

BB ELECTRA – Northern Europe's first fully electric tug



Shipbuilder:.....**Sanmar Shipyards**
 Designer:.....**Robert Allan Ltd**
 Vessel's name:.....**BB Electra**
 Owner/Operator:.....**Buksér og Berging**
 Country:.....**Norway**
 Flag:.....**Norway**
 Total number of sister ships already completed (excluding ship presented):.....**0**
 Total number of sister ships still on order:.....**0**
 Country:.....**Unspecified**
 Country:.....**February 2024**

Designed by Canada's Robert Allan Ltd (RAL) and built by Turkey's Sanmar Shipyards, *BB Electra* has been hailed as Northern Europe's first fully electric tug. The Sanmar ElectRA 2200-SX design, part of RAL's successful battery-electric ElectRA series, was delivered to Norway-headquartered operator Buksér og Berging, and is based at the Port of Oslo, replacing an older, diesel-powered tug and providing general tug support for vessels navigating through the Port of Oslo and the inner Oslofjord.

The ElectRA 2200-SX design is optimised for emissions-free/low-emission ship-assist and towing operations. With two Schottel SRP340 LE L-drives, it delivers in excess of 45tonnes of bollard pull and can reach speeds up to 12knots. The compact hullform and skeg are based on the RAL-designed and Sanmar-built RAMParts 2200-SX Sirapinar series, of which there have been over 20 deliveries and counting.

Making use of 1,718kWh of Corvus Orca lithium-ion batteries, the vessel can operate continuously on battery power for up to four hours, and is expected to reduce annual CO₂ emissions by as much as 22tonnes. The Port of Oslo has installed a dedicated shore charging facility at Sjursøya which can charge the batteries in less than three hours,

reducing downtime and allowing optimal tug utilisation.

The vessel is fitted with a single 940kW Caterpillar C32 marine generator set. This genset provides back-up propulsive power for extended operations and also acts as the primary power source for the tug when engaged in its secondary role: firefighting operations. The tug is equipped with two firefighting monitors, each capable of discharging 600m³/hour of water or 150m³/hour of firefighting foam. RAL says that it hopes *BB Electra* will "inspire other operators to follow suit".

TECHNICAL PARTICULARS

Length, oa.....22.4m
 Breadth, moulded.....10.84m
 Depth, moulded.....4.4m
 Gross tonnage.....277
 Displacement.....464.3tonnes
 Design, draught.....3.20m ABL
 4.83m navigational (to bottom of skeg)
 Design, deadweight.....43tonnes
 Lightweight.....421tonnes
 Max speed.....11.8knots
 Bollard pull.....48tonnes

Propulsion

Main engine(s):
 Number of engines.....1 main genset
 Make.....Caterpillar
 Model.....C32 IMO Tier III compliant
 Output of each engine.....940kW

Propeller(s):

Number of propellers.....2
 Make.....Schottel
 Model.....SRP340 LE L-Drives
 Diameter.....2.1m
 Material.....CuAl10Fe5Ni5-C-GS
 Fixed/controllable pitch.....Fixed
 Open/nozzled.....Nozzled

Deck machinery and bridge electronics

Crane(s):
 Number of cranes.....1
 Make.....Palfinger
 Model.....PK 11001MC
 Capacities/SWL.....0.5tonnes@10m

Winch(es):

Number of winches.....1
 Make.....DMT
 Model.....TW-E250KN
 Capacities.....125tonnes (brake holding)
 Line pull (1st layer): 25 tonnes@9m/min
 8tonnes@25m/min

Towline: 2 x 110m@44mm diameter line

Other deck machinery/equipment:

- Data Hidrolik DTH 50-120 tow hook
 - Data Hidrolik DTC 4000 EP-L rope reel

Bridge electronics:

Radar(s).....Furuno FAR-1518 BB
 Autopilot.....Simrad AP 70 Mk2
 GPS.....Furuno GP-170

Onboard capacities:

Fuel oil.....19.1m³
 Fresh water.....7.7m³
 Sullage.....5.7m³
 Foam.....6.5m³

Complement:

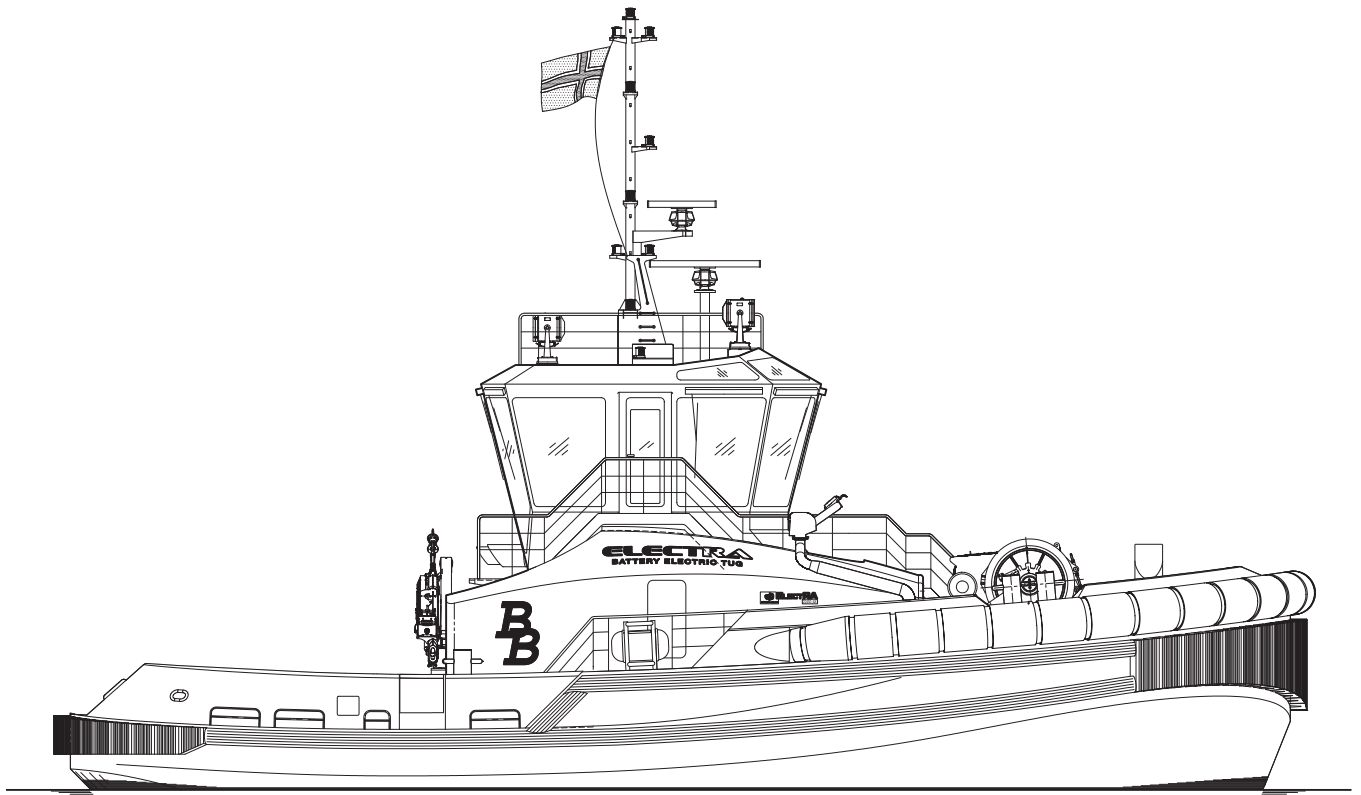
Number of crew.....>4
 Number of passengers.....0
 Number of cabins.....3

Other significant or special items of equipment:

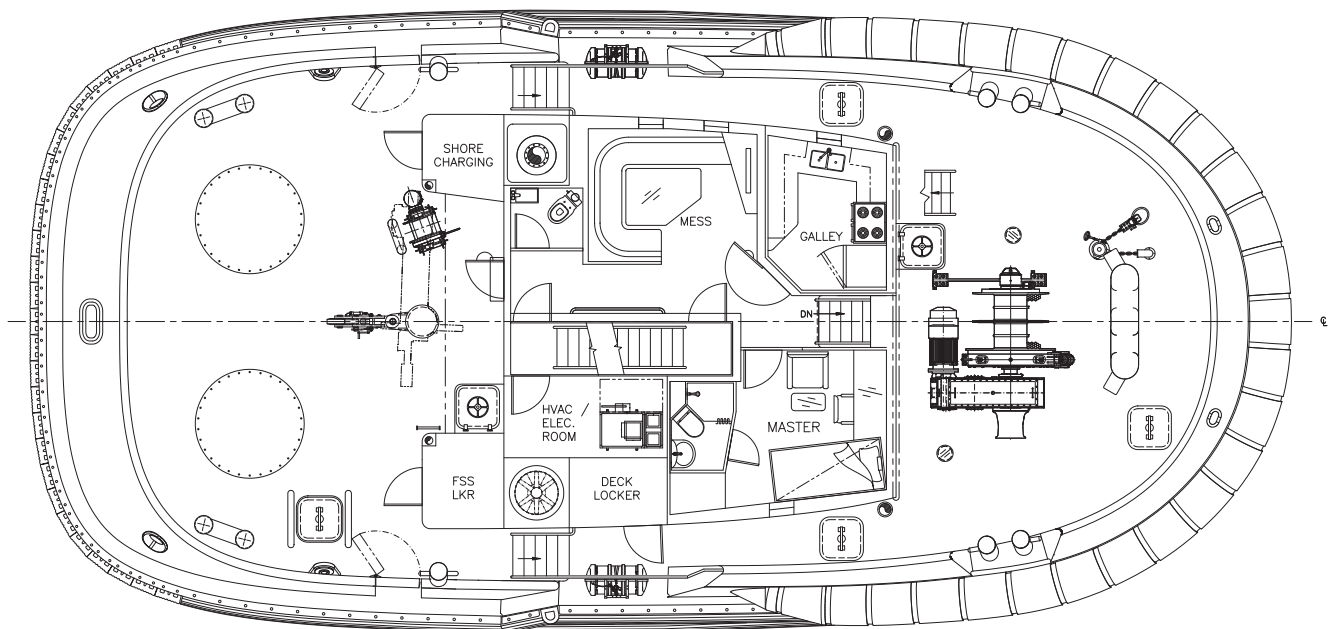
- 2 x 600m³/hr seawater (or 150m³/hr foam) fire monitors
 - Corvus Orca Energy NMC batteries, 1,718kWh

Classification:

Classification society.....ABS
 Notations.....✱A1, Towing Vessel, ✱AMS, ✱ABCU, BP (48.15 MT), ESS-LiBattery, QR, UWILD



OUTBOARD PROFILE



DECK PLAN