

## REPORT ON MACHINERY

No. 27185

Date of writing Report

10

When handed in at Local Office

Received at London Office

THU. FEB. 12. 1914

No. in Survey held at

Hull

Reg. Book.

11/2 to 14 Port of Hull

Date, First Survey

Oct. 30<sup>th</sup>

Last Survey

Jan. 30<sup>th</sup> 1914.

Hull on the

Shut S.C.K. "Beryl"

(Number of Visits)

Master

Built at

Selby

By whom built

Cochrane &amp; Sons Ltd.

Tons

Gross

248

Net

98

When built

1913.14

Engines made at

By whom made

when made

1913.14

Boilers made at

Hull

By whom made

Messrs. Charles R. Holmes &amp; Co. Ltd.

when made

1913.14

Registered Horse Power

Owners

Hampson &amp; Co. Ltd.

Port belonging to

Hull

Nom. Horse Power as per Section 28

45

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

## ENGINES, &amp;c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

13"-2 1/2"-35"

Length of Stroke

24"

Revs. per minute

Dia. of Screw shaft

as per rule 4.48

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

Yes

If two

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

Dia. of Tunnel shaft

as per rule 6.74

Dia. of Crank shaft journals

as per rule 4.08

Dia. of Crank pin

4 1/2"

Size of Crank webs

4 1/2" x 14"

Dia. of thrust shaft under

collars

4 1/2"

Dia. of screw

9'-0"

Pitch of Screw

10'-6"

No. of Blades

4

State whether moveable

No

Total surface

3 ft

No. of Feed pumps

1

Diameter of ditto

2 1/2"

Stroke

14 1/2"

Can one be overhauled while the other is at work

No. of Bilge pumps

1

Diameter of ditto

2 1/2"

Stroke

14 1/2"

Can one be overhauled while the other is at work

No. of Donkey Engines

1

Sizes of Pumps

6" x 4 1/2" x 6"

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

In Engine Room

Two 2 1/2" On found 2 on aft

In Holds, &amp;c.

One 2 1/2" On found, one 2 1/2" On found

No. of Bilge Injections

1

sizes

3 1/2"

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room &amp; size

3" dia. on

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

No

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 endings

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

14.11.13

of Stern Tube

14.11.13

Screw shaft and Propeller

14.11.13

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

## BOILERS, &amp;c.—(Letter for record

S)

Manufacturers of Steel Irons, Phoenix, &amp;c. Under Testing of Hold

Total Heating Surface of Boilers

1250 sq ft

Is Forced Draft fitted

No

No. and Description of Boilers

One up. mult. engine in dnd.

Working Pressure

200 lbs.

Tested by hydraulic pressure to

400 lbs.

Date of test

31.12.13

No. of Certificate

2046

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

43 sq ft

No. and Description of Safety Valves to

each boiler

Two spring

Area of each valve

490"

Pressure to which they are adjusted

205 lbs.

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

5"

INT.

Mean dia. of boilers

12'-6"

Length

10'-3"

Material of shell plates

S

Thickness

1/8"

Range of tensile strength

29 tons.

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

X. P. L.

Long. seams

X. P. L.

Diameter of rivet holes in long. seams

1/8"

Pitch of rivets

4 1/2"

Lap of plates or width of butt straps

14"

Per centages of strength of longitudinal joint

rivets 86.16

plate 85.24

Working pressure of shell by rules

204 lbs.

Size of manhole in shell

16" x 12"

Size of compensating ring

4" x 1 1/2"

No. and Description of Furnaces in each boiler

3 plain

Material

S

Outside diameter

36"

Length of plain part

top 6'-4 1/2"

Thickness of plates

crown 13"

bottom 16"

Description of longitudinal joint

Weld

No. of strengthening rings

3

Working pressure of furnace by the rules

232 lbs.

Combustion chamber plates: Material

S

Thickness: Sides

11"

Back

11 1/2"

Top

11 1/2"

Bottom

11"

Pitch of stays to ditto: Sides

9 1/2" x 8"

Back

8" x 10"

Top

8" x 8 1/2"

If stays are fitted with nuts or riveted heads

Yes

Working pressure by rules

220 lbs.

Material of stays

S

Diameter at smallest part

2 1/4"

Area supported by each stay

92 sq in

Working pressure by rules

234 lbs.

