

Rpt. 4.

REPORT ON MACHINERY.

No. 24137

Received at London Office

TUE AUG 29 1911

Date of writing Report

19

When handed in at Local Office

22nd Aug 1911

Port of Hull

No. in Survey held at

Hull & Selby

Date, First Survey

Jan 13th

Last Survey

Aug 16th 1911

Reg. Book.

4 Diff on the

Steel Sc K. Princeps

(Number of Visits

30

Gross

264

Tons

Net 106

Master

Built at

Selby

By whom built

Messrs. Buchanan & Sons

When built

1911

Engines made at

By whom made

Messrs

when made

1911

Boilers made at

Hull

By whom made

Chas D. Holmes & Co

when made

1911

Registered Horse Power

Owners

Anchor Steaming Co. Ltd

Port belonging to

Grimsby

Nom. Horse Power as per Section 28

73

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

12³/₄ - 22 - 36

Length of Stroke

24

Revs. per minute

111

Dia. of Screw shaft

as per rule 7.33

Material of

Iron

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

Yes

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

36

Dia. of Tunnel shaft

as per rule 6.47

Dia. of Crank shaft journals

as per rule 6.49

as fitted 7.125

Dia. of Crank pin

7¹/₈

Size of Crank webs

13¹/₂ x 4¹/₂

Dia. of thrust shaft under

collars

7¹/₈

Dia. of screw

9 - 0

Pitch of Screw

No. of Feed pumps

1

Diameter of ditto

2¹/₈

Stroke

24

Can one be overhauled while the other is at work

—

No. of Bilge pumps

1

Diameter of ditto

2¹/₈

Stroke

24

Can one be overhauled while the other is at work

—

No. of Donkey Engines

One

Sizes of Pumps

2³/₄ x 5

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

In Engine Room

Two 2", One 2¹/₂", One 3"

In Holds, &c.

One each 2", to forepeak,

forward slush well, Aft slush well.

No. of Bilge Injections

1

sizes

3

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

Yes

2¹/₂ &c.

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

hold 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

Dates of examination of completion of fitting of Sea Connections

29.5.11

of Stern Tube

29.5.11

Screw shaft and Propeller

29.5.11

Is the Screw Shaft Tunnel watertight

None

Is it fitted with a watertight door

—

worked from

—

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

Phoenix Act.

S. for B.H. Westphalia

Total Heating Surface of Boilers

1140

Is Forced Draft fitted

No

No. and Description of Boilers

One Gyl. Hull. S. Ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

18.5.11

No. of Certificate

1813

Can each boiler be worked separately

—

Area of fire grate in each boiler

37.5

No. and Description of Safety Valves to

each boiler

Two Spring

Area of each valve

3.94

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

8"

Mean dia. of boilers

13 - 0

Length

10 - 6

Material of shell plates

S

Thickness

1¹/₂"

Range of tensile strength

29 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

L.D.

long. seams

D.B.S.Y.R.

Diameter of rivet holes in long. seams

1¹/₂"

Pitch of rivets

6¹/₈"

Lap of plates or width of butt straps

15"

Per centages of strength of longitudinal joint

rivets 89

plate 85

Working pressure of shell by rules

182 lbs

Size of manhole in shell

14" x 12"

Size of compensating ring

7" x 1¹/₂"

No. and Description of Furnaces in each boiler

Two plain

Material

S

Outside diameter

3' - 8¹/₂"

Length of plain part

top 72.5"

Thickness of plates

crown 25"

bottom 32"

Description of longitudinal joint

Welded

No. of strengthening rings

0

Working pressure of furnace by the rules

181 lbs

Combustion chamber plates: Material

S

Thickness: Sides

64"

Back

76"

Top

76"

Bottom

64"

Working pressure by rules

181 lbs

Pitch of stays to ditto: Sides

10¹/₂ x 8¹/₂"

Back

10 x 9"

Top

9 x 8¹/₂"

If stays are fitted with nuts or riveted heads

Yes

Working pressure by rules

205 lbs

End plates in steam space:

Material of stays

S

Area

at smallest part

2.75"

Area supported by each stay

120"

Working pressure by rules

205 lbs

Material of stays

S

Material

S

Thickness

1¹/₈"

Pitch of stays

18 x 18"

How are stays secured

0.7.46

Working pressure by rules

185 lbs

Material of Front plates at bottom

S

Area

at smallest part

6.33

Area supported by each stay

32.4"

