

中國驗船中心

CR CLASSIFICATION SOCIETY



CR Annual Report 2015



台北總部 OPERATION CENTER

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中國驗船中心 品質政策

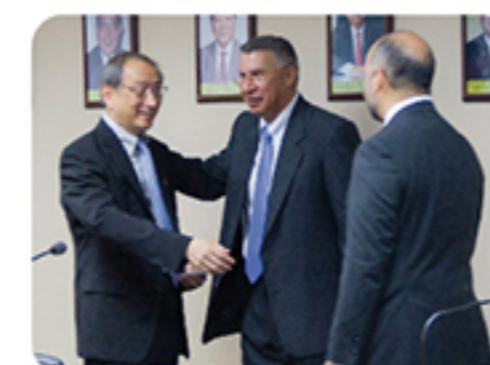
增進船舶及海上人命安全，防止船舶對海洋造成污染



財團法人中國驗船中心
CR CLASSIFICATION SOCIETY

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CR

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執行船舶之嚴格檢驗。我航運業、保險業及造船業各界有識之士，為求航業蓬勃發展，幾經磋商籌劃，始於民國40年2月15日在台北市成立「社團法人中國驗船協會」，英文名稱為CR Classification Society(former name: China Corporation Register of Shipping), 簡稱CR。復於民國67年7月1日接受民間捐助，改組並更名為「財團法人中國驗船中心」。

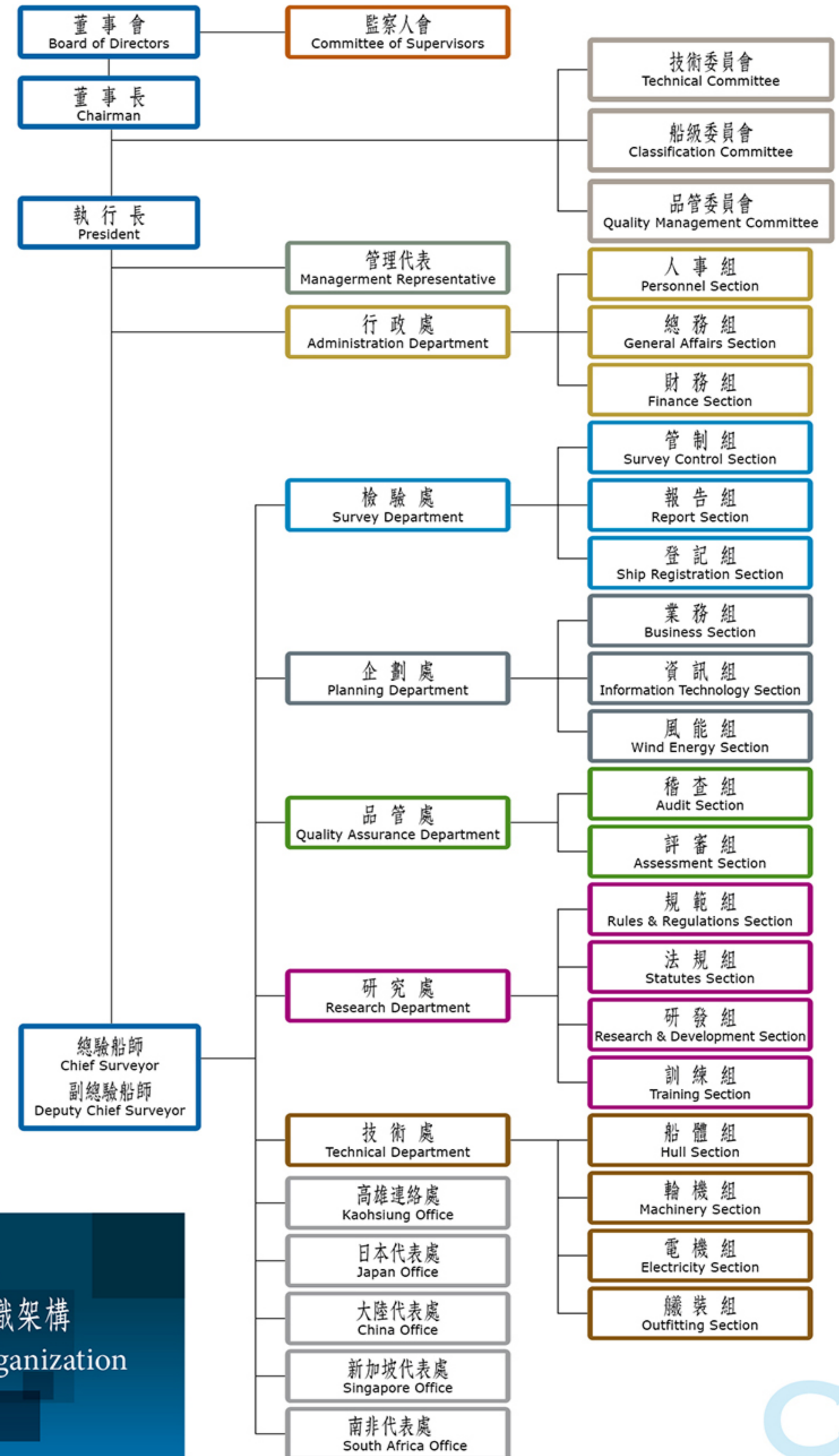
本中心為一民間純技術性，不以營利為目的之服務事業機構，其目標為提供優良之技術、高度之效率與熱忱之服務。組織型態(如下表)及工作內涵，一如世界各大驗船機構，其服務工作據點遍及世界各重要港口，為船東、造船廠及機材製造廠商提供最便捷之服務。



Brief Introduction of CR

As survey of ships and safety of navigation are closely related, countries throughout the world engaged in shipping activities have their own classification societies in order to conduct ship surveys in a strict manner. A good number of people of insight from the shipping industry, insurance industry, and shipbuilding industry in Taiwan share the same views on the importance of establishing this country's own classification society for the prosperity of its shipping industry. After repeated negotiations and adequate preparation, "CR Classification Society" (former name: China Corporation Register of Shipping), also know as CR, was founded on February 15, 1951, in Taipei City. On July 1, 1978, it was restructured after receiving financial contributions from non-governmental sources and hence changed its Chinese name.

CR is a non-governmental and nonprofit organization rendering technical services. The purpose of its work is to provide excellent techniques, high efficiency and cordial services. Its structure (see the following Organization Chart) and scope of work are similar to those of the other leading classification societies in the world, and it has a worldwide network of branch offices in important foreign ports, rendering quick services to shipowners, shipyards, and manufacturers of materials and equipment.



組織架構
Organization



董事長感言



航運市場從2008年金融海嘯以來一路衰退，各航商在辛苦經營下，數年來勉強度過難關，但近半年中國市場經濟成長放緩，加上運能過剩兩大主因不停震盪，波羅的海乾散貨運價指數(BDI)彷彿無止盡的不斷創造歷史新低點，儘管市場不停預估即將觸底反彈，但若目前的租金行情持續低迷，恐怕1984年代航運大衰退的歷史將會重演，航運業、造船業與船級協會接下來仍將面臨巨大的挑戰。

CR為非營利之財團法人，各工作同仁皆本著以服務為本之原則，勤廉自持，共同為航運業努力與奉獻，也明白在如此險峻的環境下，CR必須不斷提升服務品質，加強專業研發能力，方能符合客戶的期待與需求。

回顧2015年5月東京備忘錄(Tokyo Mou)公佈最新查驗評比，我船旗國與CR仍維持良好表現，分列白名單(White List)及高表現度(High Performance Level)之最佳成績。

2015年8月，巴拿馬海事局(PMA)執行為期5天之「驗船機構章程(Recognition Organization Code, 簡稱RO Code)」稽核，稽核結果滿意，除同意持續授權本中心執行巴拿馬船旗國之各項公約檢驗與發證，9月14日巴拿馬首席執行長Mr. Jorge Barakat Pitty更親訪本中心簽訂符合RO Code之授權合約，其強調由於CR多年來的高品質服務與成績，特別讓CR成為巴拿馬首度授權非IACS成員執行客船安全檢驗與發證的船級協會。

2015年11月，CR完成賴比瑞亞海事局安排之訓練，目前賴比瑞亞海事局已經簽約授權CR執行賴比瑞亞籍船舶之ISM、ISPS、MLC以及船旗國年度檢查，未來在台灣能提供航商更多的服務與選擇。



回首2015年，CR為因應船舶技術發展與國際公約增訂，持續修訂原有的鋼船規範與高速船規範，並新制定「潛艦建造與入級規範2015」，也完成開發多項準則提供認可與檢驗之依據，如「天然氣燃料引擎裝設準則」、「硫氧化物(SOx)洗煙器系統準則」及「離岸風場檢驗與認證準則」等。

