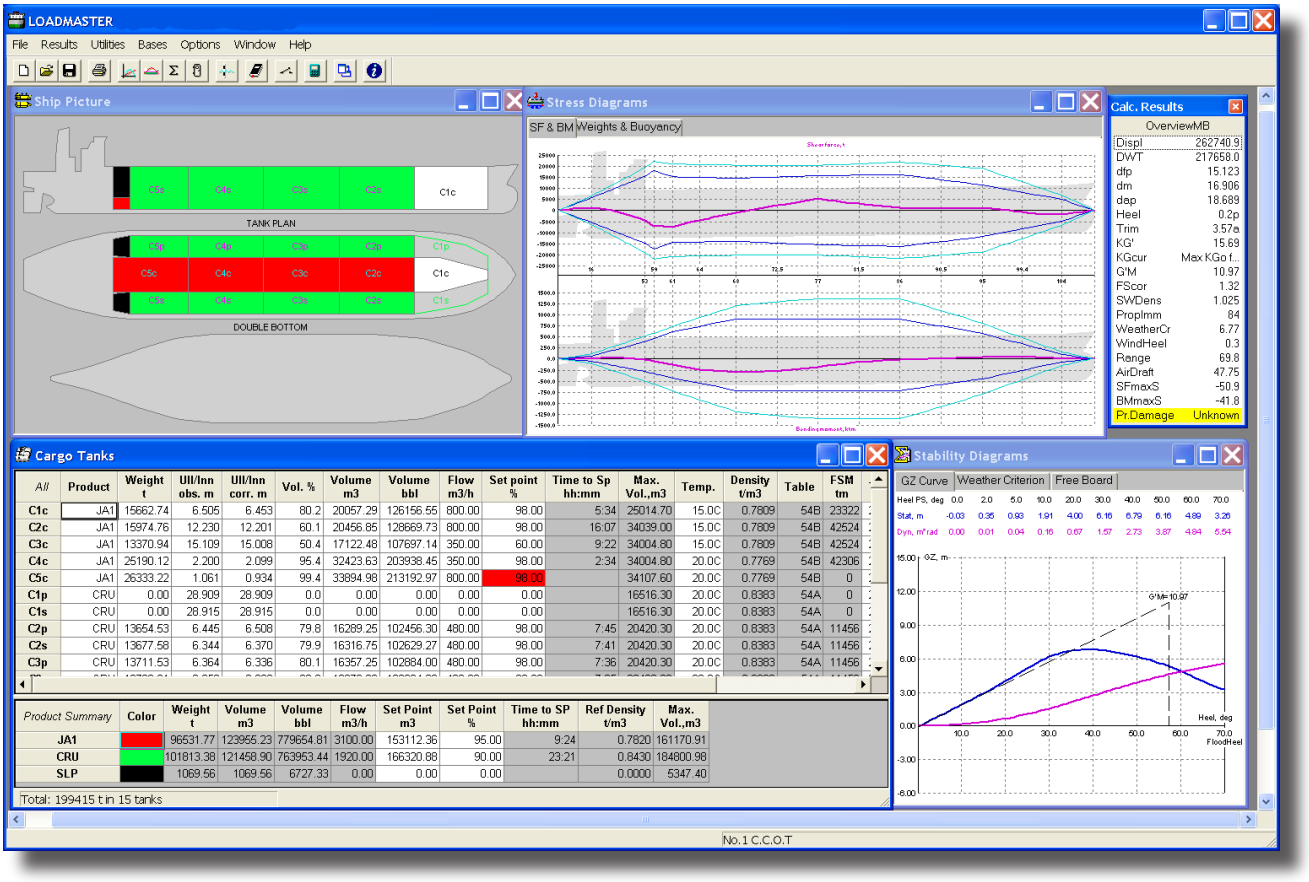
LOADMASTER® x5
Tanker Package



General Information

The LOADMASTER Tanker Package offers a complete solution for your tanker. The program covers not only the necessary stability and strength calculations but also focuses on items that save time. Functions for making onboard operation painless has been our beacon when we developed the program.

