

REPORT ON MACHINERY.

No. 12545.

Received at London Office

FRI. OCT. 15 1920

Writing Report

19

When handed in at Local Office

14. 10. 1920 Port of

Aberdeen

Survey held at

Aberdeen

Date, First Survey

23. 12. 19

Last Survey

29. 9. 1920

Book.

S. on the

single sc. S.S. "LISBON".

Tons

Gross 1964.

Net 1242.

When built 1920

A. Willcock.

Built at

Aberdeen

By whom built

Hall Russell & Co. Ltd. No. 644.

made at

Aberdeen

By whom made

Hall Russell & Co. Ltd. No. 644.

when made 1920.

made at

do.

By whom made

do

do No. 644.

when made 1920

rated Horse Power

230.

Owner: Sir John R. Ellerman Bart.

Port belonging to Liverpool

Horse Power as per Section 28

230.

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

NES, &c.—Description of Engines

Triple expansion.

No. of Cylinders 3.

No. of Cranks 3.

Cylinders 16 3/4" x 29" 50"

Length of Stroke 33"

Revs. per minute 95

Dia. of Screw shaft

as per rule 10.542 Material of screw shaft

screw shaft fitted with a continuous liner the whole length of the stern tube

yes. Is the after end of the liner made water tight

propeller boss yes. If the liner is in more than one length are the joints burned

length

If the liner does not fit tightly at the part

the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

fitted tightly

If two

are fitted, is the shaft lapped or protected between the liners

Length of stern bush 4' 3"

Tunnel shaft

as per rule 9.304 Dia. of Crank shaft journals

as per rule 9.442

Dia. of Crank pin 10"

Size of Crank webs 14 3/4" x 6 1/2"

Dia. of thrust shaft under

10"

Dia. of screw 13' 0"

Pitch of Screw 12' 6"

No. of Blades 4

State whether moveable

no

Total surface 56 1/2'

Feed pumps 2.

Diameter of ditto 3"

Stroke 18"

Can one be overhauled while the other is at work

yes.

Bilge pumps 2.

Diameter of ditto 3"

Stroke 18"

Can one be overhauled while the other is at work

yes.

Donkey Engines Two.

Sizes of Pumps

BALLAST. 6' 6" x 6" GENERAL. 6' 4 1/2" x 6"

No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room Two of 2 1/2"

In Holds, &c. Fore Hold. two of 2 1/2" Main Hold. two of 2 1/2"

Hold. two wing at fore end 2' & one of 2 1/2" to after coell. Tunnel well, one of 2 1/2"

Bilge Injections one size 4 3/4"

Connected to condenser, or to circulating pump

C.D.

Is a separate Donkey Suction fitted in Engine room & size

yes: 2 1/2"

the bilge suction pipes fitted with roses

yes.

Are the roses in Engine room always accessible

yes.

Are the sluices on Engine room bulkheads always accessible

none

connections with the sea direct on the skin of the ship

yes.

Are they Valves or Cocks both valves & Cocks.

ey fired sufficiently high on the ship's side to be seen without lifting the stokehold plates

yes.

Are the Discharge Pipes above or below the deep water line

above.

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

yes.

pipes are carried through the bunkers

none.

How are they protected

yes.

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

yes.

the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

yes.

Screw Shaft Tunnel watertight

yes.

Is it fitted with a watertight door

yes.

worked from upper grating in engine room.

ERS, &c.—(Letter for record (7))

Manufacturers of Steel

Heating Surface of Boilers 3380 1/2'

Is Forced Draft fitted

yes.

No. and Description of Boilers Two, cyl. mult., single ended.

ing Pressure 220. lbs

Tested by hydraulic pressure to

440. lbs.

Date of test 14. 4. 20

No. of Certificate 993.

each boiler be worked separately

yes.

Area of fire grate in each boiler 39. 1/2'

No. and Description of Safety Valves to

oilier two, direct spring

Area of each valve 5.94 1/2"

Pressure to which they are adjusted 225 lbs.

Are they fitted with easing gear

yes.

st distance between boilers or uptakes and bunkers or woodwork

about 8'

INSIDE dia. of boilers 12' 3"

Length 11' 4"

Material of shell plates S.

ess 1 1/2"

Range of tensile strength 28-32

Are the shell plates welded or flanged

no.

Descrip. of riveting: cir. seams d. r. lap.

seams dble straps

Diameter of rivet holes in long. seams 1 1/4"

Pitch of rivets 8 3/8"

now 2 1/2" long

Lap of plates or width of butt straps 18 1/2" x 1 1/2"

ntages of strength of longitudinal joint

84.0

Working pressure of shell by rules 223.5 lbs.

Size of manhole in shell 16" x 12"

compensating ring

McNeil. 33" x 29"

No. and Description of Furnaces in each boiler 2. Beighton

Material S.

Outside diameter 44 3/4"

h of plain part

top

bottom

Thickness of plates

crown 3 1/2"

bottom 3"

Description of longitudinal joint weld.

No. of strengthening rings

yes.

ing pressure of furnace by the rules 225.

Combustion chamber plates: Material S.

Thickness: Sides 23"

Back 16"

Top 32"

Bottom 4"

of stays to ditto: Sides 10" x 1 1/2"

Back 8 3/8" x 8 1/2"

Top 8 1/2" x 1 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules 225.

rial of stays

iron

Area at smallest part 2.249"

Area supported by each stay 43.3"

Working pressure by rules 230.

