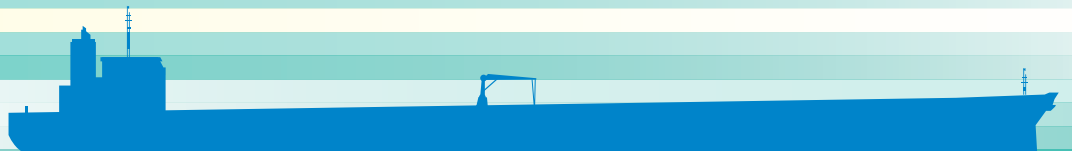


2013年度報告

[中文版]

ClassNK



ClassNK 宗旨

ClassNK 致力於確保海上生命財產的安全，並且防範海洋環境汙染。為了達成此任務，ClassNK 將：

- 在維持本協會獨立、非營利第三方組織的立場，由最優秀的人員，提供最高品質的檢驗服務；
- 並將焦點放在發展相關規範（Rules）、指南（Guidances）、與程序（Procedures），維持與發展對技術研究與研發的承諾，為航海產業做出正面貢獻；
- 維護與發展本協會的全球營運，以滿足本協會客戶的需求。

簡介

日本海事協會成立於 1899 年 11 月 15 日，常被稱為 ClassNK 或簡稱 NK，為一船級協會，致力於保衛海上船隻與船員的生命財產安全，並且防範海洋汙染。ClassNK 以本協會完全獨立第三方的非營利組織身分，提供廣泛的服務，包括檢驗與認證服務、技術資

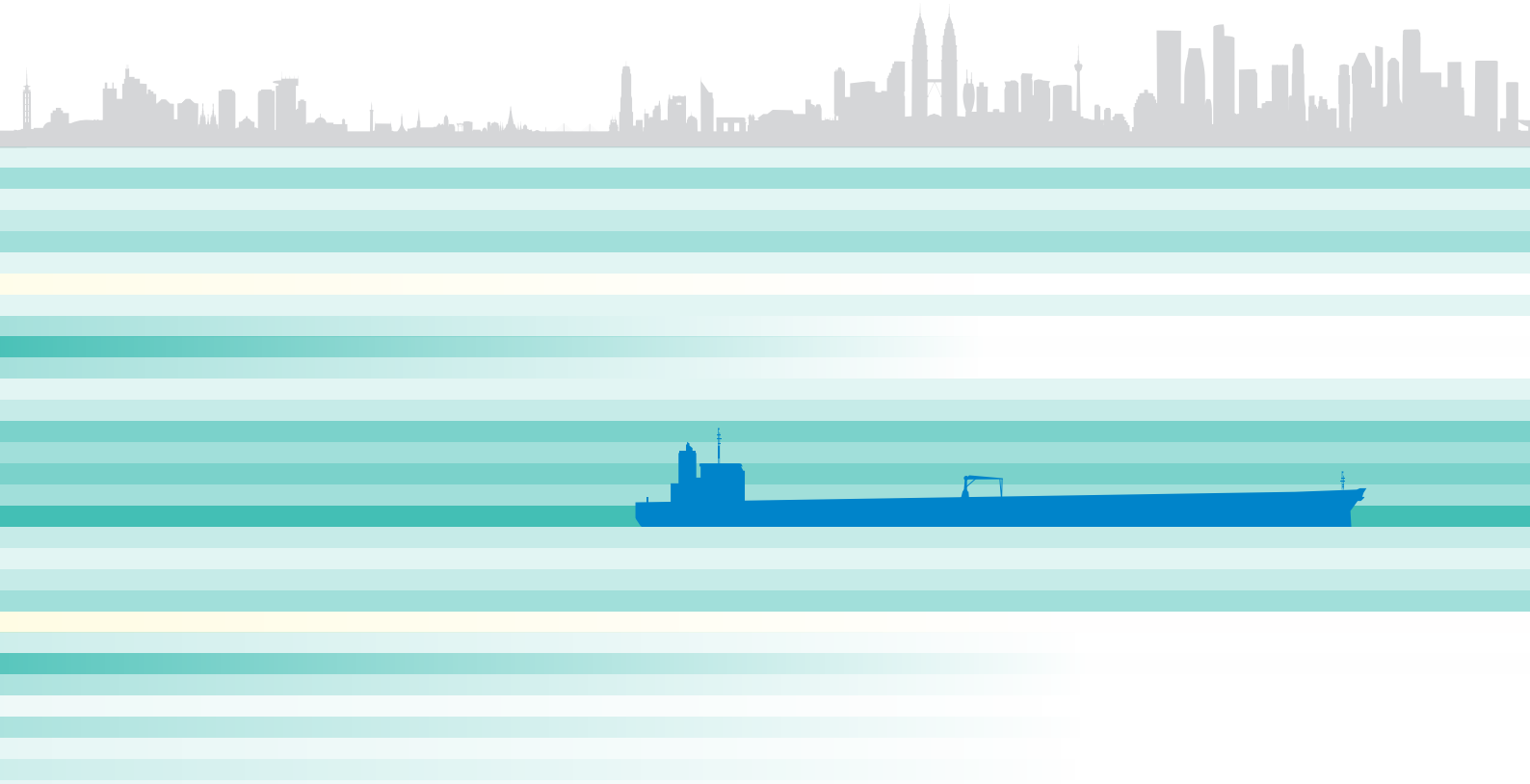
訊服務及研發活動。日本海事協會的專業技術團隊，主要工作服務項目是為新造船、現成船以及其他海洋結構物等進行檢驗的服務，包括船體結構、推進系統、電氣與電子系統、安全設備、貨物搬運裝置，以及其他眾多領域，以確保這些結構與設備完全符合

本協會制定的船舶檢驗分級規範。日本海事協會亦獲得全球超過 100 多個船旗國授權，執行相關的國際公約檢驗。其他服務範圍還包括船隻安全管理系統的審查與登錄、品質檢驗、環境與職業安全管理系統及船員訓練機構認證。



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會長的話



會長兼代表理事

上田德 (Noboru Ueda)

誠摯感謝您閱讀ClassNK 2013年度報告。本人想藉此機會表達對所有人的感激，感謝他們持續支持ClassNK的活動。

對ClassNK而言，2013年充滿了許多重要的事件，其中最重要的事件無疑是本協會登錄的一艘貨櫃船於6月間橫渡印度時發生船難。為了對這起悲劇採取應變，我們立即成立了海難特別調查小組，判斷海難的原因，並防範未來發生類似事故。我們將持續努力確保商船的安全運作，並運用這次調查的結果，提高海運業的整體安全性。

在船級社中，另一則重大事件是挪威船級社（DNV）與德國勞氏船級社（GL）合併成立DNV-GL。鑑於船級協會的競爭與日俱增，想必我們的經營環境將更具有挑戰性。

中期管理計劃

2013年也是我們的第一個中期管理計劃「Global Approach 200」的最後一年。我很高興宣佈，我們已達到該計劃的所有五個目標，分別是：

1. 為未來成長建立穩定的財務基礎

2. 登錄船隻總噸數達2億噸以上
3. 改善服務品質、提升全球營運服務範圍
4. 拓展業務
5. 促進新研發

我們將在2014年展開新一輪的中期管理計劃，名為「ClassNK Global Challenge 250」，這個第二次的三年計劃，目標是要在Global Approach 200的成就基礎上達到進一步的成長。我們將盡一切努力，確保在未來數年達成這些目標。

驗船服務網絡

在2013年，我們持續擴展協會的服務網絡，在東南亞、中東和歐洲開張共7個新的服務據點，以因應客戶不斷變化的需求。加上這些新服務據點，我們在全世界佈局的全球服務網絡已達128個據點。

除了擴展服務網絡外，我們也努力維持並改善獨立驗船服務據點的品質。此外，本協會在日本和海外舉辦廣泛的訓練課程，持續培養驗船師的專業素質。

新授權與法規


在2013年，本協會獲得德國、塞爾維亞、羅馬尼亞和芬蘭政府的新授權，截至2013年底，授權ClassNK執行檢驗和相關議題認證的船旗國總數已達110個。2013年也見到好幾個新的國際公約生效，包括降低溫室氣體（GHG）排放以及國際勞工組織的海事勞工公約（MLC, 2006）的新修訂案。本協會已在2012年成立能源效率設計指數（EEDI）部門，全面支持降低溫室氣體排放的行動。關於2006年的海事勞工公約，除了有系統地培訓海事勞工檢查員外，我們也在世界各地舉行研討會，協助客戶遵守新法規。

研究與發展

在ClassNK，致力於研發，確保海運業未來長遠發展，也是我們的最高要務之一。除了進行本身的獨立研發活動外，本協會也透過產業聯合研究計劃，促進合作研究，以因應海運業不斷變化的需求。截至2013年底，這項計劃已完成140個專案，且專案的結果正在幫助我們奠定穩固的基礎，有利於未來產業成長。今年度，我們將持續積極投入技術研發，支援產業的整體發展。

新認證服務

在2013年，我們也擴大認證服務，納入海事教育與訓練機構認證、道路交通安全管理系統認證，以及溫室氣體排放量驗證。展望未來，本協會將在悠久的船級歷史基礎上，持續累積技術專業，以提升在這些新領域的活動，並改善我們的服務。



Noboru Ueda

2013 年概觀

本協會於今年度登錄總噸數超過 2.2 億，登錄總船隻數超過 8,500 艘。

截至 2013 年 12 月底，ClassNK 登錄的船隻總噸數達到 220,979,362 噸，首度突破 2.2 億噸的關卡。ClassNK 登錄的規模自 1988 年逐年成長，登錄總噸數在 1997 年達到 1 億噸，並在 2012 年中打破紀錄，創下 2 億噸的輝煌成就。飛越 2 億噸在 ClassNK 史上是個重要里程碑，因為這是有史以來船級協會首次達到此數字。在 2013 年，本協會新登錄的船隻有 8,525 艘，到年底總登錄噸數超過 2.2 億噸。雖然新造船的數目減少，但由於現成船從其他船級協會轉向 ClassNK 登錄的數目增加，因此本協會的登錄船隻數仍呈現成長。

2千萬
登錄噸數

ClassNK 連續三年登錄總噸數超過 2 億噸

在 2013 年，ClassNK 登錄的新增船隻有 859 艘，新增噸數超過 2,050 萬噸，使得本協會連續第三年新增噸數超過 2 千萬噸。

7

新開張的獨立驗船服務據點

ClassNK 開設七個新獨立驗船服務據點

ClassNK 致力於配合客戶的需求及變化的市場趨勢，持續擴張我們的服務網絡。在 2013 年，我們的服務網絡新增了七個據點，分別設在緬甸仰光、孟加拉吉大港、立陶宛克萊佩達、丹麥埃貝爾托夫特、巴拉圭亞松森、德國符茲堡及芬蘭赫爾辛基。

66

完成的研發案

ClassNK 完成 66 個聯合研究專案

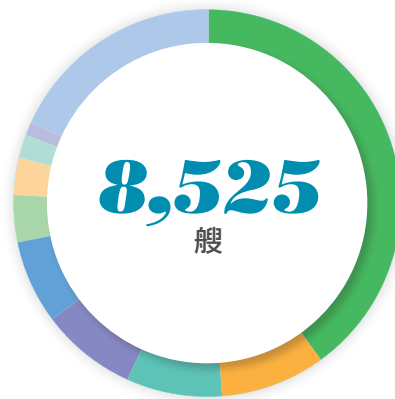
自 2009 年成立產業聯合研究計劃以來，ClassNK 每年都與產業夥伴進行各種聯合研究。在 2013 年，ClassNK 及其研究夥伴共完成此計劃其中 66 項聯合研究專案。

按船旗國的 NK 船隻分析



■ 巴拿馬	53%	■ 香港	5%
■ 日本	8%	■ 馬紹爾群島	5%
■ 新加坡	7%	■ 其他	15%
■ 賴比瑞亞	7%		

按船舶種類的 NK 船隻分析



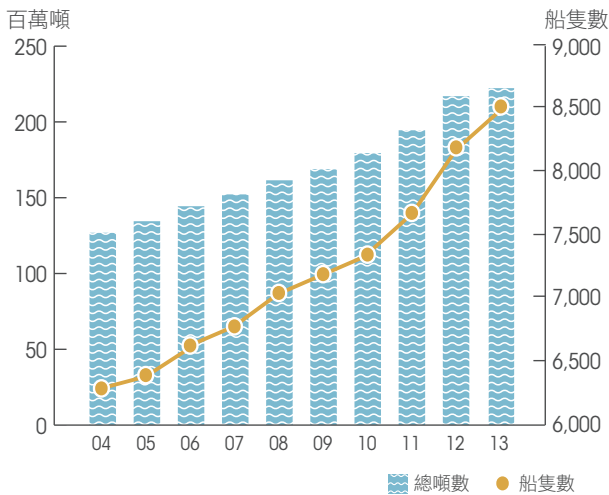
■ 散裝船	40%	■ 汽車船	4%
■ 油輪	9%	■ 液化石油氣船	3%
■ 雜貨船	8%	■ 冷凍貨品船	2%
■ 化學品船	8%	■ 液化天然氣船	1%
■ 貨櫃船	7%	■ 其他	18%



■ 散裝船	60%	■ 雜貨船	3%
■ 油輪	12%	■ 液化天然氣船	2%
■ 貨櫃船	9%	■ 液化石油氣船	2%
■ 汽車船	7%	■ 冷凍貨品船	0.5%
■ 化學品船	3%	■ 其他	1.5%

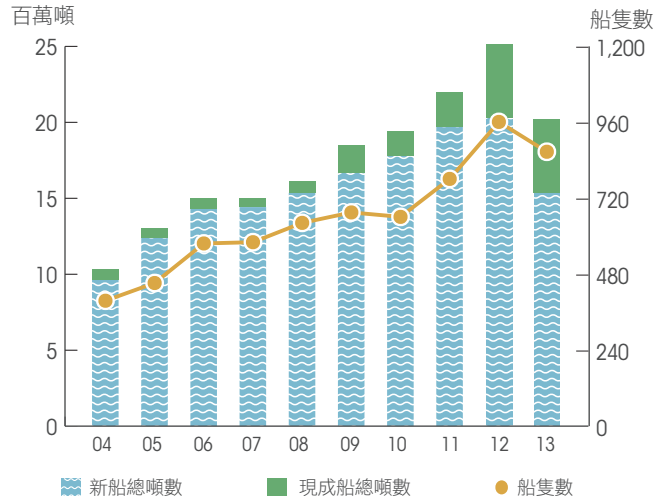
ClassNK 船隻總噸數與數量

220.9 百萬噸
8,525 艘



新登錄船隻總噸數與數量

20.5 百萬噸
859 艘



出版新技術指導方針

ClassNK在2013年出版以下技術指導方針。請到本協會網站首頁，登入「My Page」，便可下載。

- 《大容量儲存電池指導方針》
(Guidelines for Large-capacity Storage Batteries)
- 《環境指導方針第三版》
(Environmental Guidelines V.3)
- 《歐盟海洋用途產品類型核准指導方針》
(Guidelines for Type Approval of Products for Marine Use for EU)
- 《天然氣燃料船指導方針第二版》
(Guidelines for Gas Fuelled Ships V.2)

獲得德國、羅馬尼亞、塞爾維亞及芬蘭的新授權

在2013年，本協會獲得德國、羅馬尼亞、塞爾維亞及芬蘭政府授權，執行完整範圍的檢驗與審核，並核發國際海上人命安全公約（SOLAS）、防止船舶污染國際公約（MARPOL）及其他國際公約的認證證書。這些國家加入後，ClassNK現在已能代表110個船旗國和政府執行檢驗。

2013 年概觀



ClassNK宣佈新的中期管理計劃

繼2013年成功完成「Global Approach 200」中期管理計劃後，ClassNK已宣佈為2014-16年執行下一個「ClassNK Global Challenge 250」新管理計劃。

12月3日

ClassNK攜手Maria Tsakos基金會，進行海事安全與環境保護聯合研究。

ClassNK 與Maria Tsakos基金會的國際海洋研究傳統中心共同宣佈，兩個組織已同意聯手執行海事安全與環境保護的相關研究。位於希臘希俄斯的Maria Tsakos基金會國際海洋研究傳統中心是由Panagiotis N. Tsakos船長家族在2008年成立，此家族擁有希臘最負