目前國內航商加入CR緊急技術評估服務(ETAS)的船隊持續增加，此服務能協助觸礁船舶脫困，降低航商風險與潛在損失。而CR研發團隊已與船廠完成多項合作案，如船舶波浪負荷分析或船上結構與裂縫分析及改進建議等，另外也提供各航商各類專業諮詢服務，如最新公約動態、PSC項目、船舶改裝與優化之最佳評估與建議等。

面對接下來的挑戰，CR仍將秉持獨立公正的精神，以技術與服務為主軸，依循合理及安全可靠的規範和標準執行檢驗，以最優良之技術，最高度之效率與最熱忱之服務，為增進海上人命安全與防止海洋環境汙染，竭盡所能，全力以赴。感謝交通部以及航運界多年來對CR的支持，CR將持續盡最大的努力，與航運界一起迎接未來的挑戰。

中國驗船中心
董事長 趙國樑

趙國樑



Chairman's Speech

The shipping market has continuously dropped since the global financial crisis in 2008. All shipping companies are painstakingly managed and try hard to overcome difficulties in these years. Recently, the slowdown in economic growth of China market and overcapacity in the shipping market continue to fluctuate. Baltic Dry Index (BDI) has endlessly fallen a record low. The industry expects the recession to bottom out. However, if time charter rates remain stagnant, it is feared that the shipping recession during 1980-1984 period will reoccur. The shipping industry, shipbuilding industry, and classification societies will face great challenges.

CR is a nonprofit corporation. All staff members work diligently and honestly to contribute to the further development of the shipping industry. In this difficult condition, CR must continuously enhance service quality and strengthen professional R&D ability, in order to meet clients' expectation and demand.

Looking back on the year 2015, in May, Tokyo Mou announced the latest rankings. R.O.C flag and CR still maintained excellent performance, respectively listed in "White List" and "High Performance Level", which were the best grade.

In August, Panama Maritime Authority (PMA) conducted a five-day audit for Recognition Organization Code (RO Code), and was satisfied with the audit result. PMA agreed to continuously authorize CR to carry out statutory inspections and issue certificates to Panamanian vessels. Furthermore, Mr. Jorge Barakat Pitty, Minister of Maritime Affairs & Administrator of PMA, personally visited CR and signed a delegation agreement for complying with RO Code. He emphasized that considering high-quality service and performance that CR has maintained for several years, it was the first time for PMA to authorize non-IACS member to conduct safety survey and issue certificates on passenger ships.

In November, CR completed training courses held by Liberian Registry. Currently, Liberian Registry has signed the agreement for authorizing ISM, ISPS, MLC and annual safety survey with CR. In the future, CR can provide more service to shipowners.

In 2015, in response to the development of ship-related technology and the revision and inclusions of international conventions, we revised Rules for the Construction and Classification of Steel Ships and High Speed Crafts. We also developed many kinds of guidelines, such as "Guidelines for Natural Gas-Fuelled Engine Installations", "Guidelines for Sox Scrubber Systems", and "Guidelines for Offshore Wind Farm Surveillance and Certification", to serve as basis for recognition and survey.

So far, more and more fleet of Taiwanese shipowners apply for "CR Emergency Technical Assessment Service(ETAS)" which is able to help the ships grounding on the reefs reach safety successfully, and lower the risk of possible losses the shipowners may have. CR research team has completed many cooperative projects with shipyards, for example wave loads analyses or structure and crack analyses for ships and their relevant improving resolutions, and also provided professional consulting service including the latest status of international conventions, PSC inspection, the delicate assessment and recommendation for ship alternations and optimizations.

To face future challenges, we will focus on inspection techniques and services. We will conduct surveys in an impartial manner in accordance with the reasonable, safe and dependable rules and standards and will provide quick and cordial services in order to make a contribution to the enhancement of safety of life at sea and to prevent of marine environmental pollution. We would like to express our heartfelt appreciation to Ministry of Transportation and Communications, and the shipping industry for their kind support over the years, and guarantee that we will make every effort to overcome future challenges.

K. L. Chao, Chairman
CR Classification Society



CR

董事會

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13屆董事會任期自2015年5月18日起至2018年5月17日止，為期三年，董事長由董事會遴選之。第13屆董事會之董事及監察人如下：

Board of Directors

The Board of Directors, which has a total of 23 directors and 3 supervisors, is the highest decision-making body of CR. Their term of service is 3 years starting May 18, 2015. The Chairman elected from among the directors is Mr. Kuo-Liang Chao, and Mr. Richer Chen took over the post of Chairman of the Board of Supervisors. The list of the elected directors and supervisors is given below:

董事 Director	現任職務 Position
趙國樑 Kuo-Liang Chao	中國驗船中心董事長 Chairman, CR Classification Society
藍俊德 Jun-Der Lan	四維航運股份有限公司董事長 Chairman, Shih Wei Navigation Co., Ltd.
祁文中 Wei-Jong Chi	交通部航港局局長 Director-General of Maritime and Port Bureau, Ministry of Transportation and Communications R.O.C.
陳進生 Jim-Sheng Chen	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	交通部航政司副司長 Deputy Director of Department of Navigation and Aviation, Ministry of Transportation and Communications R.O.C.
黃肇嘉 Chao-Chia Huang	行政院海岸巡防署參事 Counselor, Coast Guard Administration, R.O.C.
王文潮 Wilfred Wang	台塑海運股份有限公司董事長 Chairman, Formosa Plastics Marine Corporation
盧峯海 Frank F. H. Lu	陽明海運股份有限公司董事長 Chairman, Yang Ming Marine Transport Corporation
張義源 I-Yuan Chang	台灣航業股份有限公司董事長 Chairman, Taiwan Navigation Co., Ltd.
李慶超 Steve Lee	中鋼運通股份有限公司董事長 Chairman, China Steel Express Corporation
謝志堅 Chih-Chien Hsieh	長榮集團副總裁 Second Vice Group Chairman, Evergreen Group
彭士孝 William S.H. Peng	中國航運股份有限公司執行副總裁 Executive Vice President, Chinese Maritime Transport Ltd.
陳柏廷 Po-Ting Chen	萬海航運股份有限公司董事長 Chairman, Wan Hai Lines Ltd.
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
張瑞宗 Ray-Chung Chang	台灣中油股份有限公司副總經理 Vice President, CPC Corporation, Taiwan
黃健強 Edward Huang	台灣水泥股份有限公司資深副總經理兼達和航運公司董事 Senior Vice President, Taiwan Cement Corporation
賴杉桂 Robert Lai	台灣國際造船股份有限公司董事長 Chairman, CSBC Corporation, Taiwan
蕭捷明 Jimmy C. Hsiao	明台輪船股份有限公司總經理 General Manager, MingTai Navigation Co., Ltd.
宋道平 Charles Sung	台灣產物保險股份有限公司總經理 General Manager, Taiwan Fire & Marine Insurance Co., Ltd.
劉英如 Yng-Ru Liu	中國驗船中心執行長 President, CR Classification Society
郭義隆 I-Lung Guo	藍海海運及松光航業董事長 Chairman, OceanLance Maritime Co., Ltd. and Biggin Shipping Corporation
許志堅 Chih-Chien Hsu	益利航運股份有限公司董事長 Chairman, Eddie Steamship Co., Ltd.
陳燦煌 Steve T.H. Chen	富邦產物保險股份有限公司總經理 President, Fubon Insurance Co., Ltd.

監察人 Supervisor	現任職務 Position
程正平 Paul Cheng	能源航運股份有限公司董事長 Chairman, Energy Shipping Co., Ltd.
陳瑞 Ray Chen	兆豐產物保險股份有限公司總經理 General Manager, Chung Kuo Insurance Co., Ltd.
辜炳珍 Pin-Jan Ku	交通部統計長 Director of Department of Statistics, Ministry of Transportation and Communications, R.O.C.