Oil majors demand more and more documentation and LOADMASTER features automatic printouts of cargo/ballast/stability results in cycles.

The pump log is an integrated part of the system and includes facilities to accommodate several grades as well as pump and manifold pressure.

The LOADMASTER offers an excellent user-friendly interface for new crew arriving onboard. In accordance with ISM-code it is essential to be able to start operation rapidly without compromising safety.

The LOADMASTER Tanker Package includes a communication interface to the level gauging system on-board. Interfaces are made in house and the Kockum Sonics standard includes more than 40 of the world's level gauging vendors.

Today tankers are facing IACS UR L5 regulation. The rule dictates that the loading computer has to include an approved damage calculation module. Either through Min GM / Max KG curves or through a direct damage calculation module. LOADMASTER offers both alternatives.

LOADMASTER®

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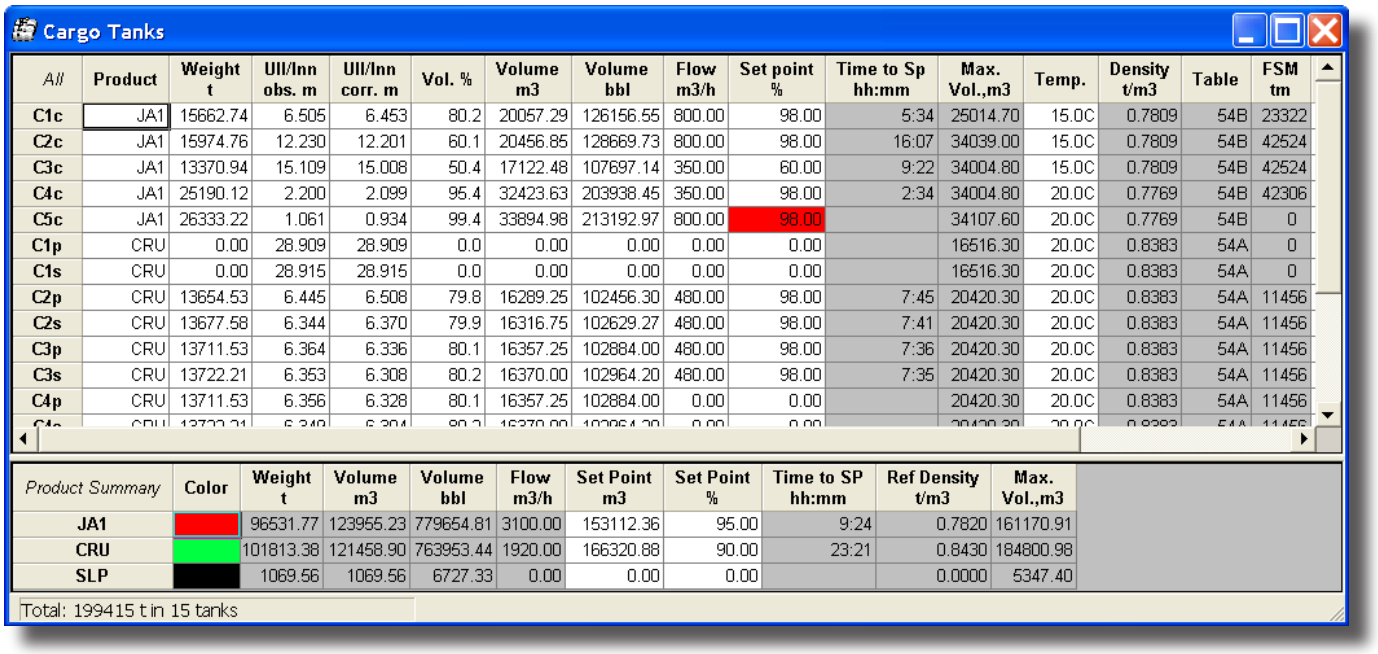
Liquid cargo plan

The liquid cargo plan is an advanced tool for handling oil and chemical cargo. The grid allows manual input or automatic on-line communication to ship's level gauging system. As soon as one value is changed all other corresponding values are recalculated automatically.

