

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

21 MAR 1925

Date of writing Report 20th April 1925 When handed in at Local Office 30 Apr 1925 Port of WEST HARTLEPOOL

No. in Survey held at West Hartlepool Date, First Survey 23 Sept 1924 Last Survey 21 April 1925
Reg. Book. 88374 on the S.S. "CITY OF KIMBERLEY" (Number of Visits 92) Tons } Gross 6204.28
Net 3979.59

Built at West Hartlepool By whom built Wm Gray & Co Ltd Yard No. 967 When built 1925

Engines made at West Hartlepool By whom made Central Marine Eng. Wks. Engine No. 967 when made 1925

Boilers made at ditto By whom made ditto Boiler No. 967 when made 1925

Registered Horse Power 592 Owners Ellerman & Bucknall P.L.C. Port belonging to London

Nom. Horse Power as per Rule 592 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Expansion

Dia. of Cylinders 24½" 42½" 74" Length of Stroke 51" Revs. per minute 73 No. of Cylinders 3 No. of Cranks 3

Dia. of Crank shaft journals as per rule 14.7" as fitted 15½" Dia. of Crank pin 15½" Crank webs Mid. length breadth 22 7/8" Thickness parallel to axis 9"
shrunk Mid. length thickness 9" Thickness around eye-hole 6 5/8"

Diameter of Thrust shaft under collars as per rule 14.7" as fitted 15½" Diameter of Tunnel shaft as per rule 14.7" as fitted 14.76" Diameter of Screw shaft as per rule 15.48" as fitted 16½" Is the Screw shaft fitted with a continuous liner the whole length of the stern tube yes 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 joints burned yes If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with 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 appliance fitted at the after end of the shaft to permit of it being efficiently lubricated no Length of Stern Bush 66" Diameter of Propeller 18'6"

Pitch of Propeller 17-6" No. of Blades 4 State whether Moveable yes Total Surface 114 square feet.

No. of Feed Pumps fitted to the Main Engines ✓ Diameter of ditto ✓ Stroke ✓ Can one be overhauled while the other is at work ✓

No. of Bilge Pumps fitted to the Main Engines 2 Diameter of ditto 4½" Stroke 28" Can one be overhauled while the other is at work yes

Total number and size of power driven Feed and Bilge Auxiliary Pumps 2 M. feed 10½" x 8" x 22" 1 Harbour feed 9½" x 7" x 27" 1 Gen. S. 10" x 6" x 10" dupl. 1 Ball. 9" x 10½" x 10" D.

No. and size of Pumps connected to the Main Bilge Line 2 main 4½" x 28" 1 Ballast 9" x 10½" x 10" duplex

No. and size of Ballast Pumps 1 9" x 10½" x 10" dupl. No. and size of Lubricating Oil Pumps, including Spare Pump ✓

Are two independent means arranged for circulating water through the Oil Cooler ✓ No. and size of suction connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 6 of 3" & 3 of 2" 15 transfer pumps. and in Holds, &c. No. 1. 2 of 3½" No. 2 2 of 3½" No. 3 2 of 2½" No. 4 2 of 3" No. 5 2 of 3" Fore peak 1 of 3" Deep tank 2 of 3" Tunnel well 1 of 3"

No. and size of Main Water Circulating Pump Bilge Suctions 1 of 5" No. and size of Donkey Pump Direct Suctions 1 of 9"
to the Engine Room Bilges 1 of 5" 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 connections with the sea direct on the skin of the ship yes Are they 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 Discharge Pipes 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 are carried through the bunkers Fore peak suction How are they protected Strong wood casing.
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 Screw Shaft Tunnel watertight see ship report Is it fitted with a watertight door yes worked from (main deck)

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 8379 sq ft

Is Forced Draft fitted yes No. and Description of Boilers 3 single ended Working Pressure 225 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes

IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? ✓

PLANS. Are approved plans forwarded herewith for Shafting ✓ Main Boilers yes Auxiliary Boilers ✓ Donkey Boilers ✓
(If not state date of approval)

General Pumping Arrangements yes Oil fuel Burning Piping Arrangements yes

SPARE GEAR. State the articles supplied:—2 Con. rod top end bolts & nuts 2 bottom end ditto. 2 main bearing ditto 1 set coupling ditto. 1 set valves & seats for bilge & main feed pumps. 1 set valves for harbour feed, Gen. service, ballast, and oil transfer pumps. 1 H.P. piston hood & rings. 1 main valve spindle. 1 gland & neck bush for piston rods 1 ditto for valve spindles. 1 pair Crank pin bearings. 1 pair eccentric straps. 1 air pump rod & nuts. 6 piston bolts. 2 main & 2 aux feed check valves. 6 boiler tubes 3 safety valve springs. 1 valve & spindle for main stop valves 1 ditto aux. stop valves. 2 C.I. propeller blades 1 set studs & nuts for 1 propeller blade. Various spare parts for Cent. circulating pump & engine & fan engine, oil fuel installation & for super heaters. Assorted bolts nuts & iron.

