

Date of writing Report

When handed in at Local Office

2-11-10 Port of Hull

No. in Survey held at

Hull & Selby

Date, First Survey

July 12th

Last Survey

1st Nov 1910

Reg. Book.

(Number of Visits 29.)

Gross 223

Master

Built at

Selby

By whom built

Messrs. Buchanan & Co. Ltd

When built

1910

Engines made at

By whom made

Messrs

when made

1910

Boilers made at

Hull

By whom made

Charles D. Holmes & Co. Ltd

when made

1910

Registered Horse Power

Owners

J. Duncan Sons & Co. Ltd

Port belonging to

Liverpool

Nom. Horse Power as per Section 28

68

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

Dia. of Cylinders

12 $\frac{1}{2}$ " - 21 $\frac{1}{2}$ " - 35"

Length of Stroke

24

Revs. per minute

110

Dia. of Screw shaft

as per rule 7.13"

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

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

31"

Dia. of Thrust shaft

as per rule 6.14"

Dia. of Crank shaft journals

as per rule 6.42"

Dia. of Crank pin

6 $\frac{1}{2}$ "

Size of Crank webs

13" x 4 $\frac{1}{2}$ "

Dia. of thrust shaft under

collars

6 $\frac{1}{2}$ "

Dia. of screw

8" - 7 $\frac{1}{2}$ "

Pitch of Screw

11" - 4 $\frac{1}{2}$ " - 10" - 4 $\frac{1}{2}$ "

No. of Blades

14

State whether moveable

No

Total surface

30 sq

No. of Feed pumps

1

Diameter of ditto

2 $\frac{3}{8}$ "

Stroke

14 $\frac{1}{2}$ "

Can one be overhauled while the other is at work

No. of Bilge pumps

1

Diameter of ditto

2 $\frac{3}{8}$ "

Stroke

14 $\frac{1}{2}$ "

Can one be overhauled while the other is at work

No. of Donkey Engines

One

Sizes of Pumps

6" x 4 $\frac{1}{2}$ " x 6"

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

In Engine Room

Two 2"

In Holds, &c. One each 2", to slush well,

Fish room, and forehold.

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

2 $\frac{1}{2}$ " 6j.

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

23.8.10

of Stern Tube

23.8.10

Screw shaft and Propeller

23.8.10

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 & G.A.H.V. of Harrogate

Total Heating Surface of Boilers

1070 sq

Is Forced Draft fitted

No

No. and Description of Boilers

One Cyl. Multi S. End

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

12.10.10

No. of Certificate

1776

Can each boiler be worked separately

Area of fire grate in each boiler

32.8 sq

No. and Description of Safety Valves to

each boiler

Two Spring

Area of each valve

3.97 sq

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

10 $\frac{1}{2}$ "

Mean dia. of boilers

12'-6"

Length

10'-0"

Material of shell plates

S

Thickness

1 $\frac{1}{2}$ "

Range of tensile strength

28-32

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

1 $\frac{1}{2}$ "

Pitch of rivets

7"

Lap of plates or

width of butt straps

15"

Per centages of strength of longitudinal joint

rivets 88.4

plate 84.82

Working pressure of shell by rules

126 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

7" x 1 $\frac{1}{2}$ "

No. and Description of Furnaces in each boiler

Two plain

Material

S

Outside diameter

3'-7"

Length of plain part

top 5'-10"

Thickness of plates

crown 4.9

bottom 6.4

Description of longitudinal joint

Welded

No. of strengthening rings

0

Working pressure of furnace by the rules

184 lbs

Combustion chamber plates: Material

S

Thickness: Sides

23"

Back

16"

Top

32"

Bottom

32"

Pitch of stays to ditto: Sides

9" x 10"

Back

9" x 10"

Top

8 $\frac{1}{2}$ " x 10"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

181 lbs

Material of stays

S

Diameter at smallest part

2.4

Area supported by each stay

110.25

Working pressure by rules

195 lbs

End plates in steam space:

Material

S

Thickness

1 $\frac{1}{2}$ "

Pitch of stays

17" x 17"

How are stays secured

D.T.W.

Working pressure by rules

185 lbs

Material of stays

S

Diameter at smallest part

5.79

Area supported by each stay

289

Working pressure by rules

208 lbs

Material of Front plates at bottom

S

Thickness

7 $\frac{1}{2}$ "

Material of Lower back plate

S

Thickness

29"

Greatest pitch of stays

14 $\frac{1}{2}$ " x 9"

Working pressure of plate by rules

194 lbs

Diameter of tubes

3 $\frac{1}{2}$ "

Pitch of tubes

5" x 5"

Material of tube plates

S

Thickness: Front

2"

Back

8"

Mean pitch of stays

10"

Pitch across wide water spaces

15"

Working pressures by rules

248 lbs

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

9" x 1 $\frac{3}{4}$ "

Length as per rule

2'-8 $\frac{1}{2}$ "

Distance apart

8 $\frac{1}{2}$ "

Number and pitch of stays in each

Two

- 10"

Working pressure by rules

227 lbs

Superheater or Steam chest; how connected to boiler

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

How stayed

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

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 connecting rod bolts and nuts, two main bearing bolts and nuts, one set coupling bolts and nuts, one set each air feed and bilge pump valves, a shaft impeller for circulating pump, assorted bolts nuts etc

That foregoing is correct description,

Arthur Holmes

Manufacturer.

Dates of Survey while building	During progress of work in shops --	1910: - July 12. Aug 9. 11. 15. 17. 19. 23. 25. 30. Sep 2. 7. 12. 14. 16. 20. 22. 29. 30. Oct 4. 5
	During erection on board vessel --	Oct 7. 12. 15. 20. 21. 24. 26. 29. Nov 1.
	Total No. of visits	29

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—		Cylinders	2. 9. 10	Slides	29. 9. 10	Covers	14. 9. 10	Pistons	22. 9. 10	Rods	30. 8. 10
Connecting rods		7. 9. 10	Crank shaft	17. 8. 10	Thrust shaft	23. 8. 10	Tunnel shafts	Screw shaft 17. 8. 10 Propeller 17. 8. 10			
Stern tube		17. 8. 10	Steam pipes tested	21. 10. 10	Engine and boiler seatings	23. 9. 10	Engines holding down bolts 26. 10. 10				
Completion of pumping arrangements		29. 10. 10	Boilers fixed	26. 10. 10	Engines tried under steam		29. 10. 10				
Main boiler safety valves adjusted		26. 10. 10	Thickness of adjusting washers		5/16" 5/16"						
Material of Crank shaft		I.	Identification Mark on Do.		704. J.B.	Material of Thrust shaft		S.	Identification Mark on Do.		
Material of Tunnel shafts		Identification Marks on Do.				Material of Screw shafts		I.	Identification Marks on Do.		
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 and boiler of this vessel have been constructed under special survey the materials and workmanship are good. The boiler tested by hydraulic pressure, and with the engines secure on board and tested under steam and found satisfactory. they are now in good order and safe working condition and respectfully submitted, as being eligible in my opinion to be classed with the notation of *L M.C. 11.10* in the Register Book

It is submitted that this vessel is eligible for THE RECORD. + LMC 11-10.

James Barclay
4-11-10

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

The amount of Entry Fee	£ 1	When applied for,	29. 10. 1910
Special	£ 10	When received,	31. 10. 1910
Donkey Boiler Fee	£		
Travelling Expenses (if any)	£ -		

Committee's Minute

Assigned

10th Nov 1910

Thmc 11. 10

MACHINERY CERTIFICATE WRITTEN



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