The liquid cargo plan presents each tanks details including Volume (%, m3, Bbls), weight (Tonnes, LT), Level (Ullage, Sounding), Density, Centre of Gravity (VCG, LCG, TCG), Grade Details, Temperature (Centigrade, Fahrenheit) and more. The column order can be modified in order to accomodate the user´s preferences. Pre-defined layout can easily be done by user for US or metric units etc.



All	Product	Weight t	Ull/Inn obs. m	Ull/Inn corr. m	Vol. %	Volume m3	Volume bbl	Flow m3/h	Set point %	Time to Sp hh:mm	Max. Vol.,m3	Temp.	Density t/m3	Table	FSM tm
C1c	JA1	15662.74	6.505	6.453	80.2	20057.29	126156.55	800.00	98.00	5:34	25014.70	15.0C	0.7809	54B	23322
C2c	JA1	15974.76	12.230	12.201	60.1	20456.85	128669.73	800.00	98.00	16:07	34039.00	15.0C	0.7809	54B	42524
C3c	JA1	13370.94	15.109	15.008	50.4	17122.48	107697.14	350.00	60.00	9:22	34004.80	15.0C	0.7809	54B	42524
C4c	JA1	25190.12	2.200	2.099	95.4	32423.63	203938.45	350.00	98.00	2:34	34004.80	20.0C	0.7769	54B	42306
C5c	JA1	26333.22	1.061	0.934	99.4	33894.98	213192.97	800.00	98.00		34107.60	20.0C	0.7769	54B	0
C1p	CRU	0.00	28.909	28.909	0.0	0.00	0.00	0.00	0.00		16516.30	20.0C	0.8383	54A	0
C1s	CRU	0.00	28.915	28.915	0.0	0.00	0.00	0.00	0.00		16516.30	20.0C	0.8383	54A	0
C2p	CRU	13654.53	6.445	6.508	79.8	16289.25	102456.30	480.00	98.00	7:45	20420.30	20.0C	0.8383	54A	11456
C2s	CRU	13677.58	6.344	6.370	79.9	16316.75	102629.27	480.00	98.00	7:41	20420.30	20.0C	0.8383	54A	11456
C3p	CRU	13711.53	6.364	6.336	80.1	16357.25	102884.00	480.00	98.00	7:36	20420.30	20.0C	0.8383	54A	11456
C3s	CRU	13722.21	6.353	6.308	80.2	16370.00	102964.20	480.00	98.00	7:35	20420.30	20.0C	0.8383	54A	11456
C4p	CRU	13711.53	6.356	6.328	80.1	16357.25	102884.00	0.00	0.00		20420.30	20.0C	0.8383	54A	11456

Product Summary	Color	Weight t	Volume m3	Volume bbl	Flow m3/h	Set Point m3	Set Point %	Time to SP hh:mm	Ref Density t/m3	Max. Vol.,m3
JA1		96531.77	123955.23	779654.81	3100.00	153112.36	95.00	9:24	0.7820	161170.91
CRU		101813.38	121458.90	763953.44	1920.00	166320.88	90.00	23:21	0.8430	184800.98
SLP		1069.56	1069.56	6727.33	0.00	0.00	0.00		0.0000	5347.40

Total: 199415 t in 15 tanks

Product summary

The Liquid Cargo plan grid has a summary portion. After the grade in each tank has been defined, LOADMASTER constantly sum up volume, flow and weight for each grade. An excellent tool for making intermediate reports for oil terminals.