船級委員會 Classification Committee

(任期自2015年5月18日起至2018年5月17日止，為期三年)

職別	姓名 Name	現任職務 Position
主任委員 Chairman	盧峯海 Frank F. H. Lu	陽明海運股份有限公司董事長 Chairman, Yang Ming Marine Transport Corporation
副主任委員 Vice-Chairman	陳籐 I. Chen	世邦船務代理有限公司船舶管理處董事長特助 Special Assistant to Chairman of Ship Management Dept., Trans Vantage Shipping Agency Ltd.
委員 Member	陳永雄 Y.H. Chen	中鋼運通股份有限公司總經理 President, China Steel Express 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	潘凌雲 Michael L. Y. Pan	遠森網路科技公司執行副總經理 Executive Vice President, Eastern Media International Corporation
委員 Member	張豐州 F. J. Chang	新興航運股份有限公司總經理 General Manager, Sincere Navigation Corporation
委員 Member	王偉明 William W.M. Wang	台灣中油股份有限公司海技組組長 Section Manager, Marine Technique & Safety Section, CPC Corporation, Taiwan
委員 Member	黃崇榮 Tsung-Yung Huang	長榮海運股份有限公司造船部副總經理 Acting Executive Vice President of Shipbuilding Department, Evergreen Marine Corporation
委員 Member	何尤彥 You-Yen Ho	四維航業股份有限公司副總經理 Vice President, Shih Wei Navigation Co., Ltd.
委員 Member	高雅平 Y. P. Kao	裕民航運股份有限公司副總經理 Vice President, U-Ming Marine Transport Corporation
委員 Member	張傑德 Jie-De Chang	台灣國際造船股份有限公司副總經理 Vice President, CSBC Corporation, Taiwan
委員 Member	徐志廷 Jyh-Tyng Shyu	慧洋海運股份有限公司工務部副總經理 Vice President of Technical Department, Wisdom Marine Lines S.A.
委員 Member	范國萬 K. W. Fan	台塑海運股份有限公司副總經理 Vice President, Formosa Plastics Marine Corporation
委員 Member	林炯圻 Jeong-Shin Lin	萬海航運股份有限公司資深協理 Senior Assistant Vice President, Wan Hai Lines Ltd.
委員 Member	林家淦 C. K. Lin	明台輪船股份有限公司副總經理 Vice President, MingTai Navigation Co., Ltd.
委員 Member	陳嘉 Charles Chen	陽明海運股份有限公司副總經理 Vice President, Yang Ming Marine Transport Corporation
委員 Member	邱瑞斌 Reul-Bin Chiou	光明海運股份有限公司董事長 Chairman, Kuang Ming Shipping Corporation
委員 Member	黃崇智 Eddie C. Huang	協榮航業股份有限公司董事 Representative, Glory Navigation Co., Ltd.
委員 Member	褚世傑 Dino S.J. Chuu	中國航運股份有限公司海運部協理 Vice President, Shipping Division, Chinese Maritime Transport Ltd.
委員 Member	馬耀湘 Yao-Shiang Ma	新健公司副總經理 Vice President, Hsin Chien Marine Co., Ltd.



職別	姓名 Name	現任職務 Position
主任委員 Chairman	王偉輝 W. H. Wang	國立臺灣海洋大學教授 Professor, National Taiwan Ocean University
副主任委員 Vice-Chairman	鄧運連 Y. L. Teng	中國驗船中心技術委員會委員 Member of Technical Committee, China Corporation Register of Shipping
委員 Member	劉詩宗 Shy-Tzong Liou	台灣港務股份有限公司副總經理 Administration Vice President, Taiwan International Ports Co., Ltd.
委員 Member	韓碧祥 P. H. Han	中信造船股份有限公司董事長 Chairman, Jong Shyn Shipbuilding Co., Ltd.
委員 Member	洪錦榮 C. J. Hung	協同造船廠股份有限公司董事長 Chairman, Hsieh Tung Shipbuilding Co., Ltd.
委員 Member	曾國正 Kuo-Cheng Tseng	台灣國際造船股份有限公司副總經理 Vice President, CSBC Corporation, Taiwan
委員 Member	蔡進發 J. F. Tsai	國立臺灣大學教授 Professor, National Taiwan University
委員 Member	林鴻志 Hong-Jyh Lin	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	黃正清 C. C. Huang	國立成功大學教授 Professor, National Cheng Kung University
委員 Member	桑滿林 Man-Lin Sang	中塑海運公司執行副總經理 Executive Vice President, Simosa Shipping Co., Ltd.
委員 Member	何永順 Jackie Ho	陽明海運股份有限公司協理 Assistant Vice President, Yang Ming Marine Transport Corporation
委員 Member	黃守真 Sheldon Huang	龍德造船工業股份有限公司董事長 Chairman, Lung Teh Shipbuilding Co., Ltd.
委員 Member	陶自勵 Zhi Li Tao	交通部航港局船舶組組長 Director, Vessel Management Division, Maritime and Port Bureau, MOTC
委員 Member	林頂光 D. K. Lin	台灣中油股份有限公司儲運處造船組組長 Section Manager, Shipbuilding Section, CPC Corporation, Taiwan
委員 Member	鄭添元 T. Y. Cheng	中國鋼鐵股份有限公司冶金規範及試驗組組長 Manager of Metallurgical Specification and Testing Section, China Steel Corporation
委員 Member	戴聖堅 Shan-Chien Tai	東方海外貨櫃航運有限公司總經理 President, Orient Overseas Container Line Limited



品管委員會 Quality Management Committee (任期自2015年5月18日起至2018年5月17日止，為期三年)

職別	姓名 Name	現任職務 Position
主任委員 Chairman	許洪烈 H. L. Hsu	中華民國輪船商業同業公會全國聯合會秘書長 Secretary General, National Association of Chinese Shipowners
副主任委員 Vice-Chairman	曹志毅 Chih-I Tsao	中華民國品質學會理事 Director, Chinese Society for Quality
委員 Member	黃文哲 W. C. Huang	陽明海運股份有限公司副總經理 Vice President, Yang Ming Marine Transport Corporation
委員 Member	林沛樵 Pei Chiao Lin	長榮海運股份有限公司副總經理 Executive Vice President, Evergreen Marine Co., Ltd.
委員 Member	陳木川 M. C. Chen	四維航業股份有限公司副總經理 Vice President, Shih Wei Navigation Co., Ltd.
委員 Member	陳志宏 Chih-Hong Chen	台灣航業公司船務部協理 General Manager of Marine Department, Taiwan Navigation Co., Ltd.
委員 Member	李國良 Leon Lee	裕民航運股份有限公司船務處經理 Manager, Marine Department, U-Ming Marine Transport Corporation
委員 Member	梁瑞聰 R. T. Liang	交通部航港局船員組組長 Director, Crew Management Division, Maritime and Port Bureau, MOTC
委員 Member	俞克維 K. W. Yu	高雄海洋科技大學教授 Professor, National Kaohsiung Marine University
委員 Member	林哲宏 Jei-Hong Lin	台灣中油股份有限公司儲運處航管組組長 Section Manager, Marine Management Section, CPC Corporation, Taiwan
委員 Member	陳火財 H. T. Chen	安生理算檢定公司總經理 President, Overseas adjusters and Surveyors Co., Ltd.
委員 Member	林彬 B. Lin	臺灣海洋大學教授 Professor, National Taiwan Ocean University

據點擴展

為擴展海外據點，加強對船東之服務，CR於2009年9月11日在新加坡正式成立代表處，2010年6月4日在南非正式成立代表處，由楊沛光擔任駐南非代表。CR總部及各代表處的連絡方式如下：

Network Expansion

In order to expand our overseas network and render better services to shipowners, CR officially established the Singapore Office on September 11, 2009 and the South Africa Office on June 4, 2010, represented by Mr. P. K. Yang. CR Operation Center and other offices can be reached in the following ways:



台北總部 Operation Center

104 台北市中山區南京東路3段103號8樓
8th Fl., No.103, Sec. 3, Nanking E. Rd., Jhongsan Dist.,
Taipei, 104, Taiwan R.O.C.
Tel: +886-2-2506-2711 Fax: +886-2-2507-4722
E-mail: cr.tp@crclass.org

高雄連絡處 Kaohsiung Office

802 高雄市苓雅區海邊路31號26樓之3
26th Fl.-3, No. 31, Haibian Rd., Lingya Dist., Kaohsiung, 802,
Taiwan R.O.C.
Tel: +886-7-330-5617 Fax: +886-7-330-6295
E-mail: cr.kh@crclass.org

日本代表處 Japan Office

〒650-0031 日本神戸市中央區東町116-1シテイライ
フ三宮ビル9階
9F., No. 116-1, Higashimachi, Chuo-ku, Kobe 〒650-0031, Japan
Tel: +81-78-333-8515 Fax: +81-78-333-8506
E-mail: crskobe@silver.ocn.ne.jp

大陸代表處 China Office

廣州市經濟技術開發區青年路東園二街明珠廣場1603室
Rm. 1603, Pearl Garden Square, Qingnian Rd., Guangzhou Economic
& Technological Development Dist., Guang Dong Province, China.
Tel / Fax: +86-20-3207-0330
Mobile: +86-134-162-52949
E-mail: cr.cn@crclass.org

