

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office -2 JUN 1936

Date of writing Report *28<sup>th</sup> May, 1936* When handed in at Local Office *29<sup>th</sup> May, 1936* Port of *NEWCASTLE-ON-TYNE*  
 No. in Survey held at *Newcastle-on-Tyne* Date, First Survey *30<sup>th</sup> Janr.* Last Survey *29<sup>th</sup> May, 1936.*  
 Reg. Book. on the *BLACKHEATH* (Number of Visits *48.*)  
 Built at *Dundee* By whom built *Caledon P.B. Co. Ltd.* Yard No. *353* When built *1936.*  
 Engines made at *WallSEND-on-Tyne* By whom made *H. E. Marine Eng. Co. Ltd.* Engine No. *2844* When made *1936.*  
 Boilers made at *WallSEND-on-Tyne* By whom made *H. E. Marine Eng. Co. Ltd.* Boiler No. *2844* When made *1936.*  
 Registered Horse Power Owners *Britain S.S. Co. Ltd.* Port belonging to *London*  
 Nom. Horse Power as per Rule *404* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes.*  
 Trade for which Vessel is intended

ENGINES, &c.—Description of Engines *Triple Expansion* Revs. per minute *62*  
 Dia. of Cylinders *23"-38"-65"* Length of Stroke *42"* No. of Cylinders *3* No. of Cranks *3*  
 Crank shaft, dia. of journals *12.81"* as per Rule *12.81"* as fitted *13"* Crank pin dia. *13"* Crank webs *23"* Mid. length breadth *23"* Thickness parallel to axis *4.81"*  
 Intermediate Shafts, diameter *12.2"* as per Rule *12.2"* as fitted *12 1/2"* Thrust shaft, diameter at collars *13"* as fitted *13"*  
 Tube Shafts, diameter *13.7"* as per Rule *13.7"* as fitted *14 1/2"* Is the *tube* shaft fitted with a continuous liner *Yes.*  
 Screw Shaft, diameter *23/32"* as per Rule *23/32"* as fitted *3/4"* Thickness between bushes *175/32"* as fitted *9/16"* 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 *One length.*  
 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 full length.*  
 If two liners are fitted, is the shaft lapped or protected between the liners *No* Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft *Yes*  
 Length of Bearing in Stern Bush next to and supporting propeller *5'-5"*  
 Propeller, dia. *18'-0"* Pitch *16'-9"* No. of Blades *4* Material *Bronze* whether Movable *No* Total Developed Surface *112* sq. feet  
 Feed Pumps worked from the Main Engines, No. *None* Diameter *—* Stroke *—* Can one be overhauled while the other is at work *—*  
 Bilge Pumps worked from the Main Engines, No. *Two* Diameter *3 1/2"* Stroke *21"* Can one be overhauled while the other is at work *Yes.*  
 Feed Pumps No. and size *2 @ 6" x 8 1/2" x 18" + 1 @ 5" x 7" x 8"* Pumps connected to the Main Bilge Line *Yes* No. and size *One @ 10" x 12" x 12"* How driven *Steam*  
 Ballast Pumps, No. and size *One @ 10" x 12" x 12"* Lubricating Oil Pumps, including Spare Pump, No. and size *—*  
 Are two independent means arranged for circulating water through the Oil Cooler *—* 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 *—* 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 bulkheads *—* 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 *2 Main 4340<sup>sq</sup> 1 Aux. 1680<sup>sq</sup> Total 6020<sup>sq</sup>*  
 Is Forced Draft fitted *Yes.* No. and Description of Boilers *2 P.E. Main + 1 P.E. Aux.* Working Pressure *220 lbs./sq.*  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? *Yes.*  
 IS A DONKEY BOILER FITTED? *No.* 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 *No* Main Boilers *Yes* Auxiliary Boilers *Yes* Donkey Boilers *—*  
 (If not state date of approval)  
 Superheaters *—* General Pumping Arrangements *Ready Space - Yes* 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 *One C.I. propeller; one pair of top end brasses; one pair of bottom end brasses; one set each of main and aux. check valves; one set of Ramsbottom rings for H.P. piston; and 12 piston bolts & nuts. One propeller shaft.*

The foregoing is a correct description,

Manufacturer.



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Lloyd's Register

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NEWCASTLE-on-TYNE

Certificate to be sent to

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

The amount of Entry Fee ... £ 5 : 0 : 0 When applied for,  
Special 4/5 hve. } 68 : 10 : 0 29 MAY 1936  
1/5 ... Lth. } 17 : 2 : 0  
Donkey Boiler Fee ... £ : : : When received,  
Travelling Expenses (if any) £ : : : 11/2 pma 36

Committee's Minute GLASGOW 14 JUL 1936  
Assigned ACCOMPANYING MACHINERY REPORT.

R. B. Forster  
Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 31 JUL 1936  
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1936  
Jan 30. Feb. 7. 14. 17. 18. 20. 27. 28. Mar. 2. 3. 10. 11. 12. 16. 18. 20. 24. 25. 30. Apr. 1. 6. 7. 9. 14. 15.  
During progress of work in shops - - 16. 21. 22. 23. 27. 28. 29. 30. May 5. 7. 8. 11. 13. 14. 15. 18. 19. 20. 21. 22. 25. 27. 29.  
During erection on board vessel - - -  
Total No. of visits 48.  
Dates of Examination of principal parts—Cylinders 30. 3. 36 Slides 30. 3. 36 Covers 30. 3. 36  
Pistons 30. 3. 36 Piston Rods 30. 3. 36 Connecting rods 30. 3. 36  
Crank shaft 12. 3. 36 Thrust shaft 16. 4. 36 Intermediate shafts 25. 5. 36  
Tube shaft - Screw shaft 18. 5. 36 Propeller 18. 5. 36  
Stern tube 14. 5. 36 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 ✓ LLOYD'S N° 2844 Identification Mark H.C.F. 12. 3. 36 Thrust shaft material Steel Identification Mark H.C.F. 16. 4. 36  
Crank shaft material Steel Identification Mark N° 8645 (2) J.D. 28. 4. 36 H.C.F. 25. 5. 36; 8641 (2) J.D. 24. 4. 36 H.C.F. 25. 5. 36  
Intermediate shafts, material Steel Identification Marks N° 8652 J.D. 30. 4. 36 H.C.F. 25. 5. 36; 8673 J.D. 7. 5. 36 H.C.F. 25. 5. 36  
Screw shaft, material Steel Identification Mark LLOYD'S N° 8615 Steam Pipes, material 10 Steel Test pressure 660 lbs/sq. in. Date of Test 15. 3. 36 - 22. 6. 36  
Spare " " Steel 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 the use of oil as fuel been complied with -  
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No 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.)

This machinery has been constructed under Special Survey in accordance with the Rules and approved plans; the materials and workmanship are good.  
The machinery is being forwarded to Dundee for instalment in the vessel.  
On instalment in the vessel, and after a satisfactory trial under working conditions, the machinery will be eligible, in my opinion, for classification, and to have the record L.M.C. (With date) - C.L. in the Register Book.  
Note:- The spare tail shaft supplied is the spare tail shaft ex ss. "Wendover"; this shaft, which has not been previously in use, has been fitted to the working and spare propellers, examined and found satisfactory; the shaft is stamped:- LLOYD'S N° 259 R.W.F. 20. 3. 28 W.B. 25. 7. 28.