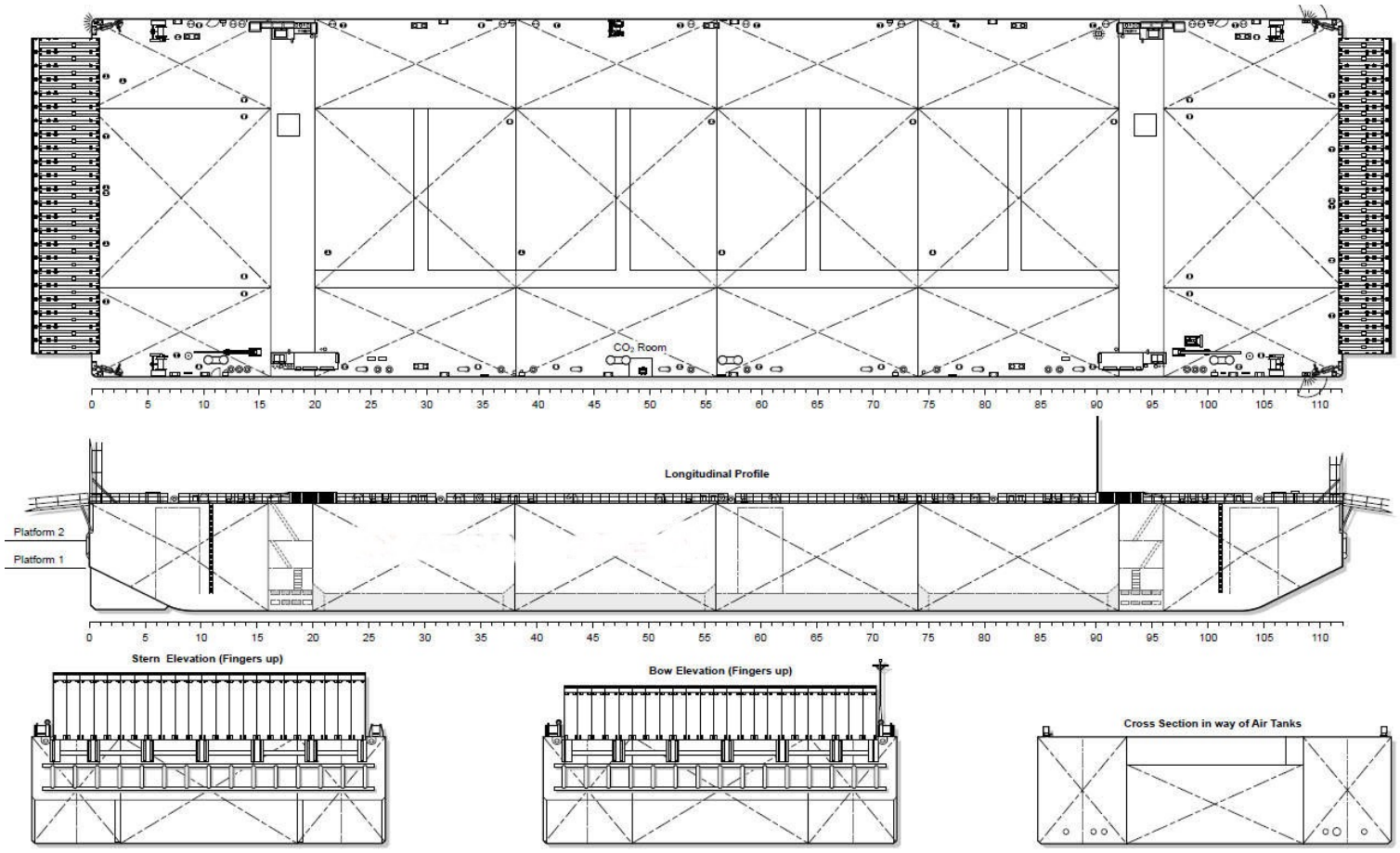
Heavy Lift Pontoon Barge

Heavy Lift Pontoon Barge - SPECS

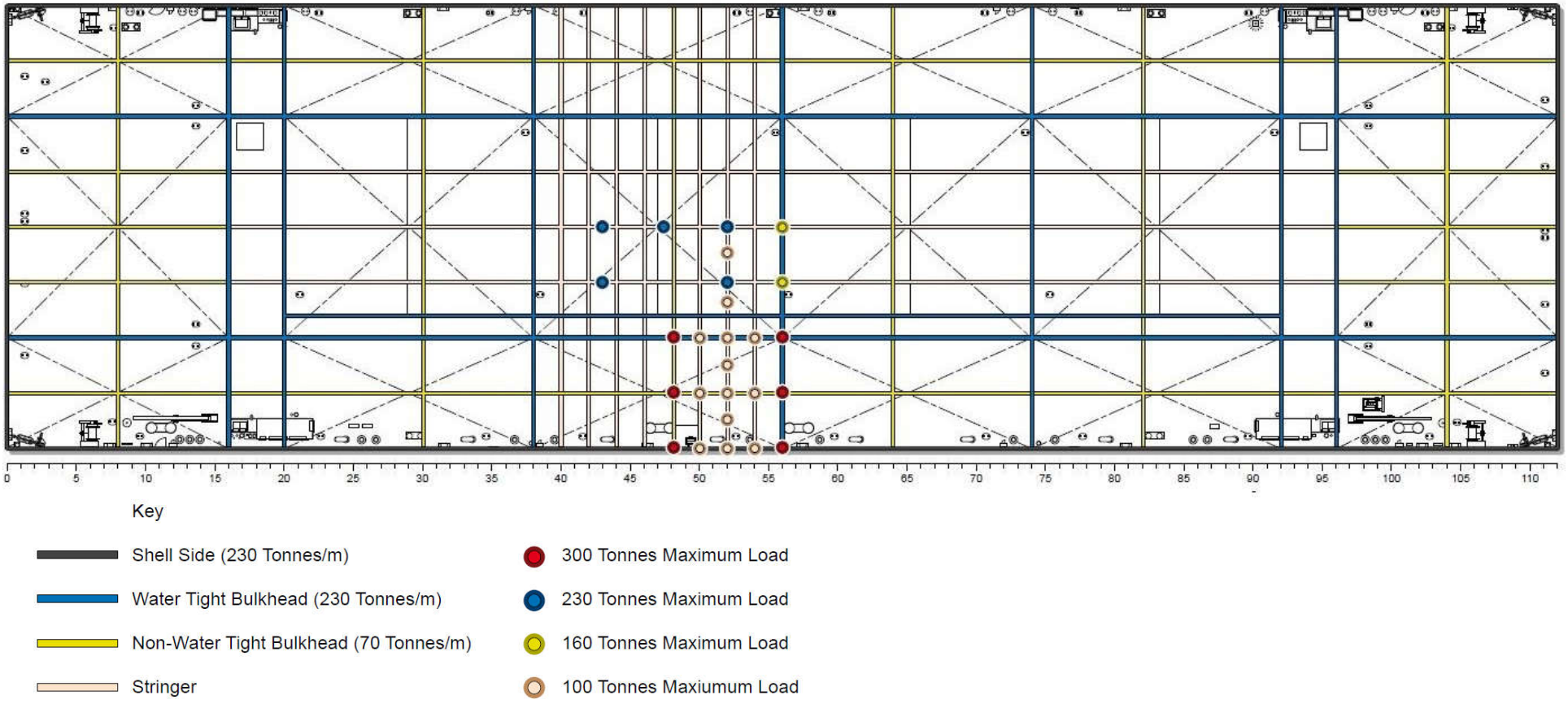
- 2013 built multi-purpose vessel
- Dimensions: 140m x 40m x 12m
- Draft (min/max): 2.7m / 11.1m
- Deadweight: 32,000t
- Deck area: 5,600m2 @20t/m2
- Ballast capacity: >24,000m3/hr
- Hydraulic Ramp & Mooring systems

