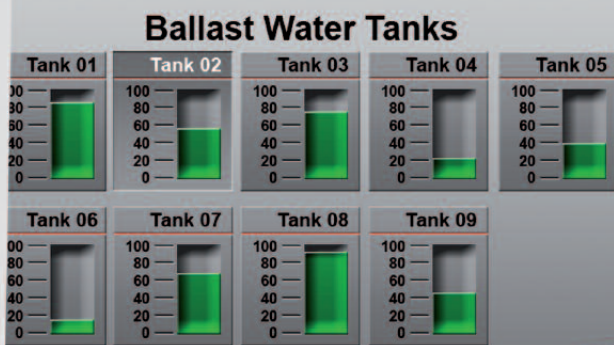


Tank Content Measuring System

Tank Content Measuring System

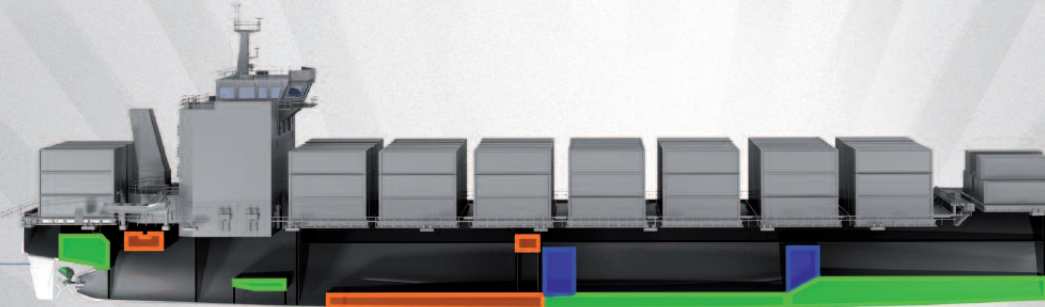
Control
Control
every move



Compact system to control
all tanks on board.

Barksdale
CONTROL PRODUCTS
CRANE Barksdale, Inc./Barksdale GmbH
A Subsidiary of Crane Co.

Barksdale – modern tank content measuring system



Overview of the tanks: e.g. ■ fresh water ■ fuel oil ■ ballast



Short description

The tank content measuring system from Barksdale is based on a programmable PLC. High speed, quick reaction and reliability are its characteristics. Depending on the media and application different Barksdale transmitters are used to obtain precise level measurement.

Security item: trim

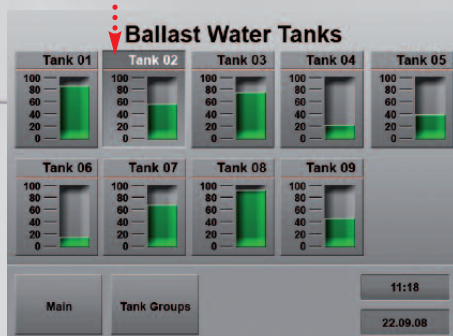
For example the trim of a ship is depending on the loading and the wind. Due to the filling of the ballast water tank, service tanks and engine tanks these factors can work against each other influencing the position of the ship. The precondition for trim is the exact measuring of the tank contents under various conditions and media, like fresh water, ballast water, fuel oil and bilge.



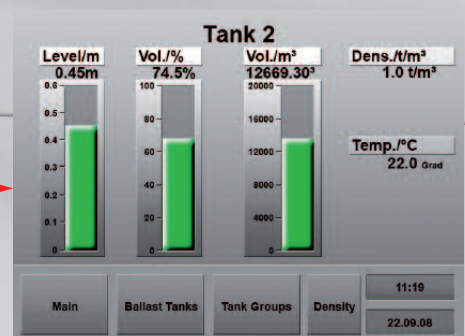
The menu will guide you easily through the program