Working pressure by rules

203 lbs

Working pressure of plate by rules

186 lbs

Thickness

7¹/₈"

Material of Lower back plate

S

Thickness

15"

Greatest pitch of stays

15 x 10"

Diameter of tubes

3¹/₂"

Pitch of tubes

4¹/₈ x 5"

Material of tube plates

S

Thickness: Front

7¹/₈"

Back

7¹/₈"

Mean pitch of stays

9¹/₈"

Pitch across wide water spaces

14¹/₄"

Working pressures by rules

256 lbs

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

8³/₄ x 2"

Length as per rule

2 - 11¹/₈"

Distance apart

9"

Number and pitch of stays in each

3 - 8¹/₂"

Working pressure by rules

185 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

These particulars

Signal Letters (if any)

Official Number.

132109

No., Date, and Port of Pr

Whether British or Foreign Built.

British

Number of Decks

Number of Masts

Rigged

Stern

Build

Galleries

Head

Framework and descrip

vessel

Number of Bulkheads

Number of water ballast

and their capacity in

Total to quarter the depth from ves

to bottom of keel

No. of sets of Engines.

Description of Engine

Triple Expansion

direct acting

Inverted cylin

No. of Shafts.

Particulars of Boile

Description Cyl. Muli

Number

Iron or Steel

Loaded Pressure

180

GROSS TO

Under Tonnage Deck

Space or spaces between

Turret or Tank

Forecastle

Bridge space

Poop or Break

Side Houses

Deck Houses

Chart Houses

Spaces for machinery, and

Section 78 (2) of the Me

1894

Excess of Hatchways

Gross Tonnage

Deductions, as per Contra

Registered Tonn

NOTE. The only spaces a

Open Forecastle

Low Side House, C

NOTE 1- The tonnage

of the total

Name of Master

No. of Owners

Name, Residence, and D

The Anchor

Docks, Great G

Manager - W

Dated 28th July

(830) (70635) Wt. 14095/26 100

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	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:—Two each top and bottom end of connecting rod, and main bearing bolts and nuts, one set coupling bolts and nuts, one set each air, circulating feed and bilge pump valves, Iron various sizes, quantity of bolts & nuts etc

The foregoing is a correct description,
p. pro CHARLES D. HOLMES & Co. LTD.

Manufacturer.

During progress of work in shops -- 1911 - Jan 13. Feb 9. 11. 14. 20. 23. Mar 26. 31. Apr 6. 20 May 3. 8. 10. 15. 18. 19
During erection on board vessel -- May 20. 29 Jan 7. 13. 17. 29 July 7. 10. 17. 28. Aug 9. 10. 12. 16.
Total No. of visits 30

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 29.6.11 Slides 7.7.11 Covers 10.7.11 Pistons 13.6.11 Rods 13.6.11
Connecting rods 10.7.11 Crank shaft 13.6.11 Thrust shaft 17.7.11 Tunnel shafts Screw shaft 20.5.11 Propeller 19.5.11
Stern tube 10.5.11 Steam pipes tested 10.8.11 Engine and boiler seatings 17.6.11 Engines holding down bolts 12.8.11
Completion of pumping arrangements 9.8.11 Boilers fixed 12.8.11 Engines tried under steam 12.8.11
Main boiler safety valves adjusted 12.8.11 Thickness of adjusting washers 3/8" 3/8"
Material of Crank shaft S Identification Mark on Do. 749. 13.6.11 Material of Thrust shaft S Identification Mark on Do. 749. 13.6.11
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts I Identification Marks on Do. 749. 13.6.11
Material of Steam Pipes Solid drawn Copper Test pressure 400 lbs per sq. inch

General Remarks (State quality of workmanship, opinions as to class, &c. The engines & boilers on this vessel have been constructed under special survey in accordance with the Rules. The materials and workmanship are good. The boiler tested by hydraulic pressure, and with the engines secured on board, & tested under steam, they are now in good order & safe working condition, and respectfully submitted as being eligible in our opinion to be classed with the notation of L.M.B. 8.11 in the Register Book.

It is submitted that
this vessel is eligible for
THE RECORD. 4th Dec 8.11

The amount of Entry Fee £ 1 : : When applied for,
Special £ 10 19 : : 25.8.11
Donkey Boiler Fee £ : :
Travelling Expenses (if any) £ 8 : : 31.8.11

Committee's Minute

Assigned

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



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Foundation