Heavy Lift Pontoon Barge – General Arrangement

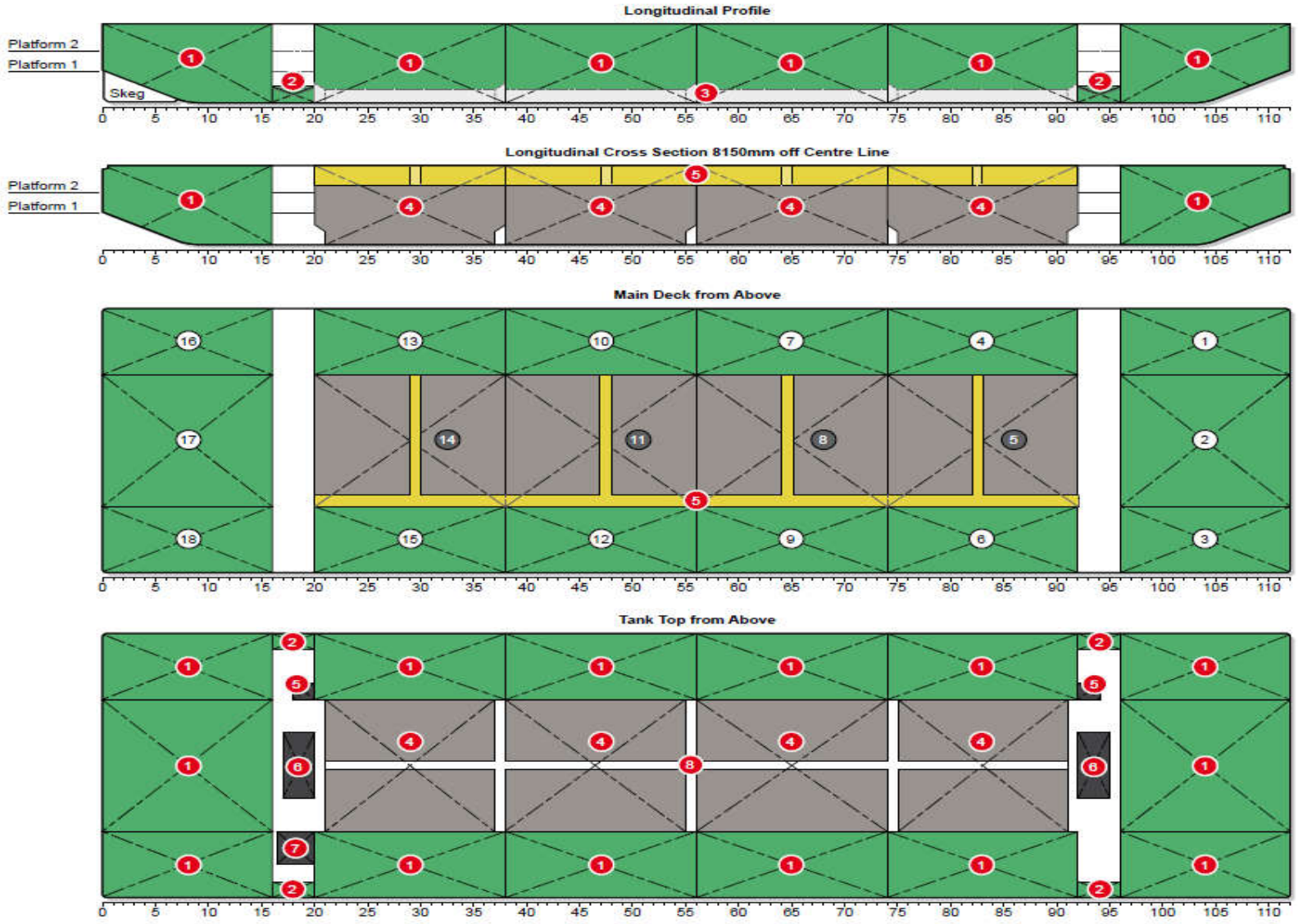


General Arrangement

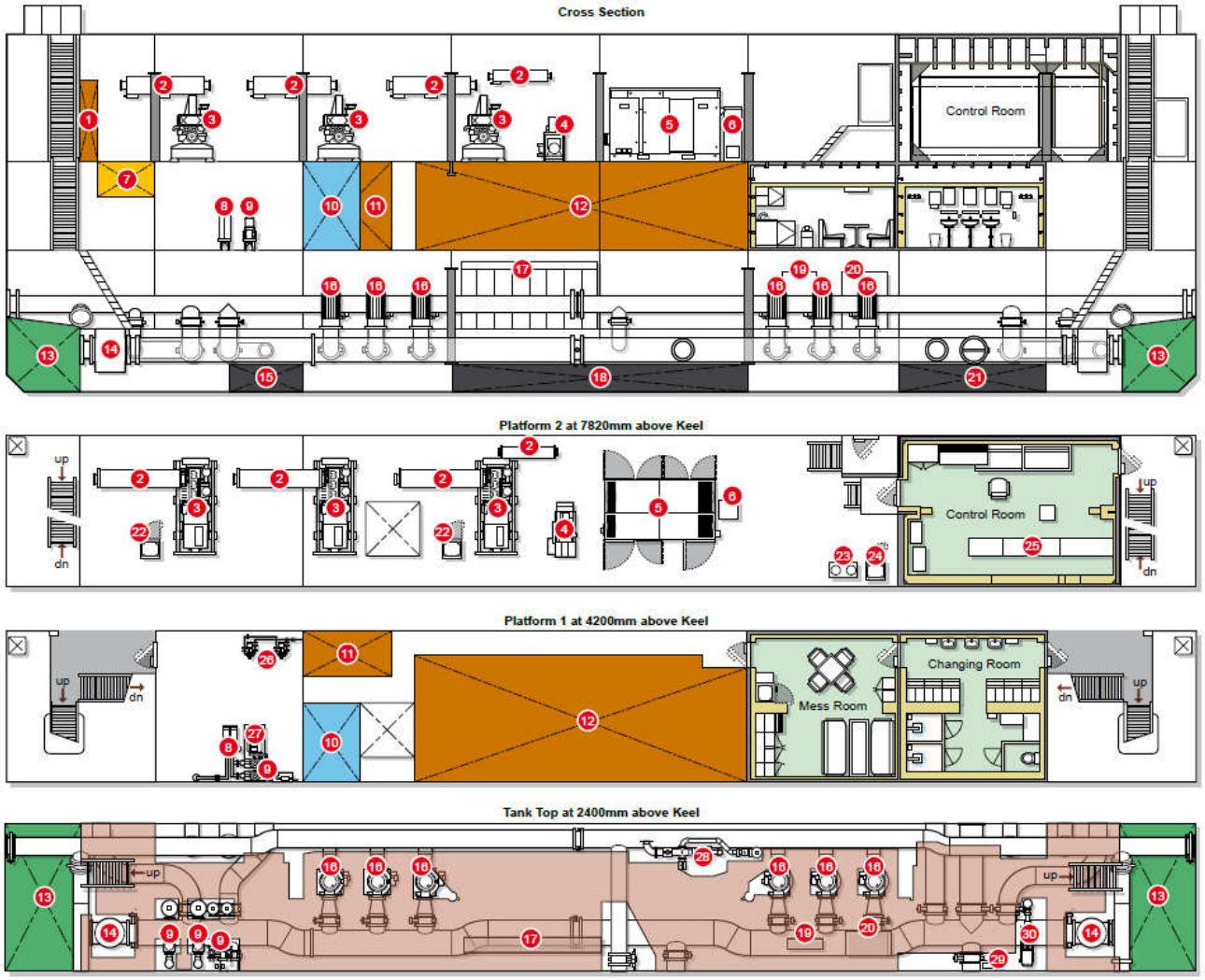
- General deck loading capacity: 20 t/m^2 distributed load
- SPMT's can be loaded up to 40-48t per line
- Point Load & Line load capacities as per below