新加坡代表處 Singapore Office

2B, Hong San Walk, #17-06, Singapore 689048
Tel: +65-63101034 Fax: +65-68935997
E-mail: cr.sg@crclass.org

南非代表處 South Africa Office

P. O. Box 298, Plumstead 7801, Cape Town, South Africa 23,
Manson Close, Bergvliet Cape Town, South Africa
Tel: +27-21-7125382 Fax: +27-862736840
Mobile: +27-82-8813690
E-mail: frank7yang@hotmail.com

建造中入級 Classification of Ships During Construction

2015年建造中入級CR的船舶共計有17艘，分列如下：

There were a total of 17 ships classed by CR during construction in 2015 as listed below:

船東 Owner	造船廠 Shipyard	建造地點 Place	船型 Ship type	艘數 Number
正德海運 FRANBO LINES CORPORATION	本田 HONDA	日本 JAPAN	16,500 DWT 散裝船 16,500 DWT Bulk Carrier	2
高雄港務警察總隊 KAOHSIUNG HARBOR POLICE DEPARTMENT	新昇發 SHING SHEN FA	台灣 TAIWAN	19噸巡邏艇 19M Patrol Boat	1
SEASPAN	台船 CSBC	台灣 TAIWAN	14,000TEU 貨櫃船 14,000TEU Container Ship	1
環能海運 TAIWAN GLOBAL ENERGY MARITIME CO., LTD	尾道 ONOMICHI	日本 JAPAN	79,700 DWT 油輪 79,700 DWT Oil Tanker	1
大榮海運 DARONG	龍德 LUNG TEH	台灣 TAIWAN	32M 客船 32M Passenger Ship	1
四維航業 SHIH WEI NAVIGATION CO.	佐伯 SAIKI	日本 JAPAN	60,000DWT 散裝船 60,000DWT Bulk Carrier	1
四維航業 SHIH WEI NAVIGATION CO.	佐伯 SAIKI	日本 JAPAN	37,000DWT 散裝船 37,000DWT Bulk Carrier	2
中油 CPC CORPORATION, TAIWAN	靖海 TING HAI	台灣 TAIWAN	600HP 工作船 600HP Work Boat	1
世邦海運 TVL MARINE COMPANY LIMITED	大鮮 DAE SUN	南韓 SOUTH KOREA	1,800TEU 貨櫃船 1,800TEU Container Ship	2
光明海運 KUANG MING SHIPPING COPORATION	岩城 IWAGI	日本 JAPAN	63,000 DWT 散裝船 63,000 DWT Bulk Carrier	2
四維航業 SHIH WEI NAVIGATION CO.	尾道 ONOMICHI	日本 JAPAN	60,000 DWT 散裝船 60,000 DWT Bulk Carrier	2
中塑海運 SIMOSA SHIPPING(TAIWAN) CO., LTD	紫金山 ZIJINSHAN	中國 CHINA	7,500DWT 瀝青船 7,500DWT Bitumen Carrier	1

現成船入級 Classification of Existing Ships

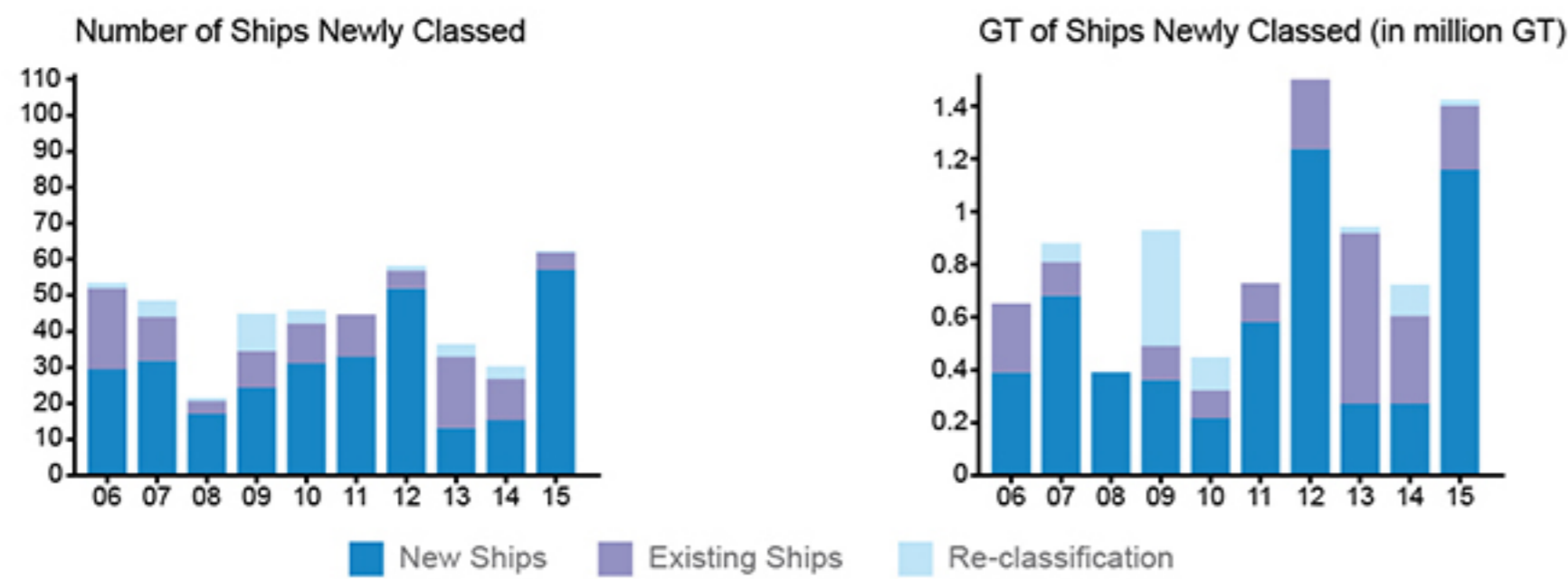
2015年現成船入級CR的船舶共計有4艘，分列如下：

There were a total of 4 existing ships classed by CR in 2015 as listed below:

船名 Ship name	船東 Owner	船旗 Flag	總噸位 GT	船型 Ship type
安立 ACACIA STAR	ACACIA MARINE CORP.	巴拿馬 Panamanian	26322	散裝船 Bulk Carrier
長月 EVER LUNAR	長榮海運股份有限公司 EVERGREEN MARIEN CORP.(TAIWAN) LTD.	中華民國 R.O.C.	99946	貨櫃船 Container Carrier
長頌 EVER LYRIC	長榮海運股份有限公司 EVERGREEN MARINE CORP.(TAIWAN) LTD.	中華民國 R.O.C.	99946	貨櫃船 Container Carrier
大華 TA HWA	台金航運股份有限公司 TAI CHIN SHIPPING CO., LTD.	中華民國 R.O.C.	2988	雜貨船 General Cargo Ship

新入級船舶 Newly Classed Ships

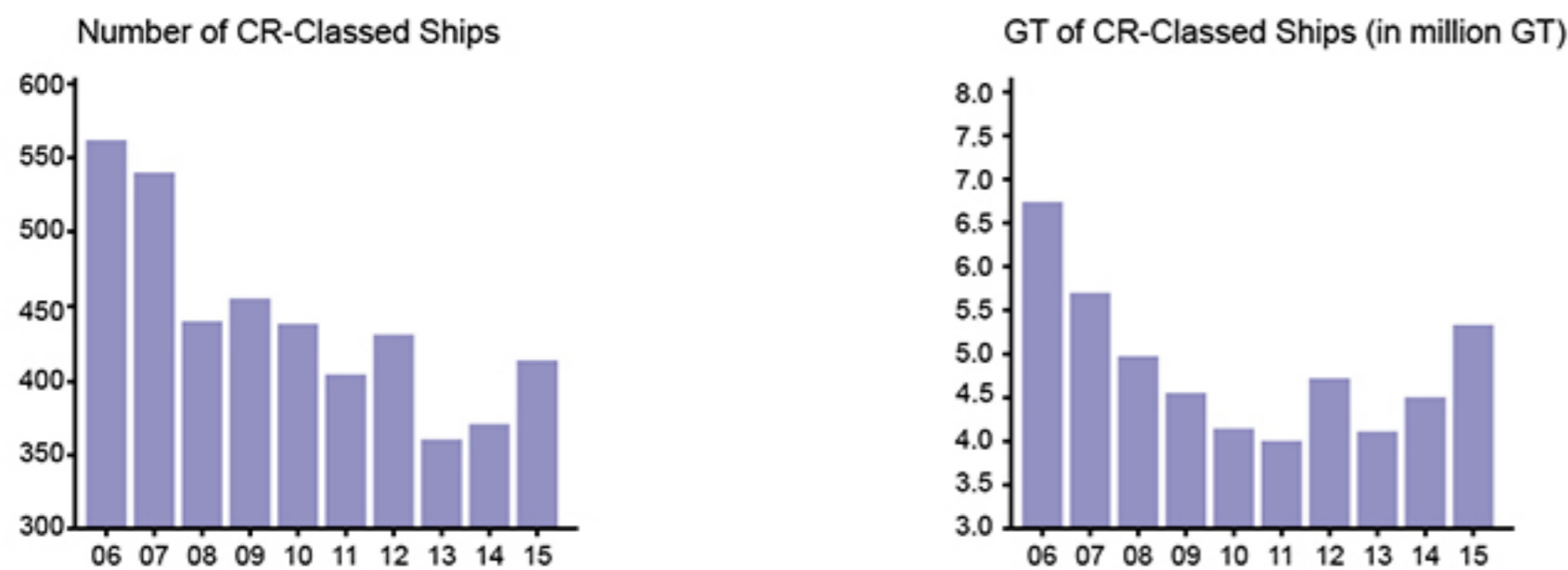
2015年經審核後正式入級的船舶有20艘共計934,490總噸，艘數為在級船舶的4.9%，其中新船入級15艘，現成船入級4艘，重新入級1艘。
After careful review, a total of 20 ships with 934,490 gross tonnage were formally classed with CR in 2015. The number of ships accounted for 4.9% of the number of those already classed with CR. Among these newly classed ships, there were 15 new ships, 4 existing ships, and 1 re-classed ships.



