

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

2 SEP 1927

of writing Report

19

When handed in at Local Office

14 Sept 1927 Port of

Belfast

in Survey held at

Belfast

Date, First Survey 24 Feb

Last Survey 30 Aug 1927

g. Book.

(Number of Visits 37)

on the

STEEL TWIN SCREW

BRIGIDA

at Belfast

By whom built

Harland & Wolff Ltd.

Yard No.

799

Gross Tons

Net Tons

When built

1927

ines made at

Belfast

By whom made

Harland & Wolff Ltd.

Engine No.

799

when made

1927

ers made at

Belfast

By whom made

Harland & Wolff Ltd.

Boiler No.

799

when made

1927

istered Horse Power

Owners Curacao'sche Scheepvaart Maats.

Port belonging to Millenstad Conacoa

m. Horse Power as per Rule

238

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

Yes

ade for which Vessel is intended

Ocean-faring

INES, &c.—Description of Engines

Inverted triple Expansion Twin Screw

Revs. per minute 130

of Cylinders 13 1/2" - 23 1/2" - 36"

Length of Stroke 27"

No. of Cylinders Six

No. of Cranks Six

ck shaft, dia. of journals

as per Rule 7.19"

as fitted 7 1/2"

Crank pin dia.

7 1/2"

Crank webs

Mid. length breadth 14 1/2"

Mid. length thickness 4 1/2"

shrunk

Thickness parallel to axis 14 1/2"

Thickness around eye-hole 3 1/2"

mediate Shafts, diameter

as per Rule 6.85"

as fitted 7"

Thrust shaft, diameter at collars

as per Rule 7.19"

as fitted 7 1/2"

Shafts, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

Is the tube

screw

shaft fitted with a continuous liner

Two liners

burned together

ize Liners, thickness in way of bushes

as per Rule 3.35"

as fitted 3 1/2"

Thickness between bushes

as per Rule 4 1/2"

as fitted 3 1/2"

Is the after end of the liner made watertight in the

ller 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

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

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

Vickers

Length of Bearing in Stern Bush next to and supporting propeller

32 3/8"

eller, dia.

8' 7"

Pitch

9' 9"

No. of Blades

4

Material

Manila

whether Moveable

No.

Total Developed Surface

28

sq. feet

Pumps worked from the Main Engines, No.

2

Diameter

5"

Stroke

14 1/2"

Can one be overhauled while the other is at work

Yes

Pumps worked from the Main Engines, No.

3

Diameter

5"

Stroke

14 1/2"

Can one be overhauled while the other is at work

Yes

No. and size

3- Two 8 1/2" x 6" x 18"

One 7 1/2" x 5" x 6"

Pumps connected to the

Main Bilge Line

No. and size

One 6" x 7 1/2" x 6"

How driven

Steam

How driven

Steam

st Pumps, No. and size

One 6" x 7 1/2" x 6"

Lubricating Oil Pumps, including Spare Pump, No. and size

oo 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 Forward 2- 2 1/2" Aft 1- 3" (Engine Room Cofferdam One 2" Oil Fuel Pumps)

and 1/2" Main Bilge Pumps. In Aft 2- 2" Inchole 1- 3" Forward Cofferdam 1- 3" all 5 1/2" x 6" x 6" Inchole Inchole Steam Pump

up Room 3- 2" & Hayward Tyler Pump 6" x 7 1/2" x 6"

Water Circulating Pump Direct Bilge Suctions, No. and size One 7 1/2"

Independent Power Pump Direct Suctions to the Engine Room Bilges,

nd size One 3 1/4"

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

ey 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

both

ey 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

both

Pipes pass through the bunkers

None

How are they protected

Yes

Pipes pass through the deep tanks

None

Have they been tested as per Rule

Yes

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

ment to another

Yes

Is the Shaft Tunnel watertight

None

Is it fitted with a watertight door

Yes

worked from

N BOILERS, &c.—(Letter for record

5)

Total Heating Surface of Boilers

3958 sq

reed Draft fitted

Yes

No. and Description of Boilers Two Single and Cyl. mult.

