

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 19 26 MAR 1943 When handed in at Local Office 26 MAR 1943 Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey 3 Mch 42 Last Survey 17 Mch 1943
 Reg. Book. "EMPIRE BEN" (Number of Visits 57)
 Built at Sunderland By whom built G. Black (1938) L. Yard No. 1264 When built 1942
 Engines made at Sunderland By whom made G. Black (1938) L. Engine No. 1264 When made 1942
 Boilers made at Sunderland By whom made G. Black (1938) L. Boiler No. 1264 When made 1942
 Registered Horse Power 183 Owners Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes
 Trade for which Vessel is intended Is

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 113
 Dia. of Cylinders 16 1/2 - 24 - 46 Length of Stroke 30 No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals 8.84 Crank pin dia. 9 3/8 Crank webs 14 1/16 Mid. length breadth 6 Thickness parallel to axis 4 3/16
 Intermediate Shafts, diameter 8.45 Thrust shaft, diameter at collars 9.84 as per Rule 9 1/4
 Tube Shafts, diameter 8 1/2 as per Rule 10 1/4 Is the tube shaft fitted with a continuous liner No liner
 Screw Shaft, diameter 10 1/4 as per Rule 10 1/4 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 Yes
 Propeller, dia. 11-0 Pitch 11-8 No. of Blades 4 Material C.I. whether Moveable No Total Developed Surface 46 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 3 Stroke 15 Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 3 Stroke 15 Can one be overhauled while the other is at work Yes
 Feed Pumps No. and size 1 - 8" x 5" x 8" Pumps connected to the Main Bilge Line Yes How driven Steam
 Ballast Pumps, No. and size none Lubricating Oil Pumps, including Spare Pump, No. and size 1 - 8" x 5" x 8" (En. Ser.)
 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 Eng. Rm. 1 at 2" dia. Tunnel 1 at 2" dia. Bl. Rm. 1 at 2" dia. & 1 at 2 1/2" dia.
 In Pump Room In Holds, &c. accommodation 1 at 2" dia.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 6" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 2 1/2" & 1 at 2 1/2" dia.
 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 man-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 Below
 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 — 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 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 — Is it fitted with a watertight door — worked from —

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 2481
 Which Boilers are fitted with Forced Draft Main Which Boilers are fitted with Superheaters none
 No. and Description of Boilers 1 SB (FD) Working Pressure 200 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 —
 Superheaters — 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 —

The foregoing is a correct description.

GEORGE BLANK (1938) LTD.

A. J. Berry
 MANUFACTURER & GENERAL MANAGER



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014143-014153-0083

1942. *Feb.* 3, 6, 9, 12, 16, 20, 27. *Apr.* 7, 2, 9, 14, 27, 28. *May.* 4, 11, 18. *June* 1, 2, 8, 11, 18, 22, 25, 26, 29
During progress of work in shops - -
30. *July.* 7, 9, 20, 21, 23, 28, 30, 31. *Aug.* 4, 18, 19, 20, 21, 26, 31. *Sep.* 9, 15, 28. *Oct.* 30. *Nov.* 2. *Dec.* 1.
During erection on board vessel - - -
1943. *Feb.* 1, 2, 10, 12, 15, 16, 17. *Mar.* 2, 5, 8, 11, 17, 24
Total No. of visits 59

Dates of Examination of principal parts—Cylinders *H.P.* 4/5/42. *M.P.* 28/4/42. *L.P.* 24/4/42. Slides 25/6/42. Covers 12/3/42.
Pistons 14/4/42. Piston Rods 14/4/42. Connecting rods 2/6/42.
Crank shaft 2/4/42. Thrust shaft 2/4/42. Intermediate shafts 20/8/42.
Tube shaft - Screw shaft 20/8/42. Propeller 20/8/42.
Stern tube 21/7/42. 20/10/42 (Hull) Engine and boiler seatings 20/10/42 (Hull) Engines holding down bolts 17.2.43
Completion of fitting sea connections 10/11/42 (Hull)
Completion of pumping arrangements 14/3/43 Boilers fixed 2.3.43 Engines tried under steam 2.3.43 & 17.3.43.
Main boiler safety valves adjusted 2.3.43 Thickness of adjusting washers Port 15/64" star 7/16"
Crank shaft material *Infot. Steel* Identification Mark *N° 6423 WHF* 2/4/42. Thrust shaft material *Infot. Steel* Identification Mark *N° 6424 WHF* 2/4/42.
Intermediate shafts, material *Infot. Steel* Identification Marks 20/8/42 Tube shaft, material - Identification Mark -
Screw shaft, material *Infot. Steel* Identification Mark *N° 6424 WHF* 20/8/42 Steam Pipes, material *Steel* Test pressure 600 Date of Test 18.2.43 to 27.2.43.
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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. *This machinery has been built under Special Survey in accordance with the approved plans, Specification & the Rules of the Society. The materials & workmanship are good. The machinery has been efficiently fitted on board and tried under working condition at quay wall with satisfactory results and is eligible, in our opinion, for the*

NOTATION + L.M.C. 3.43, O.G., I.S.B. 200 lb. F.D.

The amount of Entry Fee ... £ 3 : : When applied for, 2 6 MAR 1943
Special Specification ... £ 45 : 15 :
Donkey Boiler Fee ... £ 11 : 9 : When received,
Travelling Expenses (if any) £ : : 19

Committee's Minute *FRI. 2 APR 1943*

Assigned *John B. J. 43*
John B. J.

W. H. K. H. L. P. H. H.
Engineer Surveyor to Lloyd's Register of Shipping.



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