

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

22 MAR 1930

Date of writing Report

19

When handed in at Local Office

20 MAR. 1930 Port of

LIVERPOOL

No. in Survey held at

Birkenhead

Date, First Survey 1<sup>st</sup> July/29 Last Survey 17<sup>th</sup> March 1930

(Number of Visits 93.)

on the

S. S. 'Benedict'

Tons Gross 4680

Net

Birkenhead By whom built Messrs Cammell Laird &amp; Co Ltd

Yard No. 963

When built 1930

made at Birkenhead By whom made

No

Engine No. 963

when made 1930

made at Birkenhead By whom made

No

Boiler No. 963

when made 1930

d Horse Power

Owners Booth Steamship Co Ltd

Port belonging to Liverpool

Horse Power as per Rule 608.5

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

for which Vessel is intended

ES, &c.—Description of Engines *Vertical Triple Expansion* Revs. per minute 73.

Cylinders *25½, 43½, 73* Length of Stroke *51"* No. of Cylinders 3 No. of Cranks 3

Shaft, dia. of journals *as per Rule 14.9"* Crank pin dia. *15½"* Crank webs *Mid. length breadth 29½"* Thickness parallel to axis *9½"*

Intermediate Shafts, diameter *as per Rule 14.1"* Thrust shaft, diameter at collars *as per Rule 14.9"* Thickness around eye-hole *6½"*

Shafts, diameter *as per Rule 14.9"* Screw Shaft, diameter *as per Rule 18.6"* Is the tube shaft fitted with a continuous liner *Yes*

Liners, thickness in way of bushes *as per Rule 7.6"* Thickness between bushes *as per Rule 3.4"* Is the after end of the liner made watertight in the 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*

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*

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 *No*

Length of Bearing in Stern Bush next to and supporting propeller *6'-10"*

Blades, dia. *18'-6"* Pitch *17'-0"* No. of Blades 4 Material *Cast Iron* Whether Moveable *Yes* Total Developed Surface 100 sq. feet

Pumps worked from the Main Engines, No. 4 Diameter 4½" Stroke 27½" Can one be overhauled while the other is at work *Yes*

Pumps worked from the Main Engines, No. 2-10½ x 8 x 22" Pumps connected to the Main Bilge Line (No. and size 1-8 x 5½ x 9" 1-10 x 12 x 12" How driven *Steam*

St Pumps, No. and size 1-10 x 12 x 12" Lubricating Oil Pumps, including Spare Pump, No. and size

Independent means arranged for circulating water through the Oil Cooler

Suctions, connected to both Main Bilge Pumps and Auxiliary

Pumps; In Engine and Boiler Room 4, 0.3" No. 1 Hold 2-2¾" No. 2 Hold 2-3" No. 3 Hold 2-2¾" Deep Tank 2-3" No. 4 Hold 2-2¾"

Water Circulating Pump Direct Bilge Suctions, No. and size 1-10" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2-5"

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

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*

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*

Pipes are carried through the bunkers *Through bilge suction* How are they protected *Wood casing*

Do pipes pass through the deep tanks *None* Have they been tested as per Rule

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

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*

IN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 8907 sq. ft.

Forced Draft fitted *Yes* No. and Description of Boilers *Three cylindrical* Working Pressure 220 lb. or 35 B.

A REPORT ON MAIN BOILERS NOW FORWARDED? *Yes*

A DONKEY BOILER FITTED? *No* If so, is a report now forwarded? *Yes*

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

General Pumping Arrangements *Yes* Oil fuel Burning Piping Arrangements *Yes*

PREPARE GEAR. State the articles supplied:— *In accordance with Rule Requirements and attached list*

The foregoing is a correct description,  
CAMMELL LAIRD AND COMPANY LIMITED.

SECRETARY.

Manufacturer.



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July 1. 3. 5. 9. 12. 16. 29. Aug 13. 20. 23. 26. 27. 29. 31. Sept 4. 6. 11. 16. 17. 19. 24. Oct 2. 7. 9. 11. 14. 16. 18. 21. 25. 28. Nov 4. 6. 7. 11. 13. 15. 18.  
 14. 20. 22. 25. 26. 28. Dec 2. 3. 5. 6. 9. 11. 12. 17. 18. 19. 23. 30. 31. Jan 2. 3. 7. 9. 13. 14. 15. 17. 18. 20. 21. 22. 23. 24. 27. 28. 29. 30. Feb 1. 3. 5. 6.  
 10. 12. 13. 14. 17. 19. 20. 24. 26. 28. Mar 10. 11. 13. 17.  
 Total No. of visits **93**

Dates of Examination of principal parts—Cylinders **7/11/29 21/10 11/11 26/11** Slides **3/12/29** Covers **9/10/29 16/10/29 27/11**  
 Pistons **9/10/29 21/10 27/11** Piston Rods **7/11/29** Connecting rods **7/11/29**  
 Crank shaft **14/10/29 25/10/29 27/11/29** Thrust shaft **4/11/29 27/11** Intermediate shafts **7/11/29 21/10 25/10 27/11**  
 Tube shaft **✓** Screw shaft **13/11/29 19/11 27/11/29** Propeller **13/11/29 15/1/30**  
 Stern tube **16/10/29 6/11/29 13/11** Engine and boiler seatings **14/1/30** Engines holding down bolts **3/2/30 5/2/30**  
 Completion of pumping arrangements **11/2/30** Boilers fixed **3/2/30 28/11** Engines tried under steam **13/3/30**  
 Main boiler safety valves adjusted **28/2/30** Thickness of adjusting washers **2 1/4" P 1/4" S 1/2" 1 1/2" P 1/2" S 1/2" 1 1/2" P 1/2" S 1/2"**  
 Crank shaft material **steel** Identification Mark **2325, 2124** Thrust shaft material **steel** Identification Mark **25600**  
 Intermediate shafts, material **steel** Identification Marks **2590, 1442, 2555 1443, 1441, 2576** Tube shaft, material **✓** Identification Mark **✓**  
 Screw shaft, material **steel** Identification Mark **2594** Steam Pipes, material **steel** Test pressure **660lb** Date of Test **17/1/30 24/1/30 27/11 23/11/30**  
 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.)

This Machinery has been constructed under special survey, and is in accordance with the plans and Rules. It has been examined under full working conditions during sea trials and found satisfactory, and is eligible in my opinion for classification in Register book with record of LMC 3.30.

It is submitted that this vessel is eligible for THE RECORD. + LMC 3.30 F.D. CL.

J. S. Milton. 27/3/30

The amount of Entry Fee ... £ **6. 0. 0**  
 Special ... £ **105. 8. 0**  
 Donkey Boiler Fee ... £ **✓**  
 Travelling Expenses (if any) £ **✓**

When applied for, **20 MAR 1930**  
 When received, **12/4/30**

J. S. Milton.  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **LIVERPOOL 21 MAR. 1930**

Assigned **+ L.M.C. 3.30. F.D. Ch. Elec. light. OBR**  
 CERTIFICATE WRITTEN.