

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 19 When handed in at Local Office 2 APR. 1928 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 21st June 27 Last Survey 24 Mch 1928
Reg. Book. 39984 on the S.S. "BADJESTAN" (Number of Visits 66)

Built at Sunderland By whom built Bartram & Sons, L^d Yard No. 260 Tons {Gross 5573
Net 3353

Engines made at Sunderland By whom made Maccoll & Pollock, L^d Engine No. 352 when made 1928

Boilers made at Sunderland By whom made Maccoll & Pollock, L^d Boiler No. 352 when made 1928

Registered Horse Power Owners Hindutan Steam Shipping Co L^d Port belonging to Newcastle

Nom. Horse Power as per Rule #15 4/8 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which Vessel is intended General cargo

ENGINES, &c.—Description of Engines Single Screw Triple Expansion Patent Oscillating Valves Revs. per minute 64
Dia. of Cylinders 21 1/2 - 37 - 65 Length of Stroke 48 No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 12.936 as fitted 13 5/8 Crank pin dia. 13 5/8 Crank webs Mid. length breadth 25 3/8 Thickness parallel to axis 8 3/16
Mid. length thickness 8 3/16 shrunk Thickness around eye-hole 5 3/4

Intermediate Shafts, diameter as per Rule 12.32 as fitted 13 Thrust shaft, diameter at collars as per Rule 12.936 as fitted 13 5/8

Tube Shafts, diameter as per Rule 13.84 as fitted 14 1/2 Is the screw shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule .722 as fitted 3/4 Thickness between bushes as per Rule .541 as fitted 5/8 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

Propeller, dia. 18' 3" Pitch 15' 9" No. of Blades 4 Material C.I. & Steel Whether Moveable No Total Developed Surface 105 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 3 1/2 Stroke 24 Can one be overhauled while the other is at work Yes
Bilge Pumps worked from the Main Engines, No. 2 Diameter 3 1/2 Stroke 24 Can one be overhauled while the other is at work Yes

Feed Pumps No. and size 1 - 6" x 8 1/2" x 18" 1 - 7 1/2" x 5" x 6" Pumps connected to the Main Bilge Line No. and size 1 - 9 1/2" x 11 1/2" x 11"
How driven Steam How driven Steam

Ballast Pumps, No. and size 1 - 9 1/2" x 11 1/2" x 11" Lubricating Oil Pumps, including Spare Pump, No. and size 1
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 3 @ 3" Dia.

In Holds, &c. Fore Hold 2 @ 3" Dia, Fore Main Hold 2 @ 3" Dia, Reserve Bunkers 2 @ 3" Dia, Aft Main Hold 2 @ 3" Dia,
Deep Tank 2 @ 3" Dia, Aft Hold 2 @ 3" Dia, Tunnel Well 1 @ 2 1/4" Dia.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 7" Dia Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 4 1/2" Dia 4 3/4

Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes
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 Yes

Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Both
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Overboard Discharges above or below the deep water line Above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes
What Pipes pass through the bunkers None How are they protected
What pipes pass through the deep tanks None Have they been tested as per Rule Yes

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
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 Yes

Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from top platform.

MAIN BOILERS, &c.—(Letter for record (S)) Total Heating Surface of Boilers 5801 sq. ft.
Is Forced Draft fitted Yes No. and Description of Boilers Three Single ended Marine type Working Pressure 220 lbs sq. in.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
IS A DONKEY BOILER FITTED? Yes If so, is a report now forwarded? Yes

PLANS. Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers Yes Donkey Boilers Yes
Superheaters Yes General Pumping Arrangements Yes (with Ship Report) Oil fuel Burning Piping Arrangements Yes

SPARE GEAR. State the articles supplied:— 1 C.I. Propeller, 1 set of Coupling Bolts & Nuts, 2 Main Bearing Bolts & Nuts,
2 Top End Bolts & Nuts, 2 Bottom End Bolts & Nuts, 1 set of Feed Pump Valves & Seats for each Pump,
1 set of Bilge Pump Valves & Seats for each Pump, 100 Assorted Bolts & Nuts, 1 Cut Bar of Assorted Iron,
1 cut of Steel Plate, 1 Propeller Shaft, 2 Feed Check Valve Sids & Seats for each Boiler,
12 Cylinder Cover Studs, 4 Patent Tube Stoppers, 4 Common Tube Stoppers, 12 Jump Ring Bolts & Nuts
12 Condenser Tubes, 1 complete set of Rings for H. P. M. P. & L. P. Pistons & Slide Rod Metallic Packing,
2 Oscillating Valves for H. P. Cylinders, 2 Oscillating Valves for M. P. Cylinders,
2 H. P. Valve Siders, Complete Set of Bushes for Valve Covers.

