

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 10th Nov. 1928 When handed in at Local Office 12th Nov. 1928 Port of GLASGOW.
 No. in Survey held at Glasgow Date, First Survey 19. 4. 28 Last Survey 7th Nov. 1928.
 Reg. Book. 385 on the Steel S.S. "BEHAR" (Number of Visits 32) Tons { Gross 6000
 Built at Greenock By whom built Harland & Wolff Ltd. Yard No. 830 When built 1928-11.
 Engines made at Glasgow By whom made do. Engine No. 830 when made 1928-11.
 Boilers made at Belfast By whom made do. Boiler No. 830 when made 1928.
 Registered Horse Power 1036 Owners Hain S. S. Co. Ltd. Port belonging to London.
 Nom. Horse Power as per Rule 1036 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes
 for which Vessel is intended General & refrigerated cargo.

INES, &c.—Description of Engines Inverted, quadruple expansion, surface condensing Revs. per minute 81.
 of Cylinders 30 1/2, 44, 63 1/2 + 9 1/2 ins. Length of Stroke 60 ins. No. of Cylinders 4 No. of Cranks 4
 k shaft, dia. of journals as per Rule 17 3/16" Crank pin dia. 19" Crank webs Mid. length breadth 2 1/2" Thickness parallel to axis 1 1/2"
as fitted 18 1/4" Mid. length thickness 1 1/2" shrunk Thickness around eye-hole 7 1/2"
 Intermediate Shafts, diameter as per Rule 16 3/16" Thrust shaft, diameter at collars as per Rule 17 3/16"
as fitted 17 1/4" as fitted 18 7/8"
 e Shafts, diameter as per Rule 17 3/16" Screw Shaft, diameter as per Rule 19 1/4" Is the { tube } shaft fitted with a continuous liner { yes
as fitted 17 3/16" as fitted 19 1/4" { screw } 2 1/32"
 uze Liners, thickness in way of bushes as per Rule 1" Thickness between bushes as per Rule 2 7/32" Is the after end of the liner made watertight in the
as fitted 1" as fitted 2 7/32"
 elli 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
 e 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
 wo 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
 of the tube shaft no Length of Bearing in Stern Bush next to and supporting propeller 6' 8"
 peller, dia. 20' 0" Pitch 20' 0" No. of Blades 4 Material Brass whether Moveable no Total Developed Surface 108 sq. feet
 d Pumps worked from the Main Engines, No. Two Diameter 5 1/2" Stroke 30" Can one be overhauled while the other is at work yes
 ge Pumps worked from the Main Engines, No. Two Diameter 5 1/2" Stroke 30" Can one be overhauled while the other is at work yes
 ed { No. and size Two @ 9000 gal/hr. + One @ 7000 gal/hr. Pumps connected to the { No. and size Two @ 5 1/2" x 30" + Two @ 140 Imp / hr.
 mps { How driven Steam 2 lines Main Bilge Line { How driven Main 2 lines Steam 2 lines
 ast Pumps, No. and size One @ 140 Imp / hr. Lubricating Oil Pumps, including Spare Pump, No. and size None.
 e two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary
 ge Pumps;—In Engine and Boiler Room 5" @ 3" 1 @ 2 1/2" 1 @ 2 1/4"
 Holds, &c. Nº 1 — 1 @ 3 1/2" Nº 2 — 2 @ 3 1/2" Nº 3 — 1 @ 3" Nº 4 — 1 @ 3"

ain Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 13" Independent Power Pump Direct Suctions to the Engine Room Bilges,
 o. and size 1 @ 5" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes yes
 re 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
 re all Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks both
 re 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
 re 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 yes How are they protected yes
 What pipes pass through the deep tanks yes Have they been tested as per Rule yes
 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 level.

AIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 15,050 sq. ft.
 Is Forced Draft fitted yes No. and Description of Boilers 5 cylindrical single-ended Working Pressure 230 lbs./sq. in.
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes — Rel. Rpt. 10.024.
 IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? no
 PLANS. Are approved plans forwarded herewith for Shafting yes Main Boilers yes Auxiliary Boilers yes Donkey Boilers yes
 (If not state date of approval) Rel. Rpt. 10.024 General Pumping Arrangements yes Oil fuel Burning Piping Arrangements yes
 SPARE GEAR. State the articles supplied:— As per attached list.

The foregoing is a correct description,

For HARLAND & WOLFF, LTD.

S. C. Green.

Manufacturer.

MANAGER FINNISTON WORKS



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Lloyd's Register
Foundation

W1267-0156

During progress of work in shops - 1928 Apr 19-27 May 7 June 4-7 11 July 10-11-27 Aug 10-11-14-17-22-23-29 Sep 10-11-19-26 Oct 5-8-9-11
During erection on board vessel - 19-26-31 Nov 1-8-7.
Dates of Survey while building
Total No. of visits 32

Dates of Examination of principal parts—Cylinders 17-8-28 Slides 27-7-28 Covers 17-8-28
Pistons 14-8-28 Piston Rods 14-8-28 Connecting rods 14-8-28
Crank shaft 14-8-28 Thrust shaft 11-7-28 Intermediate shafts 11-7-28
Tube shaft — Screw shaft 11-7-28 Propeller 11-7-28
Stern tube 11-7-28 Engine and boiler seatings 10-9-28 Engines holding down bolts 5-10-28
Completion of fitting sea connections Apr. Rpt. 1897
Completion of pumping arrangements 1-11-28 Boilers fixed 9-10-28 Engines tried under steam 7-11-28
Main boiler safety valves adjusted 31-10-28 Thickness of adjusting washers
Crank shaft material steel Identification Mark 440YD 508 Thrust shaft material steel Identification Mark 440YD 508
Intermediate shafts, material steel Identification Marks 440YD 508 Tube shaft, material — Identification Mark —
Screw shaft, material steel Identification Mark 440YD 508 Steam Pipes, material steel Test pressure 690 lb./sq. in. Date of Test 19-10-28
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 the use of oil as fuel been complied with yes
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 —
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.) These Engines have been built under special survey in accordance with the Rules. The material & workmanship are good. Along with the Boilers — Bel. Rpt. 10.024 they have been properly fitted in the vessel and tried under full power at sea with satisfactory result.

This vessel's Machinery is eligible in my opinion to be classed in the Register Book with notation: + L.M.C. — 11.28; C.L. and fitted for oil fuel 11.28 — F.P. above 150° Fahr.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 11.28 F.P. C.L.

Fitted for oil fuel 11.28 F.P. above 150° Fahr.

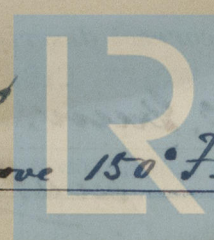
The amount of Entry Fee ... £ 6 : — :
3/5 Special ... £ 75 : 11/2 :
Donkey Boiler Fee ... £ — : — :
Travelling Expenses (if any) £ — : — :
When applied for, 13. 11. 19.28
When received, 14. 12. 19.28

Committee's Minute GLASGOW 13 NOV 1928

Assigned + L.M.C. 11.28 F.D.

Fitted for oil fuel 11.28 F.P. above 150° Fahr.

J. D. Boyle
Engineer Surveyor to Lloyd's Register of Shipping.



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