

OUTLINE

CALTIS II is a software for cargo tank monitoring software. CALTIS II has been certificated by most ship classification societies and operates with HP COMPAQ MARINE personal computer (recommended). We can build the system to match use's needs.

Software supports LAN and the monitor in each cabin is possible by inboard LAN system connection.

CALTIS II has loading computing module and damage stability, and can monitor and operate loading work functionally from one personal computer.



STANDARD SPECIFICATION

Delivery form

Personal computer pre-install
(When soft ware only: CD-ROM)

System requirement

Computer

Personal computer with Windows XP professional
(We recommend HP dc7600.)

Basic software

Microsoft Windows XP Professional
Microsoft Office 2003

Memory

1GB or more

HDD

40GB, 80GB or more

BASIC PERFORMANCE

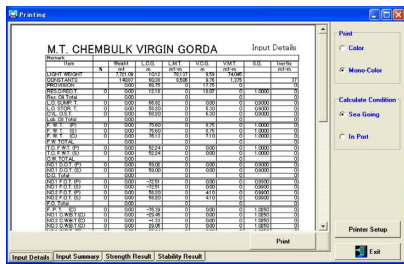
- 1) Constitute with 15 screens (Optional loading computer, Damage stability)
- 2) Control with mouse
- 3) Display of the present tank data and various setting data
- 4) Displacement and tank sounding numerate function
- 5) Display of level by bar graph
- 6) Printing
- 7) Monitor of cargo handling
- 8) Setup and display of alarm

VERSION

CALTIS II Ver.2.00

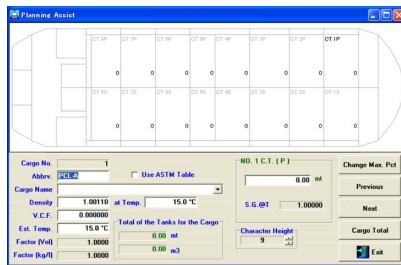
DISPLAY SAMPLES

Printing dialog



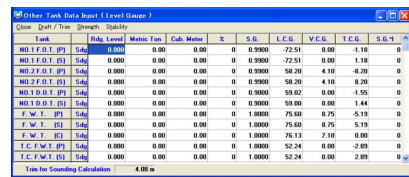
Select to print out the input data and the calculated results. This has 2 pages, which are "Input Details" and "Calculated Result." Click the tab of the page to display and print button in the page to print.

Planning assist



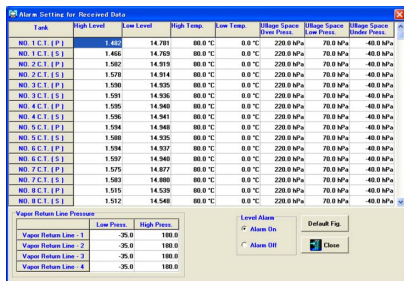
Select this mode to register up to 16 kinds of loading cargo data, and then input by Metric tons in the mimic diagram of the cargo tanks.

Others



Input ballast tank data by the reading sounding, weight (M/T), volume (m³) or volume percent. Also, you can change S.G. of the tank if necessary.

Alarm setting



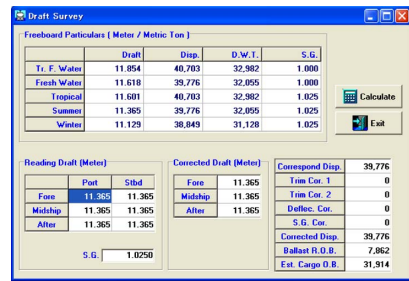
Input or change the warning and dangerous level of tanks. This data is used in the data communication.

