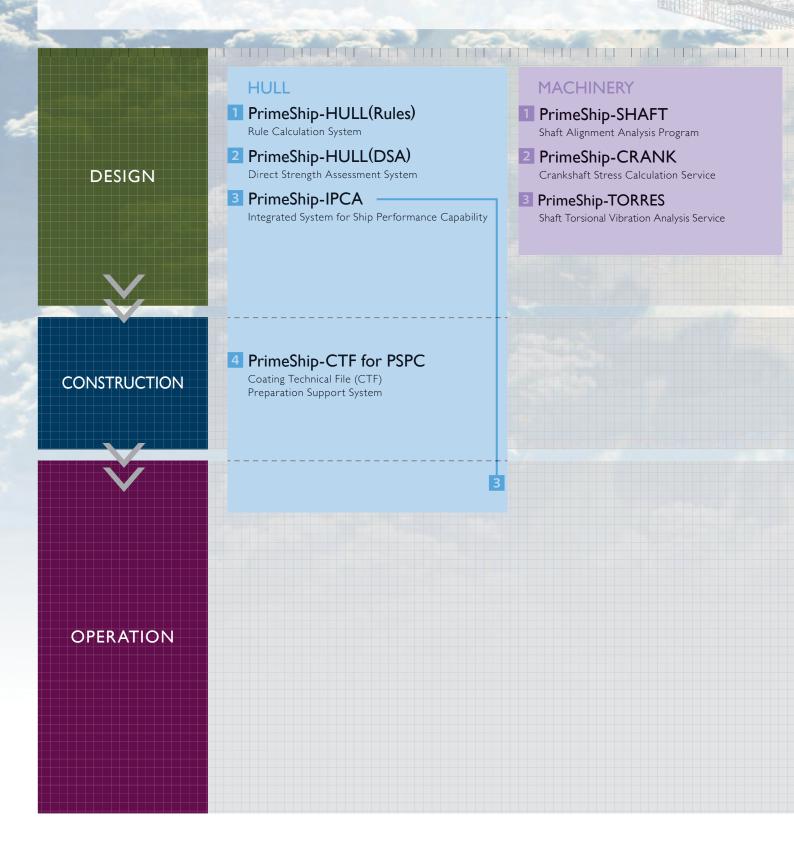




ClassNK SOFTWARE & SERVICES TOTAL SHIP CARE

Comprehensive Software and Services for Total Ship Care



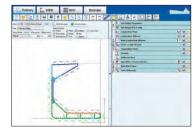
ClassNK develops software and services to provide comprehensive vessel support, using its vast technical experience gained over many years as a classification society. ClassNK software and services can support vessels not only in their design stage, but also through their operation, maintenance, and surveys, all the way up to their recycling. **OPERATION & MAINTENANCE ENVIRONMENT** PrimeShip-CHEMISYS PrimeShip-GREEN/SRM Integrated Database System Ship Recycling Management for Chemical Products PrimeShip-GREEN/MinPower INFORMATION Software for Assessment **SUPPORT** of Minimum Propulsion Power 1 NK-PASS Electronic Plan Approval System 1 PrimeShip-GREEN/ 2 e-Product ProSTA ver.ISO/ITTC Online Application Service for Survey of Material and Software for Progressive Speed Equipment Trial Analysis 3 NK-SHIPS PrimeShip-Steel Coil Loading 4 ClassNK MRV Portal Steel Coil Loading Program Data reporting and verification system for Online Status Information Service EU MRV/IMO DCS for Class and Statutory Survey/ISM PrimeShip-PSC Intelligence and ISPS Audit/MLC Inspection Support System for PSC Performance e-Application Improvement Online Application System for 4 PrimeShip-ETAS Surveys and Audits Emergency Technical Assistance Service 5 ClassNK e-Certificate PrimeShip-CAP Electronic certificate Condition Assessment Program issuing service 6 ClassNK Archive Center GBS-Ship Construction File Storage Service and Archive Center for As-built Drawings Storage Service



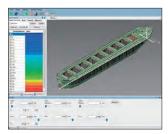
PrimeShip-HULL(Rules) Rule Calculation System

DESIGN

PrimeShip-HULL(Rules) is a rule calculation software suite for hull structures with a polished user interface. This software allows ship designers to quickly calculate the requirements for structural members in accordance with the IACS-CSR and Part C of the ClassNK Rules.