盛名的船東公司之一。自成立以來，該基金會已發展為希臘首屈一指的海事非政府組織及慈善組織之一，以其持續支持海運業和海員發展聞名於國際。雙方合作計劃的第一個專案是改善海員健康與福祉的研究，大部分由ClassNK出資。

3 月 6 日

ClassNK核准最小壓艙水船舶(MIBS) VLCC設計

ClassNK宣佈對Namura造船公司與日本造船研究中心(SRC)合作發展的最小壓艙水船舶(MIBS) VLCC設計授予AIP(原則上核准)。

Namura的新MIBS VLCC設計利用革命性的新船體線型,大幅降低安全航運所需的壓艙水量,解決了壓艙水管理的相關困難。最小壓艙水船舶設計將正常壓艙條件所需的壓艙水重量降低約65%,為使用較小的壓艙水處理系統做好準備,並降低燃料消耗量。最小壓艙水船舶設計有著較平的船底,及標準寬度的船體,這使得需要的壓艙水量大幅降低,但同時可維持標準VLCC的尺寸。



12 月 10 日

ClassNK與Rio Tinto鐵礦公司簽署全面研究合作協議

ClassNK與全球採礦集團Rio Tinto旗下的Rio Tinto鐵礦子公司共同宣佈,兩個組織已簽署一項散裝船安全相關研究的全面合作協議。此新協議為ClassNK與Rio Tinto鐵礦公司提供了合作研究的開放架構,涵蓋與鐵礦和其他貨物安全載運有關的各種主題。透過這項協

6 月 11 日

MOL與NYK簽署使用ClassNK檔案中心服務合約

ClassNK宣佈NYK Lines公司(NYK)及Mitsui O.S.K. Lines公司(MOL)已簽署初步合約,成為ClassNK檔案中心竣工圖儲存服務(ADSS)的第一批使用者。此合約乃是與三菱重工業公司(MHI)及Imabari造船公司共同制定,這兩家公司是將使用此服務的船隻的建造者。

根據合約,總共有三艘船將使用竣工圖儲存服務,包括NYK的Elegant Salute,以及MOL的Jozen和Horaisan,第一艘是95,000噸的散裝船,在Imabari造船公司的Marugame公司總部建造,第二艘是95,000噸的散裝船,也是在Imabari造船公司的Marugame公司總部建造,第三艘是300,000噸的超大型油輪,在三菱重工業公司的Nagasaki造船廠建造。



議,Rio Tinto與ClassNK將能分享彼此在固體散裝貨物海運上數十年的專業知識與經驗,努力改善海上安全。

9 月 26 日

ClassNK與印尼船級協會(BKI)簽署全面合作協議

本協會宣佈與印尼船級協會(BKI)締結一項協議。此新協議目的是要建立ClassNK與BKJ更密切合作,雙方努力支持印尼海運業的發展。這項新協議將在各種領域促進更密切的聯合技術研究合作,雙方也將合作發展規範,並提供驗船師的教育與訓練。

ClassNK 獲頒國際獎項

在 2013 年裡,ClassNK 因為對海運業的創新與安全做出卓越貢獻,在世界各地的頒獎典禮上獲得表揚,包括:

- * 2013 年 Seatrade 斯里蘭卡港口、貿易與物流頒獎典禮:技術創新獎
- * Seatrade 頒獎典禮:海上安全獎
- * 2013 年 Seatrade 亞洲頒獎典禮:技術創新獎及船級協會獎。
- * 此外,ClassNK 的會長 Noboru Ueda 先生在 2013 年 6 月 21 日的 Seatrade 亞洲頒獎典禮上榮獲 Seatrade 終生成就獎的殊榮,表揚他對亞洲海洋產業發展的傑出貢獻。

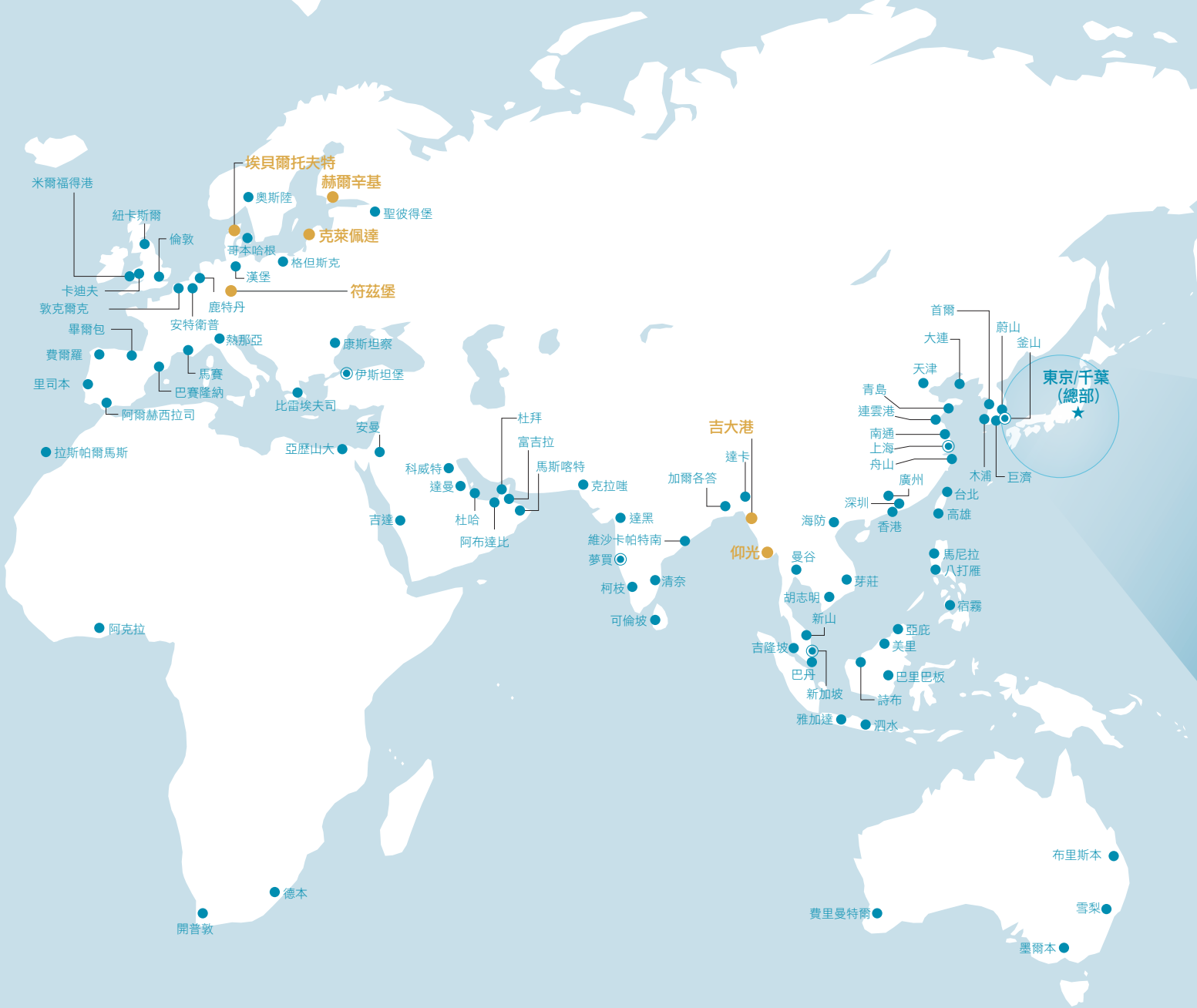
海難應變

在一艘ClassNK登錄的貨櫃船於2013年6月在印度洋發生船難損失後,ClassNK立即成立了海難特別調查小組,判斷海難的原因,並制定措施來防範未來發生類似事故。ClassNK將持續努力確保世界商船的安全運作,並運用這次調查的結果,提高海運業的整體安全性。

世界服務網絡

ClassNK持續拓展其廣大的全球驗船服務網絡，截至2013年底，世界各地的獨立驗船服務據點數已達128個。此外，ClassNK也在世界主要造船區設有六個審圖中心。

●... 驗船服務據點及審圖中心



2013 年新開張獨立驗船服務據點

●... 新獨立驗船服務處

4月1日

緬甸仰光

6月1日

孟加拉吉大港
立陶宛克萊佩達
丹麥埃貝爾托夫特

7月1日

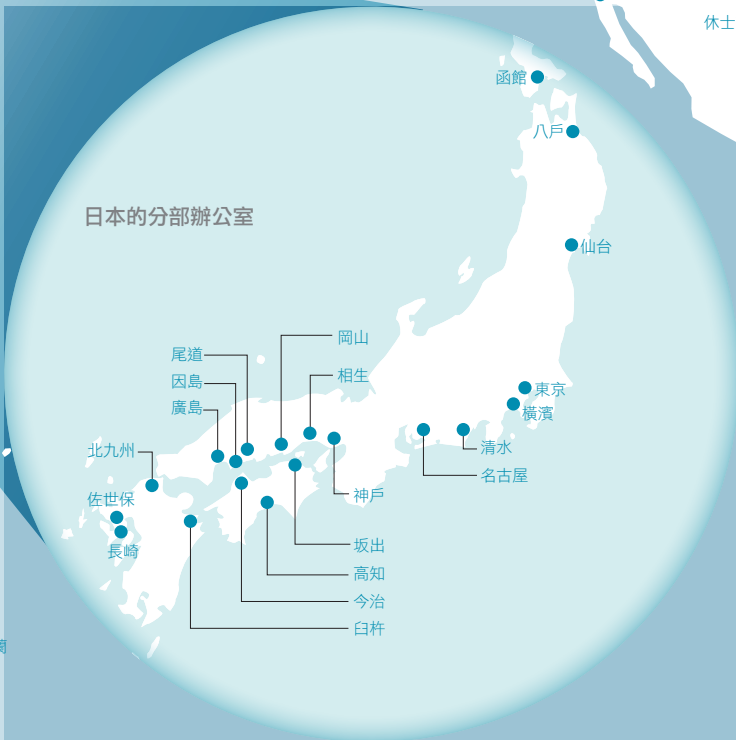
巴拉圭亞松森

11月1日

德國符茲堡

12月1日

芬蘭赫爾辛基



溫哥華
西雅圖

洛杉磯

休士頓

紐奧良

邁阿密

維拉克魯斯

巴拿馬

瓜亞基爾

卡亞俄

威爾帕內索

亞松森

里約熱內盧

山托斯

布宜諾斯艾利斯

奧克蘭

ClassNK 活動

ClassNK 持續擴張服務網絡，全球各地的獨立驗船服務據點超過 120 個，且在世界主要港市及造船區設有五個審圖中心。在 2013 年，協會登錄的總噸數增加 20.5 百萬噸以上，使得 ClassNK 連續第三年每年登錄的新增總噸數皆在 2 千萬噸以上。



DIVINE ACE

一艘 59,022 噸的汽車船，由 MINAMINIPPON SHIPBUILDING CO., LTD. 為 MITSUI O.S.K. LINES, LTD. 所建造。



OCEANUS LEADER

一艘 62,838 噸的汽車船，由 SHIN KURUSHIMA DOCKYARD CO., LTD. 為 SACHIEL SHIPHOLDING S.A 所建造。



EVER LOGIC

一艘 98,882 噸的貨櫃船，由 SAMSUNG HEAVY INDUSTRIES CO., LTD. 在 GEORGE SHIPYARD 為 EVERGREEN MARINE CORP. (TAIWAN) LTD. 所建造。

船舶檢驗與國際公約檢驗

船舶檢驗

過去一年，本協會在世界各地執行了 15,092 件檢驗，其中 859 件為入級檢驗，另外 14,233 件為船級維持檢驗。

國際公約檢驗

目前全世界共有 110 個船旗國授權 ClassNK 為其進行檢驗，並根據國際公約與規範發證，兼顧國家維持船隻安全的要求。以及海洋污染的防範等。在 2013 年，本協會執行檢驗並根據下列授權發出超過 36,000 國際公約證書：

- 國際船舶噸位認證證書：928
- 國際載重線認證證書：2,888

- 國際海上人命安全公約相關認證證書：18,882
- 防止船舶污染國際公約相關認證證書：12,551
- 防污系統認證證書：1,347

因應即將生效的法規提供新服務

過去數年，國際海事組織 (IMO) 已採行許多新公約，以解決海運產業面臨的環境議題，包括《壓艙水管理公約》(Ballast Water Management Convention) 及《船舶資源回收公約》(Ship Recycling Convention)，因此本協會提供廣泛的認證服務，協助船

主達到新公約的要求。在 2013 年，ClassNK 發書許多符合新公約的證書或聲明，包括：

- 壓艙水管理系統認證證書：147
- 船舶資源回收設施認證證書：3
- 有害物資目錄：100
- 船舶能源效率設計指數 (EEDI) 認證證書：42
- 船舶能源效率管理計劃 (SEEMP) 認證證書：684

製造與服務廠家認可

除了船舶檢驗及國際公約檢驗外，本協會也提供相關的廠家審查與認證，包括年度船舶檢驗與設備維修所需的



檢測服務與量測維修服務的廠家認證。下列為 2013 年獲得本協會的認可，可提供服務的廠家數：

1. 船舶水下檢驗：28
2. 船舶板厚量測：23
3. 無線電檢驗服務：21
4. 火警系統與器材維護：28
5. 救生器材與設備維護：17
6. BLACH: 35
7. 航行資料紀錄器：20
8. 艙口密封測試：1



MORNING CALYPSO

一艘 59,432 噸的汽車船，由 IMABARI SHIPBUILDING CO., LTD. 在 MARUGAME HEADQUARTERS 為 HIRAI LINE CO., LTD. 所建造。

如同前幾年一般，本協會持續與遭扣船的管理公司及船東合作，協助他們改善船隻條件，並提升其安全意識。為了達到此目的，本協

港口國管制 (PSC)

會的檢驗部門出版了港口國管制年度報告 (2013 年 8 月)，內容為前年度港口國管制的相關統計資料匯集與分析，此報告分送給船東、管理公司及其他相關單位。此外，本協會高階成員在本年度拜訪全世界的重要海事主管機構，包括澳洲海事安全局 (AMSA) 及中國海事局。ClassNK 也派遣代表出席分別在日本高松和中國山東舉辦的韓國與日本及中國與日本雙邊會議，檢視相關議題並提出報告，內容為本協會如何努力降低 NK 登錄船隻的扣船率。

技術服務

在 2013 年，ClassNK 根據本協會的 Condition Assessment Program (CAP) 發給 40 艘船隻合格證明。另外有 526 艘船隻的壓艙水管理系統也獲得此合格聲明。在 2013 年末，本協會合格證明的總發行數為 CAP 331 份，壓艙水管理系統 6,300 份。

近年的船隻事故率可以證明，海上的意外風險是完全無法避免的。本協會的緊急技術援助服務 (ETAS) 團隊 24 小時全年無休待命，隨時可援助登錄

此服務的船東與船員，確保船隻安全，將天災襲擊的環境影響降到最低點。在 2013 年，該團隊受命援助 4 起海難相關事故，提供技術支援。在 2013 年，登錄本協會 ETAS 服務的新增船隻為 105 艘，總登錄數為 1,170 艘。



認證服務

ISM 法規與 ISPS 法規與登錄以及 MLC 2006 相關系統之審核與登錄

除了執行ISM與ISPS法規之審查與證書核發，ClassNK在2013年也開始執行海事勞工公約 (MLC) 的審查與證書核發。在這一年裡，本協會登錄符合ISM要求的新增企業有68家，新增船隻有917艘，使本協會登錄的總企業數達677家，總船隻數達5,270艘。截至2013年底，NK為77個國家處理ISM授權審核事宜。本協會在這一年也登錄了906艘符合ISPS法規要求的船隻，使本協會符合ISPS法規的登錄船隻總數量達4,653艘。NK目前為60個國家處理ISPS授權審核事宜。此外，本協會在2013年登錄了4,534艘符合MLC要求的船隻，使本協會登錄的總船隻數達4,408艘。ClassNK目前為48個國家處理MLC檢查事宜。

品質、環境管理以及職業健康與安全管理系統

ClassNK也執行ISO 9001標準的品質管理系統認證、ISO 14001標準的環境管理系統認證，以及OHSAS 18001標準的職業健康與安全管理系統認證。在2013年，共有58個組織新登錄於ISO 9001標準，使得本協會的總登錄組織數達到440個。本協會也為符合ISO 14001標準的10個組織，以及符合OHSAS 18001標準的5個組織提供認證，使得本協會的總登錄組織數分別達到124個及12個。



新服務

除了品質管理系統、環境管理系統及職業健康與衛生管理系統外，ClassNK也提供海事教育與訓練以及溫室氣體排放的其他各種相關認證服務。在2013年，本協會在新服務活動核發的認證包括以下所列者。

- 海事教育與訓練認證：21
- 海事講師訓練課程：62
- 海員招募與就業安置服務 (MLC)：64
- 溫室氣體排放認證：1
- 道路交通安全管理系統 (ISO 39001)：2



教育與訓練服務

ClassNK 學院

本協會運用船舶檢驗與船隻管理系統等的長期專業，舉辦學術課程，在2009年設立ClassNK學院（ClassNK Academy），為造船、維修及運輸產業的從業者提供必要的基礎知識。在2013年裡，本協會在全世界總共18個國家舉辦ClassNK學院課程，參與人數超過4,500人。在這一年提供的課程包括：

新造船相關課程

- 船級協會與國際公約議題課程
- 新造船課程（船體）
- 新造船課程（機輪與電子設備）
- 材料與焊接課程

現成船相關課程

- 損壞（船體）課程
- 損壞（機輪與電子設備）課程
- 安全設備課程
- 港口國管制（PSC）課程

船隻管理相關課程

- 事故調查與分析課程以及風險管理課程
- ISM內部審核課程



INDIGO HOPE

一艘132,587噸的礦砂船，由NAMURA SHIPBUILDING CO., LTD.在IMARI WORKS為ITOCHU CORPORATION所建造。



AQUAFARM S.A.

