

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 19 When handed in at Local Office 6th July 1932 Port of Belfast

No. in Survey held at Reg. Book. on the S. S. BHADRAVATI Date, First Survey 12th July 1932 Last Survey 1st July 1932 (Number of Visits 63)

Built at Glasgow By whom built Harland & Wolff Ltd. Yard No. 9259. Tons Gross 1307 Net 553 When built 1932

Engines made at Belfast By whom made Harland & Wolff Ltd. Engine No. 9259. When made 1932

Boilers made at Belfast By whom made Harland & Wolff Ltd. Boiler No. 9259. When made 1932

Registered Horse Power Owners Bombay Steam Navigation Co. Ltd. Port belonging to Bombay

Nom. Horse Power as per Rule 269 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which Vessel is intended Ocean-going

ENGINES, &c.—Description of Engines *Inverted - triple-expansion*

Dia. of Cylinders 17" 29" - 48" Length of Stroke 33" No. of Cylinders three Revs. per minute 140

Crank shaft, dia. of journals as per Rule 9.365" Crank pin dia. 9 3/8" Crank webs Mid. length breadth 18 7/8" No. of Cranks three Thickness parallel to axis 6 1/2" as fitted 9 7/8" Crank pin dia. 9 3/8" Mid. length thickness 6 1/2" shrunk Thickness around eye-hole 4 7/8"

Intermediate Shafts, diameter as per Rule 8.93" Thrust shaft, diameter at collars as per Rule 9.365" as fitted 9 3/8"

Tube Shafts, diameter as per Rule 19.87" Screw Shaft, diameter as per Rule 10 7/8" Is the screw shaft fitted with a continuous liner? Yes

Bronze Liners, thickness in way of bushes as per Rule 3 1/2" Thickness between bushes as per Rule 3 1/2" Is the after end of the liner made watertight in the propeller boss? Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner? Yes

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? Yes

If two liners are fitted, is the shaft lapped or protected between the liners? Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft? Yes If so, state type

Length of Bearing in Stern Bush next to and supporting propeller 4 3/4"

Propeller, dia. 11' 6" Pitch 9' 9" No. of Blades four Material Man. Br. whether Movable Solid Total Developed Surface 50.5 sq. feet

Feed Pumps worked from the Main Engines, No. two Diameter 3 1/4" Stroke 18" Can one be overhauled while the other is at work? Yes

Bilge Pumps worked from the Main Engines, No. two Diameter 3 1/4" Stroke 18" Can one be overhauled while the other is at work? Yes

Feed Pumps { No. and size Pumps connected to the { No. and size
How driven Main Bilge Line 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? Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room

In Pump Room In Holds, &c.

Main Water Circulating Pump Direct Bilge Suctions, No. and size X **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 sized 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 S.) Total Heating Surface of Boilers 4546 sq. ft.

Is Forced Draft fitted Yes No. and Description of Boilers Two single-ended cyl. mult. Working Pressure 200 lbs

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

IS A DONKEY BOILER FITTED? If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting Main Boilers Yes Auxiliary Boilers Donkey Boilers

(If not state date of approval)

Superheaters General Pumping Arrangements Oil fuel Burning Piping Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes

State the principal additional spare gear supplied See attached list.

The foregoing is a correct description,
For HARLAND AND WOLFF, LIMITED.

A. J. Marshall, Assistant Secretary, Manufacturer.



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1932
 During progress of work in shops -- Feb. 12. 16. 19. 22. 24. 25. 29 Mar 2. 3. 4. 8. 10. 11. 15. 16. 21. 22. 24. 30. 31 Apr 5. 7. 8. 11.
 During erection on board vessel --- 13. 14. 18. 20. 22. 26. 27 May 3. 4. 6. 9. 10. 11. 12. 14. 18. 19. 20. 23. 24. 25. 26. 27. 31 June 2. 3. 6. 7
 8. 9. 15. 14. 21. 23. 24. 27. 28. 29 July 1
 Total No. of visits. 62

Dates of Examination of principal parts—Cylinders 20. 5. 32 Slides 17. 6. 32 Covers 17. 6. 32
 Pistons 15. 6. 32 Piston Rods 2. 6. 32 Connecting rods 2. 6. 32
 Crank shaft 2. 6. 32 Thrust shaft 17. 6. 32 Intermediate shafts 23. 6. 32
 Tube shaft 9. 6. 32 Screw shafts 17. 6. 32 Propeller 17. 6. 32
 Stern tube 9. 6. 32 Engine and boiler seatings Engines holding down bolts
 Completion of fitting sea connections Boilers fixed Engines tried under steam
 Completion of pumping arrangements Thickness of adjusting washers
 Main boiler safety valves adjusted
 Crank shaft material S.M. Steel Identification Mark LLOYD'S No 178 Thrust shaft material S.M. Steel Identification Mark LLOYD'S No 179
 Intermediate shafts, material S.M. Steel Identification Marks LLOYD'S No 180 Tube shaft, material Identification Mark
 Screw shaft material S.M. Steel Identification Mark LLOYD'S No 179 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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The machinery of his vessel has been constructed under special survey. The materials and workmanship are sound and good. The machinery has been despatched to Glasgow for installation on board.

The Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee ... £ 3 : 0 :
 Special 4/5 Receipt £ 2.50 : 7 :
 Donkey Boiler Fee 1/5 Glasgow 13.20 : 5 :
 Travelling Expenses (if any) £ : :
 When applied for, 6th July 19.32
 When received, 10/8/32

R. Lee Arnold
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 13 SEP 1932

Assigned H.L.M.C. 9.32.F.P.
 High speed fuel 9.32 on 1st Sept 52880.
 T.P. above 180°F

CERTIFICATE WRITTEN