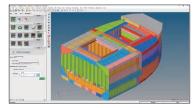


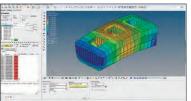


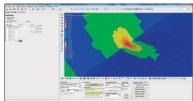
Contact Hull Rules Development Department

PrimeShip-HULL(DSA) Direct Strength Assessment System

PrimeShip-HULL(DSA) is a specialized software program for performing direct strength calculations of ship structures in accordance with ClassNK Rules and the IACS CSR. PrimeShip-HULL(DSA) helps make ship design an easy and efficient process by allowing users to quickly conduct complicated structural strength analysis for a wide variety of loading conditions.







Contact Hull Rules Development Department

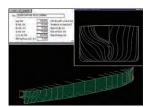
PrimeShip-IPCA

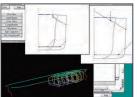
Integrated System for Ship Performance Capability

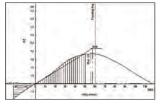
DESIGN

PrimeShip-IPCA is a Windows OS-based software package that calculates water displacement, trim, stability, and longitudinal strength for vessels during the design stage. The software allows calculations in the design stage to be carried out in line with class rules, helping reduce design lead times. It contains the design software

Design-IPCA for shipbuilders and design companies, and Onboard-IPCA Calculation Engine, which is used as a based calculation program for onboard loading computers and loading computer manufacturers, $% \left(1\right) =\left(1\right) \left(1\right)$ offering full support coverage during design and operation.







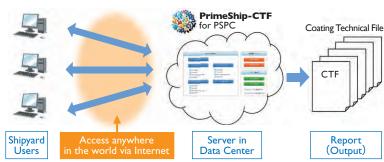
Contact Hull Department

PrimeShip-CTF for PSPC

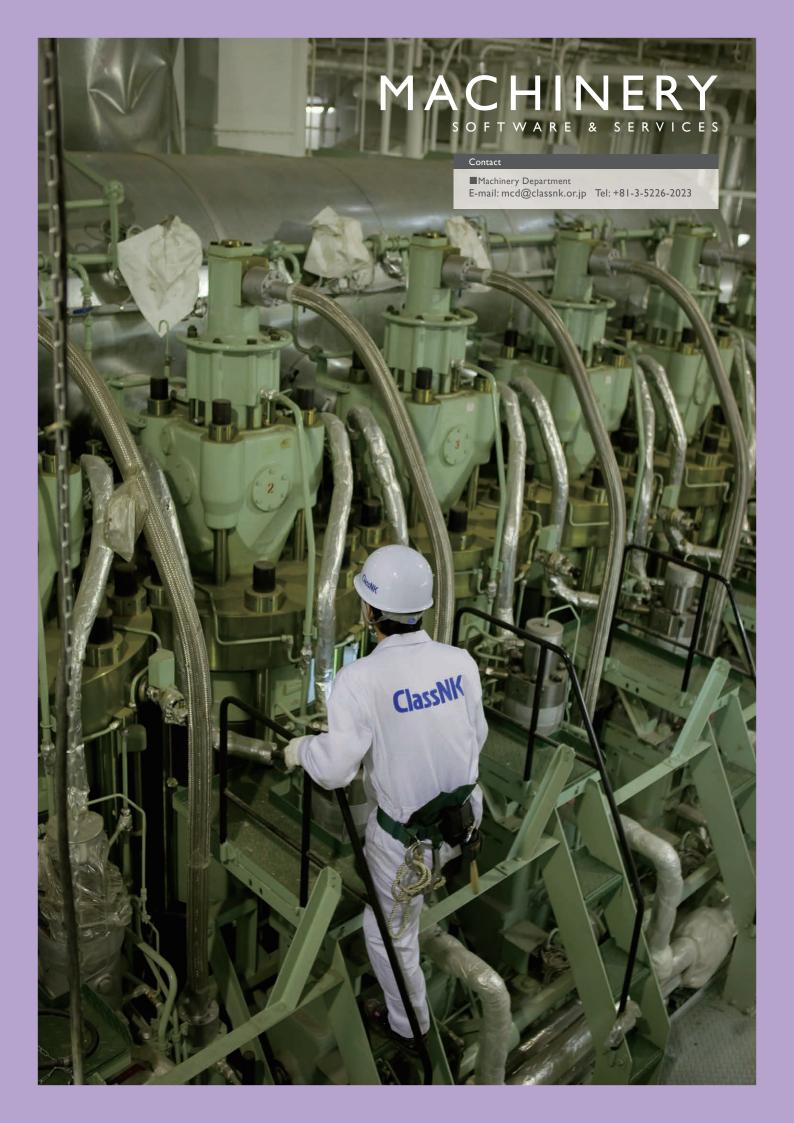
Coating Technical File(CTF) Preparation Support System



