

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.

Done on the

single sc. S.S. "LISBON"

Tons

Gross 1964.

Net 1242.

A. Willcock

Built at

Aberdeen

By whom built

Hall Russell & Co. Ltd. No. 644.

When built

1920

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. Collierman 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

ENGINES, &c.—Description of Engines

Triple expansion.

No. of Cylinders 3.

No. of Cranks 3.

Cylinders 16 3/4" x 29" 5/8"

Length of Stroke 33"

Revs. per minute 95

Dia. of Screw shaft

as per rule 10.542 Material of screw shaft as fitted 11" Steel.

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 as fitted 10"

Dia. of Crank pin 10"

Size of Crank webs 11 3/4" x 16 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' x 6' x 6" GENERAL. 6' x 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 well. Tunnel well, one of 2 1/2"

Bilge Injections one size 4 1/4"

Connected to condenser, or to circulating pump

C.P.

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.

are fixed 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.

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.

ENGINES, &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.

Working 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

boiler two, direct spring

Area of each valve 5.94 sq"

Pressure to which they are adjusted 225 lbs.

Are they fitted with easing gear yes.

least distance between boilers or uptakes and bunkers or woodwork

about 8'

INSIDE dia. of boilers 10' 3" Length 11' 4" Material of shell plates S.

seams 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 double straps

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

Pitch of rivets 8 3/8" 4 7/8"

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

stages of strength of longitudinal joint

rivets 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 1/4"

of plain part

top

Thickness of plates

bottom

Description of longitudinal joint weld.

No. of strengthening rings

Working pressure of furnace by the rules

225.

Combustion chamber plates: Material S. Thickness: Sides 3/32"

Back 1/16"

Top 3/32"

Bottom 1/8"

of stays to ditto: Sides

10" x 1/2"

Back 8 3/8" x 8 3/8"

Top 8 3/8" x 1/2"

If stays are fitted with nuts or riveted heads nuts

Working pressure by rules 225.

Area of stays Iron

Area at smallest part 2.249 sq"

Area supported by each stay 43.3 sq"

Working pressure by rules 230.

End plates in steam space:

Material S

Thickness 1 1/2"

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

How are stays secured d. n. & w.

Working pressure by rules 223.

Material of stays S.

at smallest part 6.2 sq"

Area supported by each stay 284.5 sq"

Working pressure by rules 226.5

Material of Front plates at bottom S.

Material of Lower back plate S

Thickness 3/32"

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

Working pressure of plate by rules 224.

Material of tube plates S

Thickness 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 3/16"

Mean pitch of stays 10 7/16"

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

Weight of girder at centre 9 1/2" x 1 1/4"

Length as per rule 32 1/2"

Distance apart 8 3/8"

Number and pitch of stays in each three: 4 1/2"

Working pressure by rules 230.

Steam dome: description of joint to shell None

% of strength of joint

Material

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Material of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

SUPERHEATER. Type None.

Date of Approval of Plan

Tested by Hydraulic Pressure to

from the Boiler

Material of Test

Is a Safety Valve fitted to each Section of the Superheater which can be

Is Easing Gear fitted

Pressure to which each is adjusted

223.5

223.0

223.5

223.0

223.5

223.0

223.5

223.0

223.5

223.0

223.5

Diameter of Safety Valve

Pressure to which each is adjusted

223.5

223.0

223.5

223.0

223.5

223.0

223.5

Material of Safety Valve

Pressure to which each is adjusted

223.5

223.0

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