

REPORT ON MACHINERY.

No. 25555

Received at London Office

Date of writing Report 13-9-12

When handed in at Local Office

13.9.12

Port of

Hull

TUE. OCT. 22. 1912

No. in Survey held at
Reg. Book.

Hull

Date, First Survey

10/4/12

Last Survey

13-9-12 19

30 supp. on the

steel screw steamer

Mate

(C339)

(Number of Visits 49)

Gross 273

Net 129

Master

Built at Baenode

By whom built

Van Damm & Adams

When built 1912-9

Engines made at

Hull

By whom made

Charles C. & L. & Co

H.O.A. 153

when made 1912-9

Boilers made at

Hull

By whom made

Charles C. & L. & Co

H.O.A. 153

when made 1912-9

Registered Horse Power

Owners Keeps Steamship & Lightship Co

Port belonging to London

Nom. Horse Power as per Section 28

43

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

ENGINES, &c.—Description of Engines

Comp. & Surface Condensing

No. of Cylinders

Two

No. of Cranks

Two

Dia. of Cylinders

16" x 30"

Length of Stroke

18"

Revs. per minute

130

Dia. of Screw shaft

as per rule 6.66"

Material of

steel

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

no liners

in the propeller boss

✓

If the liner is in more than one length are the joints burned

✓

Is the after end of the liner made water tight

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

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

Length of stern bush 27"

Dia. of Tunnel shaft

as per rule 5.77"

as fitted 6"

Dia. of Crank shaft journals

as per rule 6.05"

as fitted 6 1/4"

Dia. of Crank pin

6 1/4"

Size of Crank webs

12" x 4 1/2"

collars

6 1/4"

Dia. of screw

7'-6"

Pitch of Screw

8'-6"

No. of Blades

3

State whether moveable

no

Total surface

24 sq ft

No. of Feed pumps

one

Diameter of ditto

2 1/2"

Stroke

7 1/2"

Can one be overhauled while the other is at work

✓

No. of Bilge pumps

one

Diameter of ditto

2 1/2"

Stroke

7 1/2"

Can one be overhauled while the other is at work

✓

No. of Donkey Engines

one duplex

Sizes of Pumps

5 1/4" x 3 1/2" x 5"

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

In Engine Room

Two 2' dia

In Holds, &c. one 2' dia one 2' dia in F.P.Y.

No. of Bilge Injections

one sizes 3"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

2"

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

none

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

none

How are they protected

✓

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

Dates of examination of completion of fitting of Sea Connections

28-8-12

of Stern Tube

28-8-12

Screw shaft and Propeller

28-8-12

Is the Screw Shaft Tunnel watertight

✓

Is it fitted with a watertight door

worked from

✓

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

Steel Co. of Scotland

Total Heating Surface of Boilers

810 sq ft

Is Forced Draft fitted

no

No. and Description of Boilers

One single ended

Working Pressure

130 lbs

Tested by hydraulic pressure to

260 lbs

Date of test

21-2-12

No. of Certificate

187A

Can each boiler be worked separately

✓

Area of fire grate in each boiler

34.5 sq ft

No. and Description of Safety Valves to

each boiler

two spring loaded

Area of each valve

4.9 sq in

Pressure to which they are adjusted

135 lbs

Are they fitted with easing gear

yes

Smallest distance between boilers

on plates and bunkers

on deck

5 1/2"

dia. of boilers

120"

Length

9'-6 3/4"

Material of shell plates

steel

Thickness

1 1/16"

Range of tensile strength

28-32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

double

long. seams

D.R. & B.I.

Diameter of rivet holes in long. seams

1 5/16"

Pitch of rivets

5 3/8"

Lap of plates on

width of butt straps

10"

Per centages of strength of longitudinal joint

rivets 83.4

plate 82.5

Working pressure of shell by rules

136 lbs

Size of manhole in shell

15" x 19"

Size of compensating ring

8 1/2" x 7 1/2"

No. and Description of Furnaces in each boiler

two plain

Material

steel

Outside diameter

36"

Length of plain part

top 8 1/2"

bottom 10 6 1/2"

Thickness of plates

crown 3 11/16"

Description of longitudinal joint

welded

No. of strengthening rings

✓

Working pressure of furnace by the rules

132

Combustion chamber plates: Material

steel

Thickness: Sides

1 1/16"

Back

9/8"

Top

9/16"

Bottom

1 1/16"