Heavy Lift Pontoon Barge - Tank layout



Heavy Lift Pontoon Barge - AFT Pump Room

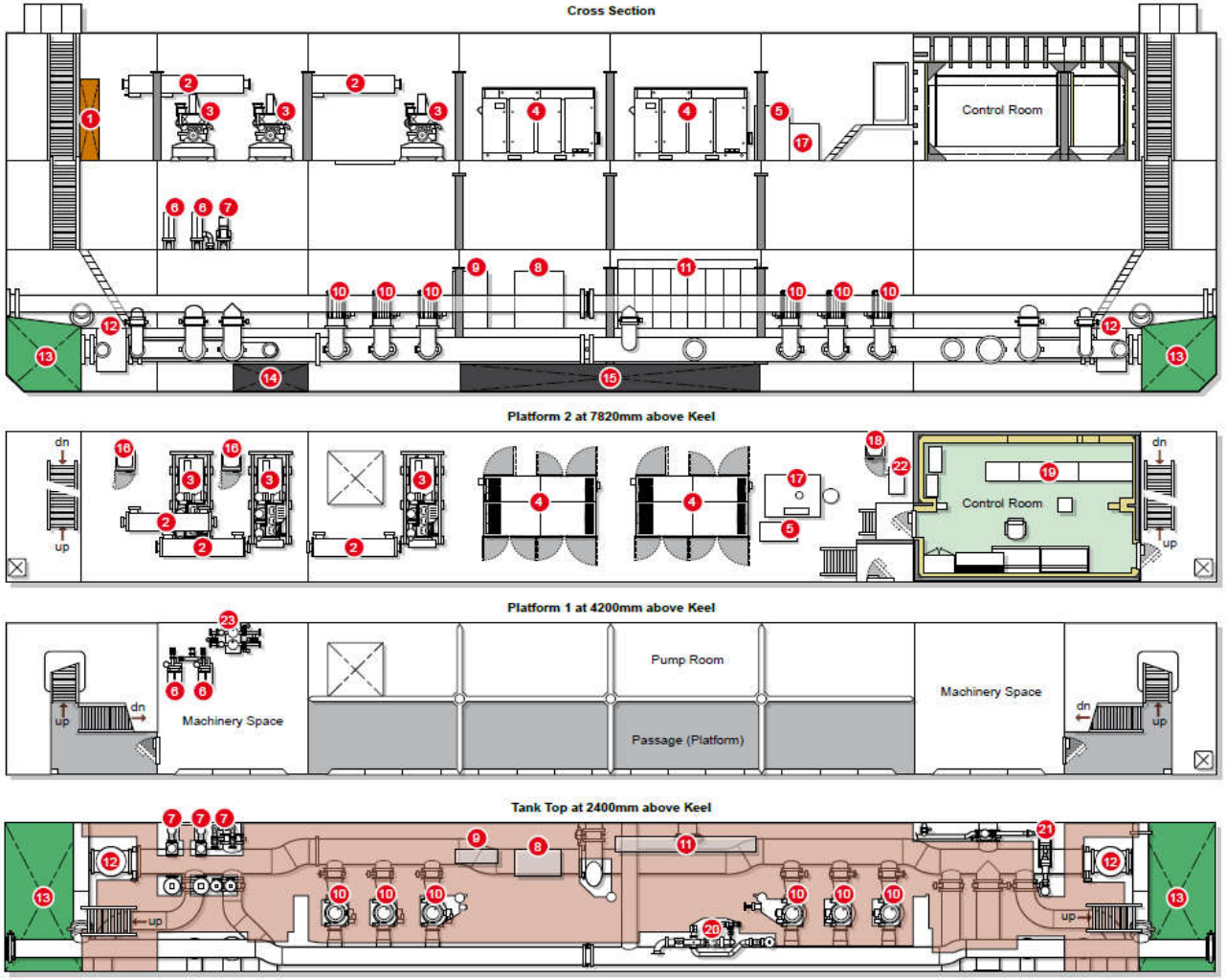


Key

1 - Fuel Oil Day Tank
2 - Exhaust Silencer
3 - Main Generator
4 - Harbour Service Generator
5 - Air Ballast Compressor
6 - Starter Board Ballast Air Compressor (Aft)
7 - Hydraulic Oil Tank
8 - Plate Cooler
9 - Sea Water Pumps
10 - Fresh Water Tank
11 - Fuel Oil Overflow Tank
12 - Fuel Oil Bunker Tank
13 - Sea Chest
14 - Sea Strainer
15 - Sludge Tank
16 - Ballast Pump
