

REPORT ON MACHINERY.

No. 16857

Port of Hull

Received at London Office

19

No. in Survey held at Hull

Reg. Book.

Date, first Survey

Feb 9th

Last Survey

May 22nd 1905

(Number of Visits 19)

Gross 176

Net 60

When built 1905

Master

Built at Hull

By whom built Charles S. B. & Co. Ltd.

Engines made at Hull

By whom made

Charles S. B. & Co. Ltd.

when made 1905

Boilers made at do

By whom made do

when made 1905

Registered Horse Power

Owners

Hull Steam Towing & Ice Co. Ltd. Port belonging to Hull

Nom. Horse Power as per Section 28 435

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted No

ENGINES, &c.—Description of Engines

Triple

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 10" 17" 28"

Length of Stroke 21"

Revs. per minute 108

Dia. of Screw shaft

as per rule 6.55

Material of screw shaft

Is the 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

in the propeller boss Yes If the liner is in more than one length are the joints burned ✓

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 ✓

Length of stern bush 2'-7"

Dia. of shaft as per rule 5.47

Dia. of Crank shaft journals as per rule 5.74

as fitted 5.34

Dia. of Crank pin 6"

Size of Crank webs 12" x 3 1/2"

Dia. of thrust shaft under

collars 6"

Dia. of screw 8'-9"

Pitch of screw 8'-0" root 9'-6" tip

No. of blades 4

State whether moveable No

Total surface 24 sq. ft.

No. of Feed pumps 1

Diameter of ditto 2 1/2"

Stroke 11"

Can one be overhauled while the other is at work ✓

No. of Bilge pumps 1

Diameter of ditto 2 1/2"

Stroke 11"

Can one be overhauled while the other is at work ✓

No. of Donkey Engines Two

Sizes of Pumps 6" x 3" x 6"

5" x 5" x 5"

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

In Engine Room One 2"

In Holds, &c. One 2"

Ejector suction from Eng. bilge, hold, & ballast tanks, & discharge on deck ✓

No. of bilge injections 1 sizes 3 1/2"

Connected to condenser, or to circulating pump Cond.

Is a separate donkey suction fitted in Engine room & size 3" Ejector

Are all 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 ✓

Are all connections with the sea direct on the skin of the ship Yes

Are they Valves or Cocks Both

Are they 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

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 are carried through the bunkers Cold & tank suction

How are they protected Wood casing

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times Yes

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges Yes

When were stern tube, propeller, screw shaft, and all connections examined in dry dock Before launch the screw shaft tunnel watertight None

Is it fitted with a watertight door ✓

worked from ✓

BOILERS, &c.—

(Letter for record (5))

Total Heating Surface of Boilers 750 sq. ft.

Is forced draft fitted No

No. and Description of Boilers One S.E. Cyl. Multi

Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs.

Date of test 2-5-05

Can each boiler be worked separately ✓

Area of fire grate in each boiler 25 1/2 sq. ft.

No. and Description of safety valves to

each boiler Two direct spring

Area of each valve 3.14

Pressure to which they are adjusted 185 lbs.

Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 5 1/2"

Mean dia. of boilers 10'-6"

Length 9'-3"

Material of shell plates Steel

Thickness 1"

Range of tensile strength 27-32

Are they welded or flanged ✓

Descrip. of riveting: cir. seams BR. Lap long. seams DBS. 5 Rivets

Diameter of rivet holes in long. seams 1 1/16"

Pitch of rivets 7 1/4"

Lap of plates or width of butt straps 16"

Per centages of strength of longitudinal joint

rivets 91.3

plate 85.3

Working pressure of shell by rules 200 lbs.

Size of manhole in shell 16" x 12"

Size of compensating ring 3'-4" x 2'-6" x 1"

No. and Description of Furnaces in each boiler Two plain

Material Steel Outside diameter 35.53"

Length of plain part top 5'-6 1/2"

Thickness of plates crown 49"

bottom 64"

Description of longitudinal joint Welded

No. of strengthening rings ✓

Working pressure of furnace by the rules 229 lbs.

