

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

JUL 18 1940

Date of writing Report 15/7/1940 When handled in at Local Office 15/7/1940 Port of WEST HARTLEPOOL.

No. in Survey held at WEST HARTLEPOOL Date, First Survey 20<sup>th</sup> July, 1939 Last Survey 6<sup>th</sup> July 1940  
 Reg. Book. on the S.S. "CAPE BRETON" (Number of Visits 100)

Built at West Hartlepool By whom built Wm. Gray & Co. Ltd. Yard No. 1101 When built 1940  
 Engines made at West Hartlepool By whom made Central Marine Eng. Works No. 1101 When made 1940  
 Boilers made at West Hartlepool By whom made Central Marine Eng. Works No. 1101 When made 1940.  
 Registered Horse Power Owners Bowring Steamship Co. Ltd. Port belonging to London.  
 Nom. Horse Power as per Rule 462. 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 Revs. per minute 70  
 Dia. of Cylinders 24" x 38" x 68" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule 13.89" Crank pin dia. 14 1/4" Crank webs Mid. length breadth 20 1/2" Thickness parallel to axis 8 3/4"  
 as fitted 14 1/4" Mid. length thickness 8 3/4" shrunk Thickness around eye-hole 6 1/8"  
 Intermediate Shafts, diameter as per Rule 13.23" Thrust shaft, diameter at collars as per Rule 13.89"  
 as fitted 13 1/2" as fitted 14 1/4"  
 Tube Shafts, diameter as per Rule — Screw Shaft, diameter as per Rule 14.77" Is the { tube } shaft fitted with a continuous liner { Yes  
 as fitted — as fitted 15 1/2" { screw }  
 Bronze Liners, thickness in way of bushes as per Rule 7.5" Thickness between bushes as per Rule 5.63" Is the after end of the liner made watertight in the  
 as fitted 3 1/2" as fitted 5"  
 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  
 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  
 shaft No If so, state type Length of Bearing in Stern Bush next to and supporting propeller 5' 0 1/2"  
 Propeller, dia. 18' 6" Pitch 16' 6" No. of Blades 4 Material Bronze whether Moveable Yes Total Developed Surface 106 sq. feet  
 Feed Pumps worked from the Main Engines, No. — Diameter — Stroke — Can one be overhauled while the other is at work —  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 28" Can one be overhauled while the other is at work Yes  
 Feed Pumps { No. and size 3 Single 9 1/2" x 7" x 21" Pumps connected to the { No. and size 1 @ 9" x 10 1/2" x 10" 1 @ 7" x 8" x 8"  
 { How driven Independent Steam Main Bilge Line { How driven Independent Steam  
 Ballast Pumps, No. and size 1 @ 9" x 10 1/2" x 10" 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 5 @ 3" dia. In Holds, &c. No. 1 1 @ 3" No. 2 3 @ 3" No. 3 2 @ 3"  
 In Pump Room — Tunnel well 1 @ 2 1/2" Tunnel drain 1 @ 2"  
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 8" Independent Power Pump Direct Suctions to the Engine Room Bilges,  
 No. and size 1 @ 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 Sea Connections fitted direct on the skin of the ship On reservoir 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 MAIN BELOW REST 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 —  
 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 upper deck.

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 6375 sq. ft.  
 Which Boilers are fitted with Forced Draft All Which Boilers are fitted with Superheaters All  
 No. and Description of Boilers 3 Single ended cylindrical 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? —  
 Can the donkey boiler be used for domestic purposes only —  
 PLANS. Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers — Donkey Boilers —  
 (If not state date of approval)  
 Superheaters Yes 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 1 Propeller shaft.

The foregoing is a correct description  
 FOR THE CENTRAL MARINE ENGINE WORKS

(By Order of the Committee)

Manufacturer.

ASSISTANT GENERAL MANAGER



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1939. July 20. Nov. 13. 16. 22. 27. 28. 29. 30. Dec. 7. 14. 19. 28. 29. 1940. Jan. 4. 5. 8. 9. 11. 15. 17. 19. 22. 24. 30.  
During progress of work in shops - - -  
Feb. 2. 7. 8. 9. 12. 13. 14. 15. 16. 19. 20. 21. 23. 26. 27. 28. 29. March 4. 5. 6. 7. 8. 11. 12. 13. 18. 19. 20. 21. 27. 28. 29. April 1.  
3. 4. 6. 8. 9. 10. 16. 18. 19. 24. 26. 29. May 1. 2. 6. 7. 8. 10. 13. 15. 21. 22. 27. 28. June 3.  
1940. April 3. 18. 16. 23. May 7. 13. 15. 17. 21. 22. 27. 28. June 3. 6. 19. July 1. 5. 6.  
During erection on board vessel - - -  
Total No. of visits 100

Dates of Examination of principal parts—Cylinders 28/11/39 - 4/3/40 Slides 7/2/40 Covers 7/2/40  
Pistons 2/2/40 - 5/5/40 Piston Rods 2.7.13/2/40 Connecting rods 2.7.13/14/2/40  
Crank shaft 22/1/40 - 18/3/40 Thrust shaft 15/1/40 - 18/3/40 Intermediate shafts 28/2/40 - 2/5/40  
Tube shaft ✓ Screw shaft 19/1/40 - 2/5/40 Propeller 13/5/40  
Stern tube 2/5/40 Engine and boiler seatings 7/5/40 Engines holding down bolts 27/5/40  
Completion of fitting sea connections 7/5/40  
Completion of pumping arrangements 6/7/40 Boilers fixed 27/5/40 Engines tried under steam 6/7/40  
Main boiler safety valves adjusted 5/7/40 Thickness of adjusting washers  $\frac{3}{8}$ "  $\frac{13}{32}$ " SUP  $\frac{3}{8}$ "  $\frac{11}{32}$ " SUP  $\frac{7}{32}$ "  $\frac{3}{8}$ "  $\frac{3}{8}$ " SUP  
Crank shaft material INHOT STEEL Identification Mark N° 2035 REG. Thrust shaft material INHOT STEEL Identification Mark N° 2049 REG.  
Intermediate shafts, material INHOT STEEL Identification Mark N° 2057 34 56 798 REG. Tube shaft, material — Identification Mark —  
Screw shaft, material INHOT STEEL Identification Mark N° 2050 REG. Steam Pipes, material STEEL Test pressure 675 lbs. Date of Test 8-5-40  
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 NO  
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. See engines and boilers of this vessel have been constructed under special survey and in accordance with the approved plans.

The workmanship and materials have been found good.

Upon completion they were examined under full working conditions and found satisfactory.

It is recommended that the machinery of this vessel be classed in the Register Books. —

\* L.M.C. 7.40. 3SB(SK) F.D. C.L.

The amount of Entry Fee ... £ 5 : 0 :  
Special ... £ 94 : 6 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 19  
When received, 13th Aug 1940 R.D. 14/8

Committee's Minute

Assigned

Arthur W. Oxford & John W. Humill  
Engineer Surveyors, Lloyd's Register of Shipping.

TUE 23 JUL 1940



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