End plates in steam space:

rial S

Thickness 1 1/2"

Pitch of stays 14 1/4" x 16 1/2"

How are stays secured d. n. w.

yes.

Working pressure by rules 223.

Material of stays S.

at smallest part

6.2"

Area supported by each stay 28.4"

Working pressure by rules 226.5

Material of Front plates at bottom

S.

ness 1 1/2"

Material of Lower back plate

S

Thickness 3 1/2"

Greatest pitch of stays 14 3/4" x 8 1/2"

Working pressure of plate by rules 224.

yes.

Material of tube plates

S

Thickness: Front 1 1/2"

Back 1 3/8"

Mean pitch of stays 10 5/8"

ter of tubes

2 1/2"

Pitch of tubes 3 3/4" x 3 3/4"

Material of tube plates

S

Thickness: Front 1 1/2"

Back 1 3/8"

Mean pitch of stays 10 5/8"

Working pressures by rules

F. 223.5

B. 223.0

Girders to Chamber tops: Material S.

Depth and

across wide water spaces

13 1/2"

Working pressures by rules

F. 223.5

B. 223.0

Girders to Chamber tops: Material S.

Depth and

Working pressures by rules

F. 223.5

B. 223.0

Girders to Chamber tops: Material S.

Depth and

ess of girder at centre

9 1/2" x 1 1/4"

Length as per rule 32 1/2"

Distance apart

8 1/2"

Number and pitch of stays in each

three: 4 1/2"

% of strength of joint

yes.

Working pressure by rules

230.

Steam dome: description of joint to shell

None

ter

Thickness of shell plates

yes.

Material

yes.

Description of longitudinal joint

yes.

Diam. of rivet holes

yes.

Working pressure of shell by rules

yes.

Crown plates

yes.

Thickness

How stayed

of rivets

yes.

IS A DONKEY BOILER FITTED? *yes* If so, is a report now forwarded? *yes*

SPARE GEAR. State the articles supplied:— *Two connecting rod top end and 2 ditto bottom end, bolts and nuts; 2 main bearing, and 1 set, coupling bolts & nuts; 1/2 set each, six and circular pump valves; 1 set each, feed & bilge pump valves; 1 check valve; 1 set, escape valve & 2 safety valve springs; 1 propeller bored, and Keyway cut; bolts & nuts assorted, and in of various sizes.*

The foregoing is a correct description,

FOR HALL, RUSSELL & CO., LTD.

James H. Hunter DIRECTOR.

Manufacturers OF MAIN ENGINES AND BOILERS.

Dates of Survey while building { During progress of work in shops - - - 1919 Dec. 22, 26 - 1920 Jan. 14, 22, 26, 29 - Feb. 16, 19 - Mar. 5, 14, 26 - Apr. 1, 7, 13, 28 - May 13, 14, 21, 24 - June 4, 11, 14, 15, 21, 25 - July 1, 5, 9, 12, 14 - Aug. 4, 9, 11, 14, 17, 20, 24, 25, 27, 30, 31 - Sep. 1, 2, 4 - Total No. of visits 53 - Sep. 14, 21, 25, 28, 29 // Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders 24.5.20 Slides 9.4.20 Covers 11.6.20 Pistons 11.6.20 Rods 4.6.20 Connecting rods 1.4.20 Crank shaft 9.4.20 Thrust shaft 4.4.20 Tunnel shafts 4.4.20 Screw shaft 1.4.20 Propeller 1.4.20 Stern tube 1.4.20 Steam pipes tested 4.9.20 Engine and boiler seatings 12.4.20 Engines holding down bolts 14.8.20 Completion of pumping arrangements 15.9.20 Boilers fixed 15.9.20 Engines tried under steam 29.9.20 Completion of fitting sea connections 12.4.20 Stern tube 31.4.20 Screw shaft and propeller 31.4.20 Main boiler safety valves adjusted 21.9.20 Thickness of adjusting washers Port Boiler 9 1/2 S 3/4 full. Star Boiler 9 1/2 S 3/4 full. Material of Crank shaft Steel Identification Mark on Do. 3245.D. Material of Thrust shaft Steel. Identification Mark on Do. 1306. Material of Tunnel shafts Steel Identification Marks on Do. 1307.A. Material of Screw shafts Steel. Identification Marks on Do. 1323. Material of Steam Pipes Steel. Test pressure 660 lbs per sq inch 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 Section 49 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 and the Boilers have been constructed under Special Survey and in accordance with the Secretary's letters, the Rules, and approved plan. The materials, and workmanship are good, and on completion, they together with the Donkey Boilers. Glasgow Rep & Co were properly fitted board the vessel, and tried under steam, with satisfactory results, and are now in good order, and in my opinion, entitled to the record. * L.M.C. 9.20 in the Register Book.*

An Electric Light and Wireless Installation has been fitted on board the vessel, a Report on which will be forwarded in due course.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 9.20 F.D.

Reel 16/10/20

Ridley Yowell.

Engineer Surveyor to Lloyd's Register of Shipping

The amount of Entry Fee ... £ 2 : : When applied for. Special ... £ 31 : 10 : 14.10.1920. Donkey Boiler Fee ... £ : : When received. Travelling Expenses (if any) £ : : 2/11/20 *ELL*

Committee's Minute

TUE. OCT. 26 1920

Assigned

+ L.M.C. 9.20

CERTIFICATE WRITTEN



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