

REPORT ON MACHINERY

No. 29756

WED. 24 JAN. 1917

Date of writing Report 4-1-17

When handed in at Local Office

1/17

Port of

Received at London Office

Hull

No. in Survey held at

Hull

Date, First Survey

24/2/16

Last Survey

3-1-17

19

Reg. Book.

(Number of Visits 63)

Capt 4 on the steel screw trawler "Sea King"

Master

Built at

Leby

By whom built

Cochrane & Sons Ltd

Engines made at

Hull

By whom made

C. D. Holmes & Co Ltd (No 1119)

when made

1917-1

Boilers made at

Hull

By whom made

C. D. Holmes & Co Ltd

when made

1917-1

Registered Horse Power

Owners

J. H. Robins & Co Ltd

Port belonging to

Hull

Nom. Horse Power as per Section 28

94

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Triple expansion

No. of Cylinders

Three

No. of Cranks

3

Dia. of Cylinders

13"-23"-37"

Length of Stroke

26"

Revs. per minute

108

Dia. of Screw shaft

as per rule 7.99

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

yes

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

yes

Length of stern bush

35 1/2"

Dia. of Tunnel shaft

as per rule 7.04"

Dia. of Crank shaft journals

as per rule 7.39"

Dia. of Crank pin

7.5"

Size of Crank webs

14 1/2" x 4 1/2"

Dia. of thrust shaft under

collars

7.5"

Dia. of screw

9-7 1/2"

Pitch of Screw

11'-0"

No. of Blades

4

State whether moveable

no

Total surface

33 1/2 sq ft

No. of Feed pumps

one

Diameter of ditto

2 5/8"

Stroke

14 3/4"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

one

Diameter of ditto

2 5/8"

Stroke

14 3/4"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

one

3" cylinders

Sizes of Pumps

6", 4 1/2" x 6" duplex

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

In Engine Room

Two 2" dia

In Holds, &c. one 2" dia in each compartment

No. of Bilge Injections

one

size 3 1/2"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

3" cylinder

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

Forward suction

How are they protected

strong wooden casings

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

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

yes

BOILERS, &c.—(Letter for record

S

Manufacturers of Steel

Stewart & Lloyd

Total Heating Surface of Boilers

1625 sq ft

Is Forced Draft fitted

no

No. and Description of Boilers

one single ended

Working Pressure

200 lbs

Tested by hydraulic pressure to

400 lbs

Date of test

18-11-16

No. of Certificate

3176

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 spring loaded

Area of each valve

4.9 sq in

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

8" lagged

Mean dia. of boilers

16 1/2"

Length

10'-8"

Material of shell plates

steel

Thickness

1 1/4"

Range of tensile strength

28-32 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

double

long. seams

J.P.D.B.

Diameter of rivet holes in long. seams

1 1/4"

Pitch of rivets

8 7/16"

Gap of plates or width of butt straps

18 1/8"

Per centages of strength of longitudinal joint

rivets 88.04

plate 84.96

Working pressure of shell by rules

200

Size of manhole in shell

16" x 12"

Size of compensating ring

7" x 1 1/2"

No. and Description of Furnaces in each boiler

three plain

Material

steel

Outside diameter

40"

Length of plain part

top 7.9"

bottom 7.1"

Thickness of plates

crown 5 13/16"

bottom 5 13/16"

Description of longitudinal joint

welded

No. of strengthening rings

yes

Working pressure of furnace by the rules

206

Combustion chamber plates: Material

steel

Thickness: Sides

23/32"

Back

7/64"

Top

23/32"

Bottom

23/32"

Pitch of stays to ditto: Sides

10" x 8 1/2"

Back

10 1/2" x 8"

Top

11" x 8 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

201

Material of stays

steel

Area at smallest part

2.07 sq in

Area supported by each stay

93.5

Working pressure by rules

200

End plates in steam space:

Material

steel

Thickness

1 1/32"

Pitch of stays

19" x 18"

How are stays secured

8 x 1/4"

Working pressure by rules

205

Material of stays

steel

Area at smallest part

7.5 sq in

Area supported by each stay

342 sq in

Working pressure by rules

228

Material of Front plates at bottom

steel

Thickness

1"

