

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Description *Compound, Inverted, Surface Condensing*
 Made by *Blair & Co. (Lem)*
 When *Sept 18 48* At *Stockton on Tees*
 Diameter of cylinder *38 1/4"* Length of stroke *45"*
 No. of revolutions per minute *About 55*
 Point of cut off *1/2 stroke*
 Diameter of screw shaft *13 1/2"*
 Diameter of crank shaft journals *13"* Tunnel shaft *12 1/2"*
 Diameter of screw, or of paddle wheel *16'-0"*
 Pitch of screw *14'-0"*
 No. of blades, *4* Total surface *Not ascertained*
 No. of bilge pumps *2* and sizes *4 1/4 x 33" stroke. Single Acting*
 Do they pump from each compartment *For bilge pump draws from ballast tanks in engine room, fore hold - after will after pump draws from port side of engine room & after will*

Are all the bilge suction pipes fitted with roses *Yes*
 No. of feed pumps *2* and sizes *4 1/4 x 33" stroke. Single Acting*
 What gauges are there attached to the engines and boilers ... *3 steam 1 vacuum*
 Description and size of Donkey Pumps ... *2 pumps 1 1/2 dia x 4 1/2" stroke Double Acting 5 3/4" x 8"*
 Where do they pump from ... *Room, fore hold & after will. No. 2 from sea, fore hold, and ballast tanks*
 No. of bilge injections *1* and sizes *6"*
 Are they connected to air, or circulating pumps *Circulating Pump*
 Is there a hand pump in the engine room *Donkeys work by hand*
 Can it be worked by the main engines *No*
 Deck hose of sufficient length to reach to any part of the vessel *Yes*

MAIN BOILERS.

Number *Two* Description *Cylindrical Multitubular*
 Made by *Blair & Co. (Lem)*
 When *Sept 18 48* At *Stockton on Tees*
 Working pressure *48 lbs*
 Tested by hydraulic pressure to *156 lbs*, Date *19/4/48*
 Description of super-heating apparatus *None*
 Can each boiler be worked separately *Yes*

Can the super-heater be shut off and the boilers worked separately *No superheater*
 Description and area of safety valves on each boiler *Two spring valves on each boiler. Combined area of two valves 25 sq in*
 No. of square feet of fire-grate surface in each boiler *40.08 sq ft*
 Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin *Yes*
 Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times. *All except suction pipes - pores in holds when ship is loaded*

Low DONKEY BOILERS. Description *Vertical. Water tubes in furnace*
 Where fixed *In stokehole*
 Working pressure *600 lbs*

Made by *H. Dryden & Co. Ltd*
 Tested by hydraulic pressure to *120*, Date *2/8/48*
 Description and area of safety valves *1 direct 2 3/8" dia = 8.8 sq in*
 No. of square feet of fire grate in each boiler *16.83 sq in*

PIPES, COCKS, AND CONNECTIONS.

Are all connections with the sea direct on the skin of the ship *Yes*
 Are they Kingston valves or common cocks ... *Stop valves and cocks*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *Yes*
 Are the discharge pipes above or below the deep water line *Below*
 Are they each fitted with a discharge valve on the plating of the vessel *Yes*
Blair & Co. Ltd
Sgt Blair Manufacturer of Engines and Main Boilers only

What pipes are carried through the bunkers *None*
 How are they protected *"*
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *New*
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *Yes*
 Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead *Tunnel not watertight Sluice door fitted*

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel *"Monarch"* owned by *Hutchinson & H. L. Lyster*
 of the Port of *Newcastle* of *1521* Tons Register, and *280* Registered Horse Power,
 and that they have been carefully inspected and examined by me at *Stockton - Middlebro*
 and found to be at this date, viz., *13 Sept. 18 48* in good order and safe working condition.

Amount of Fee for Survey ... £14.0.0
 Certificate
 (Travelling Expenses, if any, £)

James Blair
 Engineer Surveyor to Lloyd's Register of Shipping.

It is submitted that this
vessel is eligible to have
the notification Lloyd's
McRecorded and
a certificate granted

J. Mutton
26/9/78



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Foundation