Cargo tank data input



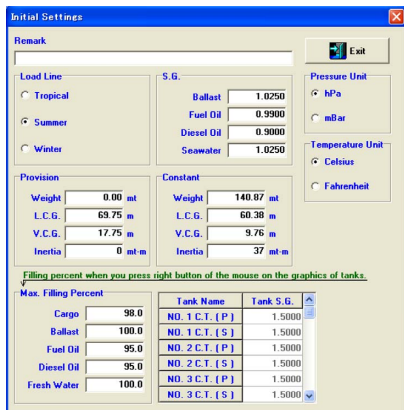
Input the cargo tank data in tabular form by corresponding ullage, gross volume (G/m³), gross volume percent, and weight (Metric Ton). Also, you can change S.G., and Temp. (Deg. C) of the tanks if necessary.

Draft survey



Input all the reading drafts, and S.G. The following are calculated and displayed.

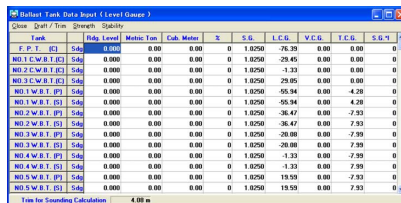
Miscellaneous setting



Select to input miscellaneous settings of the program. You can input/change the followings.

1. Remark
2. Load line and Draft mark
3. Specific gravity (S.G.) of ballast water, fuel oil, diesel oil, and seawater.
4. Weight (M/T), L.C.G., and V.K.G. of the provision and the deadweight constant.

Ballast tank data input



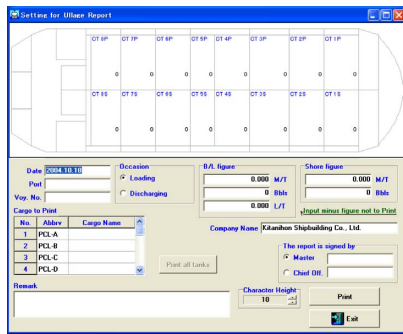
Input ballast tank data by weight (M/T), volume (m³) or volume percent. Also change S.G. of the tank, if necessary.

Tank survey



Call this function to calculate various ship's figures. The tank table for Ullage stand is used for this calculation.

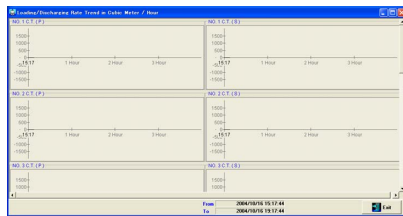
Setting for sounding report



Printing of the result calculated by Tank survey is set up.

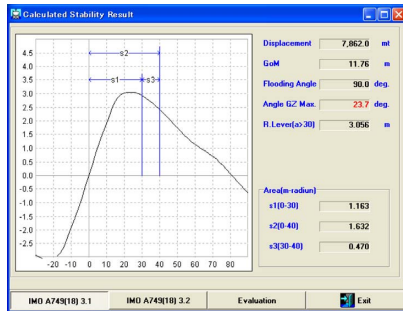
1. Input date, port, and voyage number.
2. The item of before or after loading etc. is selected.
3. Select the tank and print the Tank survey.

Rate trend

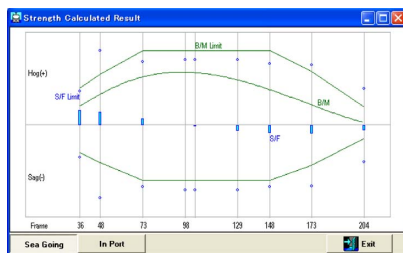


Call this page to display the loading or discharging rate in the cubic meter per hour for latest 2 hours by the graph.

Option Loading computer IMO A749 (18) 3.1



Strength in graphics (Strength graph)



The program calculates and displays shearing forces, and bending moments (green curve) in graphics together with the limit values.