17 - 400V Ballast and Starter Switchboard (Aft)
18 - Bilge Holding Tank
19 - Solenoid Box for Valves
20 - Hydraulic Power Unit for Valves
21 - Sewage Tank
22 - Start Battery Cabinet
23 - Hydraulic Power Unit — Mooring
24 - General 24V Supply Cabinet
25 - Control Room Switchboard
26 - Fuel Oil Transfer Pumps
27 - Hydrophore
28 - Bilge Pump
29 - Sewage Pump
30 - Fire Pump

Heavy Lift Pontoon Barge Service Tunnel

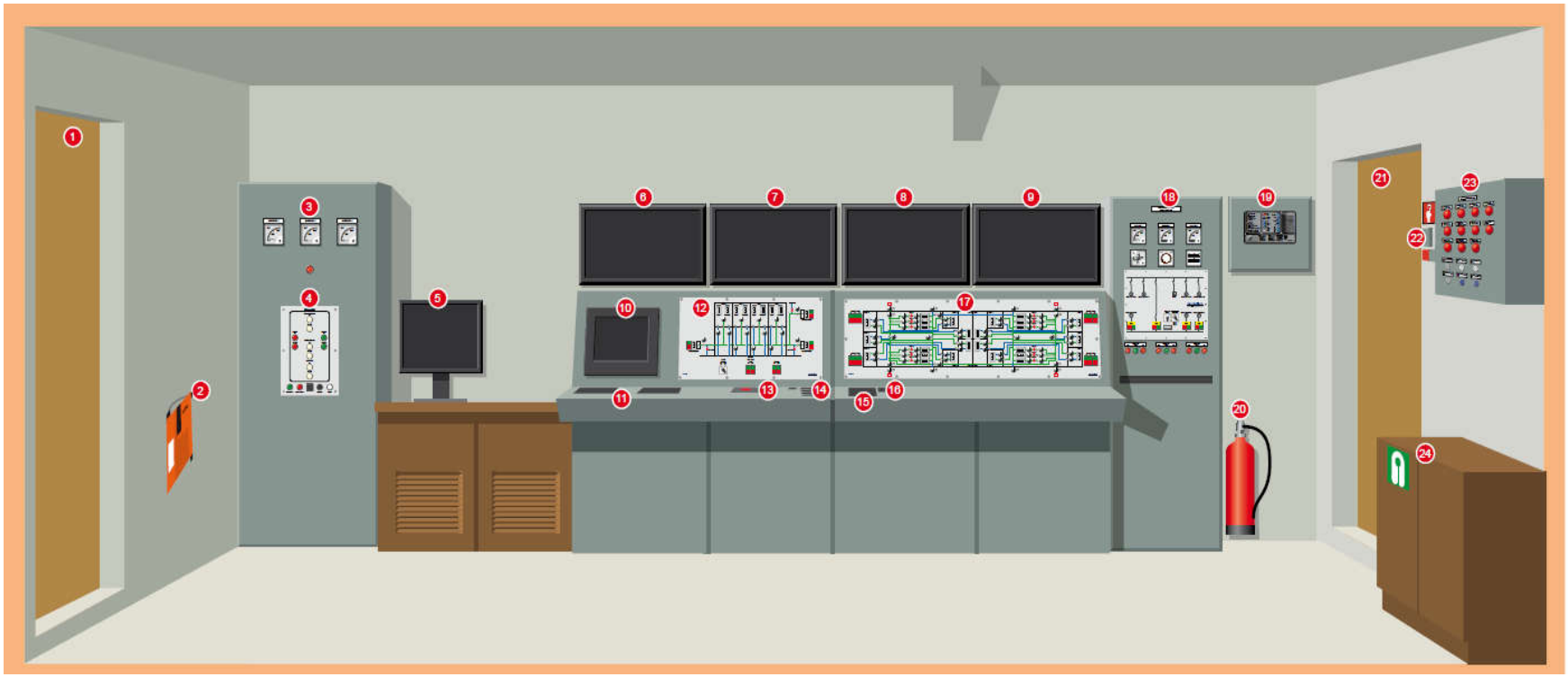
Heavy Lift Pontoon Barge Forward Pump Room



