

GHS

IMO / SOLAS INTACT & DAMAGED HYDROSTATICS & STABILITY
CARGO & PASSENGER SHIPS ✪ WORKBOATS ✪ DREDGERS ✪ YACHTS ✪ OFFSHORE

by **Creative Systems Inc.**
www.ghsport.com

Originally certified in 1989, GHS is today approved by **Det Norske Veritas** (also for offshore and asymmetric structures), **Lloyd's Register** (including torsional strength and grain stability) and by **Germanischer Lloyd**s.

The leading hydrostatics & stability program for almost 30 years, **GHS** by Creative Systems Inc. is now used in more than 1000 companies worldwide.

The GHS suite is composed of a base module which includes all intact & damage hydrostatic & stability functions, and of several add-on modules:

Condition Graphics (**CG**)
Load Editor (**LE**)
Floodable Lengths (**FL**)
Longitudinal Strength (**LS**)
Grain Shift (**GS**)
Advanced Features (**AF**)
Multi Body (**MB**)
Tank Soundings (**TS**)
COM interface (**COM**)
Programming Interface (**PI**)
Model Converter (**MC**)

Companion modules edited by VSW:

GHS Enhancer
Geometry File Viewer
Chart Editor
MidShip Section Calculator
Part Maker Enhancer

Companion modules by other software houses:

Rhino3D import / export interface

GHS is also offered for on-board use (**GHS-LM**) (including special cases such rigs, crane barges, tugs and tug-barge combinations, semi-submersibles, etc). Notable features of **GHS** include:

- **Support of HARDER regulations**
- **Templates & Wizards**
- **On-screen Report pre-view + Clipboard copy/paste**
- Full A-265 (VIII) probabilistic damage calculation
- Short A-265 (VIII) probabilistic damage calculation
- Ship torsional moment and torque calculation
- Bulkhead shear correction factor calculation
- Transverse wave distribution for accurate hydrostatic balancing in oblique seas and of asymmetric bodies
- Calibration of tank data from external sources: this feature effectively allows the physical modelling of tanks without the need for drawings. The resulting model is absolutely equivalent to the original in all aspects concerning hydrostatics, stability, free surface and moment of inertia, content weight and centre of gravity, etc. This effectively allows the composition of models for **GHS-LM** with only approved tank tables needed for input. Equivalent models are not suited for longitudinal strength calculation.
- SeaSafe hull interface
- Transparent network printer support
- Introduction of custom headers and footers in reports via user-defined rtf files, including bitmap logos
- Colour printer support for graphs in reports
- Complex boom arrangements, allowing for multiple hook loads
- Hydrostatically balanced loading
- Support of API forces and KN units
- Support of external MAXVCG tables
- Water-on-Deck calculations
- Support of 2 shear force limits for hogging and sagging bending moments
- Calculation of the Revised SDI for vessels between 80 and 100 meters (IMO regulation 25-3, effective 7/98)
- Several new print setting options
- Introduction of the new variable DAMSTAT indicating whether any of the ship's tanks are damaged
- Longitudinal Strength is computed both at specified frame locations (FRA) and at model section locations
- Floodable lengths
- Grain Shift calculations
- Enhanced MaxVCG calculations
- Water-on-deck and MaxVCG, also with passenger crowding
- **Shape Editor 2:** model creation & viewing process can also be run stand-alone (unlocked).
- Multi-window / multi-view display of full model or individual parts & components.
- **Multi Body (MB):** simultaneous handling of multiple floating bodies with points of contacts between them, and can also include grounding points.
- Detailed simulation of loading / unloading floating objects by partially submerging the carrier (heavy lift operations, transport of spar buoys and ships, etc.)
- Ice breaking simulation
- Dry docking
- Composite and Articulated floating structures
- Ground and intra-body contact forces are automatically included in the stability, longitudinal and torsion strength calculations.
- **Condition Graphics (CG):** viewing and printing of ship layouts and loading conditions, including user-defined planar and transverse section, with legends.

Several Technical Reports, User Bulletins and dozens of run file examples are available on our Internet sites.

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