一艘1,269噸的駁船，由Astillero Tsuneishi Paraguay S.A.為AQUAFARM S.A.所建造。



EXECUTIVE VALOUR

一艘3,383噸的補給船，由COLOMBO DOCKYARD PLC為Executive Offshore所建造。



GREAT CRANE

一艘749噸的避青船，由SASAKI SHIPBUILDING CO., LTD.為SENKO CO., LTD.所建造。



PACIFIC MARU

一艘106,368噸的散裝船，由JAPAN MARINE UNITED CORPORATION在TSU SHIPYARD所建造。



BRIGHT WIND

一艘43,013噸的散裝船，由TSUNEISHI SHIPBUILDING CO., LTD.在TADOTSU FACTORY為ACACIA LINE S.A.所建造。



SHINSEI MARU

一艘1,242噸的海洋調查船，由MITSUBISHI HEAVY INDUSTRIES, LTD.在SHIMONOSEKI SHIPYARD及MACHINERY WORKS為JAMSTEC所建造。



KWAJALEIN

一艘583噸的客貨船，由KEGOYADOCK CO., LTD.為Marshall Islands Shipping Corporation (MISC)所建造。



SUNNY VISTA

一艘47,914噸的液化石油氣船，由ITSUBISHI HEAVY INDUSTRIES, LTD.在NAGASAKI SHIPYARD及MACHINERY WORKS為JX SHIPPING CO., LTD.所建造。



DERYOUNG SUNBRIGHT

一艘8,818噸的雜貨船，由HIGAKI SHIPBUILDING CO., LTD.為DERYOUNG MARITIME (H.K.) CO., LTD.所建造。

訓練

ClassNK積極舉辦與參加許多不同的訓練活動，目的在於培養內部人員的能力，並與外部組織合作。這些訓練計劃範圍廣泛，從驗船師的訓練到實習、演說，以及為了滿足政府機關和海運業的需求而設計的其他合作訓練計劃。以下概述ClassNK在2013年舉辦的部分較著名的訓練計劃。

驗船師受訓

為了提供客戶前所未有的服務品質，本協會致力於維持並改善驗船師的素質。因此，ClassNK在本年度末來自世界各地的66位驗船師舉行一系列的驗船師訓練計劃。除了日本總部所提供的訓練外，有48位驗船師也分別接受了本協會在日本或海外地方辦事處所舉辦的其他檢驗訓練，以及在ヤンマ一株式会社 (Yanmar Co. Ltd.) 尼崎廠T.T.學院進行的航海引擎實際訓練。

海事勞工檢查員訓練

ClassNK在日本訓練中心為19位驗船師舉辦海事勞工檢查訓練，並在協會的許多海外服務據點為40位驗船師提

供此訓練，包括上海、新加坡、熱那亞、倫敦、紐約和韋拉克魯斯。

實習

因應來自許多大學的要求，ClassNK提供了27個實習機會給來自日本、中國、印度和印尼的學生。

東日本訓練中心的造船技能演說

因應東日本訓練中心對造船技能的要求，本協會為造船領域的新技術人員提供焊接缺陷特性的相關演說。

因島技術中心的演說

因應因島技術中心的要求，本協會提供中心成員「船隻損害案例研究與心得」相關演說。

日本國土交通省的演說

在2013年，ClassNK因應日本國土交通省 (MLIT) 的要求，舉辦一系列的演說，包括在國土交通省ISPS法規研

討會上的「船級協會船隻安全風險評估之原則」演說。

與日本國際船員勞務協會以及全日本海員工會合作

因應日本國際船員勞務協會 (International Mariners Management Association of Japan) 及全日本海員工會 (All Japan Seamen's Union) 的要求，ClassNK在日本海洋科學公司 (Japan Marine Science Inc.) 一場為年輕的技術船東代表舉辦的訓練課程中，為相關組織提供了有關船級協會、海事公約、入級檢驗及國際公約檢驗等演說。

與日本國際協力機構合作

因應日本國際協力機構 (Japan International Cooperation Agency, JICA) 的要求，本協會在日本造船技術中心 (Ship Research Centre of Japan) 為各國海事公務員舉辦的「國際海事公約與船隻安全檢查團體訓練課程」中，



DEVON BAY

一艘31,756噸的散裝船，由MITSUI ENGINEERING & SHIPBUILDING CO., LTD.在TAMANO WORKS為“K” LINE BULK SHIPPING (UK) LIMITED所建造。



ORIENT BECRUX

一艘21,163噸的散裝/木材船，由SHIN KOCHIYUKO CO., LTD.為OMC SHIPPING PTE LTD所建造。



BUENA FORTUNA

一艘2,999噸的液化石油氣 (高壓) 船，由SHITANOE SHIPBUILDING CO., LTD.為TABUCHI MARINE PTE. LTD.所建造。

也提供國際海上人命安全公約、防止船舶污染國際公約及新造船檢驗的相關演說。

ClassNK 技術研討會

提供客戶最新最即時的資訊，是本協會最重要的任務之一。因此，ClassNK 舉辦各種技術研討會，為航運和造船產業提供最新的技術資訊。以下是 ClassNK 在 2013 年技術研討會上所做的部分報告：

- 投資未來 - 為航海產業創造更綠化、更智慧型的技術
- 降低氮氧化物 (NOx) 技術
- 力行國際海事組織的海上噪音管制
- 壓艙水管理公約 - 最新資訊
- IMO -MEPC65&MSC92 的近期主題

PrimeManagement 研討會

自 2011 年起，ClassNK 即為管理系統認證 (ISO 等)、訓練課程認證及 ISM 法規認證等提供整合的 PrimeManagement 系統。2013 年，本協會在保加利亞和烏克蘭舉行 PrimeManagement 研討會，吸引了 100 位參與者。



NAVE AQUILA
一艘 30,052 噸的油輪/化學品船，由 DAE SUN SHIPBUILDING & ENGINEERING CO., LTD. 為 NAVIOS MARITIME ACQUISITION CORPORATION 所建造。



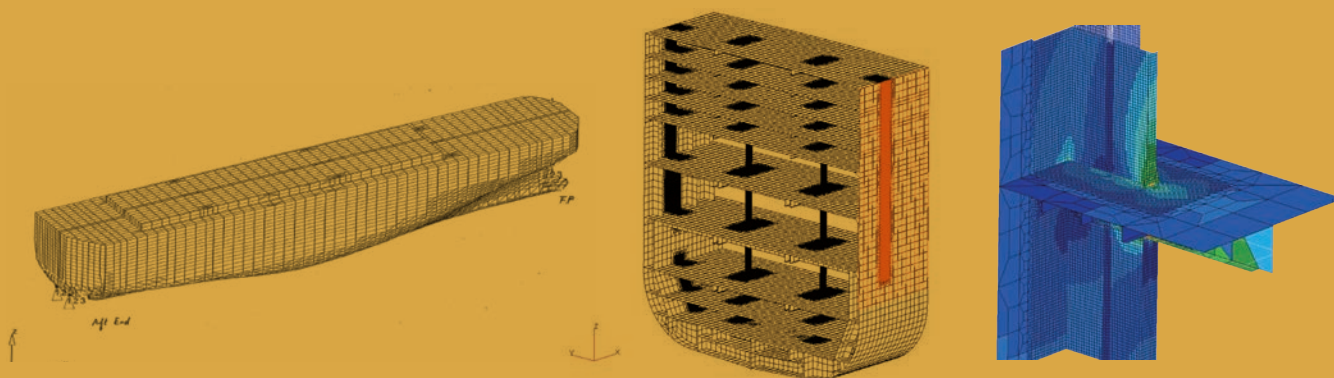
SIMURGH
一艘 31,864 噸的散裝船，由 OSHIMA SHIPBUILDING CO., LTD. 為 IRVINGTON NAVIGATION, INC. 所建造。



DAIEI MARU NO. 1
一艘 3,498 噸的油輪，由 Kurinoura Dockyard Co., Ltd. 為 DAIEI KISEN K.K. 所建造。

研發概觀

ClassNK正在進行船級協會各種相關議題的研究，目標是要確保海上生命財產的安全，並防範海洋環境污染。ClassNK也積極參與聯合研究活動，以因應產業的廣泛需求。



船舶檢驗相關研究發展

ClassNK 根據年度研究發展計劃，對於船級協會面臨的種種問題進行研發，目標是制定指導方針，並拓展協會的技術服務。以下是 2013 年執行的研究之主要細節與結果。

發展專業汽車船（PCC）結構指導方針

專業汽車船對於汽車的裝載/卸載有特殊要求（例如駛進與駛出），因此有一些獨特的結構特徵，包括多層汽車甲板，及橫向艙壁的數目有限。

為因應巴拿馬運河的擴張，新的超巴拿馬極限型專業汽車船目前正在設計，且許多新設計運用了更複雜的無艙壁船體結構，以期提升裝載效率。

面對這些改變，ClassNK正在制定新的專業汽車船指導方針，為船舶設計師和造船廠提供同時可適用於現成專業汽車船及新設計的合理指導方針。



在這項研究中，ClassNK執行了調查研究，評估專業汽車船獨有的剝離強度問題。我們已針對各種大小的專業汽車船進行耐海性及海浪負載的計算與分析，並確立主導剝離強度的海象。根據這項調查，簡化的

公式草案已提出，載明了評估剝離強度的設計負載，這乃是以2003年制定並於2011年修訂的ClassNK貨櫃船結構指導方針（直接強度分析）為基礎。

ClassNK目前正在根據這項研究，透過海浪負載與結構反應的整合分析，證實這些指導方針的有效性，並調整指導方針的結構標準，期望在2014年正式發表。

滿足產業要求的聯合研究

ClassNK自2009年開始制定了一項新的聯合研究計劃，提供技術與資金協助，促進與各種外部機構聯合進行的許多研究專案。截至2013年底，總共有144個專案已完成，另外有105個專案仍在進行中。2013年也見到日本完成第一個降低船舶溫室氣體排放的國家計劃，而ClassNK自2009年便支持這項計劃，做為其聯合研究行動的一部分。

日本降低海洋溫室氣體排放國家計劃

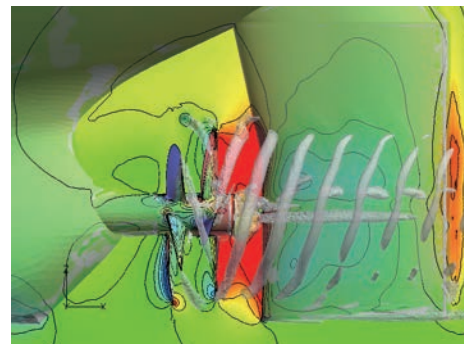
日本國土交通省在2009年推行了一項為時四年的國家計劃，支持降低船舶溫室氣體(GHG)排放的新技術發展。在ClassNK、日本財團及日本造船研究中心的支持下，這項計劃吸引超過40家海事相關企業及組織，在下述的六個關鍵技術領域共同執行22項聯合研究計劃。

發展低阻力、高推進效率的船體線型

- 發展最小壓艙水船
- 發展適合對轉螺旋槳的理想船體線型
- 為貨櫃船發展在海浪中的理想船頭設計
- 發展高效率的貨櫃船(包括船體形狀+廢熱回收系統)

發展降低船體摩擦阻力的技術

- 發展微泡沫潤滑(空氣潤滑)系統
- 將空氣潤滑系統實際應用於吃水淺的雙螺旋槳船
- 發展阻力極低的船體塗裝層



改善螺旋槳效率

- 發展無載渦輪螺旋
- 發展螺旋槳附件，改善推力效率。
- 發展使用軸帶發電機及變距螺旋槳的負載波動穩定器。

改善柴油引擎及廢熱回收的效率

- 發展大型低速柴油引擎燃燒最佳化的技術
- 發展小型柴油引擎的高效率廢熱回收系統
- 發展小型雙燃料柴油引擎
- 發展適合海洋使用的混合式渦輪增壓器

改善操作及操舵效率

- 發展理想的氣象導航系統、預留系統
- 發展港口擁塞管理及船席預訂系統
- 發展式和大型汽車船的高效率操控系統
- 發展理想的航線管理系統
- 發展詳細的資料管理與分析系統，改善船舶的運作。

發展混合式推進系統

- 發展Gigacell（高容量鎳氫電池）/光電池混合式動力系統
- 發展下一代的風帆輔助貨船
- 發展鋰離子電池/光電池混合式動力系統

以下介紹這些專案其中幾個的結果。



空氣潤滑系統實際應用於吃水淺的雙螺旋槳船

■ 參與者

- 三菱重工業 (MHI)
- NYK Line (NYK)
- Monohakobi技術學院 (MTI)
- ClassNK

■ 概述

這項專案將在模組基板船上永久安裝空氣潤滑系統，並進行測試，以證實此系統的有效性。模組基本船底平、吃水淺，具有雙螺旋槳構造，因此被視為最能因空氣潤滑應用而受益的船舶類型。

■ 目標

降低10%溫室氣體排放

■ 結果

對受試船舶的驗證測試證實空氣潤滑發揮適當作用，在海上試驗期間讓二氧化碳排放降低10%。



發展阻力極低的船體塗裝層

■ 參與者

- Nippon Paint
- Nippon Paint Marine
- Mitsui O.S.K. Lines (MOL)
- ClassNK

■ 概述

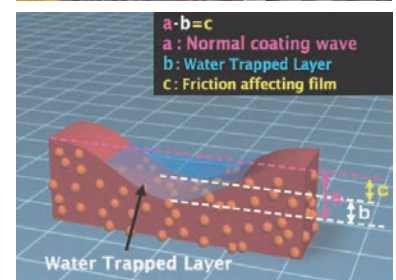
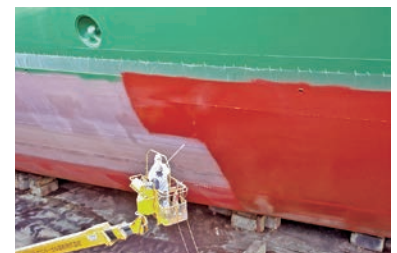
此專案進一步發展納入自磨型塗裝層 (SPC) 的降低摩擦元件，目標是要發展超高效率、超低摩擦力的船體塗裝層，並透過模型測試及實際船舶應用來證實其有效性。