Working Pressure

180 lb

1 REPORT ON MAIN BOILERS NOW FORWARDED?

Yes

1 DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

Yes

NS. Are approved plans forwarded herewith for Shafting

No

Main Boilers

Yes

Auxiliary Boilers

Yes

Donkey Boilers

Yes

(If not state date of approval)

aters General Pumping Arrangements Oil fuel Burning Piping Arrangements

RE GEAR. State the articles supplied:—Two top end bolts + nuts: two bottom end bolts + nuts: two main bearing bolts: one set of coupling

one eccentric chap + leave: one engine guide shoe: one crank throw: propeller shaft (C.I.) and nut: two w. m. linings for thrust shoes:

propellers: one set of piston rings H.P. & L.P.: one piston rod + gland: one pair of top end braces with liners: one pair of crank pin braces with

one slide valve spindle with block: one feed pump plunger: one filge pump plunger: two feed pump escape valve springs: one set of

imp + filge pump valves + seats: one spring for each set main engine escape valves: Ten boiler tubes: 27 condenser tubes + ferrules: one set of

safety valve springs: two check valve lids: 12 pump rings + nuts: Assorted bolts, nuts, studs + iron: one set valves, glands, springs + iron:

auxiliary pumps: Oil Fuel Pipes two burner pipes: one set of nozzles: one set of diaphragms: one set valves for one pump:

thermometer: set of stainer bags for suction stainers: set of stainer bags for delivery stainers: two burner brackets: Ten heater tubes:

aling Pump spares Impeller + shaft: set of bottom end braces: set of top end braces: piston rod, piston and springs:

no + Engine spares: Amature: piston rod: piston + rings: slide valve rod: eccentric rod + trap: pin bottom end braces:

top end braces: 1/2 set Carbon brushes: 3 brush holders.

The foregoing is a correct description.

For HARLAND AND WOLFF, LIMITED.

J. D. Keay.

Manufacturer.

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Lloyd's Register

Foundation

W1644-0145



1927  
During progress of work in shops - - 24 Feb. 24 Mar 4, 27 May 2, 3, 4, 9, 11, 13, 16, 17, 24, 26, 27 June 3, 6, 10, 27, 29 July  
During erection on board vessel - - 4, 6, 7, 8, 19, 21, 26, 28, 30 Aug 2, 3, 4, 8, 10, 11, 15, 25, 30  
Dates of Survey while building  
Total No. of visits 37

Dates of Examination of principal parts—Cylinders 4.7.27 Slides 7.7.27 Covers 4.7.27  
Pistons 7.7.27 Piston Rods 7.7.27 Connecting rods 7.7.27  
Crank shaft 29.6.27 Thrust shaft 29.6.27 + 4.7.27 Intermediate shafts 4.8.27  
Tube shaft ✓ Screw shaft 6.7.27 Propeller 29.6.27  
Stern tube 29.6.27 Engine and boiler seatings 4.8.27 Engines holding down bolts 10.8.27  
Completion of fitting sea connections 4.8.27  
Completion of pumping arrangements 25.8.27 Boilers fixed 4.8.27 Engines tried under steam 25.8.27  
Main boiler safety valves adjusted 25.8.27 Thickness of adjusting washers PORT BOILER P 1 1/2" S 3/8" STAR BOILER P 1 1/2" S 1/2"  
Crank shaft material S.M. INGOT STEEL Identification Mark No 6 R.L.A. Thrust shaft material S.M. INGOT STEEL Identification Mark No 6  
Intermediate shafts, material S.M. INGOT STEEL Identification Marks No 6 + Tube shaft, material ✓ Identification Mark 27.6.27  
Screw shaft, material S.M. INGOT STEEL Identification Mark No 6 Steam Pipes, material S.D. STEEL Test pressure 540 LBS. Date of Test 10.8.27  
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 carrying and burning oil fuel been complied with YES ✓  
Is this machinery duplicate of a previous case YES If so, state name of vessel "BERTA"

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 the workmanship are sound and good. It has been efficiently installed on board the vessel. The main and auxiliary machinery have been tried out under steam. The oil fuel pipe lines have been tested in accordance with the rules. The controls of the oil fuel valves are capable of being operated locally and from outside the engine room. In my opinion the machinery of this vessel is eligible for notation in the Society's Register Book - L.M.C.B. 27 C.L. F.D. Fitted for oil fuel 8.27 F.P. above 150°F

It is submitted that this vessel is eligible for THE RECORD. + L.M.C.B. 27 F.D. C.L.

Fitted for oil fuel 8.27 F.P. above 150°F  
29.9.27

*[Signature]*

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

The amount of Entry Fee ... £ 4 : - :  
Special ... £ 59 : 10 :  
Donkey Boiler Fee ... £ - : - :  
Travelling Expenses (if any) £ - : - :  
When applied for, 1st Sept 1927  
When received, 12.10.27

*[Signature]*  
Engineer Surveyor to Lloyd's Register of Shipping.

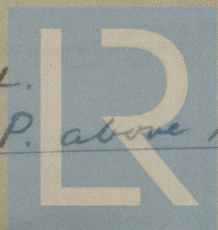
Committee's Minute

TUES. 6 SEP 1927

Assigned

thence 8.27 F.D. C.L.  
Fitted for oil fuel 8.27 F.P. above 150°F

CERTIFICATE WRITTEN



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Foundation