Combustion chamber plates: Material Steel Thickness: Sides 1/16" Back 5/8" Top 5/8" Bottom 1/16"

Pitch of stays to ditto: Sides 8 1/4" x 7" Back 7 1/8" x 7" Top 8 1/4" x 7" If stays are fitted with nuts or riveted heads Nuts

Material of stays Steel

Diameter at smallest part 1 3/8"

Area supported by each stay 50"

Working pressure by rules 237 lbs.

End plates in steam space:

Material Steel Thickness 15/16"

Pitch of stays 14 1/4" x 14"

How are stays secured Nuts & W.

Working pressure by rules 208 lbs.

Material of stays Steel

Area at smallest part 5.18

Area supported by each stay 199"

Working pressure by rules 259 lbs.

Material of Front plates at bottom Steel

Thickness 15/16"

Material of Lower back plate Steel Thickness 15/16"

Greatest pitch of stays 15 1/2" x 12 1/2"

Working pressure of plate by rules 210 lbs.

Diameter of tubes 3 1/4"

Pitch of tubes 4 3/4" x 4 1/2"

Material of tube plates Steel Thickness: Front 15/16" Back 7/8" Mean pitch of stays 9 1/2" x 9"

Pitch across wide water spaces 13 3/4"

Working pressures by rules 202 lbs.

Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 7 1/2" x 1 3/4"

Length as per rule 2'-6"

Distance apart 7"

Working pressure by rules 212 lbs.

Superheater or Steam chest; how connected to boiler ✓

Can the superheater be shut off and the boiler worked

separately ✓

Diameter ✓

Length ✓

Thickness of shell plates ✓

Material ✓

Description of longitudinal joint ✓

Diam. of rivet

holes ✓

Pitch of rivets ✓

Working pressure of shell by rules ✓

Diameter of flue ✓

Material of flue plates ✓

Thickness ✓

If stiffened with rings ✓

Distance between rings ✓

Working pressure by rules ✓

End plates: Thickness ✓

How stayed ✓

Working pressure of end plates ✓

Area of safety valves to superheater ✓

Are they fitted with easing gear ✓

Lloyd's Register

Foundation

W756-0063

DONKEY BOILER— No. Description
Made at By whom made When made Where fixed
Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety valves
No. of safety valves Area of each Pressure to which they are adjusted If fitted with casing gear If steam from main boilers can
enter the donkey boiler Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile
strength Descrip. of riveting long. seams Dia. of rivet holes Whether punched or drilled Pitch of rivets
Lap of plating Per centage of strength of joint Rivets Thickness of shell crown plates Radius of do. No. of Stays to do.
Dia. of stays. Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of
joint Thickness of furnace crown plates Stayed by Working pressure of shell by rules
Working pressure of furnace by rules Diameter of uptake Thickness of uptake plates Thickness of water tubes

SPARE GEAR. State the articles supplied:—Two top-end & two bottom-end connecting
rod bolts & nuts. Two main bearing bolts & nuts. One set of
coupling bolts & nuts. One set of feed & bilge pump valves.
Main & donkey feed check valves. Assorted bolts & nuts, &c.

The foregoing is a correct description,
SHIPBUILDING & ENGINEERING CO. LIMITED.
T. J. Dalhousie
Manufacturer.

Dates During progress of work in shops - - SECRETARY 1905:—Feb. 9. 10. 23. Mar. 3. 6. 14. 16. 22. 27. 29 Apr. 4. 11. 15. 25
of Survey During erection on board vessel - - May 2. 5. 15. 18. 22.
while building Total No. of visits 19
Is the approved plan of main boiler forwarded herewith yes
" " " donkey " " " ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Engines and Boiler of this vessel have been
constructed under Special Survey, are of good material
and workmanship, and have been fitted & secured
on board in accordance with the Rules. They are
now in good working condition and in my opinion
eligible to have the notation of + L M C 5.05 in the
Register Book.

It is submitted that
this vessel is eligible for
THE RECORD + L M C 5.05.

LM
9. 1905

The amount of Entry Fee. £ 1 : : :
Special £ 8 : : :
Donkey Boiler Fee £ : : :
Travelling Expenses (if any) £ : : :
When applied for, 5/6/1905
When received, 5. 9. 1905

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

WED. 14 JUN 1905

Assigned

+ L M C 5.05

MACHINERY CERTIFICATE
WRITTEN.



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