EQUIPMENT DATA SHEET - BALLAST CONTROL AND MONITORING

Control of the ALE barge ballasting system can be offered at two levels.

- Local control via the mounted panel situated on each hydraulic power pack, allowing the operator to control each pump or flow distribution butterfly valve individually.
- Multiple tank PC remote control utilising in-house designed software and accompanying PLC control interface panels mounted on each power pack.

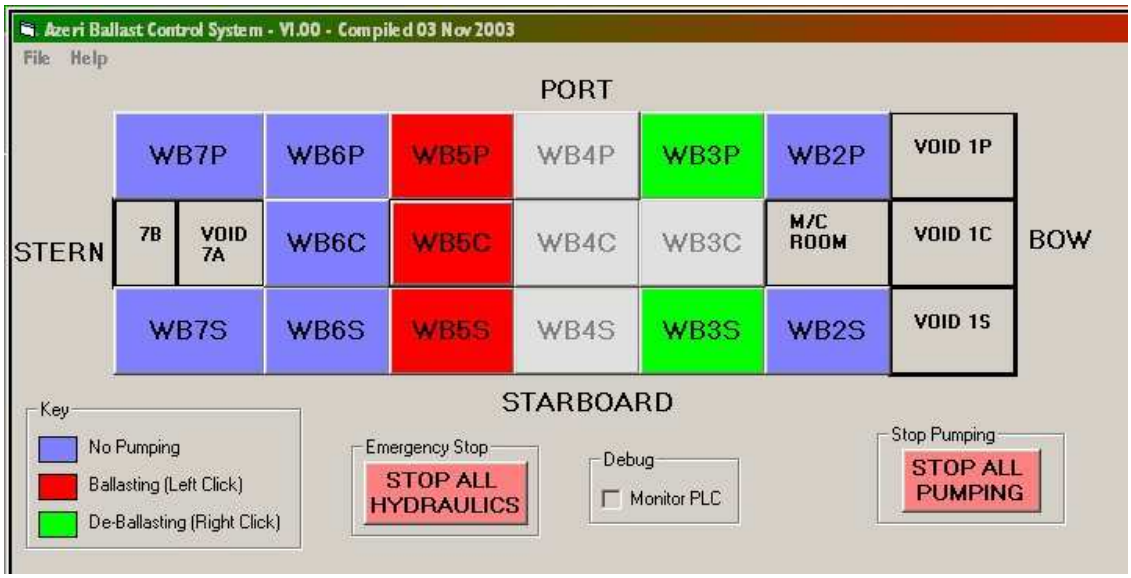
The remote control is situated in the central control cabin, typically positioned on the deck of the barge. The software allows the user to mimic the layout of the barge, and tank configurations.

ALE holds an array of popular barge configurations on databases, minimising the set up period of the control system.

The central control allows the operation of any number of pumps or butterfly valves at the push of a single ‘screen’ button.

The ALE barge ballasting system comprises:-

- Hydraulically driven, high capacity, submersible pumps.
- Self contained, diesel driven power packs.
- Flow distribution and control elements.
- Central control and monitoring system..
- Engineering & barge survey.



For reference only

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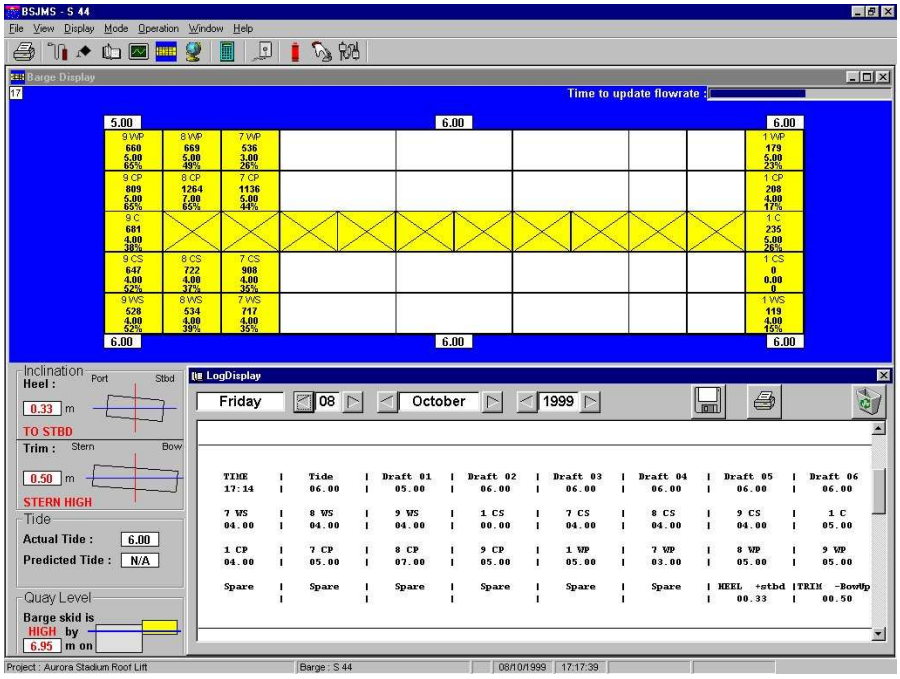
Ballast monitoring is via ALE's in-house developed Ballast Data Monitoring Systems or BDMS.

The Windows based system uses accurate pressure sensors located in each ballast tank, various points around the barge, and on the quayside, all connected to a central computer interface.

The user is presented with a real time graphical image of the barge showing tank depths, draughts, and tidal condition. A barge hydrostatics database allows the tank readings to be converted to individual or collective ballasts, flow rates, displacements, ullages or other data formats as the client or warranty surveyor requests.



SENSOR	
Type	6100 Submersible
Input	Range: 0-1 Bar Gauge. Overpressure; 2x
Electrical	Span; 0-10 V.DC. Temperature; -40 to + 100℃
Performance	Accuracy: ±02.% F.R.O.
Construction	17-4, 15-7 No & 316 Stainless Steels
Options	Load Cells, LVDTS, Thermocouples

HARDWARE	
Construction	Multiple PLC inter-face units mounted inside military flight case
Inputs	32 Data channels (10/24 V. DC excita-tion) 66 MHz clock
Output	Conventional win-dows based laptop or PC

SOFTWARE	
Samplin g Rate	62 Channel./Sec.
Data	- BargeTank - Soundings - Ullages and Ballast Content - Barge Draughts -Tidal Data - Pump Flow Information - Mathematical Filtering/Damping

For reference only