Key

1 - Fuel Oil Day Tank
2 - Exhaust Silencer
3 - Main Generator
4 - Air Ballast Compressor
5 - Starter Board Ballast Air Compressor (Forward)
6 - Plate Cooler
7 - Sea Water Pump
8 - Hydraulic Power Unit for Valves
9 - Solenoid Box for Valves
10 - Ballast Pump
11 - 400V Ballast and Starter Switchboard (Forward)
12 - Sea Strainer
13 - Sea Chest
14 - Sludge Tank
15 - Bilge Holding Tank
16 - Start Battery Cabinet
17 - Hydraulic Power Unit — Mooring
18 - General 24V Supply Cabinet
19 - Control Room Switchboard
20 - Bilge Pump and Oily Bilge Pump
21 - Fire Pump
22 - 400/230V Transformer
23 - Fresh Water Cooling Pumps

Heavy Lift Pontoon Barge Control Room



Key

1 - Entrance Door A60 Self-Closing to Generator Room
2 - EEBD
3 - Power Generation Indication from Forward Pump Room
4 - Navigation Deck Lighting Control and Indication Panel
5 - Loading Computer Screen, Server and Slave Loading Computers in Cupboard Below
6 - AMS Screen
7 - Loading Computer Screen Display
8 - Intact Stability and Longitudinal Strength Screen Display
9 - CCTV Screen Display
10 - AMS Main Interface Screen Display
11 - Keyboard with Built-in Trackball for AMS Control (Left for Main Screen - Right for Bulkhead Mounted Screen)
12 - Air Ballast System Operation Mimic, Plus Fire Pumps and Valve Hydraulic Power Unit Start/Stop Buttons
13 - Wind Speed and Direction Indicator
14 - General Alarm Activation Button (Pulse and Continuous), Plus Alarm Indication for General Alarm, Fire, Engine Room and CO_2
15 - Echo Sounder Main Panel
16 - Depth Indicator
17 - Ballast System Operation Mimic
18 - Synchronising Panel for Forward Generators
19 - Fire Alarm Slave Panel
20 - Fire Extinguisher 6kg Dry Powder
21 - Primary Escape Door Leading to Starboard Stairway
22 - Manual Fire Alarm Smash Box
23 - Emergency Stop Control Panel
24 - Life Jacket Stowage Cupboard

Heavy Lift Pontoon Barge Air cpmpressors & Generators

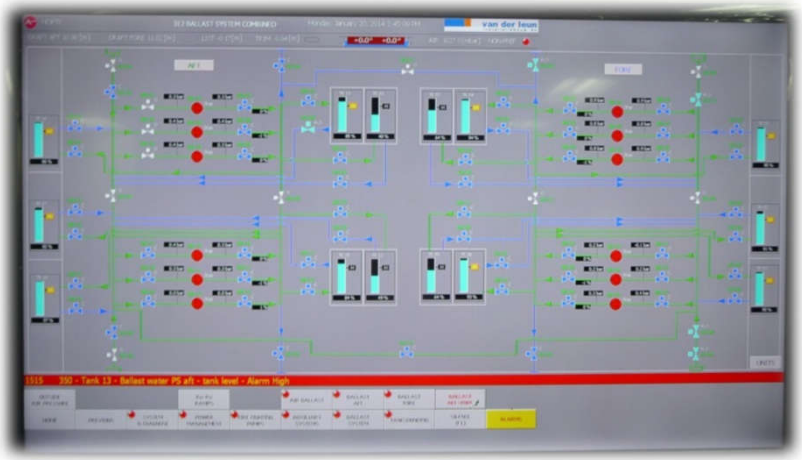
Air Compressor Units
3 x Atlas Copco ZA5 4,200 m^3/hour

