

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

-5 NOV 1930

Date of writing Report 19 When handed in at Local Office 3rd Nov 1930 Port of Belfast

No. in Survey held at Belfast Date, First Survey 5th March 1930 Last Survey 30th October 1930
Reg. Book. (Number of Visits 44)

90252 on the STEEL SC. EBANO Tons } Gross
Net

Built at Belfast By whom built Harland & Wolff Ltd. Yard No. 899 When built 1930

Engines made at Belfast By whom made Harland & Wolff Ltd. Engine No. 899 When made 1930

Boilers made at Belfast By whom made Harland & Wolff Ltd. Boiler No. 899 when made 1930

Registered Horse Power Owners Ebano Oil Co. Ltd. (A. Trevis Co. Ltd. mgs.) Port belonging to London

Nom. Horse Power as per Rule 229 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes

Trade for which Vessel is intended Ocean. Frig.

ENGINES, &c.—Description of Engines *Inverted triple expansion* Revs. per minute 130

Dia. of Cylinders 18¹/₄" - 28¹/₂" - 48¹/₄" Length of Stroke 28" No. of Cylinders three No. of Cranks three

Crank shaft, dia. of journals as per Rule 8.89" Crank pin dia. 9" Crank webs Mid. length breadth 16³/₄" Thickness parallel to axis 6³/₈"
as fitted 9" Mid. length thickness 6³/₈" shrunk Thickness around eye-hole 3⁷/₈"

Intermediate Shafts, diameter as per Rule 8.46" Thrust shaft, diameter at collars as per Rule 8.89"
as fitted 8.46" as fitted 9¹/₂"

Tube Shafts, diameter as per Rule 9.46" Is the tube screw shaft fitted with a continuous liner Yes
as fitted 9³/₄"

Bronze Liners, thickness in way of bushes as per Rule 18.71" Thickness between bushes as per Rule 12.04"
as fitted 5¹/₂" as fitted 5¹/₂" 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

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 40"

Propeller, dia. 12'-0" Pitch 9'-0" No. of Blades FOUR Material MANG. BR. whether Moveable No Total Developed Surface 46 sq. feet

Feed Pumps worked from the Main Engines, No. Two Diameter 3¹/₂" Stroke 13¹/₂" Can one be overhauled while the other is at work Yes

Bilge Pumps worked from the Main Engines, No. Two Diameter 3¹/₂" Stroke 13¹/₂" Can one be overhauled while the other is at work Yes

Feed Pumps No. and size TWIN 8¹/₂" x 6" x 13" Pumps connected to the Main Bilge Line No. and size Two 9" x 10" x 24"
How driven STEAM How driven STEAM

Ballast Pumps, No. and size ONE 9" x 10" x 24" 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 ONE 3¹/₂" AFT TWO 2¹/₂" FORWARD TWO 2¹/₂" PUMP ROOM.
In Holds, &c. CHAIN LOCKER ONE - 2¹/₂" FORWARD AIR SPACES TWO - 3" AFT AIR SPACE TWO - 3"

Main Water Circulating Pump Direct Bilge Suctions, No. and size ONE 6" (PORT) Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size ONE 6" (STARBOARD) 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 Yes Are they fitted with Valves or Cocks Yes

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

What Pipes pass through the bunkers How are they protected

What pipes pass through the deep tanks 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 none Is it fitted with a watertight door worked from

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 3880 sq ft

Is Forced Draft fitted Yes No. and Description of Boilers Two Single ended Cyl. Mull. Working Pressure 180 lbs

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes 2SB.

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

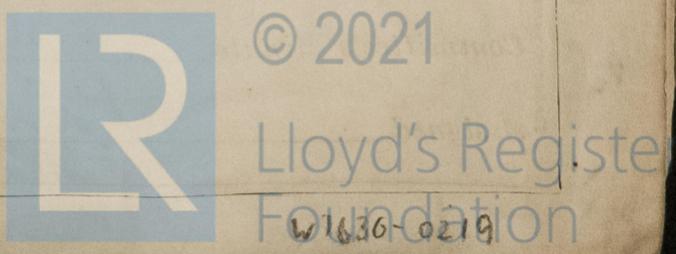
PLANS. Are approved plans forwarded herewith for Shafting Main Boilers Yes Auxiliary Boilers Donkey Boilers
(If not state date of approval)

