

MACS3

Cargo Management System for Tankers



seacos Cargo Management

Stability calculation

Longitudinal strength calculation

Customizable user interface

User-defined warning points

Visualization of various vessel views

Automatic wind pressure calculation

Automatic ballast tank optimization

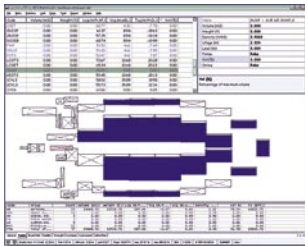
Modular extension

Screen and print reports

MACS3 for tankers

More than 4,900 vessels worldwide are equipped with the MACS3 loading computer. The software controls dangerous cargo segregation, damage stability, calculates and provides detailed information on ullage reports etc. MACS3 has been approved and is certified for on-board use by all major classification societies.

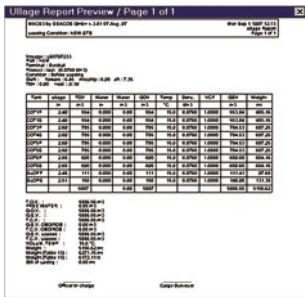
Basic System



Basic Program MACS3.net

- Graphical tankplans of the vessel showing current conditions
- Optimization of trim, heel, stability and stress by ballast tanks
- Display and printout of loading conditions and calculations
- Saving and loading of loading conditions
- Online help
- Warning points (e.g. trim, draught, GM)

By tanker type



ULLAGE REPORT corrects the density and weight of the cargo in tanks in relation to the temperature, providing precise volume data for billing purposes.

If hydrostatic curve tables with trim and heel are available, the tank volume is corrected for the current trim and heel. Water dip can be taken into account, as well. The user maintains a product database with the appropriate density and temperature correction factors.

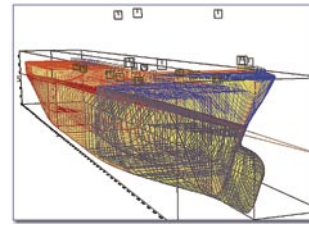
ASTM tables 54A/B/C/D and 6A/B/C as well as linear correction are supported. Also, bill of lading, weight in air/vacuum and calculation of OBQ, ROB and GSV are supported.

LPG MODULE includes liquefied gas/vapor calculations (LPG), taking into account: Correction for tank shell temperature, free water level/free water volume, tank shell expansion coefficient, volume corrector factor, sediment and water.

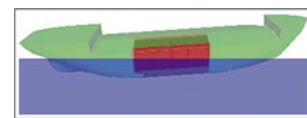
Furthermore transfer rate calculation with enhanced Log/Mass, ROB/OBQ reporting is included.

DASTYMAN Damage stability is calculated based on the hull form and inner structure of the ship, using the lost buoyancy method. Whenever the cargo or the levels of ballast and bunker tanks have been changed, the required damage conditions — as laid down by the classification society — are calculated automatically. The effect of the change is shown immediately. The calculation results are checked against the appropriate IMO criteria, e.g. IBC code, SOLAS 74.

For simulation and training purposes, or to estimate the survivability of the ship in a current case, damage condition can be defined. The details of each damage condition are shown. The damage optimization function tries to find an intact condition that fulfills the requirements of the current damage condition.



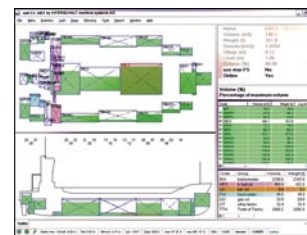
Calculated Damage Conditions	Damage Criteria	actual	required	Cond.No.
FCB12 ok	max.LIN	0.6	2.0	FCB12
FCB13 ok	min. Range of pos. Lever	0.0	2.0	FCB13
FCB14 ok	min. righting Lever	0.0	0.100	FCB14
FCB15 ok	min. Area of pos. Lever	0.0	0.0175	FCB15
FCB16 ok	min. Freeboard of Openings	0.110	0.000	FCB16



Selected add-ons

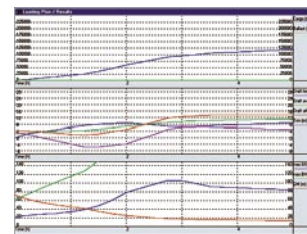
TANK ONLINE reads current tank volumes or levels into MACS3. It relieves the user of manually entering the values that are needed for the stability and strength calculations.

Drafts, trim and heeling can also be read online and compared with the MACS3 calculations. TANK ONLINE is available for all major on-board measurement systems, connecting to over 25 different makers.



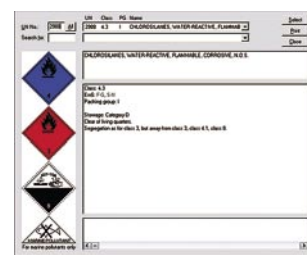
LOADMAN is an additional module for bulk carriers and cargo tankers for the optimization of total cargo distributions with respect to certain criteria, e.g. trim, GM, stability, stress of the vessel.

After a number of cargo tanks are selected, the program makes a proposal how to divide the cargo among the selected cargo tanks.



Calculation of intermediate conditions (stability and strength) for loading and discharging operations incl. graphical display of the results.

Integrated facility for preparing the loading/unloading plan in accordance with resolution A.862(20) as pdf file.

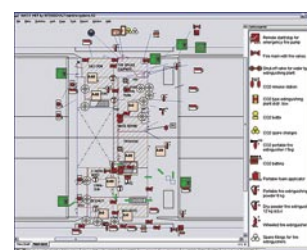


DAGO for tankers manages dangerous goods. It checks the fulfillment of the stowage and segregation requirements imposed by the latest edition of the IBC Code by IMO.

DAGO I includes the IBC database with all the relevant information from the Code and the Emergency Schedules (EmS).

DAGO II adds the fire-fighting and safety plans in several graphics.

DAGO III contains the complete Medical First Aid Guide (MFAG).



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