PrimeShip-CTF for PSPC is a cloud-based support tool provided free of charge to help create coating technical files. With this software, users can compile and manage logs and data for onboard CTFs via the internet in line with the IMO Performance Standards for Protective Coatings.



Contact Survey Department



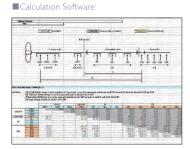
PrimeShip-SHAFT

Shaft Alignment Analysis Program

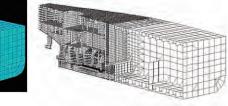
■Finite Element Analysis

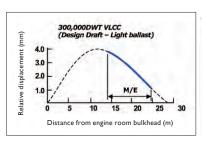
DESIGN

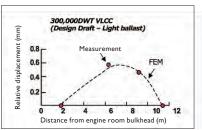
PrimeShip-SHAFT is a program provided free of charge to help designers comply with ClassNK's Guidelines on Shafting Alignment and analyze shaft alignment based on the Guidelines. Using this software, designers can easily calculate alignment in line with ClassNK rules and guidance, as well as determine the optimal position for shaft bearings.



Contact Machinery Department



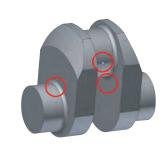




PrimeShip-CRANK Crankshaft Stress Calculation Service

DESIGN

PrimeShip-CRANK is a fee-based service that offers strength evaluations of diesel engine crankshafts in line with ClassNK and IACS rules. Users can determine if a crank shaft meets strength requirements and receive a statement of compliance through





Contact Machinery Department

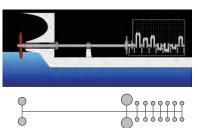
PrimeShip-TORRES

Shaft Torsional Vibration Analysis Service

DESIGN

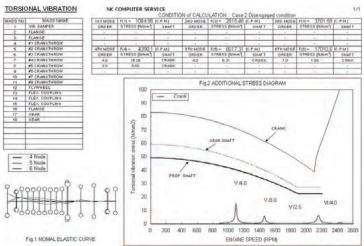
PrimeShip-TORRES is a fee-based service that analyzes shaft torsional vibration in line with ClassNK and IACS rules. Users can evaluate torsional vibration in the design stage and receive analysis reports indicating any occuring torsional vibration stress and allowable values through this service.