在級船舶 Classed Ships

截至2015年底，維持CR船級之船舶有412艘，共計5,456,405總噸，平均船齡為12.3年。
Up to the end of 2015 there were 412 ships maintaining CR class with 5,456,405 gross tonnage, and the average age of ships was 12.3 years.

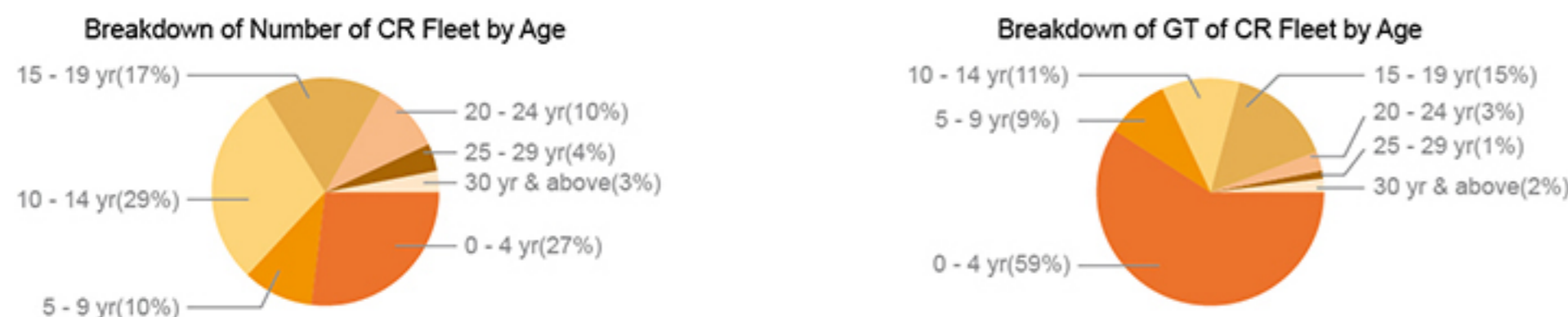
歷年在級船舶艘數及總噸位 The number of CR-classed ships over the years and their gross tonnage



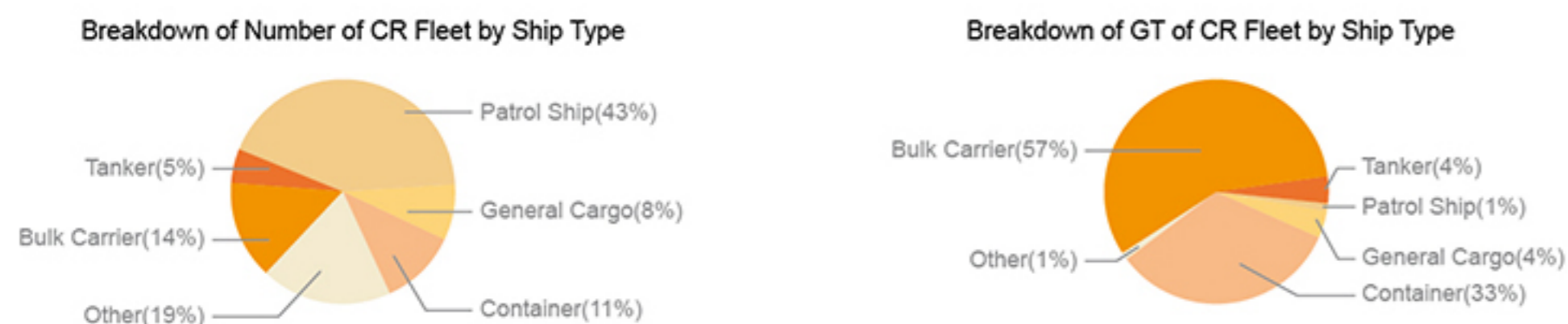
在級船舶之船旗國分析 Analysis of flag states of CR-classed ships



在級船舶之船齡分析 (平均船齡12.3年) Analysis of age of CR-classed ships (the average age of ships: 12.3 years)



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



ISM, ISPS 及 MLC 評鑑

2015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)之評鑑及發證工作，共計符合文件(DOC)評鑑38家，船舶管理評鑑(SMC)80艘，國際船舶保全(ISPS)評鑑共72艘次及海事勞工公約(MLC)檢查共66艘。

ISM, ISPS & MLC Verifications

In 2015, CR conducted ISM, ISPS and MLC verification and certification work, carrying out DOC verifications for 38 companies, SMC verifications for 80 ships, ISPS verifications for 72 ships, and MLC inspection for 66 ships.



CR

港口國管制

自2006年起，為改善本中心入級船舶之PSC滯留率，特制定「現成船加強檢驗及管理辦法」及「加強管制現成船入級辦法」等二辦法以加強對高齡船舶之嚴格檢驗及入級之適當設限，如今已見成效。本中心在2012-2015年東京備忘錄(TOKYO MOU)的紀錄上為高績效的表現。

Port State Control

In order to improve the detention rate of CR-classed ships, since 2006 we have established the "Rules for intensifying inspection and management of existing ships" and the "Rules for controlling Classification of existing ships" as part of our effort to enhance the inspection of aged ships and to impose proper restrictions on classification of these ships. So far, this has demonstrated effectiveness. From 2012 to 2015, the performance of CR in Tokyo MOU remains at a HIGH level.



工廠認可及型式認可

2015年CR執行船舶用品工廠認可及產品型式認可共計41家109型，其中包括危險品容器之認可工廠共16家、中型容器型式共4型、小型容器型式共190型。

Works Approval and Type Approval

In 2015, CR conducted works approval of 41 companies and type approval of 109 products for use on vessels, including 16 works of small packagings/intermediate bulk containers (IBCs) for dangerous goods, 4 types of IBCs, and 190 types of small packagings.