End plates in steam space:

Material

S

Thickness

1 1/2"

Pitch of stays

16 1/2" x 14"

How are stays secured

X. P. L.

Working pressure by rules

236 lbs.

Material of stays

S

Diameter at smallest part

6 1/4"

Area supported by each stay

280.5 sq in

Working pressure by rules

236 lbs.

Material of Front plates at bottom

S

Thickness

1"

Material of Lower back plate

S

Thickness

13"

Greatest pitch of stays

13" x 8"

Working pressure of plate by rules

200 lbs.

Diameter of tubes

3 1/2"

Pitch of tubes

4 1/2" x 5"

Material of tube plates

S

Thickness: Front

1"

Back

3/8"

Mean pitch of stays

9 1/2"

Pitch across wide water spaces

13 1/2"

Working pressures by rules

212 lbs.

Girders to Chamber tops: Material

S

Depth and

Number and pitch of stays in each

3 - 8" x 10"

Thickness of girder at centre

10" - 1 1/4"

Length as per rule

2'-9 3/8"

Distance apart

8 1/2"

Working pressure by rules

220 lbs.

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

separately

Yes

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

Material of flue plates

Thickness

How stayed

Stiffened with rings

Distance between rings

Working pressure by rules



IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— *Two each top & bottom end connecting rod bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set each fuel & bilge pump valves, iron of various sizes, a quantity of assorted bolts, nuts & washers.*

The foregoing is a correct description,

*p. pro* CHARLES D. HOLMES & CO. LTD.

*S. Arthur Holmes*

DIRECTOR.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } *1913: - Oct. 30. 31. Nov. 11. 14. 20. 26. 28. Dec. 4. 9. 15. 17. 20. 23. 31 1914: Jan. 1. 6. 1.*  
{ During erection on board vessel - - - } *Jan. 17. 21. 22. 26. 30.*  
Total No. of visits *22*

Is the approved plan of main boiler forwarded herewith *Rpt 2700*

" " " *donkey* " " "

Dates of Examination of principal parts—Cylinders *17. 12. 13* Slides *12. 1. 14* Covers *12. 1. 14* Pistons *6. 1. 14* Rods *6. 1. 14*

Connecting rods *12. 1. 14* Crank shaft *1. 1. 14* Thrust shaft *11. 11. 13* Tunnel shafts *✓* Screw shaft *11. 11. 13* Propeller *11. 11. 13*

Stern tube *11. 11. 13* Steam pipes tested *22. 1. 14* Engine and boiler seatings *14. 11. 13* Engines holding down bolts *18. 1. 14*

Completion of pumping arrangements *30. 1. 14* Boilers fixed *26. 1. 14* Engines tried under steam *26. 1. 14*

Main boiler safety valves adjusted *26. 1. 14* Thickness of adjusting washers *Forward  $\frac{5}{16}$  aft  $\frac{3}{8}$*

Material of Crank shaft *Iron* Identification Mark on Do. *1097 T. 4 D.* Material of Thrust shaft *Steel* Identification Mark on Do. *1097 T. 4 D.*

Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts *Iron* Identification Marks on Do. *1097 T. 4 D.*

Material of Steam Pipes *Solid drawn copper.* Test pressure *400 lbs. per sq. inch hydraulic.*

Is an installation fitted for burning oil fuel *No.* Is the flash point of the oil to be used over 150°F. *✓*

Have the requirements of Section 49 of the Rules been complied with *✓*

Is this machinery duplicate of a previous case *Yes.* If so, state name of vessel *Siam steamer "AGATE".*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The engines & boiler of this vessel have been constructed under special survey in accordance with the Rules. The materials & work-*

*manship are sound & good. The boiler tested by hydraulic pressure, & with the engines secured on board & tested under steam they are now in good order & safe working condition & respectfully submitted as being eligible in my opinion to be classed with the notation of T.B.M.C. 1. 14 in the Register Book.*

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 1. 14.

*JWR 10/2/14* *Paul*

The amount of Entry Fee ... £ *1 : 0 :* When applied for, *11-2 1914*  
Special ... £ *11 : 5 :*  
Donkey Boiler Fee ... £ *:* When received, *28/2/14*  
Travelling Expenses (if any) £ *4/1 :*

*H. D. Jones*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRI. FEB. 13. 1914*

Assigned *+ Lmb 1. 14*

MACHINERY CERTIFICATE  
WRITTEN.



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Foundation