Set point

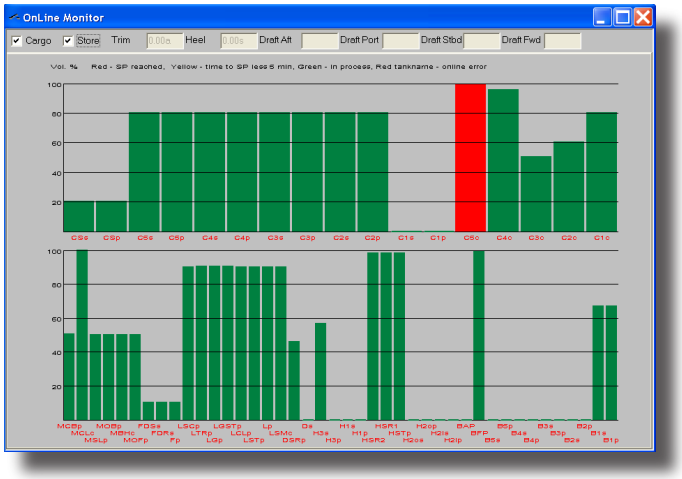
The user defines a certain set point for each tank. LOADMASTER calculates the time remaining until the set point is reached. Calculation is based on manually entered flow or online received level rate. The set point also appears in the product summary window. This gives the officer on watch a direct indication of remaining time of loading/discharging.

On-line:

The LOADMASTER is very flexible in communicating with other systems. LOADMASTER can receive level, temperature, pressure etc from any gauging system available. In return we send the volumes, strength and stability results to the ship's automation system.

The LOADMASTER can also communicate with Hull Stress Monitoring Systems (HSMS) as well as Voyage Data Recorders (VDR). Communication can be via Serial Communication, Ethernet, File Sharing etc.

Tailormade solutions can be done on request.



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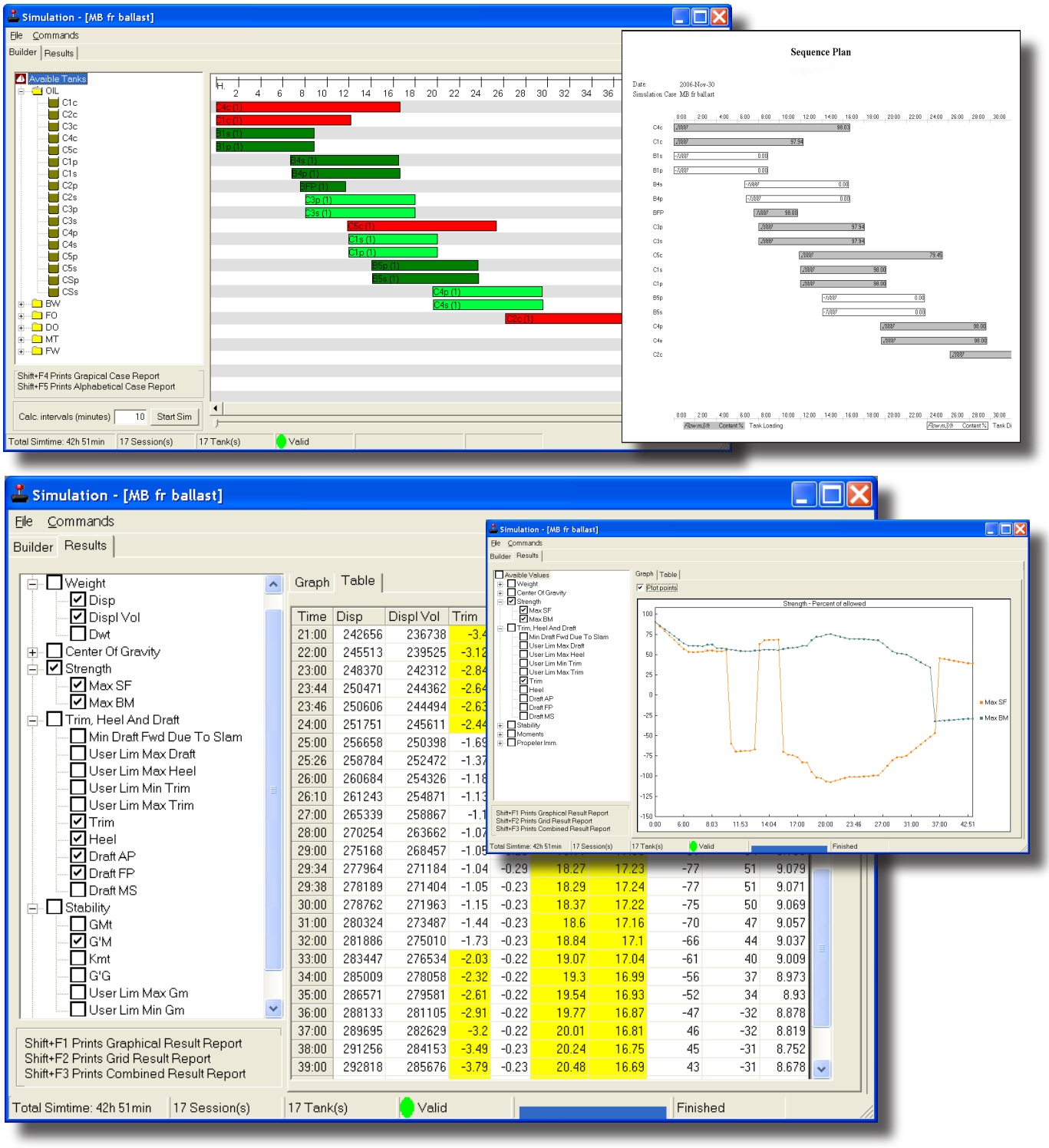
Simulation