規範研究

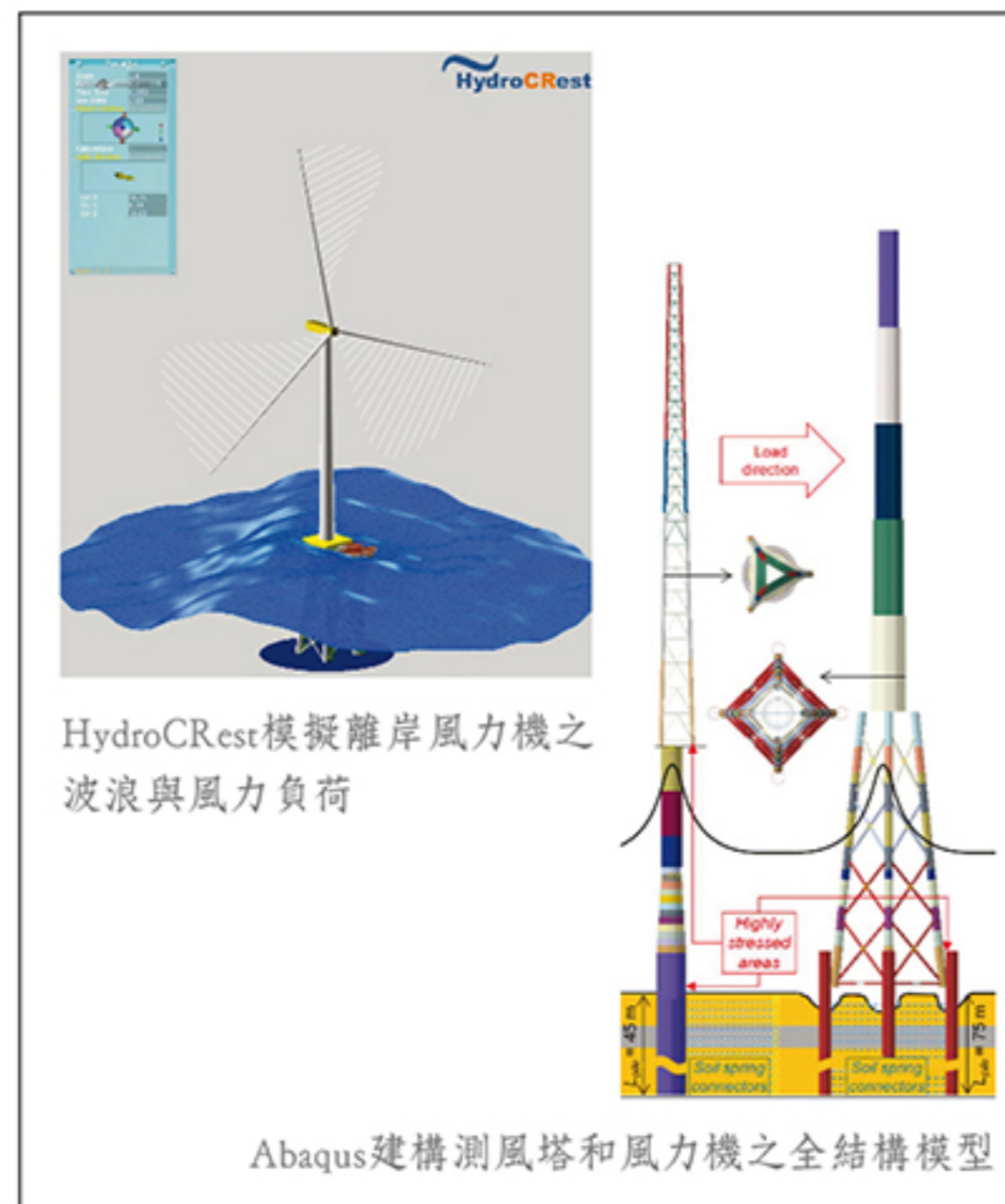
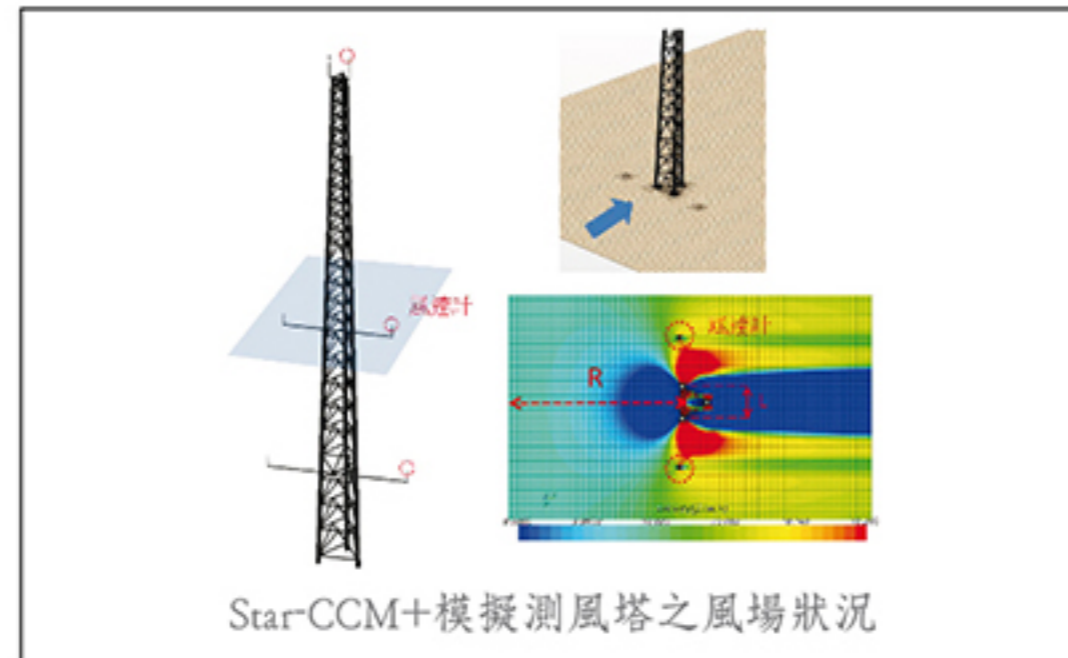
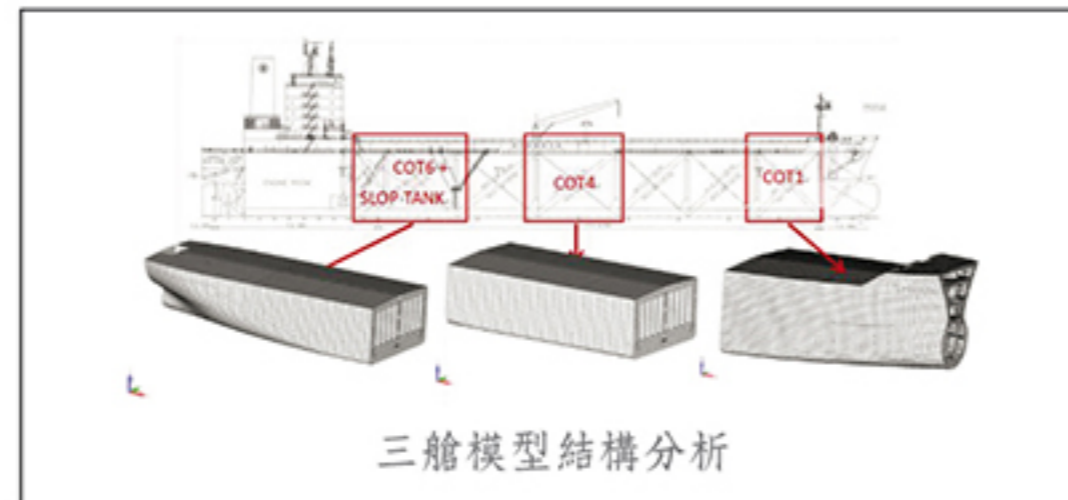
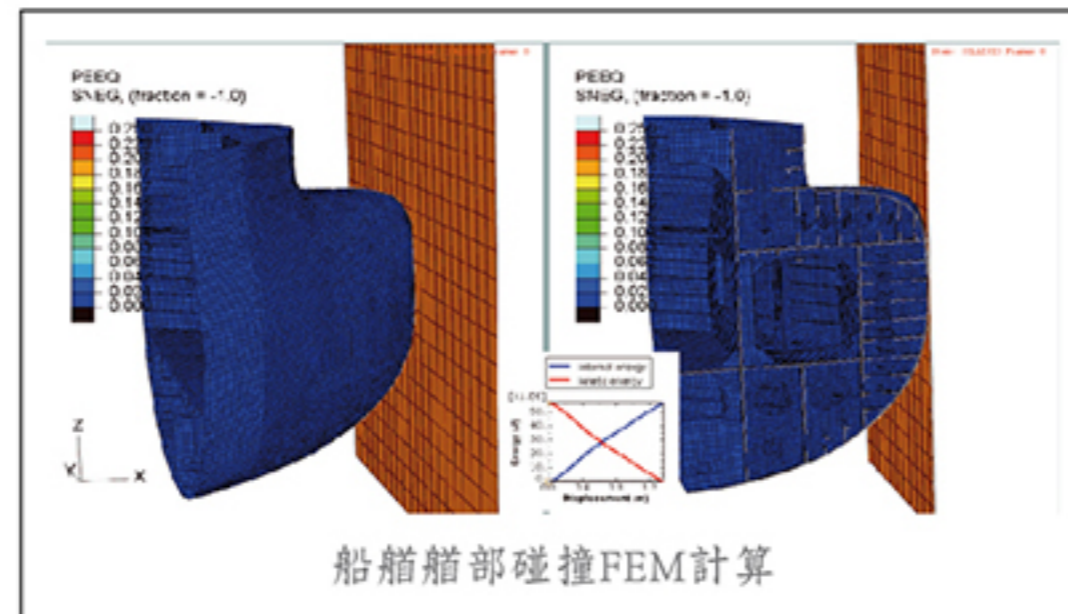
本中心之「鋼船建造與入級規範」係自行開發並每四年改版一次，期間亦隨時因應法規及技術發展而增訂修訂版。目前本中心所編撰之船級規範計有：