Generators
6 x Caterpillar C18 480kW

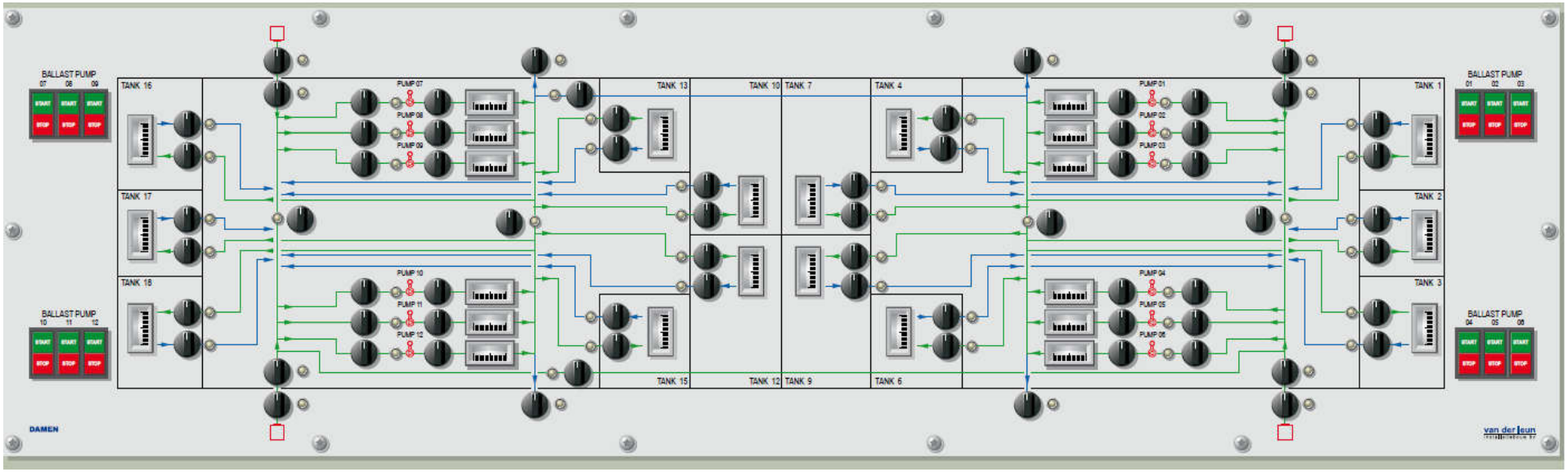
Heavy Lift Pontoon Barge - Water Ballast system

Pumps

12 x Azcue 2000m^3/hr



Ballast system operation by computer
(1 man only)



Ballast system operation by Mimic Panel

- Internal ballast system
  - Protected from the elements
  - Permanently located, maintained and tested on regulated intervals
- Enormous ballasting capacity of 36,600m^3/hour
  - 12x water ballast pumps of 2,000m^3/hour
  - 3x air compressors of 4,200m^3/hour
- The ballast system has been designed with 100% redundancy.
- Roll and Trim can be compensated with pumping clean water internally from tank to tank
- Deck is clear of pumps, hoses and piping for flexible SPMT configurations and support stool locations.
- Tide independent unloading solution:
  - In case problems arise during ro-ro operations and SPMT is partly on ship or quay, the Pontoon can pump through the tide cycle using air tanks