For years the chief officer has struggled to get a proper work order to the crew. At least one that he knows does not result in critical situations with respect to strength and stability. LOADMASTER provides a state of the art graphical simulation. Today the officer can plan the loading/discharging sequence in a graphical mode easy to overview and modify. Tank bars are moved with the mouse and added/deleted from the work area via drag and drop functionality.

Calculations can be done over and over again until the most optimum sequence is found. When the sequence is optimized reports are generated by a click of the mouse. The simulation reports can be graphical or table based and come as work orders and also documents the results obtained from the LOADMASTER during the sequence i.e. weight, G'M, SF, BM etc all in compliance with oil major's requests.

Simulation reduces turn around times in ports and at the same time ensures that safety is not compromised. An investment with payback time calculated in hours.



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Functional description

Pump log

The pump log handles the presentation of the pumping sequence for one or more grades. Rate, quantity and local time/date will be recorded automatically. The user has the opportunity to customize the interface to the present situation.

The module is able to handle functions such as approximate time to completion (ETC). Shore/Ship stop as well as other information that are relevant in a pump log can be entered and the pump log can be printed as hard copy.

The pump log is able to handle a variety of reports that are used by ship, terminal, cargo surveyors, oil majors etc.

Reports

Integrated in the LOADMASTER are a number of reports needed in ship's administration. Reports for intact stability, longitudinal strength and damage stability are available.

There is a consolidated report for minimizing the volume of paper and at the same time making the necessary administration easy.

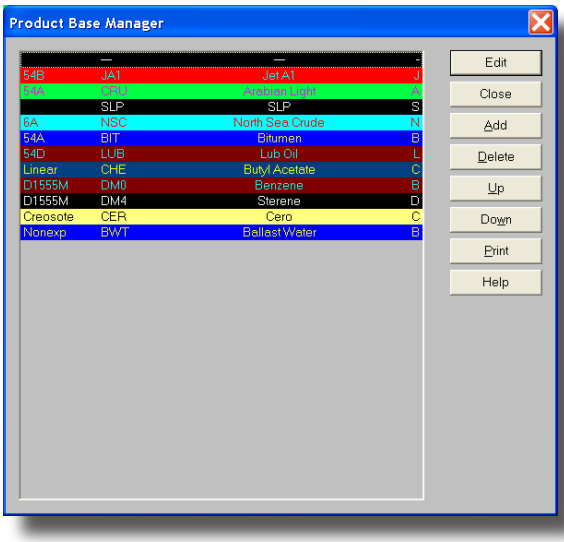
Specifically for liquid cargo there are reports for ROB/ OBQ, Vessel's experience factor (VEF) and Ullage report. The ullage report is configurated to include all tanks, selected tanks or per grade basis.