■ 目標

降低10%溫室氣體排放

■ 結果

一種新的超高效率的防污塗裝層 (A-LFC) 已發展出來，並應用於實際船隻。船隻運作的分析資料證實，視船舶類型而定，溫室氣體排放可降低7-10%。



發展大型低速柴油引擎燃燒最佳化的技術

■ 參與者

- 三井造船公司
- ClassNK

■ 概述

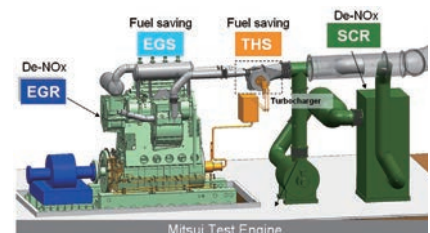
此專案的目標是將大型引擎燃料效率全面最佳化，方法是將燃料射出型態以及排放閥打開和關閉的時間最佳化，確保在各種引擎負載都能達到最理想的運作，並應用廢能回收系統。

■ 目標

降低9%溫室氣體排放

■ 結果

這項專案的結果是，新的液壓廢熱回收系統被發展出來，且結合了電子控制引擎及一種可變化的機制，能部分改善負載效能。船隻測試期間的評估證實此系統可降低10%的溫室氣體排放，超越專案最初的降低目標。



發展適合海洋使用的混合式渦輪增壓器

■ 參與者

- NYK Line (NYK)
- Monohakobi技術學院 (MTI)
- 三菱重工業公司 (MHI)
- 寰宇造船公司 (現為日本海事聯合公司)
- ClassNK

■ 概述

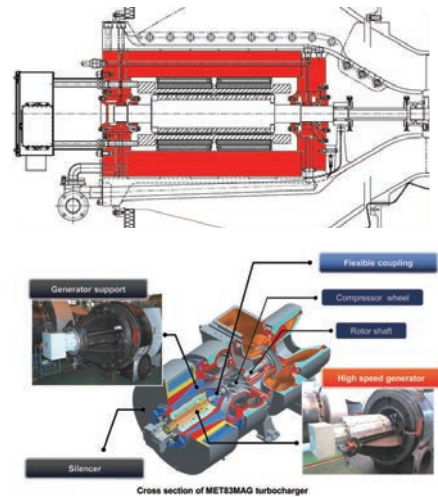
此專案的目標是發展新的混合式渦輪增壓器，其中包含高速電動發電機，可利用船舶的廢氣，並低燃料消耗。

■ 目標

降低2%溫室氣體排放

■ 結果

此專案開發的混合式渦輪增壓器安裝於實際船舶上，並在航行期間受到監測。資料分析證實，在整個航行期間（包括混合式渦輪增壓器及柴油發電機同時運轉的期間），二氧化碳排放減少1.8%。



由於這項計劃十分成功，日本國土交通省決定於2013財政年度在此基礎上推出一項新計劃，持續支

持降低溫室氣體排放技術的發展。ClassNK將持續積極參與此計劃，盡力為計劃的每個研究專案提供強力

的支持。



GRACE DAHLIA

一艘141,671噸的液化天然氣船，由Kawasaki Heavy Industries, Ltd.在Ship & Offshore Structure Company Sakaide Shipyard為NIPPON YUSEN KABUSHIKI KAISHA所建造。



RYOUMEI MARU

一艘749噸的瀝青船，由MIURA SHIPBUILDING CO., LTD.為KYOKUYU SHIPPING CO., LTD.所建造。



UNITED DIGNITY

一艘92,146噸的散裝船，由JAPAN MARINE UNITED CORPORATION在KURE SHIPYARD為XANADU MARITIME S.A.所建造。



GENUINE VENUS

一艘19,899噸的石油/化學品船，由KITANIHON SHIPBUILDING CO., LTD.為"K" LINE PTE LTD.所建造。



KAKUYU MARU

一艘3,031噸的液化天然氣船，由Kawasaki Heavy Industries, Ltd.在Ship & Offshore Structure Company Sakaide Shipyard為TSURUMI SUNMARINE CO., LTD.所建造。



HORAI SAN

一艘160,057噸的油輪，由MITSUBISHI HEAVY INDUSTRIES, LTD.在NAGASAKI SHIPYARD & MACHINERY WORKS為Mitsui O.S.K. Lines, Ltd.所建造。



HASSYOMARU No.5

一艘3,668噸的油輪，由USUKI SHIPYARD CO., LTD.為NISHIYAMA KISEN Y.K.所建造。

國際活動



國際海事組織 (IMO)

ClassNK 投入許多國際活動，為國際海事組織 (IMO) 的廣泛技術議題付出努力。本協會在 2013 年參加國際海事組織的會議列表如右，以日本政府代表或者國際船級協會代表的身分與會。此外，本協會持續派遺成員長期任職國際海事組織秘書處。

海事安全委員會 (MSC) 及海洋環境保護委員會 (MEPC) 等國際海事組織主要會議的公約修訂相關決議資訊，已定期透過電子郵件提供給 ClassNK 的相關團體，也上載到 ClassNK 網站上的 IMO 國際公約行事曆。

IMO 消防小組委員會第五十六次集會	1 月
散裝、液態及瓦斯船小組委員會第十七次集會	2 月
IMO 穩度與載重線及漁船安全小組委員會第五十五次集會	2 月
船旗國履約小組委員會第二十一次集會	3 月
船隻設計與設備小組委員會第五十七次集會	3 月
訓練與值班標準小組委員會第四十四次集會	4 月
IMO 環境保護委員會第六十五次集會	5 月
海事安全委員會第九十二次集會	6 月
裝運危險物品、固體貨物與貨櫃小組委員會第十八次集會	9 月



國際船級協會 (IACS)

ClassNK 積極參與國際船級協會 (IACS) 的活動，包括在 2010-11 年擔任協會主席，以及在 2011-2012 年擔任副主席。國際船級協會設有船體、機輪、檢驗及公約四個小組會議，ClassNK 的人員在 2013 年擔任檢驗小組會議的主席，同時也是國際海事組織目標基礎標準 (GBS) 專業團體的主席。

ClassNK 也致力於提升調和共通構造規則 (Common Structural Rules)，並透過國際船級協會政務會議管理的諮詢團隊以及船體會議小組及其下轄的十個專案團隊，來檢討產業的意見。

ClassNK 在 2013 年參與的國際船級協會會議列舉如右。

政務會議	2 次
整體政策團體集會	2 次
品質委員會會議	2 次
諮詢小團體集會 (CSR、品質政策 (6 個團體))	6 次
專家團體會議 (GBS、EU、環境等 (8 個團體))	12 次
技術小組集會 (船體、機輪、檢驗、公約)	9 次
專案團隊集會 (14 個團隊)	23 次
國際船級協會 / 產業聯合作團體集會 (EEDI、規範發展的結構性方法)	4 次
指導委員會會議 (國際船級協會的策略)	2 次
調和共通構造規則與 GBS 研討會	4 次
產業高層集會	2 次
調和共通構造規則產業簡報	5 次

亞洲聯合船級協會(ACS)活動

亞洲聯合船級協會(ACS)繼會員將近二十年的非正式集會後，於2010年成立正式的組織。除了積極參與執行委員會的規劃及技術管理活動，ClassNK也領導目標基礎標準(GBS)團隊及船隻回收工作小組。

ClassNK也促成亞洲聯合船級協會獨立技術研討會(7月)，積極參與亞洲船主論壇航行安全與環保委員會(ASF/SNEC)，並擔任亞洲船級協會的協調單位。ClassNK也在11月舉行的亞洲造船專家論壇(ASEF)上出任協會代表。ClassNK在2013年參與的會議列舉如右



執行委員會	1次
技術管理團體會議	2次
技術研討會	1次
船隻回收研討會	1次
工作團體集會(4個團體，包括GBS及船隻回收)	4次
業界集會(包括技術研討會、亞洲造船專家論壇會議)	3次



國際委員會

委員會名稱	日期	地點
第 19 屆印度委員會	2/15	柯枝
第 11 屆菲律賓委員會	2/26	宿霧
第 19 屆中國委員會	2/28	桂林
第 6 屆中東技術委員會	3/7	杜拜
第 4 屆北美委員會	3/15	紐約
第 22 屆希臘委員會	4/17	雅典
第 11 屆英國委員會	5/9	倫敦
第 11 屆香港技術委員會	5/16	香港
第 13 屆台灣技術委員會	5/28	台北
第 10 屆土耳其委員會	5/29	伊斯坦堡
第 18 屆中國技術委員會	5/30	洛陽
第 24 屆韓國委員會	6/14	首爾
第 9 屆馬來西亞委員會	7/5	吉隆坡
第 10 屆新加坡委員會	7/24	新加坡
第 4 屆拉丁美洲委員會	8/7	亞松森
第 20 屆中國委員會	8/26	唐山
第 17 屆新加坡技術委員會	9/11	新加坡
第 23 屆丹麥技術委員會	9/27	哥本哈根
第 14 屆台灣委員會	10/1	台北
第 39 屆香港委員會	10/9	香港
第 11 屆泰國委員會	11/1	普吉府
第 5 屆希臘技術委員會	11/12	雅典
第 20 屆韓國技術委員會	11/20	釜山
第 3 屆印度技術委員會	11/21	孟買
第 1 屆巴西技術委員會	11/26	里約熱內盧
第 1 屆智利技術委員會	11/28	瓦爾帕萊索
第 11 屆印尼委員會	12/6	巨港



	TM	LL	SOLAS					MARPOL 73/78			
			SC	SE	SR	ISM	ISPS	I	II	IV	VI
馬德拉	●	●	●	●	●	●	●	●	●	●	●
馬來西亞	●	●	●	●	●	●	●	●	●	●	●
馬爾地夫	●	●	●	●	●	●		●			
馬爾他	★	★	★	★	★	★	★	★	★	★	★
馬紹爾群島	●	●	●	●	●	●	●	●	●	●	●
模里西斯	●	●	●	●	●	●	●	●	●	●	●
墨西哥	★	★	★	★	★	●		★			
摩洛哥	★	●	★	★	★	★		★	★		
莫三比克		●						●	●	●	
緬甸	●	●	●	●	●	●	●	●	●	●	●
納米比亞	●	●	●	●	●			●	●	●	
荷蘭	●	●	★	★	★	●	●	●	●	●	●
挪威	●	●	●	●	●	●	●	●	●	●	●
阿曼	●	●	●	●	●						
巴基斯坦	●	●	●	★	★	★	★	●	●	●	●
帛琉	●	●	●	●	●	●	●	●	●	●	●
巴拿馬	●	●	●	●	●	●	★	●	●	●	●
巴布亞新幾內亞	●	●	●	●	●			●			●
巴拉圭	★	★	★	★	★	★					
菲律賓	●	●	●	●	★	●	●	●	●		●
葡萄牙		★	★						★		
卡達	●	●	●	●	●	●	●	●	●	●	●
羅馬尼亞	●	●	●	●	●	★		●	●	●	●
沙烏地阿拉伯	●	●	●	●	●	●	●	●	●	●	●
塞爾維亞	●	●	●	●	●	●	●	●	●	●	●
塞席爾	●	●	●	●	●	●	●	●	●	●	●
新加坡	●	●	●	●	●	●	●	●	●	●	●
所羅門群島	●	●	●	●	●						
南非		●	●					★	●		
斯里蘭卡	●	●	●	●	●			●			
聖克萊斯多福與尼維斯	●	●	●	●	●	●	●	●	●	●	●
聖文森及格瑞那丁	●	●	●	●	●	★	★	●	●	●	●
瑞士	●	●	●	●	●	●		●	●	●	●
坦尚尼亞		●									
泰國	★	★	★	★	★	★		★			
東加	●	●	●	●	●			●	●		
突尼西亞		●	★					●			
土耳其	★	●	★	★	★	●	●	●	●	●	●
吐瓦魯	●	●	●	●	●	●	●	●	●	●	●
阿拉伯聯合大公國	●	●	●	●	●	●	●	●	●	●	●
烏甘達		●									
英國 (ACS)	●	●	●	●	●	★	★	●	●	●	●
烏拉圭		★	★	★	★						
美國	●	●	●	●		●		●	●		●
萬那杜	●	●	●	●	●	●	●	●	●	●	●
委內瑞拉		★									
越南	★	★	★	★	★	★		★	★		
葉門		●									

備註 1：效力始於 2014 年 1 月

縮寫：

- -- 已委任授權
- ★ -- 有條件之委任授權

TM：國際噸位認證 (1969)
 LL：國際載重線認證
 SC：貨物安全結構認證
 SE：貨物安全設備認證
 SR：貨物安全無線電認證
 ISM：國際安全管理規範
 ISPS：國際船舶與港口設施章程
 I, II, IV, VI：防止船舶污染國際公約副則 I, II, IV, VI

組織

ClassNK in Committee

ADVISORY COUNCIL

Member	Chang Yung-fa Frank W. K. Tsao Sumate Tanthuwaniit	Group Chairman Group Chairman President	Evergreen Group IMC Group of Companies Regional Container Lines Group
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BRITISH COMMITTEE

Chairman	J. G. Davis CBE	Chairman	IMIF (International Maritime Industries Forum)
Member	F. M. Marchant MBE Douglas W. Lang Chris Bailey Sunil Malhotra Michael G. Parker Epaminondas G. E. Embiricos Philip D Atkinson Alastair Fischbacher Adri R. Postema Michael K. Drayton John Kerr	Managing Director Technical Vice President Chief Operating Officer Chairman Chairman Technical Director General Manager General Manager Former Chairman Operations Director	Anglo-Eastern (UK) Ltd. BP Shipping Limited British Marine Plc CMA CGM (UK) Holdings Limited Embiricos Shipbrokers Ltd. Graig Ship Management Limited Rio Tinto Shipping Limited Shipping Technology & Innovation Shell International Trading and Shipping Company Ltd The Baltic Exchange V. Ships UK Limited

BRAZIL TECHNICAL COMMITTEE

Chairman	Paulo Roberto Neves Bezerra	Maritime Projects Manager	Department of Shipping & Distribution Vale S.A
Member	Rosalvo S. Sales Jr. Frank Dambrin Comte. Joaquim Fernando da Silva Michel P. Andrade Hiroshi Nishioka Takuya Fujita Soichiro Inoue Paulo Duprat Eduardo Cardoso Ribeiro Luiz Fernando Reis Junqueira Cesar Augusto de A. Lima Ricardo B. Portella Bertoldo Gancz Regina Maria Ozorio da Cruz Toshihiko Tsutsumi Nilton Gonçalves Atul Sethi	Director Managing Director Marine General Manager Engineering Manager Production Director Senior Staff Officer Vice-President Director Contract Manager Clearance & Vetting Manager Section Manager – C&A Shipbuilding Naval Architect and Marine Engineer Deputy Director Director Executive Manager of Engineering President General Technical Manager - PROMEF Country Manager	Business Development & Strategic Planning Amec KROMAV Bourbon Offshore Marítima Elcano, S.A. Estaleiro Atlântico Sul IHI do Brasil Representações Ltda. Project Division Kawasaki Heavy Industries, Ltd. Mitsubishi Indústrias Pesadas do Brasil Ltda. OSX PETROBRAS PETROBRAS ENG-AB LNG Shipping PETROBRAS GAS & Energy Basic Design Division Projemar Rio Nave Serviços Navais Ltda. Construction and Assembly SETE Brasil SIGMAX TRANSPETRO UP OFFSHORE