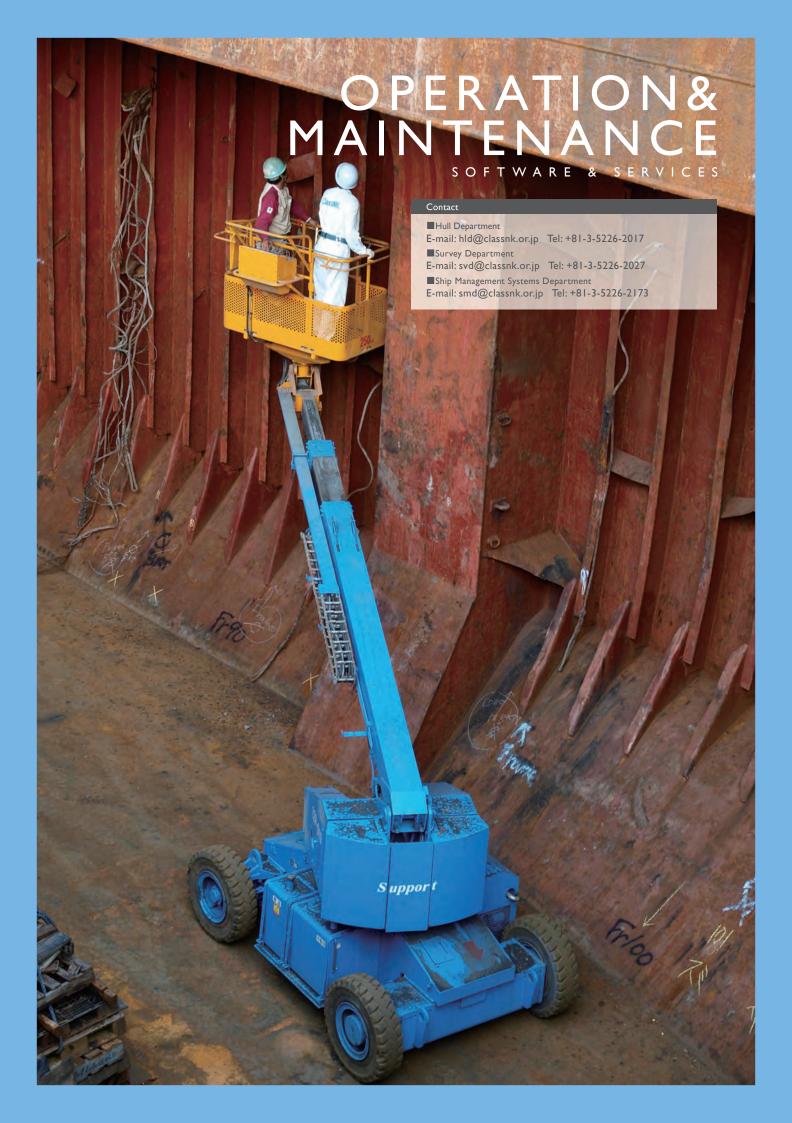
■Evaluation of Essential Items Relevant to Torsional Vibration



Contact Machinery Department

■Comprehensive Analysis Reports



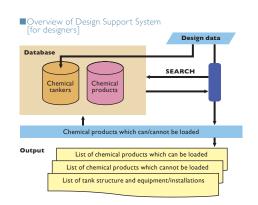


PrimeShip-CHEMISYS

Integrated Database System for Chemical Products



PrimeShip-CHEMISYS consists of two specialized applications. For designers, PrimeShip-CHEMISYS provides an easy search and reference system for determining chemical loading suitability. For owners, PrimeShip-CHEMISYS provides a tool to easily assess the present status of the ship and determine the loadability of potential cargoes.



■ Search and reference system for determining chemical substances loading suitability



■ Chemical substances list for P&A Manual and Chemical Operation Manual

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Contact Hull Department

PrimeShip-Steel Coil Loading Steel Coil Loading Program

OPERATION

This program has been developed to provide some reference information for ship masters, ship owners and management companies to make judgements about the possibility of their intended loading plans, which are not covered by the loading manual on board.



