

# HULL



Ship Structure Design Support System





# Key Features

- ◆Comply with the comprehensive revision of Part C of the ClassNK Rules
- **◆Intuitive UI/UX**
- **◆**Automation/Person-hour reduction
- ◆Versatility with respect to ship type
- ◆Data linkage with NAPA Designer

PrimeShip-HULL is a ship structure design support system for strength assessment based on Part C of the ClassNK Rules and the IACS CSR.

PrimeShip-HULL has an intuitive UI/UX (User Interface/User Experience) that makes the software easy for anyone to use as well as a menu structure that follows the operation flow and a video help function. In addition, PrimeShip-HULL has automatic processing functions that contribute to the reduction of design person-hours and a linkage function with the 3D ship design system of NAPA. The system strongly supports the efficiency improvement of the ship design process.

## Composition of PrimeShip-HULL

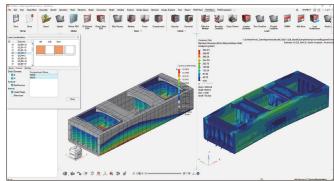
♦ Rule Calculation Software

It is possible to evaluate the strength of the input cross sectional data using the prescriptive rule requirements for longitudinal strength, local strength, strength for primary supporting structures, fatigue strength, etc. as specified in the rules. It is equipped with a highly flexible modeling function and a highly transparent calculation function that allows you to check all calculation parameters and results in real time.

♦ Direct Strength Analysis Software

It is possible to evaluate the strength of cargo holds and full-ship analyses using the finite element analysis (FEA) specified in the rules. HyperWorks is used as the platform, and various design support functions, such as automatic load generation and sensitivity analysis, enable efficient design review and optimization.









#### Intuitive UI/UX

A unified and visual intelligible UI design with a menu structure that follows the operation flow enables intuitive operation, allowing users to smoothly proceed with their work. In addition, the system is equipped with a help function that allows users to check the operation procedure via video, making the system easy to use by anyone.

#### **Automation/Person-hour reduction**

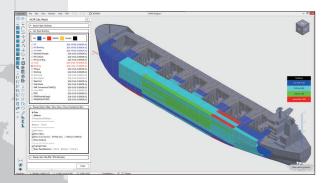
In addition to the automatic calculation and report generation functions, a mesh partitioning algorithm specially developed for direct calculation requirements based on the finite element method (FEM) makes it possible to automatically perform complicated tasks such as the creation of very fine meshes required for fatigue strength evaluation.

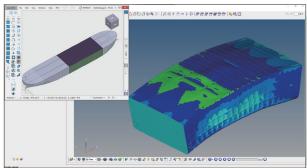
# Versatility with respect to ship type

By consolidating separate systems for each ship type, it is possible to model and evaluate various ship types with the same operability, thus greatly contributing to the reduction of the training time needed to become proficient at using the software.

#### **Data linkage with NAPA Designer**

Using NAPA Designer's application programming interface (API), evaluations with PrimeShip-HULL can be performed seamlessly on NAPA Designer. In addition, model changes on PrimeShip-HULL based on calculation results can be reflected in NAPA's 3D model, greatly reducing the person-hours required for data linkage and making more accurate data linkage possible.





### **Superior support**

A dedicated support desk is available to quickly resolve any operational questions. In addition, information such as update files and FAQs are available on the support page.