Cargo tank data

Tank No.	NO. 1 C.T. (1)	NO. 1 C.T. (2)	NO. 1 C.T. (3)	NO. 1 C.T. (4)	NO. 1 C.T. (5)	NO. 1 C.T. (6)	NO. 1 C.T. (7)	NO. 1 C.T. (8)
Cap Above	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Temp	22.6 °C	22.6 °C	22.6 °C	22.6 °C	22.6 °C	22.6 °C	22.6 °C	22.6 °C
Vol	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000
Weight	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Height	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ullage	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000
Volume	2,897.733	2,897.733	2,897.733	2,897.733	2,897.733	2,897.733	2,897.733	2,897.733
Weight	13,089.5	13,089.5	13,089.5	13,089.5	13,089.5	13,089.5	13,089.5	13,089.5
MT	2,897.733	2,897.733	2,897.733	2,897.733	2,897.733	2,897.733	2,897.733	2,897.733
LWT	2,844.912	2,844.912	2,844.912	2,844.912	2,844.912	2,844.912	2,844.912	2,844.912
Ullage	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8

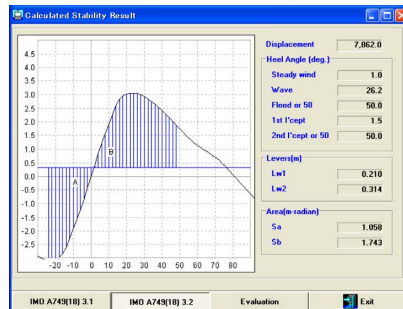
The program calculates the cargo volume and weight from the received tank levels, and displays in tabular form.

Cargo tank level



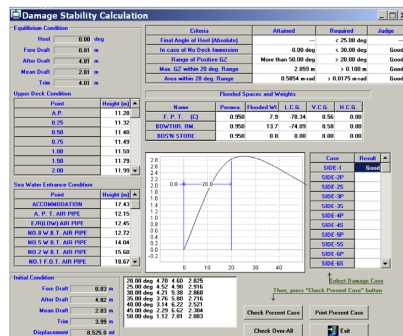
Call this page to display the received cargo tank level (ullage) by the bar graph and figures.

IMO A749 (18) 3.2



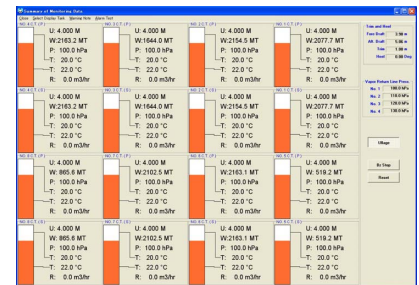
This program calculates the stability in accordance with IMO A749 (18) 3.1 and A749 (18) 3.2.

Damage stability



Residual stability calculation at the time of hull fracture flood is performed automatically.

Received data summary



The program calculates the cargo volumes and weights from the received tank levels, and displays the weights and the levels with graphics.

Tank temperature

Tank	Mean Temp.	Upper Temp.	Lower Temp.	High Alarm T.	Low Alarm T.
NO. 1 C.T. (P)	22.0 °C	22.0 °C	22.0 °C	80.0 °C	0.0 °C
NO. 1 C.T. (S)	22.0 °C	20.0 °C	22.0 °C	80.0 °C	0.0 °C
NO. 2 C.T. (P)	22.0 °C	20.0 °C	22.0 °C	80.0 °C	0.0 °C
NO. 2 C.T. (S)	22.0 °C	20.0 °C	22.0 °C	80.0 °C	0.0 °C
NO. 3 C.T. (P)	22.0 °C	20.0 °C	22.0 °C	80.0 °C	0.0 °C
NO. 3 C.T. (S)	22.0 °C	20.0 °C	22.0 °C	80.0 °C	0.0 °C
NO. 4 C.T. (P)	22.0 °C	20.0 °C	22.0 °C	80.0 °C	0.0 °C
NO. 4 C.T. (S)	22.0 °C	20.0 °C	22.0 °C	80.0 °C	0.0 °C
NO. 5 C.T. (P)	22.0 °C	20.0 °C	22.0 °C	80.0 °C	0.0 °C
NO. 5 C.T. (S)	22.0 °C	20.0 °C	22.0 °C	80.0 °C	0.0 °C
NO. 6 C.T. (P)	22.0 °C	20.0 °C	22.0 °C	80.0 °C	0.0 °C
NO. 6 C.T. (S)	22.0 °C	20.0 °C	22.0 °C	80.0 °C	0.0 °C

Call this page to display temperature at upper, middle, and lower parts in cargo tanks.