Superheaters General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements

SPARE GEAR. State the articles supplied:— 2 Connecting rod top end bolts and nuts, 1 pair top end bushes, 2 Connecting rod bottom end bolts and nuts, 1 pair bottom end bushes, 2 main bearing bolts and nuts, 1 set each hollow rod & carbide rings for H.P. 2L. + L.P. pistons, 12 junk ring studs and nuts, 1 eccentric strap complete, 1 pair each of engine and pump link brasses, 1 pair pump lever carriage brasses, 24 Condenser tubes, 1 diaphragm for engine stop valve, 1 spring each for 2L. 2L. + L.P. cylinder relief valves, auxiliary feed pumps discharge, general service pumps discharge and Ballast pump discharge, 1 set United States packing for piston rod and 1 set for valve rod, 1 spring each for auxiliary and for cargo heating exhaust to atmosphere, 1 air pump bucket, rod, nut and 18 valve discs, 2 feed and 2 bilge pumps suction and discharge valve lids, spring for feed pump relief valve, 1 propeller shaft, 6 Coupling bolts and nuts, 1 C.I. propeller, 10 L.V. strips of wood for aft bush and 10 L.V. strips for forward bush, 12 plain boiler tubes, 2 safety valve springs, 1 lid each for main stop valve, auxiliary stop valve, main feed check valve and auxiliary feed check valve, 1 steam valve cock, 1 blow down valve lid, 2 oil fuel burners, 16 tips, 6 Springs, 1 suction filter basket, 1 discharge filter basket, 2 thermometers, 5 flame controls, 1 set of goup valves and spring for each pump, 1 set each oil piston rings & steam piston rings for each pump, 8 strainer atomizers, 1 burner supply valve, 3 burner supply pipes, 3 jacket tubes, 1 oil pot and lid, 1 set spanners and sack for O.F. pumps, 2 burner spanners.

The foregoing is a correct description,
For HARLAND AND WOLFF, LIMITED.

F. E. Beck Manufacturer.



NOTE.—The records which do not apply should be deleted.

1930
 During progress of work in shops -- Mar 5. 19. 24. 25. 26 Apr 8. 9. 10. 17. 28. 30 May 1. 12. 13. 14. 15. 16. 19. 20. 22. 24. 26. 28
 June 2. 5. 6. 9. 10. 12. 13. 16. 17. 18. 19. 20. 23. 24. 27. 30 July 8. 11. 31 Sept 20
 Oct 30
 During erection on board vessel --
 Total No. of visits 44

OVAEE

Dates of Examination of principal parts—Cylinders 30. 4. 30 Slides 30. 4. 30 Covers 30. 4. 30
 Pistons 30. 4. 30 Piston Rods 15. 5. 30 Connecting rods 15. 5. 30
 Crank shaft 28. 4. 30 Thrust shaft 22. 5. 30 Intermediate shafts ✓
 Tube shaft ✓ Screw shaft 22. 5. 30 Propeller 20. 5. 30
 Stern tube 20. 5. 30 Engine and boiler seatings 24. 5. 30 Engines holding down bolts 24. 6. 30
 Completion of fitting sea connections 24. 5. 30
 Completion of pumping arrangements 30. 6. 30 Boilers fixed 24. 6. 30 Engines tried under steam 30. 6. 30
 Main boiler safety valves adjusted 30. 6. 30 Thickness of adjusting washers Pat Boiler 2 7/8" A 7/16" Stan. Boiler 2 1/2" A 3/8"
 Crank shaft material S. M. STEEL Identification Mark 123 R.L.A. Thrust shaft material S. M. STEEL Identification Mark 126 R.L.A.
 Intermediate shafts, material ✓ Identification Marks 126 R.L.A. ✓ Tube shaft, material ✓ Identification Mark ✓
 Screw shaft material S. M. STEEL Identification Mark 129 TDS Steam Pipes, material S. D. Steel ✓ Test pressure 540 lbs. ✓ Date of Test 9. 6. 30
 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. The machinery of this vessel has been constructed under special survey. The materials and workmanship are sound and good. The main and auxiliary machinery has been tried under working conditions with satisfactory results. In my opinion the vessel is now eligible for notation in the Society's Register Book as L.M.C. 10. 30. C.L. fitted for oil fuel 10. 30. F.P. above 150°F. Electric light.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 10. 30 C-L

F.D. Fitted for oil fuel (10. 30) F.P. above 150°F.

[Signature]
 10/11/30.

The amount of Entry Fee ... £ 4 : - : When applied for,
 Special ... £ 57 : 5 : 4th Nov. 1930.
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : : 28. 11. 1930

[Signature]
 R. Lee Amear.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 11 NOV 1930

Assigned

+ Amb. 10. 30 C.L. 30
 Fitted for oil fuel 10. 30 F.P. above 150°F

CERTIFICATE WRITTEN.



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

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