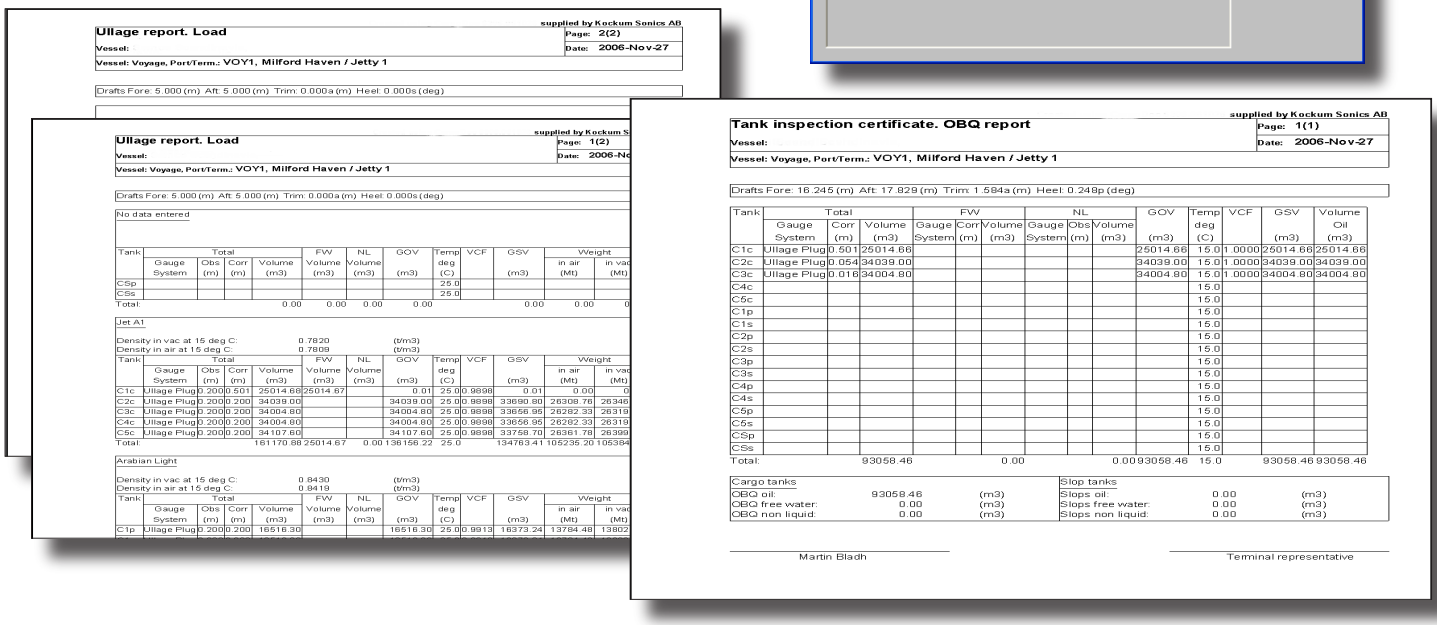
Product database

The product database is connected to the liquid cargo plan. The feature provides the possibility to enter cargo details with name, density and an assigned colour.

LOADMATER supports calculations according to ASTM tables No 6A, 6B, 54A, 54B and 54D. In addition the there are D1555M and linear expanding option for chemical cargoes. The product database recalculates density/API to standard temperature if entered in another format.

The assigned colour follows the grade throughout the entire program. Ship's pictures include same colour as well as product summary. The program comes with a great number of pre-defined grades from start.





Automatic report

Oil majors demand more and more documentations. In the LOADMASTER you can have automatic printouts of cargo/ballast/stability results in user defined cycles. Preview of reports is available before printing.

Elevation of point

LOADMASTER has a very practical feature for entering any point on the vessel and immidately get its vertical distance above the water line calculated. The user can define points such as manifold and gangway etc.

Subject to alteration without notice.

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