

REPORT ON MACHINERY.

No. 25513.

Received at London Office

FRI. OCT. 11. 1912

Date of writing Report

19

When handed in at Local Office

4. 10. 12 Port of Hull.

No. in Survey held at
Reg. Book.

Hull.

Date, First Survey

July 17th

Last Survey

Sep 23rd 1912

14 Saffron the

Ship S.C.K. "G.E. FOSTER"

(Number of Visits 21)

Gross 229
Tons Net 96

Master

Built at

Sulby

By whom built

Boothman & Sons.

When built 1912.

Engines made at

By whom made

when made 1912.

Boilers made at

Hull.

By whom made

Thames, Charles & Thomas & Co. Ltd.

when made 1912.

Registered Horse Power

Owners Athol Construction Co.

Port belonging to

Grimsby -

Nom. Horse Power as per Section 28

43

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" x 21" x 34"

Length of Stroke

24"

Revs. per minute

Dia. of Screw shaft

as per rule 6.99

Material of

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

Yes.

Length of stern bush

31"

Dia. of Tunnel shaft

as per rule 6.26

Dia. of Crank shaft journals

as per rule 6.544

Dia. of Crank pin

6 1/2"

Size of Crank webs

4 1/2" x 13 1/2"

Collars

6 1/2"

Dia. of screw

8-6"

Pitch of Screw

11-3" 1/2

No. of Blades

4

State whether moveable

No.

Total surface

24 1/2 sq ft

No. of Feed pumps

1

Diameter of ditto

2 1/2"

Stroke

24"

Can one be overhauled while the other is at work

Yes.

No. of Bilge pumps

1

Diameter of ditto

2 1/2"

Stroke

24"

Can one be overhauled while the other is at work

Yes.

No. of Donkey Engines

2

Sizes of Pumps

6" x 3" x 6 1/2"

4 1/2" x 2 1/2" x 4 duplex

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

In Engine Room Two 2" One forward & one aft.

In Holds, &c. Two 2" one in main hold & one in

fore hold. 6 1/2" in suction from all bilges with discharge on deck.

No. of Bilge Injections

1

sizes

3 1/2"

Connected to condenser, or to circulating pump

pump.

Is a separate Donkey Suction fitted in Engine room & size

2 1/2" dia.

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

Yes.

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

31. 4. 12

of Stern Tube

31. 4. 12

Screw shaft and Propeller

31. 4. 12

Is the Screw Shaft Tunnel watertight

Yes.

Is it fitted with a watertight door

Yes.

worked from

MILLERS, &c.—(Letter for record

S.)

Manufacturers of Steel

Thames, Charles & Thomas & Co. Ltd. Qd. 400 of Engr.

Total Heating Surface of Boilers

1290 sq ft

Is Forced Draft fitted

No.

No. and Description of Boilers

One 4 ft. multi-cylinder m.d.

Working Pressure

180 lbs.

Tested by hydraulic pressure to

360 lbs.

Date of test

2. 9. 12

No. of Certificate

1923.

Can each boiler be worked separately

Yes.

Area of fire grate in each boiler

48 sq ft

No. and Description of Safety Valves to

each boiler

Two 4 spring.

Area of each valve

4. 90"

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

6"

Mean dia. of boilers

13-6"

Length

10-6"

Material of shell plates

S.

Thickness

1/2"

Range of tensile strength

29 tons.

Are the shell plates welded or flanged

No.

Descrip. of riveting: cir. seams

2. 29.

Long. seams

D.P.S.P.

Diameter of rivet holes in long. seams

1/16"

Pitch of rivets

6 1/2"

Lap of plates or width of butt straps

15 3/8"

Percentages of strength of longitudinal joint

rivets 92

plate 84.5

Working pressure of shell by rules

181 lbs.

Size of manhole in shell

16 x 12"

Size of compensating ring

4 x 1/16"

No. and Description of Furnaces in each boiler

3 plain.

Material

S. Outside diameter

38"

Length of plain part

top 48.5"

Thickness of plates

crown 23"

bottom 32"

Description of longitudinal joint

Weld.

No. of strengthening rings

11"

Working pressure of furnace by the rules

180 lbs.