General Systems

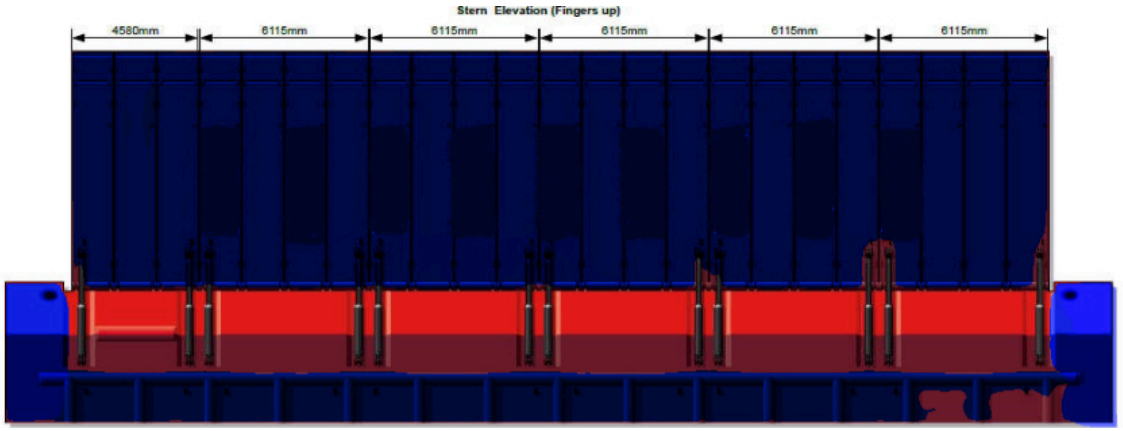
- Ballast
- Ballast Stripping
- Air Ballast
- Hydraulic Valve System
- Cooling Water
- Fuel Oil
- Lube & Hydraulic Oil
- Bilge
- Deaeration
- Fresh Water
- Sewage
- Hydraulic Mooring
- Hydraulic Ro-Ro Ramp
- Ventilation + A/C

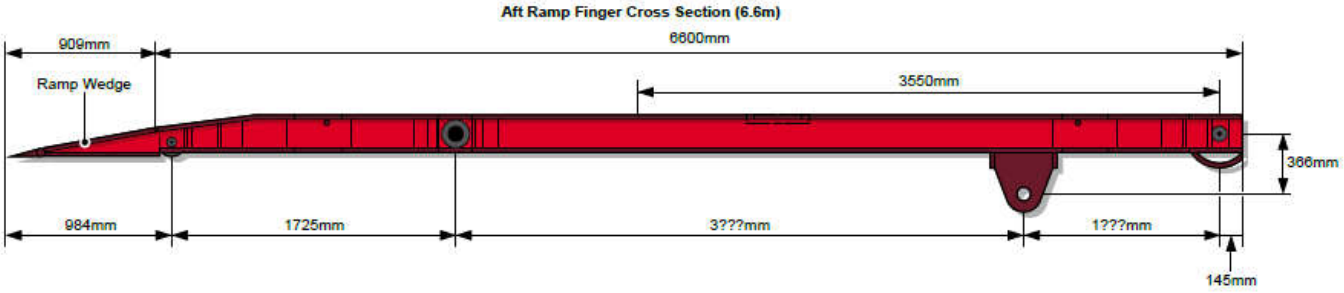
Electrical Systems

- Power Generation
- Main Switchboard, Control & Power Distribution
- Main & Emergency Lighting
- AMS Control, Alarm & Monitoring
- Impressed Current Protection
- Navigation Aids
- Communications & CCTV

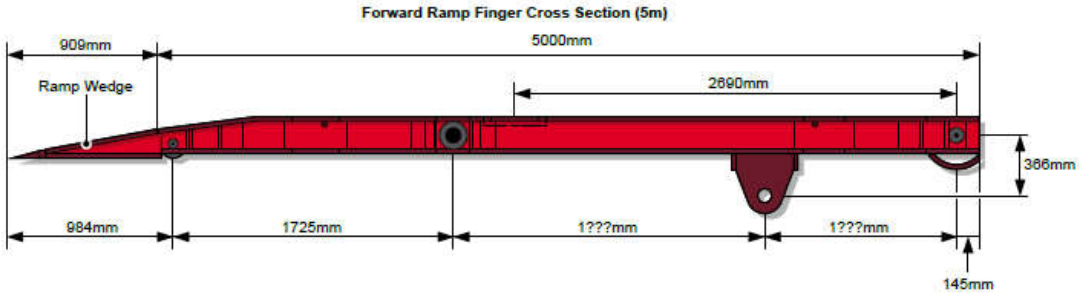
Safety Systems

Heavy Lift Pontoon Barge Hydraulic Ro-Ro Ramps





Specification	
Wedge Mass:	672kg
6.6m Ramp Mass:	6209kg
Aft Ramp Section Mass:	6881kg



Specification	
Wedge Mass:	672kg
5m Ramp Mass:	4705kg
Forward Ramp Section Mass:	5377kg

- Designed for maximum axle loads of strongest SPMTs on the market to provide the safest possible ramp solution.

- Their hydraulic capability eliminates crane and/or forklift work (potential causes of incidents during a ro-ro operation).

- Limits exposure of field personnel to the elements by eliminating tasks.