CHILE TECHNICAL COMMITTEE

Chairman	Angel Canessa T.	Vice President Planning and Operations Shipmanagement	Compañía SudAmericana de Vapores S.A.
Member	Andres Fonzo Rosauero Segovia Gonzalo Araya Gajardo Carlos Valenzuela Sotomayor Francisco Lopez Luis Bauerle Hugo Barra Pablo Gomez Ramon Gatica Cristian Rojas Mogens Mellerup Carlos Bastías Nercelles	Director Technical Manager Chief of Maritime Inspections Services Vice President Shipmanagement Superintendent Logistics and Procurement Manager Fleet Manager General Manager Shipmanagement and Commercial Manager Fleet Manager Tugs Manager Senior General Manager Marine Manager	ASMAR Chile National Shipowners' Association DIRECTEMAR Empremar S.A. Humboldt Shipmanagement Naviera Chilena del Pacífico S.A. SOCIBER Sociedad Nacional Marítima S.A. Southern Shipmanagement (Chile) Ltda. Sudamericana Agencias Aereas y Marítimas S.A. Head of Handysize Operations Ultrabulk Ultratug

CHINA COMMITTEE

Chairman	Sun Jiakang	Executive Vice President	China Ocean Shipping (Group) Company (COSCO)
	Li Tian Bao	Board Chairman	Bohai Shipbuilding Heavy Industry Co., Ltd.
Member	Wang Yongliang	President	Chengxi Shipyard Co., Ltd.
	Gao Yongjun	Manager	Fleet Planning Dept. Strategic Planning Div. China Ocean Shipping (Group) Company (COSCO) China Ship Design & Research Center Co., Ltd. Party Secretary Secretary of Discipline Inspection Commission China Ship News China Shipbuilding Industry Corporation China Shipbuilding Trading Co., Ltd. Technical Dept. of Enterprises Management Div. China Shipping (Group) Company China Shipping Development Company Limited Ship & Ocean Engineering Dept. China State Shipbuilding Corporation COSCO Container Lines Co., Ltd. Dalian Shipbuilding Industry Co., Ltd. Fortune Ocean Shipping Limited Hebei Ocean Shipping Co., Ltd. Hudong-Zhonghua Shipbuilding (Group) Co., Ltd. Jiangnan Shipyard (Group) Co., Ltd. Jiangsu Ocean Shipping Company Ltd. Nantong COSCO KHI Ship Engineering Co., Ltd. Pacific King International Shipping Management Co., Ltd., Shanghai Penglai Zhongbai Jinglu Ship Industry Co., Ltd. Director of Science & Technology Dept. Shanghai Waigaoqiao Shipbuilding Co., Ltd. Sinotrans Shipping Limited
	Zhao Zhanjun	President	
	Li Zhong	President	
	Xu Ziqiu	Assistant President	
	Tao Jian	Vice President	
	Lu Yi Bin	Deputy Manager	
	Yan Zhi Chong	Managing Director	
	Xu Xing	Deputy Director	
	Hou Liping	Deputy Managing Director	
	Li Cheng	Vice President	
	Sun Xing Tao	President	
	Liu Shi Bao	Vice President	
	Wang Yong	President	
	Zhang Haisen	Vice President	
	Yang Jian Ming	Managing Director	
	Han Cheng Min	President	
	Huang Zi Qiang	President	
	Wang Hong	Chairman	
	Liu Jianfeng	Assistant President	
	Tian Zhong Shan	Executive Director General Manager	

CHINA TECHNICAL COMMITTEE

Chairman	Zhao Zhanjun	President	China Ship Design & Research Center Co., Ltd.
	Zhan Shuming	Chief Engineer	COSCO Shipyard Group Co., Ltd.
Member	Li Guang Min	Chief Engineer	Bohai Shipbuilding Heavy Industry Co., Ltd.
	Feng Guo Ying	Vice President	
	Chen Zhengjie	Vice General Manager	China Business Marine Co., Ltd. (SINOMARINE)
	Zhang Lelong	Vice President	China Marine Bunker (PetroChina) Co., Ltd.
	Chen Jian	Manager	Fleet Planning Department, Strategic Planning Division China Ocean Shipping (Group) Company China Shipping Development Co., Ltd. Tanker Company China Shipping International Trading Co., Ltd. COSCO Bulk Carrier Co., Ltd.
	Chen Yan	Deputy Managing Director	
	Wang Guorong	General Manager	
	Cai Deqing	Managing Director	
	Hong Ying	Senior Chief Engineer	Safety & Technology Management Division COSCO Container Lines Co., Ltd. Ship Management Dept. COSCO Shipping Co., Ltd.
	Gao Cheng Gang	General Manager	Dalian Master Well Ship Management Co., Ltd.
	Zhao Jin Wen	General Manager	Safety & Technical Division Dalian Ocean Shipping Company Dalian Shipbuilding Industry Co., Ltd.
	Yang Wei Zan	Senior Chief Engineer	
	Chen Yu	Deputy Technical Director	
	Zhang Minghua	Senior Engineer	Dalian Tiger Shipping Ltd. Evergreen Industries Holding Group
	Zhou Zhi Hao	Managing Director	
	Lou Dan Ping	Vice President, Senior Engineer	
	Hu Keyi	CMAC Arbitrator	
	Chen Xing	Senior Engineer	Guangzhou Shipyard International Co., Ltd. Hudong-Zhonghua Shipbuilding (Group) Co., Ltd. Technology & Market Development Jiangnan Shipyard (Group) Co., Ltd. TDCC Office Jiangsu Hantong Ship Heavy Industry Co., Ltd. Jiangsu Ocean Shipping Co., Ltd. Jinhai Heavy Industry Co., Ltd. Merchant Ship Department Marine Design & Research Institute of China Senior General Manager of Central Technical Div. Nantong COSCO KHI Ship Engineering Co., Ltd. New Century Shipbuilding Co., Ltd.
	Peter Chen	Deputy Chief Technical Officer	
	Sun Zhenglin	Technical Director	
	Jin Qiang	Deputy Technical Director	
	Goro Nishiyama	Deputy Director	
	Qian Huaqing	Vice President	
		Deputy general manager	
		Senior Engineer	

Member	Li Yanjie	General Engineer	Qingdao Beihai Shipbuilding Heavy Industry Co., Ltd
	Wang RongLiang	General Manager	Qingdao Fushun Ship Management Co., Ltd.
	Guan Qinghui	Deputy Managing Director	Qingdao Ocean Shipping Co., Ltd.
	Ren Jian	Technology Director	Qingshan Shipyard of SINOTRANS & CSC SBICO
		Senior Engineer	
	Mu Shi Jia	V. G. Manager	Sea Carrier Shipping Co., Ltd
	Wang Lin	Vice President	Shanghai Merchant Ship Design & Research Institute
		Professor	
	Qiu Xin Yao	General Manager	Shanghai Ocean Shipping Company LTD.
	Jin Yun Long	Technical Chief	Dept. of System Transportation Technology Shanghai Ship & Shipping Research Institute, Ministry of Communications Shanghai Shipyard Co., Ltd.
	Ye Jinwen	Technical Director	Shanghai Waigaoqiao Shipbuilding Co., Ltd.
	Tao Ying	Chief Engineer	
		Senior Engineer	
	Gao Fu Quan	Managing Director	Shanhaiguan New Shipbuilding Industry Co., Ltd
	Senior Engineer		
Yang Shiming	Technical Director	Sinopacific Shipbuilding Group Co., Ltd.	
Xiao Sen Yuan	President	SITC Ship Management Co., Ltd.	
Gao Yunqiang	Deputy General Manager	Tianjin Xingang Shipbuilding Heavy Industry Co., Ltd.	
Deng Wenpeng	Vice General Manager/Chief Engineer	Winning International Ships Management Co., Ltd.	
	Certified Safety Engineer		
Yan Jun	Vice Chief Engineer	General Manager of Offshore Wuchang Shipbuilding Industry Co., Ltd.	
		Zhongchang Marine Company Ltd.	
Cao Zhi Teng	General Manager		

DANISH TECHNICAL COMMITTEE

Chairman	Jørgen Juncher Jensen	Professor, Head of Section Fluid Mechanics, Coastal and Maritime Engineering	DTU Mechanical Engineering Department of Mechanical Engineering Technical University of Denmark
Member	Niels Bjørn L. Mortensen	Director Regulatory Affairs	A. P. Møller-Maersk A/S
	Claus Usen Jensen	Executive Vice President Technical Division	A/S Dampskibsselskabet TORM
	Lars Robert Pedersen Per Sønderstrup	Deputy Secretary General Head of Regulation, EMBA Maritime Regulation and Manning Ministry of Business & Growth	BIMCO Danish Maritime Authority
	Per Winther Christensen Lars Christiansen Peter Justesen	Director Technical Director Vice President Head of Fleet Management	Danish Shipowners' Association ID Shipping A/S Lauritzen Kosan A/S
	Erik Møller Thomas S. Knudsen	Technical Manager, Projects Senior Vice President Head of Marine Low Speed	Lauritzen Offshore Services A/S MAN Diesel & Turbo
	Kurt Rye Damkjær Svend Anthonsen	Senior Vice President Chief Technical Officer	Nordic Tankers Marine A/S Othello Shipping Company A/S

GREEK COMMITTEE

Chairman	Charalambos N. Mylonas	Chairman	Transmed Shipping Ltd.
Member	Markos A. Nomikos	Director	A. M. Nomikos Transworld Maritime Agencies S.A.
	Nicolas Hadjiannou		Alassia NewShips Management Inc.
	Tatiana V. Petalas		Carras (Hellas) S.A.
	Michael D. Chandris	Chairman	Chandris (Hellas) Inc.
	Andreas N. Hadjiyiannis		Cyprus Maritime Co., Ltd.
	Semiramis Paliou	Head of Technical Operations & Crew (Mechanical Engineer & Naval Architect)	Diana Shipping Services S.A.
		President	
	Dimitrios S. Tsolakis		DST Shipping Inc.
	Philippos A. Efstathiou		Efnav Company Ltd.
	Anna G. Dracopoulos	Director	Empros Lines Shipping Co. SP. S.A.
	Ghikas J. Goumas	Director	Equinox Maritime Ltd.
	Kriton Lendoudis	Managing Director	Evalend Shipping Co. S.A.
	Nicolas A. Frangistas	Chief Executive Officer	Franco Compania Naviera S.A.
	George Fidakis	Chairman	Globus Maritime Ltd.
	Michael E. Veniamis	Director	Golden Union Shipping Co. S.A.
	N. D. Leventakis	Managing Director	Grecomar Shipping Agency Ltd
	Panagiotis Christodoulatos	Managing Director	Ikaros Shipping & Brokerage Co., Ltd.
	Dimitri-Frank Saracakis	Group CEO	Ionic Shipping Group
	Valentios Valentis	Managing Director	Konkar Shipping Agencies S.A.
	Constantinos D. Krontiras	Director	Kristen Marine S.A.
	Dimitris Z. Kritsas	President	Kritsas Shipping S.A.
	Alexis Kondilis	Director	Larus S.A.
	Panagiotis C. Laskaridis	Managing Director	Laskaridis Shipping Co. Ltd.

Member	George J. Souravlas Diamantis P. Diamantides Dionysios Delaportas Theodore P. Angelopoulos Babis Ziogas Angeliki Frangou Basil E. L. Mavroleon Ted Petropoulos D. Marinos Dimitris E. Patrikios Harry N. Vafias George S. Livanos Panagiotis N. Tsakos Michael M. Scufalos I. Kehagias Ori Angel Diamandis J. Caloghiros	CEO Managing Director General Manager Managing Director Chairman of the Board and Chief Executive Officer Chairman General Manager President-Chief Executive Officer Chairman President Managing Director F.I.C.S. Managing Director Managing Director	Load Line Marine S.A. Marmaras Navigation Ltd. Meadway Shipping & Trading Inc. Metrostar Management Corp. MFS Shipmanagement Navios Maritime Holdings Inc. Niovis Shipping Co. S.A. Petrofin Ship Management Inc. Seastar Chartering Ltd. Springfield Shipping Co. Panama S.A. StealthGas Inc. Sun Enterprises Ltd. Tsakos Shipping & Trading S.A. Union Commercial Inc. White Sea Navigation S.A. XT Management Ltd. Z & G Halcoussis Co., Ltd.
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GREEK TECHNICAL COMMITTEE

Chairman	Marios Stafilopatis		Byzantine Maritime Corporation
Member	Manolis G. Koutlakis P. E. Antonelos Amir Geva Christos C. Hadjigeorgiou George Laou Haris G. Giantzikis George Kourelis Demetrios Koukoulas Eleftherios A. Belessis Michael D. Kapsorrachis Dionisios Kourouklis Antonis Giantsis George Kotsyfis George Alexandridis Dimitrios A. Alifragis Pantelis Chondros Costas Petsas Leontios Pitaoulis Leonidas S. Zogopoulos Stefanos Georgiou George H. Paschalis Dimitrios J. Fafalios Pavlos G. Perakis Dimitrios Theodoropoulos Christoforos E. Andreadis Constantinos Tourlos Anastasios Kalogiannis Dimitris Vlassopoulos Dion Theodorou Takis Koutris John A. Yiannakenas Nick Argyros Yannis Voulgaris Kostas Symeonidis John N. Ioannidis Theodoros Pavlidis Stavros Daniolos Nikolaos Balalis Costas Mitropoulos Evangelos D. Laliotis George Hatzivassiliou Paraskevas Koutsoukos Miltos Synefiats Theodosios Vareltsis	General Manager Managing Director Technical Manager Technical Manager Technical Manager General Manager Technical Management Services Tanker Division General Manager Technical Management Services Dry Division Technical Manager Technical Manager Director Marine Operations Technical Manager Deputy Technical Manager Technical Coordinator General Manager Technical Manager Technical Manager Technical Manager New Building Projects Technical Manager Technical Manager Tankers Division Mechanical Marine Engineer Technical Director Director Naval Architect and Marine Engineer (N.T.U.A.) Technical Manager Technical Department Chief Operating Officer Technical Manager Fleet Director Technical Manager Technical Department Technical Manager Managing Director Technical Department Technical Director Technical Manager Mech. Eng. NTUA MSc Marine Eng. Newcastle Technical Manager Chief Shipping Officer Technical Director Technical Manager Technical Director Technical Director Naval Architect & Marine Engineer Technical Manager Managing Director & Technical Manager Technical Director Technical Manager	A. M. Nomikos Transworld Maritime Agencies S.A. Ace Ships Management Almi Marine Management S.A. Alpha Tankers and Freighters International Ltd. Arcadia Shipmanagement Co. Ltd Cardiff Marine Inc. Cardiff Marine Inc. Carras (Hellas) S.A. Centrofin Management Inc. Chandris (Hellas) Inc. Cyprus Maritime Co. Ltd. Diana Shipping Services S.A. Dynacom Tankers Management Ltd. E. Nomikos Corp. Efnav Company Ltd. Empros Lines Equinox Maritime Ltd. Eurobulk Ltd. European Navigation Inc. Evalend Shipping Co. S.A. Fafalios Shipping S.A. Fairsky Shipping and Trading S.A. Franco Compania Naviera S.A. Golden Union Shipping Co. S.A. Grecomar Shipping Agency Ltd Iolcos Hellenic Maritime Enterprises Co. Ltd. Ionic Shipping Group Konkar Shipping Agencies S.A. Kristen Marine S.A. Kritsas Shipping S.A. Laskaridis Shipping Co. Ltd. Load Line Marine S.A. Lydia Mar Shipping Co. S.A. Maryville Maritime Inc. Metrostar Management Corp. Minerva Marine Inc. Navios Shipmanagement Inc. NEDA MARITIME AGENCY Co Ltd Niovis Shipping Co. S.A. Oceanbulk Maritime S.A. Paradise Navigation S.A. Pleiades Shipping Agents S.A. Quintana Ship Management Ltd.