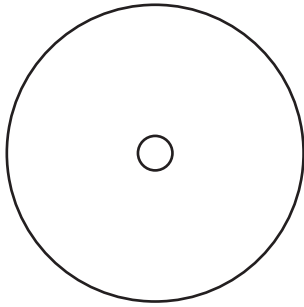
Strength result (Table)

Frame	Shearing Force				Bending Moment				Long. BMD Shearing Force			
	Max	Min	Avg	Unit	Max	Min	Avg	Unit	Max	Min	Avg	Unit
35	1,560	3,857	3,279	kN	21,084	60,817	30,450	kNm	250	1,400	1,471	kN
40	1,341	2,872	2,565	kN	33,933	55,036	41,774	kNm	483	219	1,400	kN
45	844	6,837	4,430	kN	55,386	81,143	68,142	kNm	774	80	1,260	kN
50	52	6,727	6,727	kN	56,845	81,545	69,142	kNm	775	170	1,260	kN
55	180	6,727	6,727	kN	57,339	81,545	69,142	kNm	782	49	1,315	kN
60	434	6,727	6,727	kN	49,827	81,545	69,142	kNm	782	6	1,315	kN
65	847	6,349	4,413	kN	38,879	81,545	69,142	kNm	784	43	1,315	kN
70	1,017	6,349	4,413	kN	29,876	80,797	44,000	kNm	784	0	1,315	kN
75	200	6,349	4,413	kN	15,817	14,862	14,8	kNm	784	161	1,315	kN

The program calculates and displays the shearing forces, longitudinal bulkhead shearing force and the bending moments in tabular form together with the limit values, and percent to the limits.

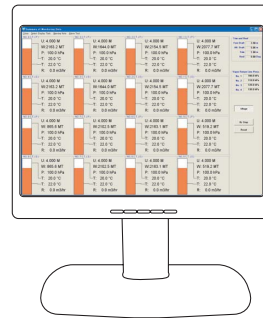
SYSTEM CONFIGURATION

Software (Manufacturer's scope)
 CD-ROM
 (When software only)

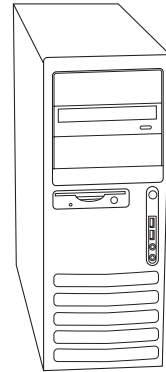


When we prepare a personal computer, install is made at our company.

Computer (Manufacturer's arrangement)



TFT



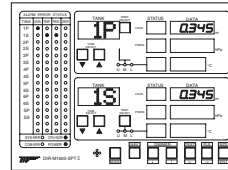
CPU



Various level gauges (Manufacturer's scope)
 SPT-3500 Hall IC type level gauge
 Others DC4 to 20mA output
 (Air purge, Pressure, and Level)



Interface (Manufacturer's scope)



DIR-M1600 series (For SPT-3500)

OPTION

Loading computing module and Damage stability

CALTIS II has a built-in Loading computing module and Damage stability as option.

Loading computing module and Damage stability have type approval of most shipping classification societies, and it can monitor level and operate loading function.

* Specification is subject to change without notice.

TOKYO KEISO CO., LTD.

Head Office : Shiba Toho Building, 1-7-24 Shibakoen, Minato-ku, Tokyo 105-8558

Tel : 03-3431-1625 (KEY) ; Fax : 03-3433-4922

e-mail : overseas.sales@tokyokeiso.co.jp ; URL : http://www.tokyokeiso.co.jp



ISO 9001 Certified
 JQA-2172