Rules Development

The "Rules for Construction and Classification of Steel Ships" is self-developed and has been revised once every four year. Supplements and amendmnets are also published from time to time before the next edition is published in order to cope with the development of technology. At present, we are compiling the following rules for classification of ships:

- 2013年鋼船建造與入級規範
Rules for the Construction and Classification of Steel Ships, 2013
- 2013年貨櫃建造與發證規範
Rules for the Construction and Certification of Freight Containers, 2013
- 2013年貨物裝卸設備構造與檢驗規範
Rules for the Construction and Survey of Cargo Gear, 2013
- 2008年高速船建造與入級規範
Rules for the Construction and Classification of High-Speed Craft, 2008
- 2013年鋁合金船建造與入級規範
Rules for the Construction and Classification of Aluminum Vessels, 2013
- 1998年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 for Fibreglass Reinforced Plastics, 1998
- 2015年潛艦建造與入級規範
Rules for the Construction and Classification of Submarines, 2015

CR



政府授權

CR接受交通部委託，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、貝里斯、蒙古、柬埔寨、吉里巴斯、吐瓦魯、多米尼克等政府之授權執行各該國籍船舶之國際公約檢驗。

交通部於2015年12月30日蒞臨本中心進行查核，查核重點係針對本中心之檢驗業務、組織、管理方法、設立許可、財務狀況及公益績效等各項加以評審，稽核結果符合「交通部審查交通事務財團法人設立許可及監督要點」之各項規定。

交通部航港局林副局長昌輝率團於2015年12月30日前來本中心，進行遊艇驗證機構之年度查核並順利完成。

國家通訊傳播委員會(NCC)於11月13日及12月2日順利完成對本中心授權無線電現場稽核及委辦業務查核之年度稽查工作。

巴拿馬海事局(PMA)於8月3日至7日至本中心進行為期5天之RO Code稽核，稽核結果滿意並同意持續授權本中心執行巴拿馬船旗國之各項法規公約檢驗與發證。

賴比瑞亞海事局於11月9日至20日完成ISM/ISPS/MLC/ASI檢查員訓練並授權本中心執行賴比瑞亞籍船舶之ISM、ISPS、MLC驗證及船旗國之年度安全檢查等事宜。

Government Authorization

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, Belize, Mongolia, Cambodia, Kiribati, Tuvalu, and Dominica for conducting statutory surveys of ships registered with their respective governments.

The Ministry of Transportation and Communications performed an audit of CR at our head office on December 30, 2015, evaluating particularly our survey work, organization, management techniques, establishment permit, financial situation, and performance relating to public welfare. The audit results met all the requirements of the "Regulations of the Ministry of Transportation and Communications for Governing Supervision and Establishment of Corporations regarding Transportation Affairs."

Mr. Chang-Hui Lin, Deputy Director General of Maritime and Port Bureau, Ministry of Transportation and Communications R.O.C. visited CR with an audit team to conduct annual audit on yacht inspection. The audit was smoothly completed.

The annual audit on radio inspection and other authorized business by National Communications Commission(NCC) on November 13 and December 2, 2015.

Panama Maritime Authority(PMA) conducted RO Code audit from August 3 to 8, 2015. PMA was satisfied with the audit result and agreed to continuously authorize CR to carry out statutory survey and issue certificates to vessels flying Panama flag.

Panama Maritime Authority issued Announcement MMC-267 to inform Panama-flag vessels over 500 tons are required to have classification certificate issued by recognized organization which is authorized by government. CR applied to Panama on March 24, 2014, and successfully obtained authorization on June 12, 2014.

Liberian Registry held ISM/ISPS/MLC/AIS inspectors training from November 9 to 20, and authorized CR to carry out ISM、ISPS、MLC certification and annual safety inspection for vessels flying Liberia flag.

研究成果

本中心於2015年發表七篇研討會論文，題目分別為：「以非線性有限元素分析評估補強板極限強度」、「應用RANS計算評估氣象塔之風場」、「波振效應對8000TEU貨櫃船疲勞壽命之影響」、「高速船耐海性能分析」、「以流固耦合直接計算方法評估CSR-H之沖激準則」、「負荷不確定性對共同結構規範之疲勞壽命之影響」、「探討海氣象觀測塔於颱風環境下極限及暫態負荷對結構反應之影響」。完成開發協調共同結構規範(Harmonised Common Structural Rules)之結構計算軟體「高峰」(High Crest)。針對離岸結構，開發可快速計算結構受風、波、流外力，並予以即時顯示的軟體「水峰」(Hydro Crest)。

Research Achievement

In 2015, this Society has published seven conference papers, which respectively entitled as "Stiffened panels ultimate strength evaluation through non-linear finite element analyses", "Evaluation of the wind flow around a meteorological mast through RANS computations", "Springing effect on the fatigue life of an 8000TEU container ship", "Analysis of seakeeping performance of high speed craft", "Evaluation of the CSR-H sloshing criterion using direct fluid structure calculation", "Load uncertainties effect on the fatigue life evaluation by the Common Structural Rules", "Effect of extreme and transient loads on the structural response of meteorological mast under typhoon condition". The structure calculation software has been developed for the Harmonised Common Structural Rules, named as "High Crest". For offshore structures, the software "Hydro Crest" has been developed to rapidly calculate the wind, wave and current forces applied on structures with real-time display.

ETAS 緊急技術評估服務

截至2014年底，各航運公司向本中心申請緊急技術評估服務(ETAS)的船舶共計有25艘次。

Emergency Technical Assessment Service (ETAS)

Up to the end of 2014, there are 25 ships for which the companies applied to CR for Emergency Technical Assessment Service (ETAS).