Contact Hull Department

PrimeShip-PSC Intelligence Support System for PSC Performance Improvement



PrimeShip-PSC Intelligence is a support system for improvement of PSC performance as well as a ship management system providing: I) trend analysis of deficiencies recorded at each port or country 2) output of PSC checklists for each port or country based on the trends 3) clarification and review of frequently recorded deficiencies for managing ships.

Contact Ship Management Systems Department

■Research on the trends of ports and countries on world map



PrimeShip-ETAS Emergency Technical Assistance Service



CONSTRUCTION OPERATION

PrimeShip-ETAS is fee-based vessel support service offered by ClassNK to shipowners to provide assistance during accidents including but not limited to grounding, collision, and explosions, to help ensure the safety of vessels and to protect and limit any damage to the marine environment. ClassNK ETAS works in close communication with shipowners and salvagers during marine casualties, offering advice to ensure salvage operations are carried out safely with as little impact to the environment as possible. The ETAS team is comprised of experienced surveyors on hand 24/7 to provide emergency assistance.

Contact Survey Department



■Sample for Rating



PrimeShip-CAP Condition Assessment Program

PrimeShip-CAP(Condition Assessment Program) is a fee-based service that allows users to assess and verify whether hull conditions meet or exceed class rules and international regulations. Users can obtain a 1 (highest) to 4 (lowest) grade of their hull condition based on onboard surveys, as well as receive comprehensive reports and certificates through this service. Hulls awarded condition levels of grade 2 and above rank very highly, verifying that maintenance conditions are satisfactory, which is particularly useful for chartered vessels.

Contact Survey Department

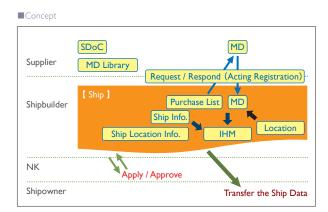


1 PrimeShip-GREEN/SRM

Ship Recycling Management



PrimeShip-GREEN/SRM is a web-based system offering support to the industry for the Ship Recycling Convention. The system is provided free of charge to shipbuilders and suppliers. PrimeShip-GREEN/SRM facilitates information exchange between shipbuilders, shipping companies and suppliers during the development and maintenance of Inventory of Hazardous Materials (IHM: list indicating quantity & location of hazardous materials on board) generating IHM automatically with minimum additional input and drastically reducing the burden on the industry.



Contact Ship Management Systems Department(environment)

2 PrimeShip-GREEN/MinPower

Software for Assessment of Minimum Propulsion Power

DESIGN
CONSTRUCTION
OPERATION

PrimeShip-GREEN/MinPower is a program provided free of charge to help users assess minimum propulsion power for bulk carriers, tankers or combination carriers in adverse weather conditions in accordance with IMO regulations. The software allows users to easily assess the minimum propulsion power taking into account factors such as added resistance in irregular waves, and automatically create graphs for class approval, helping to greatly reduce design lead times.



Contact EEDI Section of Hull Department

3 PrimeShip-GREEN/ProSTA ver.ISO/ITTC

Software for Progressive Speed Trial Analysis



PrimeShip-GREEN/ProSTA ver.ISO/ITTC is a program that allows users to analyze ship speed correction in progressive speed trials taking into account factors such as wind, currents, waves, shallow water, displacement, water temperature and water density in compliance with ISO 15016:2015 or ITTC 2017 Guidelines, and derive ship speed for Energy Efficiency Design Index(EEDI) calculation. The software allows users to easily analyze speed correction in progressive speed trials, and automatically creates graphs for class approval, helping to greatly reduce costs and times.

