

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 18-1-1944 When handed in at Local Office 21 Jan 1944 Port of 17 May 1943 Received at London Office 17 May 1943  
 No. in Survey held at 4275 on the ss "Vio 31" Date, First Survey 18-1-1944 Last Survey 18-1-1944  
 Reg. Book 4275  
 Built at By whom built Isaac Pimblett & Son Ltd. Yard No. 654 Tons Gross 654 Net 654  
 Engines made at By whom made (Pimblett (1931) Ltd. Engine No. 646 When built 1944  
 Boilers made at Annan By whom made Cochran & Co. Boiler No. XT-1148 When made 1943  
 Registered Horse Power 6.9 Owners T.P. Abdul Rahman & Co. Port belonging to Colombo  
 Nom. Horse Power as per Rule 6.9 Is Refrigerating Machinery fitted for cargo purposes. Is Electric Light fitted.

## ENGINES, &amp;c.—Description of Engines

Dia. of Cylinders 10 1/2" — 22" Length of Stroke 14" No. of Cylinders Two Revs. per minute 150  
 Crank shaft, dia. of journals as per Rule 4 3/8" 4 1/3" for main shaft Crank pin dia. 4 3/8" Mid. length breadth 4 3/8" Thickness parallel to axis 2 7/8"  
 Intermediate Shafts, diameter as per Rule 3.93 for main shaft Mid. length thickness 4 3/8" Thickness around eye-hole 2"  
 Tube Shafts, diameter as per Rule 4 7/8" 4 5/8" Thrust shaft, diameter at collars as per Rule 4 3/8" as fitted 4 3/8"  
 Screw Shaft, diameter as per Rule 4 7/8" 4 5/8" Is the tube screw shaft fitted with a continuous liner?  
 Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the propeller boss?

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner.  
 If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive.  
 If two liners are fitted, is the shaft lapped or protected between the liners. Is an approved Oil Gland or other appliance fitted at the after end of the tube at.

Propeller, dia. 66" Pitch 86" No. of Blades 4 Material C.I. Length of Bearing in Stern Bush next to and supporting propeller 20" whether Moveable No Total Developed Surface 11.6 sq. feet  
 Feed Pumps worked from the Main Engines, No. 2 Diameter 2 1/8" Stroke 6" Can one be overhauled while the other is at work.  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 2 1/8" Stroke 6" Can one be overhauled while the other is at work.  
 Feed Pumps No. and size Pumps connected to the Main Bilge Line No. and size How driven

Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size  
 Are two independent means arranged for circulating water through the Oil Cooler.  
 Bilge Pumps:—In Engine and Boiler Room Suctions, connected to both Main Bilge Pumps and Auxiliary In Pump Room In Holds, &c.

Main Water Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size  
 Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes.  
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges.  
 Are all Sea Connections fitted direct on the skin of the ship. Are they fitted with Valves or Cocks.  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates. Are the Overboard Discharges above or below the deep water line.  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel. Are the Blow Off Cocks fitted with a spigot and brass covering plate.  
 What Pipes pass through the bunkers. How are they protected.  
 What pipes pass through the deep tanks. Have they been tested as per Rule.  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times.  
 Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another. Is the Shaft Tunnel watertight. Is it fitted with a watertight door. worked from.

MAIN BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers.  
 Which Boilers are fitted with Forced Draft. Which Boilers are fitted with Superheaters.  
 No. and Description of Boilers. Working Pressure.

IS A REPORT ON MAIN BOILERS NOW FORWARDED?  
 IS A DONKEY BOILER FITTED?  
 Can the donkey boiler be used for domestic purposes only. If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting 28-10-41. Main Boilers. Auxiliary Boilers. Donkey Boilers.  
 (If not state date of approval)  
 Superheaters. General Pumping Arrangements. Oil fuel Burning Piping Arrangements.

Specification SPARE GEAR.  
 Has the spare gear required by the Rules been supplied. Yes.  
 State the principal additional spare gear supplied.

The foregoing is a correct description.

FOR GRADFREE (1931) LTD.

A. Smith  
Manager

Manufacturer.



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012501-012507-0181



17.5.43, 18.6.43, 1.7.43, 24.9.43, 10.11.43, 15.12.43

During progress of work in shops - - { 6-9-43, 21-10-43, 18-11-43, 22-11-43, 18-1-44.

Dates of Survey while building {

During erection on board vessel - - {

Total No. of visits *Seven (11)*

Dates of Examination of principal parts—Cylinders 6-9-43, 21-10-43. Slides 6-9-43, Covers 21-10-43

Pistons 21-10-43. Piston Rods 18-11-43. Connecting rods 18-11-43.

Crank shaft 6-9-43. Thrust shaft 6-9-43. Intermediate shafts ✓

Tube shaft ✓. Screw shaft 18-1-44. Propeller 18-1-44.

Stern tube 18-1-44. Engine and boiler seatings ✓. Engines holding down bolts ✓

Completion of fitting sea connections ✓

Completion of pumping arrangements ✓. Boilers fixed ✓. Engines tried under steam ✓

Main boiler safety valves adjusted ✓. Thickness of adjusting washers ✓

Crank shaft material *Steel* Identification Mark ✓. Thrust shaft material *Steel* Identification Mark ✓

Intermediate shafts, material ✓. Identification Marks ✓. Tube shaft, material *C.I.* Identification Mark ✓

Screw shaft, material *Steel* Identification Mark ✓. Steam Pipes, material ✓. Test pressure ✓. Date of Test ✓

Is an installation fitted for burning oil fuel ✓. Is the flash point of the oil to be used over 150° F. ✓

Have the requirements of the Rules for the use of oil as fuel been complied with ✓

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo ✓. If so, have the requirements of the Rules been complied with ✓

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with ✓

Is this machinery duplicate of a previous case *No*. If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. *BROWNS T. 413.*

The machinery has not been constructed in accordance with the requirements of the Society's Rules but has been constructed under the supervision of the Society.

The scantlings are in accordance with the Society's Rules. The workmanship is of good description.

The machinery & boiler fitted on board in accordance with the approved specification.

Full power basin trials held with satisfactory results

*Carfed*  
Liverpool 25/5/44

*LIV*  
*Install - fee 6-16-0*

The amount of Entry Fee	£	:	:	When applied for,
Special	£	8	0	0
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any)	£	1	5	6

*Byrdell*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 13 OCT 1900*

Assigned

*not for  
Classing Committee*



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