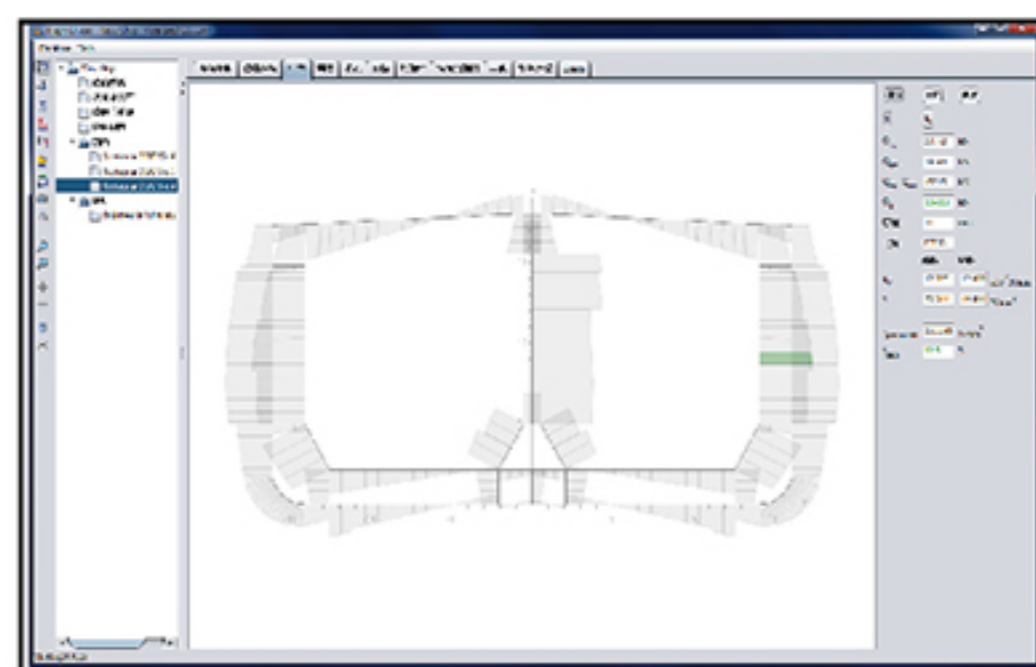
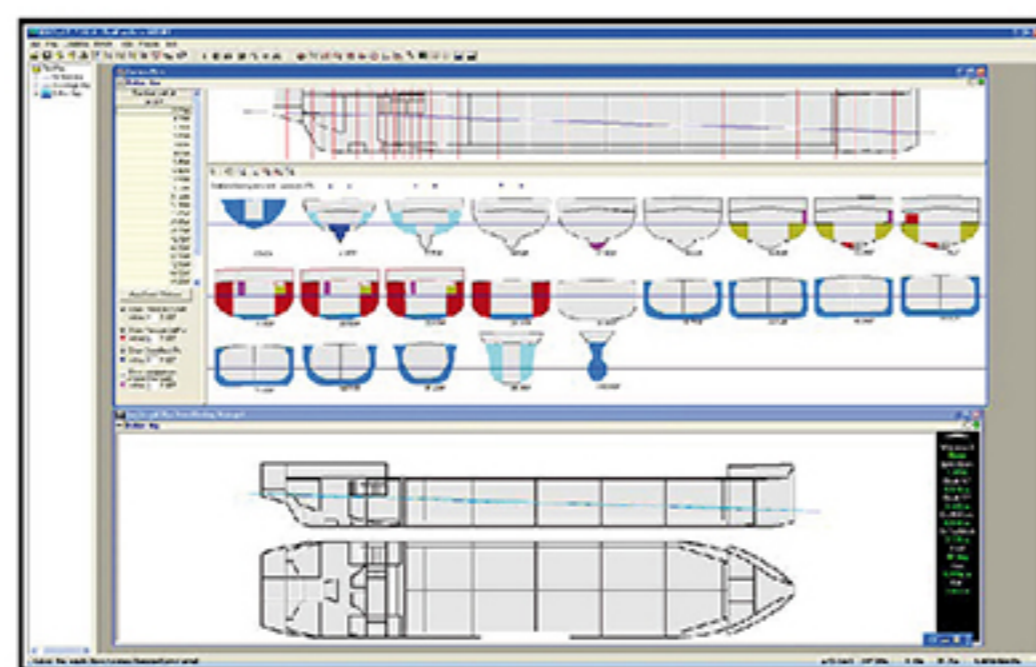
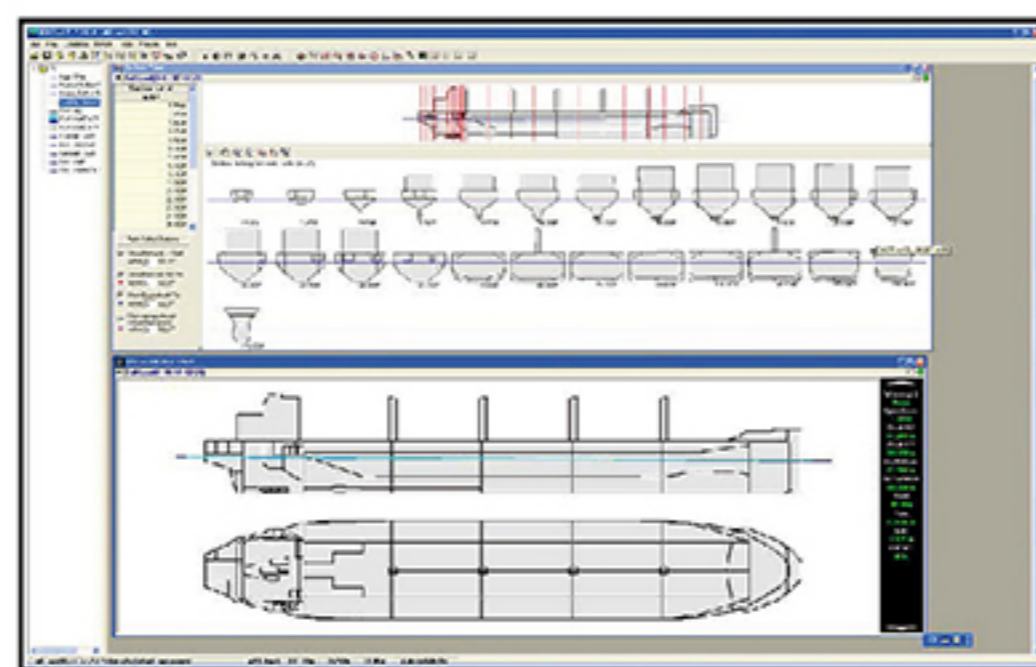
CRPA 電子審圖

為加強新造船設計圖審核效率，並減少紙張印刷之資源浪費，本中心自行開發電子審圖系統(CRPA)，其功能包括由船廠傳送設計圖電子檔、本中心審核意見退審、現場驗船師查詢審圖意見、船廠處理退審意見、船東查詢送圖及審圖進度等。

CR Plan Approval (CRPA)

In order to enhance the efficiency of plan approval for newbuildings and to reduce paper consumption in the office, we have developed CR Plan Approval (CRPA). Its functions include submission of design drawings in electronic form by the shipyard, approval of drawings by CR with comments and return of drawings, review of approval comments by the field surveyors, handling of comments on returned drawings, and inquiries from the shipowner about submission of drawings and progress of drawing approval.

CR



教育訓練

CR應業界要求舉辦公司保全員(CSO)及港口設施保全員(PFSO)之訓練課程，本年度舉辦公司保全員共2班次計22人，及港口設施保全員共3班次計108人。另並舉辦國際安全管理(ISM)內部稽查訓練課程共2班次共計34人，港口設施查驗訓練課程共1班次計52人及國內航線船舶安全管理制度(NSM)共1班次計15人，教育訓練課程均深獲參與學員之好評。

Training

In response to the request of the shipping industry, CR has offered 2 CSO training courses for a total of 22 participants and 3 PFSO training courses for a total of 108 participants. Moreover, CR has also held 2 ISM Code training courses for a total of 37 participants, 1 training course for Port Facility Inspection for a total of 52 participants, and 1 training course for National Safety Management System for a total of 15 participants. The above-mentioned educational training courses all drew high praise from the participants.

對外研討會 External Workshops

本年度對外共舉辦5次研討會，均深獲與會人士好評。

We held 5 external workshops during 2015, all of which received favorable responses from attendees.

日期	研討會內容
2015.03.26	<ul style="list-style-type: none">• 2014年CR船級檢驗動態及PSC統計 CR Classification Activity, 2014 and Statistics of Port State Control• ISM / ISPS / MLC法規宣導及注意事項 ISM / ISPS / MLC Overview
2015.04.14	<ul style="list-style-type: none">• ISM / ISPS / MLC法規宣導及注意事項 ISM / ISPS / MLC Overview
2015.06.25	<ul style="list-style-type: none">• LNG與雙燃料引擎發展趨勢 Development Tendency of LNG & Dual Fuel Engine• 航運市場分析與回顧 Shipping Review and Analysis
2015.09.22	<ul style="list-style-type: none">• 簡介2016年生效國際公約修正案 Introduction of International Convention's Amendments that will Come into Force in 2016• 實海域船速減少係數之評估與ISO15016試俾程序介紹 Evaluation of Ship Speed Loss in Actual Sea and Introduction of Sea Trial Procedure of ISO15016
2015.12.22	<ul style="list-style-type: none">• 最新生效國際公約與進度 Latest Enforced Convention and Schedule• 船舶運動應用概略 Brief Introduction of Ship Motion Analysis Applications• 高速船耐海性能分析 Analysis of Seakeeping Performance of High Speed Craft

國際交流

為符合IMO目標型船舶建造標準(簡稱GBS)，協商IMO有經驗之稽核員；日本籍Mr. Koji Yoshida和韓國籍Mr. Sei-Chang Lee，為本中心之GBS系統做獨立驗證稽核。9月1日於本中心進行稽核啟始會議，12月21日至22日於本中心舉行問答會議。稽核結果顯示CR規範技術符合IMO GBS。預計將可順利取得GBS符合聲明書。

巴拿馬海事局首席執行長Mr. Jorge Barakat Pitty與商船部主任Mr. Fernando A. Solorzano A.巴拿馬駐台大使Mr. Alfredo Martiz Fuentez於9月14日前來訪問，並與本中心簽訂符合RO Code規定之授權合約，且巴拿馬首度授權非IACS成員執行客船之檢驗與發證，足以證明巴拿馬海事局對CR多年來的表現給予肯定。

International Exchange

In order to comply with Goal-Based Ship Construction Standards (abbreviated as GBS), CR has negotiated with experienced auditors, Mr. Koji Yoshida(Japan) and Mr. Sei-Chang Lee(Republic of Korea), to conduct independent certification audit for GBS. The kick-off meeting was held on September 1, 2015. And the meeting for question and answer was held between December 21 and 22, 2015. The audit result revealed that rules of CR are in compliance with IMO GBS. It is expected that CR will smoothly obtain Statement of Compliance for GBS.

Mr. Jorge Barakat Pitty, Minister of Maritime Affairs & Administrator of PMA, Mr. Fernando A. Solorzano, General Director of Merchant Marine of PMA, and Mr. Alfredo Martiz F, Ambassador Extraordinary and Plenipotentiary visited CR and signed a delegation agreement for complying with RO Code. It was the first time that PMA authorized non-IACS member to conduct surveys and issue certificates to passenger ships. It is enough to prove that PMA gives recognition to CR's performance in these years.