Combustion chamber plates: Material

S.

Thickness: Sides

1/16"

Back

3/32"

Top

1/16"

Bottom

1/16"

Pitch of stays to ditto:

Sides 8 1/4 x 10 1/2"

Back 9 x 10 1/2"

Top 8 1/4 x 10 1/2"

If stays are fitted with nuts or riveted heads

Yes.

Working pressure by rules

183 lbs.

Material of stays

S.

Diameter at smallest part

2. 40"

Area supported by each stay

110. 250"

Working pressure by rules

196 lbs.

End plates in steam space:

Material

S.

Thickness

1 1/2"

Pitch of stays

18 x 19 1/2"

How are stays secured

20. 7. 54.

Working pressure by rules

180 lbs.

Material of stays

S.

Diameter at smallest part

6. 30"

Area supported by each stay

251. 0"

Working pressure by rules

184 lbs.

Material of Front plates at bottom

S.

Thickness

1/8"

Material of Lower back plate

S.

Thickness

3/32"

Greatest pitch of stays

14 x 9"

Working pressure of plate by rules

180 lbs.

Mean pitch of stays

10 1/2"

Diameter of tubes

3 1/2"

Pitch of tubes

5 1/2 x 5"

Material of tube plates

S.

Thickness: Front

3/8"

Back

1/2"

Mean pitch of stays

10 1/2"

Pitch across wide water spaces

14" d.b.

Working pressures by rules

285 lbs.

Girders to Chamber tops: Material

S.

Depth and

Thickness of girder at centre

10 1/2" 1 3/4"

Length as per rule

2-10 3/16"

Distance apart

10 1/2"

Number and pitch of stays in each

3-8 1/4"

Working pressure by rules

206 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

stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves

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 Safe
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 connecting rod top and bottom bolts & nuts, two connecting rod bottom and bolts & nuts, two main bearing bolts, one set of coupling bolts, one of fuel & bilge pump valves, a quantity of assorted bolts & nuts, iron of various sizes etc.*

The foregoing is a correct description,
P. PRO CHARLES D. HOLMES & CO. LTD.
 Manufacturer.

Dates of Survey while building	During progress of work in shops -	1912 - July 17, 19, 23, 24, 31, Aug 1, 9, 14, 16, 22, 28, 29, Sep 2, 5, 7, 10, 11, 17
	During erection on board vessel -	Sep 18, 19, 23
	Total No. of visits	21

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

Dates of Examination of principal parts—Cylinders	19.4.12	Slides	28.8.12	Covers	22.8.12	Pistons	28.8.12	Rods	14.8.12
Connecting rods	1.8.12	Crank shaft	19.4.12	Thrust shaft	16.8.12	Tunnel shafts	-	Screw shaft	19.4.12
Stern tube	23.4.12	Steam pipes tested	14.9.12	Engine and boiler seatings	21.4.12	Engines holding down bolts	5.9.12		
Completion of pumping arrangements	23.9.12	Boilers fixed	18.9.12	Engines tried under steam	19.9.12				
Main boiler safety valves adjusted	19.9.12	Thickness of adjusting washers	A 7/16 F 3/8						
Material of Crank shaft	S	Identification Mark on Do.	Nº 9567.62	Material of Thrust shaft	S	Identification Mark on Do.	Nº 9567.62		
Material of Tunnel shafts		Identification Marks on Do.	-	Material of Screw shafts	S	Identification Marks on Do.	Nº 9567.62		
Material of Steam Pipes	Solid drawn copper	Test pressure	360 lbs. per sq. inch hydraulic						

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 & workmanship 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 notes of L.M.C. 9.12 in the Register Book.*

It is submitted that this vessel is eligible for
 THE RECORD + L.M.C. 9.12.

The amount of Entry Fee	£ 1 : 0 :	When applied for,	10.10.12
Special	£ 10 : 19 :		
Donkey Boiler Fee	£ :	When received,	31.10.12
Travelling Expenses (if any)	£ 2/6 :		

Committee's Minute

Assigned

TUE. OCT. 15. 1912

L.M.C. 9.12

J.W.D.
 15/10/12
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Lloyd's Register Foundation

Certificate (if required) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)