PrimeShip
Total Ship Care

HULL (HCSR)
Design Support Software for Harmonised CSR

HULL
ENVIRONMENT PrimeShip MACHINERY
MAINTENANCE OPERATION

Key Features

◆ **Total design support tool**
◆ **Support for prescriptive rule and direct strength calculations**
◆ **Create models and perform strength analyses of the entire ship from stem to stern**
◆ **Free of charge**

PrimeShip-HULL (HCSR) is an entirely new concept that was developed from the ground up. It not only makes use of the knowledge gained from previous software development as well as the latest technical information, but also takes into account the opinions and desires of ship designers. It is a total support tool to help make your ship designs efficient and HCSR compliant.
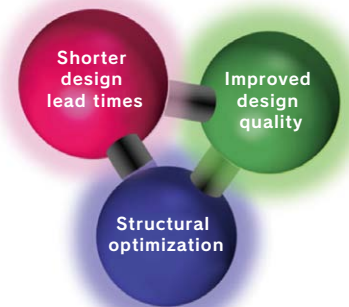
What is the HCSR?

The HCSR (Harmonised Common Structural Rules) is the harmonisation of two sets of separate rules related to the construction of bulk carriers and double hull oil tankers— the Common Structural Rules for Tankers (CSR-T) and the Common Structural Rules for Bulk Carriers (CSR-BC)—which were adopted by IACS in 2006. Bulk carriers (90 m or longer) and double hull oil tankers (150 m or longer) contracted for construction on or after 1 July 2015 must be designed in accordance with the requirements specified in the HCSR.

Supporting the 3 key elements of design

PrimeShip-HULL (HCSR) includes a variety of features which help improve the efficiency of the design process through "shorter design lead times", "structural optimization" and "improved design quality". Some of the features provided are as follows:

◇ Dimensions necessary for prescriptive rule compliance can be clearly displayed.
◇ Parameters can be freely changed to allow various cases studies to be easily carried out.
◇ Extensive data linkage with major commercial 3D CAD and other software.
◇ FE models for direct strength analyses can be quickly and automatically created.

Shorter design lead times
Improved design quality
Structural optimization

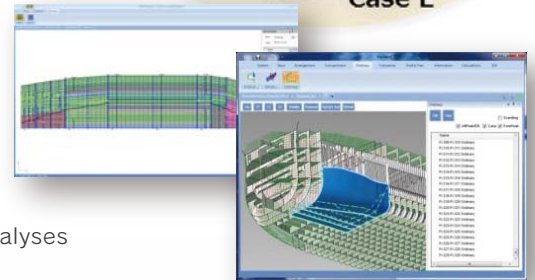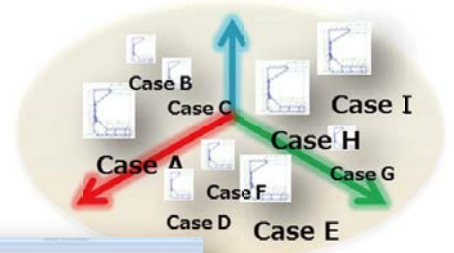## Components of PrimeShip-HULL (HCSR)

PrimeShip-HULL (HCSR) is comprised of the following two programs:

PrimeShip-HULL (HCSR)/Rules: Prescriptive rule calculation software to evaluate prescriptive requirements
PrimeShip-HULL (HCSR)/DSA: Direct Calculation software to carry out direct strength analyses

ClassNK

PrimeShip-HULL(HCSR)/ Rules

Based upon requests received from designers, this software can be used as not only a strength analysis tool, but also as a total design support tool capable of performing various functions such as the following:

◇Rapidly studying cross sections to determine initial dimensions
◇Determining structural dimensions from stem to stern
◇Calculating with a high degree of transparency
◇Creating geometric models for direct strength analyses
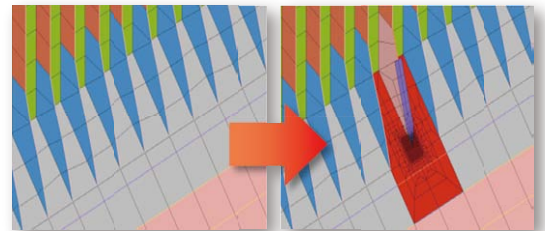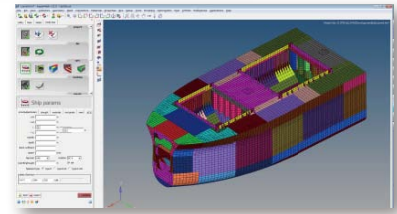
Data Linkage

PrimeShip-HULL(HCSR)/ DSA*

This software is able to perform strength evaluations using the Finite Element Method required by the HCSR, and its various features allow the amount of time required for analysis to be greatly reduced. Moreover, this software can be used together with either Altair's "HyperWorks" or MSC's Patran.

◇Can be used with prescriptive rule calculation software
◇Automatically create FE Models (Coarse/Fine/Very-fine mesh)
◇Automatically create buckling panels
◇Easy structural optimization

Full Support

A dedicated technical support desk is available to rapidly resolve any problems you may have, and a website has been set up to provide the latest software-related information. Furthermore, training seminars are also held as needed to help designers become familiar with using the software.

* Patran and MSC.Nastran (not included), or Hyperworks (not included) is needed to run PrimeShip-HULL(HCSR)/DSA