Overview of the tanks



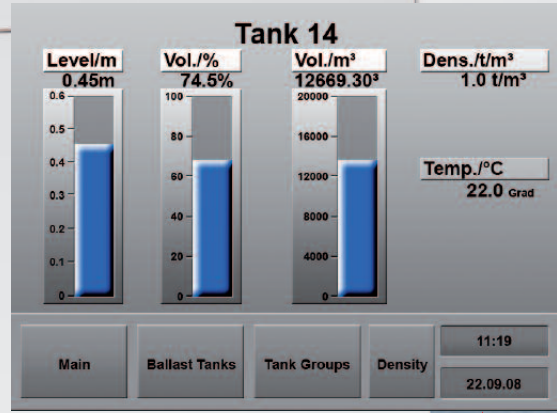
Example: Ballast tank



Level indication at Ballast tank No.2

Nr.	Beschreibung	Gewicht [t]	LCG [m]	VCG [m]	TCG [m]	RHO [t/m3]	IB* RHO [m³t]
HEAVY OIL							
1	TK.1 DO.DO.TK.4 C/P	95.33*	41.69	0.67	-1.30	0.970	0
2	TK.2 DO.DO.TK.4 C/S	95.44*	41.70	0.67	1.30	0.970	0
3	TK.3 WING TANK 6 F	87.63*	35.88	2.97	-6.69	0.970	0
4	TK.4 WING TANK 6 S	87.63*	35.88	2.97	6.69	0.970	0
5	TK.5 DEEP TANK 2 F	99.93*	56.17	4.22	-4.42	0.970	0
6	TK.6 DEEP TANK 2 S	120.00*	56.15	4.91	4.70	0.970	17
7	TK.7 DAY TANK 3	16.68*	8.11	7.93	5.89	0.970	0
8	TK.8 SETTLING TK.1 S	37.48*	24.74	6.14	5.60	0.970	0
9	TK.9 SETTLING TK.2 S	37.08*	26.97	6.13	5.72	0.970	0
10	TK.10 OVERFLOW TK.1 S	22.49*	56.14	7.97	1.46	0.970	0
11	TK.11 DOBO OVERFL 2 C	14.72*	26.31	0.68	0.16	0.970	0
	TOTAL:	714.41	42.42	3.41	0.95		17
GAS OIL							
12	TK.12 DEEP TANK 1 F	0.00	0.00	0.00	0.00	0.870	0
13	TK.13 SETTLING TK. F	0.00	0.00	0.00	0.00	0.870	0
14	TK.14 DAY TANK F	0.00	0.00	0.00	0.00	0.870	0
	TOTAL:	0.00					
LUBRICATION OIL							
15	TK.21 SUMP TANK C	0.00	0.00	0.00	0.00	0.890	0
16	TK.22 STOR.TK. M.E. S	0.00	0.00	0.00	0.00	0.890	0
17	TK.23 STOR.TK. AUX. F	0.00	0.00	0.00	0.00	0.890	0
18	TK.24 STOR.TK. GEAR F	0.00	0.00	0.00	0.00	0.890	0
19	TK.25 HYD.OIL VPP. F	0.00	0.00	0.00	0.00	0.890	0
	TOTAL:	0.00					

The complete parameters of the system are from the information (tank curves) provided by the shipyard.



The actual level of the tank contents can be shown as weight or in a percentage of the maximum contents.

The transmission of the signal of the level transmitter is effected by 4-20 mA analog signals.

UPA2 LMK457-GL (flange)
Lateral mounting in case there is no space at the top of the tank.
Measuring principle: hydrostatic
Material: CuNiFe

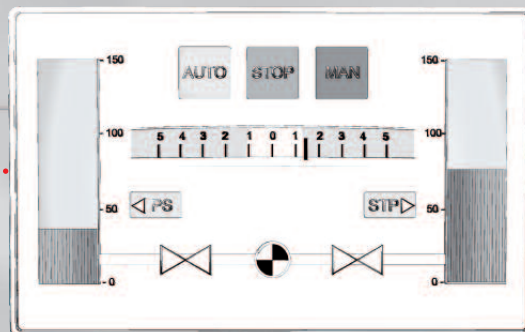
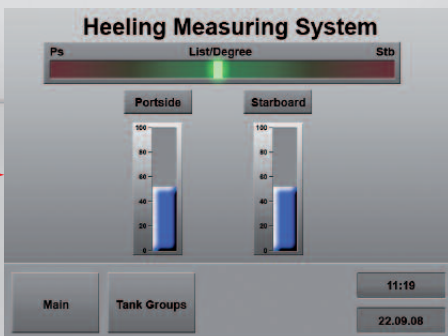
UPA2 LMK457-GL, level probe*
This level probe is used in applications with fully automatic tank control.
Measuring principle: hydrostatic
Material: CuNiFe
*also available as high temperature version for fuel oil tanks up to 125°C

BNA (Bypass Level Indicator)
Used in smaller ships where visual indication is requested.
Measuring principle: float with level probe
4-20 mA

USE3000 MU3L
Used in tanks with pressurized tanks.
Measuring principle: float system

Heeling Measuring System

An inclinometer (goniometer) measures the angle of two levels (list and trim) in degrees and delivers a 4-20 mA signal to actuate the anti-heeling system. The boundary values defined in degrees are marked in the PLC.



Barksdale – Engineering the future

Today's markets demand suppliers that are flexible and dynamic. Lean production processes and efficient management makes Barksdale a world-class provider of innovative products and comprehensive customer service.

Our products cover the full range of mechanical and electronic pressure, temperature, level and flow control for liquid and gaseous media. With premium product solutions, we provide the highest standards of performance and reliability for the most challenging control tasks in any manufacturing environment.

Barksdale has the advantage of over 50 years market experience, a global distribution network and is part of the Crane Co. family, one of the world's largest manufacturers of engineered products. These facts guarantee you a perfect solution.

The special environment of shipbuilding demands quality measurement products. Certified with the GL approval, Barksdale products are used every day in all areas of shipbuilding.

With our experience, know-how and our personal involvement we provide solutions to your desires and demands.



**BUREAU
VERITAS**



DNV

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changes without notice.

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