The foregoing is a correct description,
(W. Gray & Co. Ltd.)
Wm. H. Gearing Manufacturer.

DIRECTOR.

1924. Sept 23. Oct 10. 22. 23. 29. 30. Nov 11. 13. 19. 20. 24. 28. Dec 1. 2. 3. 4. 5. 8. 9. 11. 13. 16. 19. 21. 23. 24. 30. 31.

1925. Jan 7. 8. 9. 13. 14. 15. 16. 19. 20. 21. 22. 23. 26. 28. Feb 3. 5. 5. 6. 10. 11. 12. 12. 13. 16. 17. 18. 19. 22. 24. 24. 25.

Mar 2. 3. 3. 6. 6. 9. 9. 12. 13. 16. 17. 17. 18. 19. 23. 24. 25. 26. 26. 27. 30. 31. 31. Apr 2. 3. 6. 8. 9. 17. 20. 21.

Dates of Survey while building }
 During progress of work in shops -- }
 During erection on board vessel --- }
 Total No. of visits **92.**

Dates of Examination of principal parts - Cylinders **24.11.24 - 19.1.25** Slides **2.12.24 - 6.2.25**
 Covers **5.12.24 - 23.12.24** Pistons **5.12.24 - 19.1.25** Rods **10.10.24 - 30.12.24**
 Connecting rods **28.10.24 - 19.1.25** Crank shaft **15.12.24 - 16.1.25** Thrust shaft **24.12.24 - 16.1.25**
 Tunnel shafts **7.1.25 - 19.2.25** Screw shaft **30.12.24 - 19.2.25** Propeller **11.2.25 - 23.2.25**
 Stern tube **3.12.24 - 23.2.25** Engine and boiler seatings **9.3.25** Engines holding down bolts **12-13.3.25**
 Completion of pumping arrangements **3.4.25** Boilers fixed **12.3.25** Engines tried under steam **8.4.25**
 Completion of fitting sea connections **19.2.25** Stern tube **27.2.25** Screw shaft and propeller **3.3.25**
 Main boiler safety valves adjusted **8.4.25** Thickness of adjusting washers **P.P. $\frac{5}{16}$ S. $\frac{11}{32}$ C.P. $\frac{11}{32}$ S. $\frac{11}{32}$ S.P. $\frac{5}{16}$ S. $\frac{11}{32}$**
 Material of Crank shaft **Ingot steel** Identification Mark on Do. **7418 $\frac{19}{32}$**
 Material of Thrust shaft **ditto** Identification Mark on Do. **7435**
 Material of Tunnel shafts **ditto** Identification Marks on Do. **7441. 7442. 7443. 7444. 7448. 7449. 7450. 7461**
 Material of Screw shafts **ditto** Identification Marks on Do. **7419.**
 Material of Steam Pipes **Lap welded steel** Test pressure **675 lb** Date of Test **24.2.25 - 31.3.25**
 Is an installation fitted for burning oil fuel **yes** Is the flash point of the oil to be used over 150°F. **yes**
 Have the requirements of the Rules for carrying and burning oil fuel been complied with **yes**
 Is this machinery duplicate of a previous case **Engines yes Boilers no** If so, state name of vessel **City of Salisbury**

General Remarks (State quality of workmanship, opinions as to class, &c. **A 25 ton evaporator fitted, the coils of which were tested to 450 lbs. and the body to 50 lbs.**

This vessel's machinery has been built and installed under Special Survey. The materials and workmanship are good and efficient.

On completion it was tried at work under full steam satisfactorily, and is now eligible to have the notation **L.M.C. 4.25.**

It is submitted that this vessel is eligible for **THE RECORD, + LMC 4.25. FD. CL.**
Fitted for oil fuel 4.25. FP. above 150°F.

[Signature]
 4/5/25.

R. D. Shilston
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ **6 : 0** :
 Special ... £ **104 : 12** :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, **1 May 19 25**
 When received, **12/5/25**

FRI. 8 MAY 1925

CERTIFICATE WRITTEN

Committee's Minute
 Assigned

+ Lmc 4.25 30 C
Fitted for oil fuel 4.25 FP above 150°F



WEST HARTLEPOOL

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