Member	Elias A. Galanopoulos Dimitris Andreadakis Michael Anagnostou Achilleas Avlonitis Dimitris C. Makris Apostolos P. Gavalas Diamantis Andriotis Vassilis I. Peponis Dimitrios A. Heliotis Theo G. Baltatzis Vasileios Lampropoulos C. Dean Tseretopoulos Savvas D. Papadatos Stylianios Smyrlakis Constantinos M. Metaxas Takis Koutouras	Managing Director Technical Director Managing Director and Technical Manager Technical Manager Technical Manager Technical Manager Technical Manager Naval Architect & Marine Engineer, NTUA Director of Marine Operations Technical Director General Manager Technical Department Manager Naval Architect-Marine Engineer, MBA Mechanical Engineer Special Projects & Claims Manager Fleet Director Naval Architect - Marine Engineer Technical Manager Technical Manager	Regal Mare Inc. Remi Maritime Corp. Roswell Navigation Corp. S. Frangoulis (Ship Management) Ltd. Springfield Shipping Co. Panama S.A. Starmarine Management Inc. Stealth Maritime Corporation S.A. Sun Enterprises Ltd. Target Marine S.A. Technomar Shipping Inc. Thenamaris Ships Management Inc. Triple Tee International Ltd. Tsakos Shipping and Trading S.A. TST International S.A. Union Commercial Incorporated Z & G HALCOUSSIS Co. Ltd.
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HONG KONG COMMITTEE

Chairman	Sabrina S. M. Chao	Chairman	Wah Kwong Maritime Transport Holdings Limited
Member	Y. Q. Huang Chen Xin Chuan Robert Alexander Ho Andrew Y. Chen Arthur Bowring Frank W. K. Tsao C. H. Lee Jack Hsu Kwai Sze Hoi Jan Rindbo Lothair M. F. Lam M. T. Yung Peter Cheng Li Hua Kenneth K.W. Lo Edward S. C. Cheng Pradeep Ranjan Wellington Koo Ray McNamara	Deputy General Manager Deputy Managing Director President Chairman & Managing Director Managing Director Group Chairman Deputy General Manager Fleet Manager Managing Director Chairman & President Chief Operating Officer Vice President Director General Manager Shipping Division Managing Director Executive Director General Manager Chairman & Managing Director Chairman Chief Operating Officer Executive Director Managing Director	China Merchants Energy Shipping Co., Ltd. COSCO (H.K.) SHIPPING CO., LTD Fairmont Shipping (HK) Ltd. & Affiliates Grand Seatrade Shipping Company Ltd. Hong Kong Shipowners Association IMC Group of Companies Island Navigation Corporation International Ltd. Oak Maritime (H.K.) Inc., Ltd. Ocean Longevity Shipping and Management Co., Ltd. Pacific Basin Shipping (HK) Ltd. Parakou Shipping Ltd. Patt Manfield & Co., Ltd. Peter Cheng Naval Architect & Marine Consultant Ltd. Sinotrans Shipping Limited Teh-Hu Cargocean Management Co., Ltd. Unique Shipping (H.K.) Ltd. Univan Ship Management Limited Valles Steamship Co., Ltd. Wallem Shipmanagement Limited

HONG KONG TECHNICAL COMMITTEE

Chairman	Peter Cheng	Managing Director	Peter Cheng Naval Architect & Marine Consultant Ltd.
Member	Marcel Liedts Alok Roy Vishal Khurana Liu Yi Fan Chen Xin Chuan Kishore S. Rajvanshy Lau Pong Sze Y. H. Shum Zhang Shiwei Li Kwok Hung Vipin Sachdeva Pan Zhong Shan Kenji Yamada Haruki Aono James S. C. Tai Vijayesh Dutta Kenneth Koo Anil Arora W. L. Hung	Chief Operating Officer Fleet Manager Director & Chief Executive Deputy General Manager Senior Engineer Deputy Managing Director Managing Director Managing Director Director Deputy General Manager Managing Director Vice President Fleet Director & General Manager General Manager Ship Management Division Executive Director General Manager -cum- Technical Director Fleet Management Department Technical Manager Group Chairman & Chief Executive Officer Head of Ship Management & Projects General Manager	Anglo-Eastern Group Bernhard Schulte Shipmanagement (Hong Kong) Limited Partnership Chellaram Shipping (Hong Kong) Ltd. China Shipping (H.K.) Marine Co., Ltd. COSCO (H.K.) SHIPPING CO., LTD Fleet Management Limited Gold Bridge Shipping Ltd. Goldbeam International Limited Hong Kong Ming Wah Shipping Co., Ltd. IMC Shipping Services Co. Pte. Ltd. KC Maritime Ltd. Lihai International Shipping Limited New Asian Shipping Company, Limited Northstar Ship Management Ltd. Orient Overseas Container Line Ltd. Pacific Basin Shipping (HK) Limited Tai Chong Cheang Steamship Co. (H.K.) Ltd. Unique Shipping (H.K.) Limited Wah Kwong Ship Management (Hong Kong) Limited

INDIAN COMMITTEE

Chairman	K. M. Sheth	Executive Chairman	The Great Eastern Shipping Co., Ltd.
Vice Chairman	R. L. Pai	Consultant	-Energy, Infrastructure, Shipping
Member	H. Ansari	Visiting Professor (Insurance)	
	Ashok K. Srivastava	Chief Executive Officer	Arcadia Shipping Limited
	A. K. Bahl	President (Shipping)	British Marine Plc
	Ashok V. Chowgule	Executive Director	Chowgule and Company Private Limited
	Cmdr K. Subramaniam	Chairman & Managing Director	Cochin Shipyard Limited
	Shri Ajithkumar Sukumaran	Engineer & Ship Surveyor cum DDG(Tech)	Directorate General of Shipping
	Satish Kumar	Managing Director	Dockendale Ship Management (India) Pvt. Ltd.
	A. R. Ramakrishnan	Managing Director	Essar Shipping Limited
	M. P. Dhanuka	Executive Director	GEE Limited
	Umesh C. Grover	Technical & Marketing	
	Shri Dilip Mehrotra	Chief Executive Officer	Indian National Shipowners' Association
	Atul J. Agarwal	Deputy Secretary	IOMOU Port State Control Secretariat
	S. Govindraj	Managing Director	Mercator Limited
	Antony Prince	Managing Director	Progressive Shipping Consultancy Services (PVT) Ltd.
	Arun Kumar Gupta	President	Smart Engineering and Design Solutions Ltd.
		Director	The Shipping Corporation of India Ltd.
		Technical & Offshore Services	
	Sujata Naik Tolani	Chairperson	Tolani Shipping Company Limited

INDIAN TECHNICAL COMMITTEE

Chairman	R. L. Pai	Consultant	-Energy, Infrastructure, Shipping
Member	K. Mantry	Associate Vice President - Projects	ABG Shipyard Ltd.
		Naval Architect	
	Ashok Kumar Sharma	Superintendent - Training	Anglo-Eastern Maritime Training Centre
	C. D. Joseph	Managing Director	Bernhard Schulte Shipmanagement (India) Private Limited
	P. Vinayakumar	Director (Technical)	Cochin Shipyard Limited
	Dileep Krishnan	Associate Professor & Consultant	Cochin University of Science and Technology(CUSAT)
		Department of Ship Technology	
	D. V. Abeyasinghe	General Manager (Projects & Engineering)	Colombo Dockyard PLC
	B. N. Singh	General Manager	Dockendale Ship Management (India) Pvt. Ltd.
	Ranjit Singh	Chief Technical Officer	Essar Shipping Limited
		Sea Transportation Business	
	Rajeev Nayyer	Head S & P New Building	Essar Shipping Limited
		Sea Transportation Business	
	Brahma Mall	Vice President	Fleet Management India Pvt. Ltd.
	S. C. Misra	Professor	Indian Maritime University(IMU)
		Ex-Director	
	R. B. Urilkouth	General Manager (Ship Building)	Larsen & Toubro Limited
	Sudhish Nair	DPA	Medallion Marine Private Limited
	S. M. Rai	Vice President (Technical)	Mercator Limited
		Head Ship Management	
	Maneesh Jha	Chief Engineer, F. I. Mar. E.	Samundra Institute of Maritime Studies
		Vice Principal & Head	
	Hariroj P.	General Manager	Smart Engineering and Design Solutions Ltd.
	H. S. Swaminathan	Director	Synergy Maritime Private Limited
	Ajoy Chatterjee	Principal & Head	The Great Eastern Institute of Maritime Studies
	David Birwadkar	Vice President - Fleet Management	The Great Eastern Shipping Co. Ltd.(GESCO)
	Indra Nath Bose	General Manager – Quality, Safety & Training	The Great Eastern Shipping Co. Ltd.(GESCO)
	Virendra Gharat	Director (Technical)	Tolani Shipping Company Limited

INDONESIA COMMITTEE

Chairman	Widihardja Tanudjaja	President Director	PT. Berlian Laju Tanker Tbk
Honorary Member	Oentoro Surya	Commissioner	PT. ARPENI PRATAMA OCEAN LINE Tbk.
Member	Antonius W. Sumarlin	Ex-President Director of PT Humpuss Intermoda Transportasi	Tbk
	Ir. Tjahjono Roesdianto	Chairman	Indonesia Shipbuilding and Offshore Industry Association
	Carmelita Hartoto	Chairman	Indonesian National Shipowners' Association
	Arifin Soenardjo, MH	Director of Marine Safety	Ministry of Transportation
		Tanjung Priok Port Administrator	Republic of Indonesia
	Theo Lekatompessy	President	PT Humpuss Intermoda Transportasi Tbk
	Krisman Bahar	President Director	PT Indobaruna Bulk Transport
	Asmari Herry	Director	PT Samudera Indonesia, Tbk.
	Praditya Nirtara	President Director	PT. Adnyana
	Stephen Layarda	Managing Director	PT. Alpha Pacific Lines
	Iriawan Alex Ibarat	Chief Executive Officer	PT. Arpeni Pratama Ocean Line Tbk.
	Kasim Arifin	President Director	PT. Bumi Perkasa Bahtera
	Amir Gunawan	President Director	PT. Daya Radar Utama
	Riry Syeried Jetta	President Director	PT. Dok & Perkapalan Kodja Bahari (PERSERO)
	Yance Gunawan	President Director	PT. Dumas Tanjung Perak Shipyard
	Hendrato	General Manager	PT. Gesuri Lloyd
		Liner Division	

Member	H. Soenarto	President Director	PT. Gurita Lintas Samudera
	Joeswanto Karijodimedjo	President Director	PT. Janata Marina Indah
	Henry Djuhari	President Director	PT. Meranti Maritime
	Frank Menaro	Fleet Director	PT. Meratus Line
	M. Firmansyah Arifin	President Director	PT. PAL Indonesia
	Benny Winarto	President Director & CEO	PT. Pelayaran Caraka Tirta Perkasa
	Ganny Zheng	Director	PT. Pelayaran Tirtamas Express
	M. Yudhie RF	SVP Shipping	PT. PERTAMINA
	Rachmat Koentjoro	Managing Director	PT. Tanto Intim Line
	Johnson W. Sutjipto	Commissioner	PT. Wintermar Offshore Marine Tbk
	Handara A. Utomo	Chief Operating Officer	Soechi Lines

KOREA COMMITTEE

Chairman	S. R. Pae	President & CEO	STX Pan Ocean Co., Ltd.
Member	Bang Eon Jeong	Senior Executive Vice President/CTO	Daewoo Shipbuilding & Marine Engineering Co., Ltd.
	Hyon-Soo Bong	Senior Executive Vice President/CTO	Hanjin Heavy Industries & Construction Co., Ltd.
	Oi-Hyun Kim	President & COO	Shipbuilding & Offshore Engineering
	Weon-Gil Choe	President & CEO	Hyundai Heavy Industries Co., Ltd.
	G. J. Ha	CEO	Hyundai Mipo Dockyard Co., Ltd.
	Jin Bang Lee	Chairman	Hyundai Samho Heavy Industries Co., Ltd.
	Chang Hee Yoon	President	Korea Line Corporation
	Suh, Myung-Chun	Representative Director	KSS Line Ltd.
	Sangbok Lee	President & CEO	Namsung Shipping Co., Ltd.
	J. K. Kim	Representative director	Pan Continental Shipping Co., Ltd.
	Doo-Chan Chang	President	Samsung Heavy Industries Co., Ltd.
	Ki-Il Kim	Executive Vice President & CMO	Sea Explorers of Korea
		Advisor	SK Shipping Co., Ltd.
		Chief Executive Officer	

KOREA TECHNICAL COMMITTEE

Chairman	Jeom Kee Paik	Professor	Pusan National University
Member		Department of Naval Architecture and Ocean Engineering	
	Jang Min-Seok	Director	Dae Sun Shipbuilding & Engineering Co., Ltd.
		Design Department	
	Hyung-Kyun Seo	Director	Daewoo Shipbuilding & Marine Engineering Co., Ltd.
		Integrated Design and Engineering Administration (IDEA) Team	
	ManSoo Kim	Vice President	Daewoo Shipbuilding & Marine Engineering Co., Ltd.
		Head Of Hull Design	
	Sung-Ryool Kim	Managing Director	Hanjin Heavy Industries & Construction Co., Ltd.
		Engineering Ship Sales Team2	
	In Soon Kim	Vice President	Hanjin Ship Management Co., Ltd.
		Fleet Management Director	
	Lee Yun-Sik	Senior Vice President	Hyundai Heavy Industries Co., Ltd.
		Basic Design Office	
		Shipbuilding Division	
	Taeg-Gyu Lee	President	Hyundai Ocean Service Co., Ltd.
	Hyun-Sang Shim	Executive Vice President	Hyundai Samho Heavy Industries Co., Ltd.
		Head of Design Division	
	Yeong-Se, Jeong	Managing Director	KLC SM Co., Ltd.
	Jae-Sung Choi	Professor	Korea Maritime University
		Dept. of Marine System Engineering	
	Keum-Taek Lim	Managing Director	KSS Line Ltd.
		Marine Affairs Management Department	
	Yoonsoo Kim	Vice President	Samsung Heavy Industries Co., Ltd.
		Technology Planning Team	
	Seog Hwan Kang	Chief Operating Officer	SK Shipping Co., Ltd.
		Ship Management	
	Chul-Ho Song	Technical Managing Director	SPP Shipbuilding Co., Ltd.
		Basic/Structure Design Team	
		Busan R&D Center	
	Myeong-Su Kim	Division Manager / Vice President	STX Marine Service Co., Ltd
		SM Division	
	Yeong-Pyo Kim	Vice President	STX Offshore & Shipbuilding Co., Ltd.
		Hull Design Dept.	
	Jae-Woo Son	Senior Vice President	Sungdong Shipbuilding & Marine Engineering Co., Ltd.
		Basic Design Department	
	Nojoon Park	CEO	TMS Co., Ltd

LATIN AMERICAN COMMITTEE

Chairman	Ricardo dos Santos	Director	P&O Maritime Services Paraguay S.A.
Member	Ricardo Vahia Alves de Souza	Director	Amec KROMAV
	Nobuaki Fujii	Presidente	Astillero Tsuneishi Paraguay S.A.
	Javier Reyes Conde	Operations Manager of Marine Services	Blue Marine Technology Group
	Angel Canessa T.	Vice President Planning and Operations	Compañía SudAmericana de Vapores S.A.
		Shipmanagement	
	Bartolome Carrera Santiago	Owner	Desarrollo Naviero Mexicano, S.A. de C.V.
	Alberto Velázquez	Fleet Director	Elcano, S.A.
	Danilo Moreno Oleas	General Manager	EP FLOPEC
	Marcelo de Mendonça Abreu	Engineering Manager - DRU Project	Estaleiro Atlântico Sul
	Wanderley Marques	President	Estaleiro Mauá
	Patricio Mondaca	Senior Vice President	Humboldt Shipmanagement
	Hiroshi Nishiyama	General Manager	Kawasaki del Peru S.A.
	José Luiz Nunes Ruiz	Principal Engineer	London Offshore Consultants Brasil Ltda.
	Ricardo Menezes	Operation and New Building Director	Ocean Pact
	Vladimir Contreras	Ingeniero Naval	Petróleos de Venezuela S.A.
	Tomazo Garzia Neto	President	Projemar
	Roberto Hetz Vorpahl	Chief Executive Officer	Sociedad Nacional Maritima S.A.
	Eduardo Balzaretto	Commercial Manager	TANDANOR S.A.C.I. y N.
	Paul Casanova Claros	General Manager	Transgas Empresa Naviera
	Agenor Cesar Junqueira Leite	Shipping Director	Transpetro
	Ruben Galindo Villanueva	Technical and Fleet Managing Director	TMM Group
		Transportacion Maritima Mexicana S.A. de C.V.	
	Victor Montes	Manager & Marine Engineer	Ultrapetrol S.A.
	Nelson Luiz Coelho Alves	Shipping Engineering General Manager	Vale S.A.

