽約進一步鞏固雙方自 1962 年以來長達 63 年的緊密合作關係，更進一步展現雙方在船舶檢驗、法定監督及海事安全等領域長期合作的決心，未來將持續深化交流，提升國際能見度。

CR and the Panama Maritime Authority (PMA) held an authorization agreement signing ceremony on February 12, with President of CR, Mr. Chih-Wen Cheng and PMA's Director General of the Merchant Marine, Mr. Ramón Franco, representing their respective organizations. PMA will continue to authorize CR to conduct convention inspections and issue statutory certificates for Panama-flagged vessels. This renewed agreement further strengthens a partnership that has been maintained since 1962 and now extends over 63 years, underscoring the long-standing cooperation between the two parties in the areas of ship inspection, statutory oversight, and maritime safety. Both organizations look forward to deepening exchanges and enhancing CR's international visibility in the years ahead.

義大利驗船協會 (RINA)

義大利驗船協會 (RINA) 北亞區總裁 Mr. Simone Manca 於 6 月 4 日率團拜訪 CR，雙方針對近期各方所關注節能減碳及綠色燃料應用等議題進行廣泛討論，並對加強合作達成具體共識，CR 持續與各船級協會拓展交流，進一步提升服務與創新能力。

Mr. Simone Manca, North Asia Area Director of RINA, led a delegation to visit CR on June 4. Both parties held extensive discussions on topics of widespread concern, including energy efficiency, decarbonization, and the application of green fuels, and reached concrete consensus on strengthening future cooperation. CR will continue to expand exchanges with classification societies worldwide to enhance service performance and foster technological innovation.

香港海事處 (Hong Kong Marine Department)
CCS 香港分社 (CCS Hong Kong Branch)

CR 鄭志文執行長於 7 月 17 日赴香港拜訪香港海事處副處長史強及 CCS 香港分社總經理范強，本次與香港兩大海事單位進行實體交流，會談氣氛融洽，不僅加深雙方關係，更就替代燃料推動、船舶檢驗方向、PSC 制度與合作模式等多面向深入探討，成果豐碩，亦建立聯繫管道，以利未來溝通，CR 將持續關注相關政策與國際趨勢，以強化專業服務。

On July 17, Mr. Chih-Wen Cheng, President of CR visited Mr. Shi, Deputy Director of the Hong Kong Marine Department, as well as Mr. Fan, General Manager of CCS Hong Kong Branch. The in-person meeting with Hong Kong's major maritime authorities proceeded in a cordial atmosphere, deepening bilateral relations and enabling in-depth discussions on various topics, including alternative fuel promotion, ship inspection directions, the PSC regime, and cooperation models. The meeting yielded fruitful results and established a closer communication channel to support future collaboration. CR will continue to monitor relevant policies and international developments to strengthen its professional services.

歐洲海運產業與綠色能源推動考察
(Study Mission on the European Maritime Industry and Green Energy Development)

CR 董事長林國顯與執行長鄭志文於 8 月 21 日至 31 日率團前往荷蘭、比利時及法國，與港務公司共同考察當地海運產業與綠色能源推動現況。行程期間拜訪鹿特丹港務局、安特衛普港務局、比利時 DEME 集團、法國電力公司 (EDF)，並與長榮海運及陽明海運歐洲代表處進行交流，重點討論永續燃料、氫能應用與離岸風電等相關議題。本次出訪有助於了解歐洲在能源轉型與低碳運輸方面之實務作法，並作為後續業務推動與國際合作之重要參考。

From August 21 to 31, CR Chairman Mr. Kuo-Hsien Lin and President Mr. Chih-Wen Cheng led a delegation to the Netherlands, Belgium, and France to jointly conduct a study mission with Taiwan International Ports Corporation, Ltd. on the development of the maritime industry and the advancement of green energy. The delegation met with the Port of Rotterdam Authority, Port of Antwerp-Bruges, DEME Group, and Électricité de France (EDF), as well as the European representative offices of Evergreen Marine Corp. and Yang Ming Marine Transport Corp., focusing on sustainable fuels, hydrogen applications, and offshore wind power. These exchanges provided valuable insights into Europe's practical approaches to energy transition and low-carbon transport, serving as important references for future business development and international cooperation.

諾魯海事管理局 (Nauru Maritime Administration)
吐瓦魯船舶註冊局 (Tuvalu Ship Registry)

CR 於 9 月 15 日於新加坡與諾魯海事管理局 (Nauru Maritime Administration) 與吐瓦魯船舶註冊局 (Tuvalu Ship Registry) 正式簽署授權機構 (Recognized Organization) 合約。對於懸掛諾魯及吐瓦魯船旗之商船及漁船 CR 可以為船東提供公約檢驗及發證服務，進一步拓展對船東服務範圍，此舉不僅象徵著合作關係的新篇章，更彰顯三方在強化船舶安全、環境保護及永續航運上的共同承諾。

On September 15, CR formally signed Recognized Organization (RO) agreements in Singapore with the Nauru Maritime Administration and the Tuvalu Ship Registry. Under these agreements, CR is authorized to provide convention-related inspection and certification services for merchant vessels and fishing vessels flying the flags of Nauru and Tuvalu, thereby further expanding the scope of services available to shipowners. This milestone not only marks a new chapter in the cooperative relationship among the three parties but also underscores their shared commitment to enhancing ship safety, environmental protection, and sustainable shipping.

技術研討會 Technical Seminar

本年度對外共舉辦 2 次研討會，深獲與會人士好評。

We held 2 technical seminars during 2025, which received favorable responses from participants.

日期 Date	研討會內容 Topic
2025.4.18	• IMO 溫室氣體減排中期措施重點解析 In-Depth Analysis of IMO's Mid-Term Measures for Greenhouse Gas Reduction • 航運業因應 IMO 溫室氣體減排中期措施的未來趨勢與準備策略 Future Trends and Preparation Strategies for the Shipping Industry in Response to IMO's Mid-Term GHG Reduction Measures
2025.8.19	• 114 年度強化國輪管制檢查作業 Implement enforcement control measures on R.O.C flagged vessels in 2025 • 2025 重點檢查活動 -Ballast Water Management(BWM) Concentrated Inspection Campaign (CIC) on Ballast Water Management (BWM) in 2025 • IMO 法規最新動態與未來趨勢 Latest Developments and Future Trends of IMO Regulations • PSC 檢查常見缺失案例探討 PSC Common Deficiency Case Study

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