Material of Lower back plate

steel

Thickness

1 1/16"

Greatest pitch of stays

16 1/2" x 9 1/2"

Working pressure of plate by rules

200

Diameter of tubes

3 1/2"

Pitch of tubes

4 7/8"

Material of tube plates

steel

Thickness: Front

1"

Back

7/8"

Mean pitch of stays

11"

Pitch across wide water spaces

13 3/4"

Working pressures by rules

203

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

10 3/4" x 1 3/4"

Length as per rule

35 3/8"

Working pressure by rules

206

Steam dome: description of joint to shell

yes

% of strength of joint

yes

Diameter

yes

Thickness of shell plates

yes

Material

yes

Description of longitudinal joint

yes

Diam. of rivet holes

yes

Pitch of rivets

yes

Working pressure of shell by rules

yes

Crown plates

yes

Thickness

yes

How stayed

yes

SUPERHEATER. Type

none fitted

Date of Approval of Plan

yes

Tested by Hydraulic Pressure to

2019

Date of Test

yes

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

yes

Diameter of Safety Valve

yes

Pressure to

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? ☒

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, one set of air, feed & bilge pump valves, 6 gunking studs & nuts, one main & one donkey check valve, one set of donkey pump valves, one safety valve spring, top & bottom end bolts for circulating pump (centrifugal) & a quantity of bolts & nuts & nuts of various sizes. Impeller & shaft for circulating pump.*

The foregoing is a correct description,

Charles D. Holmes & Co. Ltd.
Arthur Holmes DIRECTOR

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 19/6:-- Feb 24. 29 Mar 3. 28 Apr 11. 19. 27 May 5. 15. 18. 20. 23. 25. 26 July 10. 17. 21
During erection on board vessel -- 26. 31 Aug 8. 9. 11. 15. 19. 23. 28. 29 Sep 2. 5. 7. 12. 13. 15. 19. 27. 29 Oct 5. 7. 10. 12. 17.
Total No. of visits 63.
Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders 17-10-16 Slides 7-11-16 Covers 31-10-16 Pistons 20-10-16 Rods 27-10-16
Connecting rods 3-11-16 Crank shaft 18-10-16 Thrust shaft 28-8-16 Tunnel shafts ☒ Screw shaft 25-5-16 Propeller 25-5-16
Stern tube 20-5-16 Steam pipes tested 14/12-16 Engine and boiler seatings 26-5-16 Engines holding down bolts 8-12-16
Completion of pumping arrangements 1-1-17 Boilers fixed 28-12-16 Engines tried under steam 3-1-17
Completion of fitting sea connections 26-5-16 Stern tube 26-5-16 Screw shaft and propeller 26-5-16
Main boiler safety valves adjusted 1-1-17 Thickness of adjusting washers $7\frac{1}{32}$ A $\frac{3}{4}$
Material of Crank shaft *Iron* Identification Mark on Do. 1744 FLS Material of Thrust shaft *Iron* Identification Mark on Do. 1721 FLS
Material of Tunnel shafts ☒ Identification Marks on Do. Material of Screw shafts *Iron* Identification Marks on Do. 1525 FLS
Material of Steam Pipes *Solid drawn copper* Test pressure *400 lbs*

Is an installation fitted for burning oil fuel ☒ 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 ☒ If so, state name of vessel ☒

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been constructed under special survey in accordance with the approved plans & the rules of this Society, the materials & workmanship are good, the boiler & steam pipes have been tested by hydraulic pressure as above & found sound & good. The machinery has been properly fitted & secured on board the vessel & on completion was tried under steam & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 210 lbs.*

In my opinion the vessel is eligible for the record & L.M.C. 1.17

*It is submitted that
this vessel is eligible for
THE RECORD.*

+ L.M.C. 1.17

*7/8
27.1.17*

9/8

The amount of Entry Fee ... £ 1 : 0 :
Special ... £ 1/4 : 2 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : 8/2 :
When applied for, 19...
When received, 31.1.19.17

Frank L. Stanger

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 30 JAN. 1917.

Assigned

+ L.M.C. 1.17



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Foundation