Pitch of stays to ditto: Sides

10 1/4" x 6 3/4"

Back

9 3/4" x 9 3/4"

Top

11" x 6 3/4"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

132

Material of stays

steel

Diameter at smallest part

1 1/2"

Area supported by each stay

74.25 sq in

Working pressure by rules

133

End plates in steam space:

Material

steel

Thickness

29/32"

Pitch of stays

15" x 19"

How are stays secured

8 x 1/2"

Working pressure by rules

132

Material of stays

steel

Diameter at smallest part

4 1/2"

Area supported by each stay

285 sq in

Working pressure by rules

154

Material of Front plates at bottom

steel

Thickness

29/32"

Greatest pitch of stays

14" x 9 3/4"

Working pressure of plate by rules

195

Thickness

29/32"

Material of Lower back plate

steel

Thickness

29/32"

Pitch of stays

14" x 9 3/4"

Working pressure of plate by rules

195

Diameter of tubes

3"

Pitch of tubes

4 1/4" x 4 1/4"

Material of tube plates

steel

Thickness: Front

29/32"

Back

1 1/16"

Mean pitch of stays

10 1/2"

Pitch across wide water spaces

14"

Working pressures by rules

150

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

6 1/2" x 1 1/2"

Length as per rule

25"

Distance apart

11"

Number and pitch of stays in each

two 6 3/4"

Working pressure by rules

134

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

✓

Pitch of rivets

✓

Working pressure of shell by rules

✓

Diameter of flue

✓

VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description	Made at	By whom made	When made	Where fixed
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment	
If fitted with easing 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 Plates
Working pressure of shell by rules	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	
Working pressure of furnace by rules	Thickness of furnace crown plates	Stayed by			
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, set of pump valves & a quantity of bolts & nuts & iron of various sizes.

FOR EARLE'S
SHIPBUILDING & ENGINEERING CO. LIMITED.
The foregoing is a correct description,
J. J. Salathorne
Secretary

Dates of Survey while building
During progress of work in shops— 1911: Nov 6, 7, 10, 20, 22, 29 Dec 1, 5, 6, 15, 21 1912: Jan 4, 6, 9, 11, 15, 16, 18, 19, 22
During erection on board vessel— 24, 25, 29, Feb 2, 5, 9, 16, 21, 22, 26 Mar 8, 21, Jun 20, Aug 13, Nov 27, 28, 29, 30, 31, Sep 2, 3, 5
Total No. of visits 24
Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts—Cylinders 4-1-12 Slides 6-1-12 Covers 6-1-12 Pistons 16-1-12 Rods 16-1-12-9-12
Connecting rods 16-1-12 Crank shaft 16-2-12 Thrust shaft 16-2-12 Piston shafts 16-2-12 Screw shaft 16-2-12 Propeller 21-3-12
Stern tube 29-8-12 Steam pipes tested 30-2-12 Engine and boiler seatings 29-8-12 Engines holding down bolts 2-9-12
Completion of pumping arrangements 6-9-12 Boilers fixed 5-9-12 Engines tried under steam 10-9-12
Main boiler safety valves adjusted 10-9-12 Thickness of adjusting washers P 9/16 S 3/4
Material of Crank shaft steel Identification Mark on Do. 744 J.B. Material of Thrust shaft steel Identification Mark on Do. 744 J.B.
Material of Piston shafts steel Identification Marks on Do. 943 F.L.S. Material of Screw shafts steel Identification Marks on Do. 943 F.L.S.
Material of Steam Pipes solid drawn copper Test pressure 400 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.) The Machinery for this vessel has been constructed under special survey in accordance with the approved plans & the rules of this society, the material & workmanship is good, the boiler has been tested by hydraulic pressure to 240 lbs & found sound & tight. The machine has been properly fitted & secured on board & satisfactorily tried under steam. The safety valves have been adjusted under steam & tested for accumulation.
In my opinion the vessel is eligible for the vessel + L.M.C. 9.12.

It is submitted that
this vessel is eligible for
THE RECORD + LMC 9.12.

The amount of Entry Fee .. £ 1 : 0 :
Special .. £ 2 : 0 :
Donkey Boiler Fee .. £ : :
Travelling Expenses (if any) £ : :
When applied for, 21-10-12
When received, 24/12/12
FRI. JAN. 3. 1913
Committee's Minute
Assigned
+ L.M.C. 9.12.
Frank L. Stanger
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.