ClassNK PrimeShip-GREEN/ProSTAver.ISO

ClassNK PrimeShip-GREEN/ProSTAver.ITC

ClassNK PrimeShip-GREEN/ProSTAver.ITTC

Estimation of Reference Ship Speed (Vref) for EEDI

Speed correction for wind, waves, currents, shallow water, displacement, water temperature and water density

Total Control of the Con

Contact EEDI Section of Hull Department

4 ClassNK MRV-Portal

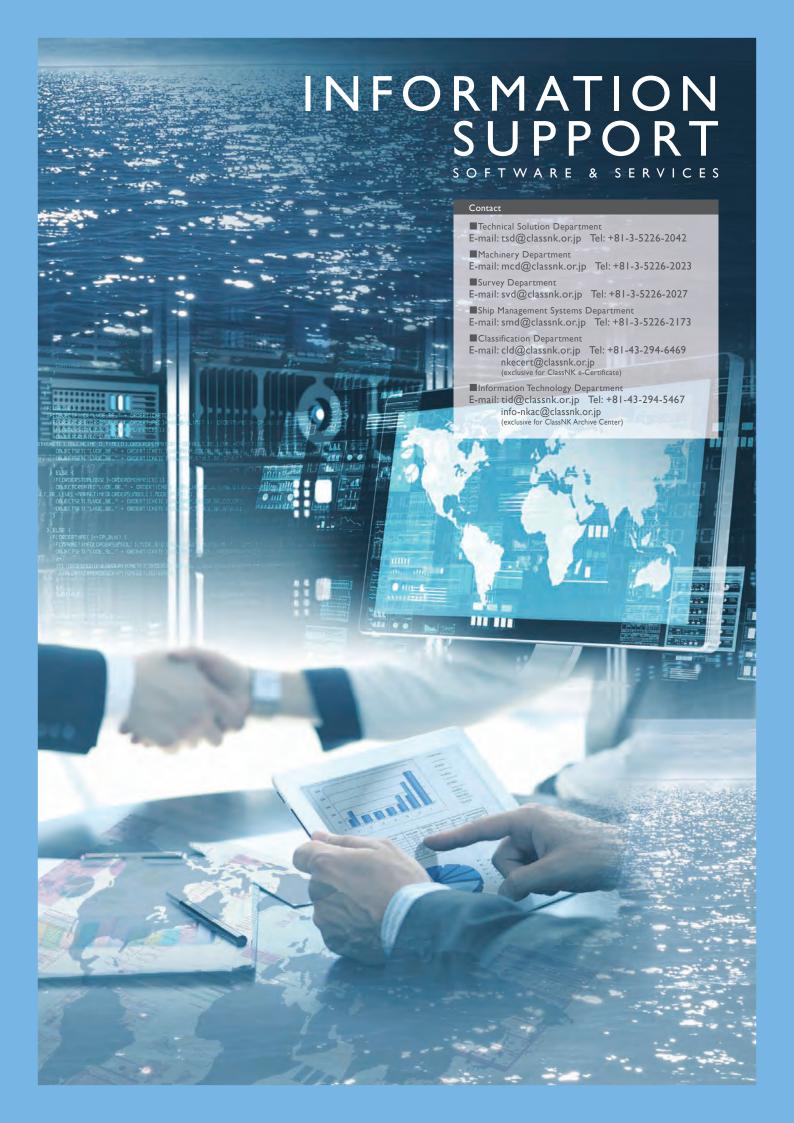
Data reporting and verification system for EU MRV / IMO DCS



ClassNK MRV Portal enables users to submit MP and ER for EU MRV and annual reports for IMO DCS smoothly as well as control monitoring data by sending monitoring data and documentary evidence from ship or shore to the verifier. The company can utilize the input data gathered through this service for preparation and submission of ER. Submitting data through ClassNK MRV Portal leads to reduced costs of ClassNK certification services for EU MRV and IMO DCS. This system is enabled to connect to other Reporting Systems developed by your own company or third-party providers, and thereby will avoid duplication of on-board work.