The foregoing is a correct description,
PER PRO MACCOLL & POLLOCK LTD.

J.H. Pelling

Manufacturer.



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1927. June 21, 27, 28. July 17, 12, 19, 21, 25. Aug. 3, 9, 10, 16, 19, 23, 25. Sep. 7, 16, 22, 26, 27, 28. Oct.
 During progress of work in shops - - 7, 10, 12, 14, 17, 20, 21, 24, 27, 28. Nov. 1, 9, 11, 14, 17, 19, 22, 24, 30. Dec. 1, 6, 14, 19, 28. Jan. 4, 12, 17, 24, 27
 Dates of Survey while building During erection on board vessel - - - 1, 8, 9, 20, 21, 22, 29. Feb. 9, 13, 14, 15, 19, 20, 21, 24.
 Total No. of visits 66

Dates of Examination of principal parts - Cylinders 11 - 11 - 27 ^{Oscillating} ^{Stiles} Valves 6 - 12 - 27 Covers 17 - 11 - 27
 Pistons 14 - 11 - 27 Piston Rods 12 - 10 - 27 Connecting rods 4 - 10 - 27
 Crank shaft 21 - 7 - 27 (Vienna) Thrust shaft 26 - 9 - 27 Intermediate shafts 26 - 9 - 27
 Tube shaft ✓ Screw shaft 26 - 9 - 27 Propeller 4 - 10 - 27
 Stern tube 19 - 7 - 27 Engine and boiler seatings 28 - 9 - 27 Engines holding down bolts 1 - 12 - 27
 Completion of fitting sea connections 10 - 8 - 27
 Completion of pumping arrangements 14 - 3 - 28 Boilers fixed 30 - 11 - 27 Engines tried under steam 19 - 3 - 28
 Main boiler safety valves adjusted 8 - 2 - 28 Thickness of adjusting washers P.P. $\frac{3}{8}$; P.S. $\frac{1}{32}$; B.P. $\frac{1}{32}$; B.S. $\frac{1}{32}$; S.P. $\frac{3}{8}$; S.S. $\frac{1}{32}$
 Crank shaft material Ingot Steel Identification Mark H.J. 21-7-27. Thrust shaft material Ingot Steel Identification Mark A.T.G. 26-9-27
 Intermediate shafts, material Ingot Steel Identification Marks SEE BELOW Tube shaft, material ✓ Identification Mark ✓
 Screw shaft, material Ingot Steel Identification Mark (H) LLOYDS N° 1014. (S) LLOYDS N° 1013. Steam Pipes, material SOLID DRAWN STEEL. Test pressure 600 lbs. Date of Test 14-10-27
 Is an installation fitted for burning oil fuel No Is the flash point of the oil to be used over 150° F. ✓
 Have the requirements of the Rules for carrying and burning oil fuel 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.)

The Materials and workmanship are good.
 The Machinery has been constructed under Special Survey, and satisfactorily fitted in the vessel, and is eligible in our opinion for classification and the notation
 ✠ L.M.C. 3, 28

Intermediate Shafts (B) LLOYDS N° 634, (C) LLOYDS N° 633, (D) LLOYDS N° 635, (E) LLOYDS N° 671, (F) LLOYDS N° 13088
 Identification Marks (G) LLOYDS N° 13089, (H) LLOYDS N° 13087. A.T.G. 26-9-27.

It is submitted that
 this vessel is eligible for
 THE RECORD.

✠ L.M.C. 3-28 C.L. F.D.

10-4-28
 J.S.A.

The amount of Entry Fee ... £ 5 : : When applied for,
 Special ... £ 87 : 5 : 21. March 1928
 Donkey Boiler Fee ... £ 6 : 16 : :
 Travelling Expenses (if any) £ 2 : 2 : : When received,
 2 April 1928

J. Griffiths & A. I. Griffiths.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

WED. 11 APR 1928

Assigned

Thuc 3.28

C.L. F.D.



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

CERTIFICATE WRITTEN