MALAYSIAN COMMITTEE

Chairman	Datuk Nasarudin bin Md Idris	President/Chief Executive Officer	MISC BERHAD
Vice Chairman	Ir. Nordin Mat Yusoff	Vice President	MISC BERHAD
Member		Group Technical Services	
	Datuk Azmi Bin Ahmad	Group Managing Director/CEO	Alam Maritim Resources Berhad
	Thomas Ng Chin Keuan	Executive Director	Coastal Contracts Bhd.
	Dato' Ir. Abdul Hak B. Md. Amin	Managing Director	E.A. Technique(M) Sdn. Bhd.
	Billy Tan Gim Hoe	Chairman	Ecoship Sendirian Berhad
	Dato' David Tan	Managing Director	Everise Maritime Sdn. Bhd.
	Johari Mohd Noh	Managing Director	Gagasan Carriers Sdn Bhd
	Tan Sri Dato' Seri Halim Bin Mohammad	Executive Chairman and Managing Director	Halim Mazmin Bhd.
	Dennis Liong	General Manager	Hub Shipping Sdn. Bhd.
	Datuk Elias Kadir	President	Keretapi Tanah Melayu Berhad
	Azaharuddin Osman	Chief Executive Officer	Petronas Maritime Services Sdn. Bhd.
	Lawrence Wong	General Manager	Sarawak Land Shipyard Sdn. Bhd.
	Lim Piak Wah	Executive Director	Serudong Shipping Sdn. Bhd.
	Vincent Ling Lu Yew	Director	Shin Yang Shipyard Sdn. Bhd.
	Datuk Lau Nai Hoh	Group C.E.O. / Group M.D.	Tuong Aik Shipyard Sdn. Bhd.
	Torbjørn J. Aaker	Regional Manager WSM Asia	Wilhelmsen Ship Management Sdn. Bhd.

MIDDLE EAST TECHNICAL COMMITTEE

Chairman	Jitendra Misra	Managing Director	Emarat Maritime
Member	Haakon Johnsen	Senior Vice President (Operations)	ADNATCO-NGSCO
	Benny K. Alex	General Manager	Emarat Maritime
		(New Buildings & Tech. Services)	
	Abdul Hayee	Fleet Manager	Gulf Stolt Ship Management
	Anil Cariappa	Technical Director	International Tanker Management Limited
	Jamil Al-Ali	Manager	Kuwait Oil Tanker Company S.A.K.
		Fleet Engineering Group	
	Ali A. Shehab	Manager Fleet New Building Projects Group	Kuwait Oil Tanker Company S.A.K.
		Marine Chief Engineer (UK)	
	Masanori Hayashi	General Manager(LNG)	Oman Ship Management Company
		Marine and Technical Department	
	Zaheer Babar Qureshi	Executive Director	Pakistan National Shipping Corporation
		Ship Management	
	A. Ramamurty	Sr. General Manager	Pioneer Ship Management Services L.L.C.
	Rostom Merzouki	Technical Superintendent	Qatar Gas Transport Company Ltd. (NAKILAT)
	Medjahed Benkabilia	Senior Fleet Technical Superintendent	Qatargas Operating Company Limited
	G. Fekry	Managing Director	Red Sea Marine DMCC
	Naushad Azad	General Manager	Red Sea Marine Services Co. Ltd.
	A. Mansourzadeh	G. M. Technical	Simatech Shipping L. L. C.
	Mohammed El-Sayed Ahmed	Vice President - Fleet(acting)	United Arab Shipping Company (S. A. G.)
		Fleet Management	
	Abdulaziz A. Sabri	Fleet Operations Manager	Vela International Marine Limited
	N. V. K. Nambiar	Technical Manager	Warm Seas

NORTH AMERICAN COMMITTEE

Chairman	Alexis P. Zoullas	President	Eagle Shipping International (USA) LLC
Member	John Calicchio	Chairman	Apex Bulk Carriers LLC
	Royce C. Wilken	President	ARTCO
	John D. Noonan	Chief Executive Officer	Chembulk Tankers
	Osami Maeyama	President / C.O.O.	Dowa Line America Co., Ltd.
	Ramesh Bhat	Technical Director	Eagle Shipping International (USA) LLC
	Calvin W. S. Cheng	Chairman	Eastmark Associates, Inc.
	Byron M. Sugahara	President	Fairfield-Maxwell Services, Ltd.
	Charles Leung	Senior Vice President	Fairmont Shipping (Canada) Limited
	Thomas H. Paterson	Vice President	Fednav Limited
		Owned Fleet & Business Development	
	Michael M. Lee	President	Foremost Maritime Company LLC
	Shunji Sasada	Chief Operating Officer	Navios Corporation
	Ronald W. Tursi	President	Roymar Ship Management Inc.

PHILIPPINE COMMITTEE

Chairman	Arben E. Santos	President & CEO	Southwest Maritime Group of Companies
Member	Doris Magsaysay Ho	President & Chief Executive Officer	A. Magsaysay Inc.
	Roy R. Alampay	Vice President for Operations & General Manager	Baliwag Navigation, Inc.
	Rogelio A. Torres	Vice-President	Eastern Shipping Lines, Inc.
		Traffic & Operations	
	Ahn, Jin Kyu	President	HHIC-Phil
	Siew Loon Leong	President	Keppel Batangas Shipyard (A division of Keppel Philippines Marine Inc.)
			Loadstar International Shipping, Inc.
	Teodoro G. Bernardino	President	Maritime Industry Authority
	Maximo Q. Mejia Jr.	Administrator	
		Department of Transportation & Communications	
	Edgardo G. Lacson	President	MIS Maritime Corporation
	Eduardo U. Manese	President	Philippine-Japan Manning Consultative Council of the Philippines
			SMC Shipping and Lighterage Corporation
	Thomas A. Tan	President	Solid Shipping Lines Corporation
	Fausto C. Tiu	Executive Vice President	Tsuneishi Heavy Industries (Cebu), Inc.
	Hifoshi Kono	President	

SINGAPORE COMMITTEE

Chairman	Aloysius Seow	Chief Operating Officer	Ocean Tankers (Pte) Ltd.
Member	Kenneth A. Glenn	President	APL Co. Pte Ltd.
	Tong Chong Heong	Chief Executive Officer	Keppel Offshore & Marine Ltd
	Andrew Tan Kok Kiong	Chief Executive	Maritime and Port Authority of Singapore
	Kuok Khooon Kuan	Managing Director	Pacific Carriers Limited
	Teo Cho Keng	Senior Executive Director	Pacific International Lines (Pte) Ltd.
		Technical Division	
	Wong Weng Sun	President & C.E.O.	Sembcorp Marine Ltd
	Sun Xiushun	President	Winning International Group Pte Ltd

SINGAPORE TECHNICAL COMMITTEE

Chairman	Tey Yoh Huat	Technical Head	Altus Shipping Pte. Ltd.
Member	Iwane Ogawara	Chief Engineer	"K"Line Ship Management (Singapore) Pte Ltd
		Managing Director	
	Robert Sumantri	Chief Executive Officer	Altus Shipping and Logistics Pte. Ltd.
	Shaj U. Thayil	Vice President	APL
		Technical Services & Ship Management	
	Soumendu Das Roy	Fleet General Manager	Berge Bulk (Singapore) Pte. Ltd.
		Fleet Management	
	B. N. Prasad	Director	Bernhard Schulte Shipmanagement (Singapore) Pte Ltd
		Technology & Innovation	
	Cheam Yeow Cheng	Director (Shipyard)	Bina Marine Pte Ltd
	Kapil Berry	Manager for Maintenance and Project	BW Fleet Management Pte Ltd
	B. S. Teeka	Managing Director	EXECUTIVE SHIP MANAGEMENT PTE LTD
	Ajay K. Chaudhry	General Manager	Fleet Ship Management Pte Ltd.
	Lim Teck Cheng	Chief Executive	HONG LAM MARINE PTE LTD
	Ir Wong Sin Futt	Director	IMC Shipping Services Co., Pte. Ltd.
		Newbuildings	
		CEng FIMarEST	
	Seow Tan Hong	Senior General Manager	Jurong Shipyard Pte Ltd
		Engineering Department	
	Chor How Jat	Managing Director	Keppel Shipyard Limited
	Avinash Kadam	Fleet Group Manager	Maersk Tankers

Member	Mark Lim Yew Guan	Deputy Director (Shipping)	Maritime and Port Authority of Singapore
	Toshihiko Ota	Deputy Director of Marine	
	Arun K. Ahluwalia	Managing Director	MOL Tankship Management (Asia) Pte. Ltd.
	Mok Kim Terng	Fleet Director	MSI Ship Management Pte. Ltd.
	Hemant Pathania	Corporate Development Director	NAM CHEONG LIMITED
		Managing Director	NYK SHIPMANAGEMENT PTE LTD
		Chief Operating Officer	
	Teh Eng Hua	Vice President	Ocean Tankers (Pte) Ltd
		Technical Department	
	Lim Tau Kok	Director	PACC SHIP MANAGERS PTE LTD
		Fleet Management Division	
	Panneer Selvam	General Manager	Pacific International Lines (Pte) Ltd.
		Technical Division	
	Toh Ho Tay	Offshore Division (Ship Local)	RS Platou (Asia) Pte. Ltd.
	Govinder Singh Chopra	Director	SeaTech Solutions International (S) Pte Ltd
	Francis Chin	Chief Operating Officer	Stellar Shipmanagement Services Pte. Ltd
	Rajdeep Singh	Technical Director	Tanker Pacific Management (Singapore) Pte Ltd
	Naresh Chand	General Manager	UNITED OCEAN SHIP MANAGEMENT PTE LTD
	Calum S Hume	Deputy Managing Director and Technical Director	V. Ships Asia Group Pte. Ltd.

THAI COMMITTEE

Chairman	Sutep Tranantasin	Executive Vice President	Regional Container Lines Public Co., Ltd.
Member	Warawan Nganthavee	Managing Director	Asian Marine Services Public Co., Ltd.
	Bhumindr Harinsuit	Managing Director	Bhureemas Navee Co., Ltd.
	Suparuk Potchanant	Operation Director	ES Offshore and Marine Engineering (Thailand) Co., Ltd.
	Vivek Dwivedi	Director	GR Consultants Company Limited
	Wirat Chanosit	Managing Director	Italthai Marine Ltd.
	Chanet Phenjati	President	Jutha Maritime Public Co., Ltd.
	Nat Chubchai	Deputy Director General	Marine Department
	Suraphon Meesathien	Vice President	Nathalin Co., Ltd.
	Jaipal Mansukhani	Director	Precious Shipping Public Co., Ltd.
	Kraiyasit Intarapanich	Vice President	PTT Public Company Limited
		International Chartering Department	
	Voravit Visitkijakarn	Managing Director	Sang Thai Shipping Co., Ltd.
	Surachai Lerkpichayayotin	Marine Fleet Director	Siam Lucky Marine Company Limited
	Nitas Krongvanitchayakul	Managing Director	Thaioil Marine Co., Ltd.
	Yodchai Ratanachiwakorn	Director, Marine Operations	Thoresen & Co., (Bangkok) Ltd.
	Teruo Kondo	Chief Production Manager	Unithai Shipyard & Engineering Ltd.

TURKISH COMMITTEE

Chairman	Yalcin Sabanci	Chairman	YA-SA Holding S.A.
Member	Necdet Aksoy	Chairman	Akmar Shipping & Trading S.A.
	Ali Umur	President	Aktif Shipping
	Kenan S. Sumra	Company Manager	Anadoluhisari Tankercilik A.S.
	Erhan Bayraktar	Board Member/CEO	Bayraktar Shipping Group
	Derya Sabaz	Board Member	Beşiktaş Group
	Gönç Beyli	Vice Chairman BoD	Beykim Petrolcülük Gemi İşletmeciliği San. Ve Tic. A.Ş.
	Engin Özcelik	General Manager	CEBI Maritime & Trading SA
	Idil Baran	Director	CerBa Group of Companies
	Esref Cerrahoglu	Chairman	Cerrahgil A. S.
	Serra Cerrahoglu	Vice Chairman	Cerrahgil Group of Companies
	H. Bülent Şener	Chairman	Delta Marine Engineering and Computer Trading CO.
	Serdar Akcali	Managing Director	Denak Ship Management & Agency
	Ö. Faruk Miras	Member of Board	Diler Shipping and Trading Inc.
	Bilge Bayburtlugil	General Manager	DITAS Tanker and Marine Operations Corp.
	Cihan Ergenc	Chairman	ER Denizcilik Sanayi Nak. Ve Tic. A. S.
	Orhan Karademir	Chief Operating Officer	Genel Denizcilik Nakliyatı A.S.
	Sadan Kapitanoglu	Owner	H.I. Kapitanoglu Shipping Group
	Bülent Subaşı	General Manager	IDÇ Denizcilik San. ve Tic. A.Ş.
	Bedri Ince	Chairman	Ince Shipping and Trading Co. Inc.
	Murat Edip Karahasan	Chairman	Karahasan Group of Shipping Companies
	Tamer Kiran	Chairman	Kiran Group of Shipping Companies
	Bayram Yusuf Aslan	President	Mardeniz & Kardeniz & Mardas Group of Companies
	Mecit Çetinkaya	Owner	Mecit Çetinkaya Shipping, Transport, Marketing Ind. & Trade Co. Ltd.
			Moliva Shipping Inc.
	Huseyin Yardimci	General Manager	
		Member of Board	
	Tufan Süslüer	General Manager	Nemtas Denizcilik
	Hüseyin Şener	Fleet Manager	Odin Ship Management
	G. Osman Küçükertan	General Manager	Orsan Denizcilik A.Ş.
	Emir Sohtorik	Chairman	Semih Sohtorik Management & Agency Inc.
	Suha Izmirligil	President	Sinomar S.A.