Contact Ship Management Systems Department(environment)

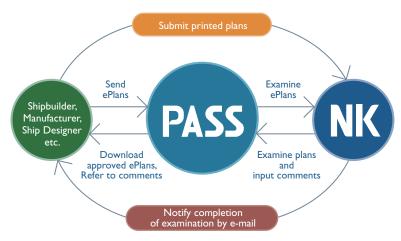


1 NK-PASS

Electronic Plan Approval System



NK-PASS is a free service that allows shipyards, equipment manufacturers and designers to replace printed plans and drawings with electronic versions that can be submitted for class approval and returned electronically. Users can confirm the status of submitted drawings and approval results in real time via the internet, greatly reducing the time and costs associated with approval (such binding, postage, etc.), allowing users to manage their plans and drawings more efficiently. The optional NK-PASS EDI (Exchange Data Interface) service is a standard interface linked to customers' own systems that allows users to exchange electronic drawings between NK-PASS and their system.



Contact Where to apply: Information Technology Department Inquiries for the Service & Operation: Technical Solution Department

e-Product Online Application Service for Survey of Material and Equipment



e-Product is a free service allowing users to apply for material and equipment surveys via the Internet. Users can view the status of their applications and easily send applications for a wide range of surveys using the application history copy function.





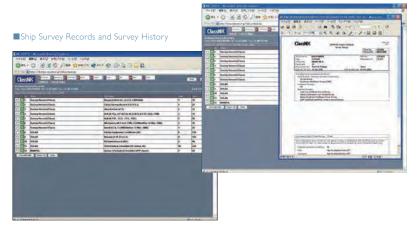
Contact Machinery Department

NK-SHIPS

Online Status Information Service for Class and Statutory Survey/ISM and ISPS Audit/MLC Inspection



NK-SHIPS is a free service provided to managers and owners of ClassNK registered vessels for managing information such as survey/audit/inspection statuses for each ship, periodic survey/audit/inspection items, and designated dates for surveys/audits/inspections via the internet. The service allows users to easily manage and plan surveys/audits/inspections for each vessel or their entire fleet. A "Due Date Notice E-mail Service" is also available which sends users F-mail notifications of Survey/Audit/Inspection due dates.



Contact Where to apply: Information Technology Department Inquiries for the Service & Operation: Classification Department or Ship Management Systems Department



4 e-Application Online Application System for Surveys and Audits



e-Application is a service provided free of charge allowing users to apply for class and statutory surveys, ISM/ISPS audits, and onboard MLC inspections for existing vessels as well as ISM audits for their company. The service allows users to automatically configure required surveys for each vessel or entire fleets as well as apply for surveys and audits online through ClassNK's NK-SHIPS service. An NK-SHIPS user registration is required in order to use this service. NK-SHIPS can be used immediately after registration.

■Online Application Window for Surveys and Audits



■Link with NK-SHIPS



Where to apply for NK-SHIPS: Information Technology Department Inquiries for the Service & Operation: Survey Department or Ship Management Systems Department

ClassNK e-Certificate Electronic certificate issuing service



ClassNK e-Certificate enables the shipowner to reduce administrative burdens such as the sending or storing of paper certificates onboard by issuing Class/Statutory certificates in secure electronic format (PDF). The service addresses the requirements specified in the IMO guidelines (FAL.5/Circ.39/Rev.2).

■Online verification of authenticity





Contact Classification Department

Class NK Archive Center GBS-Ship Construction File Storage Service and Archive Center for As-built Drawings Storage Service

Center for As-built Drawings Storage Service



ClassNK Archive Center is a cloud-based 24/7 service for storing and accessing various vessel plans and other detailed information related to a vessel's construction over it lifetime. The ClassNK Archive Center helps reduce administrative costs by allowing users to manage and view stored information via the internet, greatly enhancing the efficiency and practicality of ship management. The highly secure system protecting the data is also compliant with the IMO GBS "Ship Construction File" requirements expected to come into force in the near future, covering customers for the new regulations.

Contact Information Technology Department



SOFTWARE & SERVICES

[English]

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