Member	Orkun Kalkavan Hasan Pehlivan Yasin Çil Ilhan Sabanci Emirhan Sabanci	Executive Board Member Operational Director / CSO General Manager Board Member Board Member	Turkon Holding U.N RO-RO İşletmeleri A.Ş. Vera Shipping YA-SA Shipping Industry & Trading S.A. YA-SA Tanker and Transportation S.A.
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TURKISH TECHNICAL COMMITTEE

Chairman	M. Erbil Özkaya	General Coordinator	YA-SA Shipping Industry and Trading S.A.
Member	Ş. Şenol Üngör	Technical Manager	Active Shipping & Management Pte Ltd
	Özgür Aksoy	General Manager & Board Member	Akmar Holding S.A.
	Saim Gökçen	Technical Manager	Aksay Denizcilik ve Ticaret A.Ş.
	Erkan Dereli	Owner	ALİAĞA DENİZCİLİK
	Yusuf Angin	Manager	Aruna Shipping Ltd., Corp.
	Selçuk Karakimseli	Board of Member	Atlas Ship Management Ltd.
	Kenan S. Sumra	Marine Department Manager	Aygaz A.Ş.
	Metin Solak	Technical Manager	Besiktas Group
	Cem Dikbayır	Managing Partner	Beyaz Denizcilik Ltd. Şti.
	Burak Meriç	DPA	Beykim Petrolcülük Gemi İşletmeciliği San. ve Tic. A.Ş.
	Mustafa Bahar	Technical Manager	Cebi Denizcilik AS
	Süleyman Vural	Fleet Manager	Ceren Denizcilik
	S. Dirim Şener	Department Manager	Delta Marine Engineering and Computer Trading Co.
		Planning Department	
	Şemsettin Özyapar	Technical Manager	Denak Ship Management & Agency
	Baha Erbil	General Manager	Densan Deniz Nakliyat ve Sanayi A.Ş.
	Taşkın Çilli	CEO, Member of Board	Desan Deniz İnşaat San. A.Ş.
	Coşkun Ağca	Fleet Manager	Ditaş Deniz İşletmeciliği ve Tankerciliği A.Ş.
	Yavus Büyükyüksel	Fleet Manager	GAS MASTER Deniz İşletmeciliği ve Acenteliği Ltd. Şti.
	Erhan Mentés	Technical ADM	Gemiciler Denizcilik
	Mehmet Cebeci	Bulk Fleet Manager	Genel Denizcilik Nakliyatı A.Ş.
	Nurettin Kuş	General Manager	Greenfleet Ship Management
	Ergun Köker	Technical Manager	GUNGEN Denizcilik
	Türker Yaltır	General Manager	Haç-San Shipyard
	Ahmet Taymeç	Manager	Horizon Gemi İşletmeciliği San ve Tic A.Ş.
	Çağdaş Gürol	Project Officer	İçdaş Çelik Enerji Tersane ve Ulaşım San. A.Ş.
	Mustafa Terzi	Coordinator	İce Tanker
	Bülent Subaşı	Operation Manager	IDÇ Denizcilik San. Tic. A.Ş.
	A. Yaşar Canca	Technical Manager	Ince Shipping Group
	Mahmut Ünsal	General Manager	İskenderun Ship Management
	Raif Söylerkaya	Ocean Going Master	Kaptanoglu Holding
	Cengiz Eren	Head of Technical Department	Karahasan Group of Shipping Companies
	Mehmet Gülakdeniz	Safety Coordinator / DPA	Kiran Group of Shipping Companies
		Master Mariner	
	Melek Yavan	Member of Board	Körfez Shipping and Trading Inc.
	Mustafa Dülger	Operation Manager	Manta Shipping Ltd.
	Galip Kendigelen	General Manager	Mardas & Mardeniz & Kardeniz Group of Companies
	Göksenin Eroğul	Deputy General Manager (Technical & Logistics)	Nemtaş Shipping
		Fleet Manager	
	Hüseyin Şener	Technical Manager	Odin Ship Management
	Kemal Ayten	Operation Manager	Pina Shipping & Transportation Inc.
	M. Murat Döşemeciler	Uzak Yol Kaptanı	POLARNET İletişim ve Gemi İşletmeciliği San. Tic. A.Ş.
	Haktan Demirboğa	Gemi Sörvey Kurulu Başkanı	Ministry of Transport Maritime Affairs and Communications
		Republic of Turkey	
	M. Cumhur Kuter	General Manager	Sedef Shipbuilding Inc.
	Mehmet Başoğlu	General Manager	Semih Sohtorik Management & Agency Inc.
	Ender Keskin	General Manager	Transal Denizcilik
	Müjdat Uludağ	Purchasing & Logistics Director	Turkish Airlines Technic Inc.
	Hayati Cingöz	BSC Engineer & Technical Manager	Ulusoy Sea Lines Management S.A.
	Ali H. Doğanlı	Technical Manager	VERA SHIPPNG
	Mehmet Kayhan	General Manager	YA-SA Shipmanagement and Trading S.A.
		Bulk Carriers	
	Hakan Gürel	General Manager	YA-SA TANKERCİLİK VE TASIMCILIK A.S.

TAIWAN COMMITTEE

Chairman	Loh Yao-fon	Adviser	Evergreen Group
Member	Donald K. L. Chao	Chairman	China Steel Express Corporation
	Jei-Yuan Chen	Executive Manager	CPC Corporation, Taiwan
	Robert Lai	Chairman	CSBC Corporation, Taiwan
	Der-Hsiung Chen	President	Deryoung Maritime Co., S.A.
	Shang-Wen Liao	President	Eastern Media International Corporation
		Ph. D. Leeds. U.K.	
	Shyu Ren-gung	Chairman	Evergreen International Storage & Transport Corp.
	David Hsu	Chairman	First Steamship Co., Ltd.

Member	B. C. Tsai Bill M. H. Huang Harvey Chiu R. Y. Guer Jimmy C. Hsiao J. D. Lan	Chairman Chairman Chairman President Director & President Chairman C. E. O.	Franbo Lines Corp. Glory Navigation Co., Ltd. Hsin Chien Marine Co., Ltd. Kuang Ming Shipping Corp. Mingtai Navigation Co., Ltd. Shih Wei Navigation Co., Ltd.
	Felix Chen Fred C. P. Tsai Kenneth Lee Hrong-Nain Lin Janus Kao I. Y. Chang Nobu Su C. K. Ong Lin Ching Chih Glenn K. L. Chan Chen, Po Ting James Lan Hermann Yu	Chairman & CEO Chairman Chairman & CEO President President Chairman C.E.O. President Chairman President Chairman Chairman Chairman President	Sincere Industrial Corporation Sincere Navigation Corporation T.V.L. Business Group Ta Tong Marine Co., Ltd. Ta-Ho Maritime Corporation Taiwan Navigation Co., Ltd. TMT Co., Ltd. U-Ming Marine Transport Corporation Unison Marine Corporation United Ocean Shipping S.A. Wan Hai Lines Ltd. Wisdom Marine Lines S.A. Yang Ming Marine Transport Corp.

TAIWAN TECHNICAL COMMITTEE

Chairman	Chiang Shou-hsing	Senior Vice President Shipbuilding Dept. Engineering Div.	Evergreen Marine Corp. (Taiwan) Ltd
Member	Guo I-Lung K. C. Lin	Chairman/President Senior Manager Marine Dept.	Biggin Shipping Corporation Cheng Lie Navigation Co., Ltd.
	P. J. Ching J. Z. Fang	Vice President Chief Engineer Chief Engineer Office	China Steel Express Corporation CPC Corporation, Taiwan
	Frank Foung-Tang Lin	Director Department of Design Assistance to G. Manager	CSBC Corporation, Taiwan
	Chih-Peng Tsai Michael L. Y. Pan Luo Chin-ek	Executive Vice President Senior Vice President Maintenance Dept. Project Division.	Deryoung Maritime Co., S.A. Eastern Media International Corporation Evergreen Marine Corp. (Taiwan) Ltd.
	S. H. Wang	Vice President Engineering & Supply Dept.	First Steamship Co., Ltd.
	T. W. Wu William Wu Tony C. T. Hsueh Thomas S. H. Yeh	Chief Engineer / Ass. Dep. Manager President Manager of Marine Department DS Vice President Safety Management System Dept.	Formosa Plastics Marine Corporation Franbo Lines Corp. Glory Navigation Co., Ltd. Harmony Transportation Co., Ltd.
	W. K. Wu	Manager Technical Dept.	Hsin Chien Marine Co., Ltd.
	Stephen Chen	Vice President Labor Safety & Health Department	Kuang Ming Shipping Corp.
	C. K. Lin	Vice President Engineering / Operation Department	Mingtai Navigation Co., Ltd.
	You-Yen Ho	Vice President Marine Department	Shih Wei Navigation Co., Ltd.
	Kenny J. H. Yang	General Manager Technical Department	Sincere Industrial Corporation
	Young Perng-Terng Yu Ko Yuan	Chief Engineer Associate Manager Marine Department	Ta Tong Marine Co., Ltd. Ta-Ho Maritime Corporation
	Hao Yuan Chang	Manager Engineering Division Marine Department	Taiwan Navigation Co., Ltd.
	Chen Teng	Special Assistant to Chairman Ship Management Dept.	TVL Marine Company Limited
	Robert Y. P. Kao Peter W. D. Ho	Senior Vice President Vice President Technical Department	U-Ming Marine Transport Corporation Unison Marine Corp.
	Sanders Jong	Vice President Engineering Division	Wan Hai Lines Ltd.
	Charles Chu	Vice President Technical Department	Wisdom Marine Lines S.A.
	Jackie Ho	Vice President Engineering Department	Marine Technology Group Yang Ming Marine Transport Corp.

ClassNK in Control

Officers

Councilors	Akimitsu Ashida	Representative Director (Chairman of the Board)	Mitsui O.S.K. Lines, Ltd.	
	Takashi Uyeno	Chairman & President	Uyeno Transtech Ltd.	
	Katsuyuki Sugimoto	Counselor	Iino Kaiun Kaisha, Ltd.	
	Koji Miyahara	Chairman	Nippon Yusen Kabushiki Kaisha	
	Zenshichi Akasaka	President	Akasaka Diesels Limited	
	Yasuhiko Katah	Chairman, Representative Director	Mitsui Engineering & Shipbuilding Co., Ltd.	
	Kazuo Tsukuda	Senior Executive Adviser	Mitsubishi Heavy Industries, Ltd.	
	Sho Minami	Company CEO	Oshima Shipbuilding Co., Ltd.	
	Makoto Satani	Former Executive Consultant	JX Nippon Oil & Energy Corporation	
	Hiroshi Shima	Representative Director and President	NIPPON STEEL & SUMIKIN TEXENG.CO.,LTD.	
	Masakazu Nakanishi	Former Executive Director	Tokio Marine & Nichido Fire Insurance Co., Ltd.	
	Hisashi Tanikawa	Professor Emeritus	Seikei University	
	Sinji Hayama	Professor Emeritus	The University of Tokyo	
	Masafumi Yasutomi	Vice President	Tokyo Metro Co., Ltd.	
	Koichiro Yoshida	Professor Emeritus	The University of Tokyo	
	Councilor Appointment Committee	Hisashi Tanikawa	Professor Emeritus	Seikei University
		Tsutomu Aihara	Former Commandant	Japan Coast Guard
		Hiroshi Itagaki	Professor Emeritus	Yokohama National University
		Seiichi Ochiai	Professor	Law School, Chuo University
		Tetsushi Agata	Managing Director	ClassNK
Directors	Noboru Ueda	Chairman and President	ClassNK	
	Toshitomo Matsui	Executive Vice President	ClassNK	
	Shosuke Kakubari	Executive Vice President	ClassNK	
	Koichi Fujiwara	Executive Vice President	ClassNK	
	Takuya Yoneya	Executive Vice President	ClassNK	
	Yasushi Nakamura	Executive Vice President	ClassNK	
	Tetsushi Agata	Managing Director	ClassNK	
	Tetsuya Kinoshita	Managing Director	ClassNK	
	Shunichi Arisaka	Director, Managing Executive Officer	Kawasaki Kisen Kaisha, Ltd.	
	Yoshio Otagaki	Representative Director Vice President	Japan Marine United Corporation	
	Hideomi Otsubo	Professor Emeritus	The University of Tokyo	
	Kazuya Kobayashi	Associate Officer General Manager Engineering Division Ship & Offshore Structure Company	Kawasaki Heavy Industries, Ltd.	
	Auditors	Kiyotaka Yoshida	Managing Executive Officer	Mitsui O.S.K. Lines, Ltd.
		Tsutomu Aihara	Former Commandant	Japan Coast Guard
		Yasuhide Sakinaga	Board Counsellor	Kawasaki Kisen Kaisha, Ltd.
Yasuo Tanaka		Managing Corporate Officer	Nippon Yusen Kabushiki Kaisha	
Yuzuru Fujita		Professor Emeritus	The University of Tokyo	

Classification Committee

Chairman	Noboru Ueda	Chairman and President	ClassNK
Vice Chairman	Toshitomo Matsui	Executive Vice President	ClassNK
Members	Shosuke Kakubari	Executive Vice President	ClassNK
	Koichi Fujiwara	Executive Vice President	ClassNK
	Takuya Yoneya	Executive Vice President	ClassNK
	Yasushi Nakamura	Executive Vice President	ClassNK
	Tetsushi Agata	Managing Director	ClassNK
	Tetsuya Kinoshita	Managing Director	ClassNK
	Toshio Araki	Managing Director	Iino Marine Service Co., Ltd.
	Shunichi Arisaka	Director, Managing Executive Officer	Kawasaki Kisen Kaisha, Ltd.
	Mitsuhiko Sunouchi	General Manager Technical Group	Nippon Yusen Kabushiki Kaisha
	Kiyotaka Yoshida	Managing Executive Officer	Mitsui O.S.K. Lines, Ltd.
	Naoki Ueda	General Manager, Ship & Ocean Engineering Division, Shipbuilding & Ocean Development	Mitsubishi Heavy Industries, Ltd.
	Kenji Shikano	Senior Manager of Initial Design Department	Kawasaki Heavy Industries, Ltd.
	Yoshiyuki Nakajima	General Manager of Planning & Development Department	Japan Marine United Corporation
	Taiji Maeda	General Manager, Basic Design Department	Mitsui Engineering & Shipbuilding Co., Ltd.
	Kimio Kiriake	Managing Director	The Shipbuilders' Association of Japan
	Naoto Tsukamoto	Associate Director, General Manager, Commercial Lines Claims Department	Tokio Marine & Nichido Fire Insurance Co., Ltd.
	Hitoshi Hosaka	Managing Director	The Japanese Shipowners' Association
	Hiroshi Itagaki	Professor Emeritus	Yokohama National University
	Hideomi Otsubo	Professor Emeritus	The University of Tokyo
	Toshiharu Nomoto	Professor Emeritus	The University of Tokyo
Shinji Hayama	Professor Emeritus	The University of Tokyo	
Koichiro Yoshida	Professor Emeritus	The University of Tokyo	

Technical Committee

Chairman	Koichiro Yoshida	Professor Emeritus	The University of Tokyo
Vice Chairman	Hideomi Otsubo	Professor Emeritus	The University of Tokyo
Members	Noboru Ueda	Chairman and President	ClassNK
	Toshitomo Matsui	Executive Vice President	ClassNK
	Takuya Yoneya	Executive Vice President	ClassNK
	Yasushi Nakamura	Executive Vice President	ClassNK
	Tetsuya Kinoshita	Managing Director	ClassNK
	Shunichi Arisaka	Director, Managing Executive Officer	Kawasaki Kisen Kaisha, Ltd.
	Masahiro Kanno	Director, Managing Executive Officer	Daiichi Chuo Kisen Kaisha
	Hideyuki Takahashi	Managing Director	JX Tanker Company Limited
	Yasuo Tanaka	Managing Corporate Officer	Nippon Yusen Kabushiki Kaisha
	Kiyotaka Yoshida	Managing Executive Officer	Mitsui O.S.K. Lines, Ltd.
	Kazuya Kobayashi	Associate Officer, General Manager, Engineering Division, Ship & Offshore Structure Company	Kawasaki Heavy Industries, Ltd.
	Yoshiyuki Nakajima	General Manager of Planning & Development Department	Japan Marine United Corporation
	Kunifumi Hashimoto	Senior Vice President, Vice President, Commercial Aviation & Transportation Systems	Mitsubishi Heavy Industries, Ltd.
	Norihisa Fukuda	Director, General Manager of Ship & Ocean Project Hq., General Manager of Chiba Works	Mitsui Engineering & Shipbuilding Co., Ltd.
	Atsushi Majima	Director, Acting Chief General Manager	Sumitomo Heavy Industries Marine & Engineering Co., Ltd.
	Kozo Yasuda	Managing Executive Officer	Sasebo Heavy Industries Co., Ltd.
	Takashi Iwamoto	Deputy Plant Manager	The Japan Steel Works, Ltd.
Hirofumi Kawasaki	Executive Councilor Head of Div. Plate Technology Div.	Nippon Steel & Sumitomo Metal Corporation	
Akira Tagane	General Manager, Plate Business Planning Dept.	JFE Steel Corporation	
Hiroaki Matsubara	General Manager	Kobe Steel, Ltd.	
Hiroshi Itagaki	Professor Emeritus	Yokohama National University	
Toshiharu Nomoto	Professor Emeritus	The University of Tokyo	
Shinji Hayama	Professor Emeritus	The University of Tokyo	

Quality Committee

Chairman	Hiroshi Sakai	Professor Emeritus	The University of Tokyo
Member	Norikazu Ooka	Guest Professor	Institute of Technologists
	Hirofumi Kodama	General Manager, Technology Affairs Department	Japan Marine Equipment Association
	Yasuhiro Nishioka	Managing Director	The Japanese Shipowners' Association
	Takayoshi Yagi	Senior Technical Manager, Standardization Center	The Japan Iron & Steel Federation
	Yuji Yamaguchi	Deputy General Manager	The Shipbuilders' Association of Japan
	Kunio Yoshida	Technical Supervisor	Japan Ship-Machinery Quality Control Association
	Koichi Yoshida	Deputy General Manager Engineering Department	The Japan Electrical Manufacturers' Association
	Nobutaka Kimura	General Manager, Classification Service Department	ClassNK

2013年度報告

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