

REPORT ON MACHINERY.

No. 30,685

Received at London Office FRI. APR. 6. 1918

Date of writing Report

19

When handed in at Local Office

4-9-18

Port of

Hull

No. in Survey held at
Reg. Book.

Hull

Date, First Survey

Mar 13/17

Last Survey

4-9-18

19

on the

steel screw tugboat Thomas Johns

Master

Built at

Lelby

By whom built

Cochran & Sons Ltd

Tons

Gross 324

Net 149

When built

1918

Engines made at

Hull

By whom made

Chas. D. Holmes & Co. Ltd (A23)

when made

1912

Boilers made at

Hull

By whom made

Chas. D. Holmes & Co. Ltd (A38)

when made

1912

Registered Horse Power

Owners

British Admiralty

Port belonging to

Nom. Horse Power as per Section 28

87

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

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

Dia. of Screw shaft

as per rule 7.2"

Material of

steel

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

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 1/2"

Size of Crank web

4 1/2" x 1 1/4"

Dia. of thrust shaft

rollers

7 1/2"

Dia. of screw

9 1/2"

Pitch of Screw

11-0"

No. of Blades

4

State whether moveable

no

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 4 3/4" cwt

SIZES OF PUMPS

6" 4 1/4" 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 sizes 3 1/2"

Connected to condenser, or to circulating pump

yes

Is a separate Donkey Suction fitted in Engine room & size 3" cwt

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

Sewer suction & cold water

How are they protected

strong 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

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

OILERS, &c.—(Letter for record

S)

Manufacturers of Steel

J. Spencer & Sons & Port Talbot

Total Heating Surface of Boilers

1440 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

25-7-12

No. of Certificate

3308

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

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

9" Bl lagged

Mean dia. of boilers

16.5"

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

Y.P.D.B.S.

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

8 5/8"

Lap of plates or width of butt straps

18"

Per centages of strength of longitudinal joint

rivets 85-9

plate 85-5

Working pressure of shell by rules

202

Size of manhole in shell

16" x 12"

Size of compensating ring

7" x 1 1/4"

No. and Description of Furnaces in each boiler

3 Plain

Material

steel

Outside diameter

40"

Length of plain part

top 7 1/2"

Thickness of plates

crown 7 1/16"

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

3/4"

Back

2 3/32"

Top

3/4"

Bottom

3/4"

Pitch of stays to ditto: Sides

10" x 8"

Back

9 3/4" x 8 3/4"

Top

11" x 8"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

202

Material of stays

steel

Area at smallest part

2.07 sq in

Area supported by each stay

88 sq in

Working pressure by rules

211

End plates in steam space:

Material

steel

Thickness

1 7/32"

Pitch of stays

19" x 17 1/2"

How are stays secured

A.H.W.

Working pressure by rules

210

Material of stays

steel

Area at smallest part

7.5 sq in

Area supported by each stay

335 sq in

Working pressure by rules

233

Material of Front plates at bottom

steel

Thickness

15/16"

Material of Lower back plate

steel

Thickness

15/16"

Greatest pitch of stays

13 3/4" x 9 9/16"

Working pressure of plate by rules

216

Diameter of tubes

3 1/2"

Pitch of tubes

4 7/8"

Material of tube plates

steel

Thickness: Front

15/16" + 3/8"

Back

7/8"

Mean pitch of stays

10"

Pitch across wide water spaces

14"

Working pressures by rules

275

Girders to Chamber tops: Material

steel

Depth and

Thickness of girder at centre

11" x 1 3/4"

Length as per rule

36.218"

Distance apart

11"

Number and pitch of stays in each

Three 8"

Working pressure by rules

201

Steam dome: description of joint to shell

yes

% of strength of joint

yes

Diameter

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

yes

Date of Approval of Plan

yes

Tested by Hydraulic Pressure to

yes

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, six junk ring studs & nuts, one main & one donkey check valve, two valves for donkey pump, one safety valve spring, 3 condenser tubes, one set of fire bars, & quantity of bolts & nuts & iron of various size*

The foregoing is a correct description,

For CHARLES D. HOLMES & CO. LTD.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1917: Mar 13. 20. 22. 25. Apr 10. 12. 19. 20 May 6. 8. 13. 14. 24. 28. 29. 31 Jun 1. 4. 5. 7. 10. 12. 13. 19. 21
During erection on board vessel -- 24. 27. 28 Jul. 2. 3. 5. 10. 12. 13. 16. 28. 25. 31 Aug 13. 15. 20. 21. 22. 26. 27. 30 Sep 4
Total No. of visits 47

Is the approved plan of main boiler forwarded herewith *dup already forwarded*

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 7-6-18 Slides 2-7-18 Covers 7-6-18 Pistons 10-6-18 Rods 19-6-18
Connecting rods 21-6-18 Crank shaft 24-6-18 Thrust shaft 24-6-18 Tunnel shafts ✓ Screw shaft 28-5-18 Propeller 28-5-18
Stern tube 1-6-18 Steam pipes tested 21-8-18 Engine and boiler seatings 5-6-18 Engines holding down bolts 13-8-18
Completion of pumping arrangements 30-8-18 Boilers fixed 27-8-18 Engines tried under steam 30-8-18
Completion of fitting sea connections 5-6-18 Stern tube 5-6-18 Screw shaft and propeller 5-6-18
Main boiler safety valves adjusted 27-8-18 Thickness of adjusting washers *Both 3/8*

Material of Crank shaft *steel* Identification Mark on Do. *2137FLS* Material of Thrust shaft *steel* Identification Mark on Do. *2138FLS*
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *steel* Identification Marks on Do. *2127FLS*
Material of Steam Pipes *solid drawn copper* Test pressure *400 lbs.*

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 *Lord Thrusy class*

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 & specification & the rules of this Society, the materials & workmanship are good. The boiler & steam pipes have been tested as above & found sound & tight. The machinery has been properly fitted & secured on board the vessel & on completion tested under full power for two hours, as required by the Admiralty, & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 215 lbs.*

In my opinion the vessel is eligible for the record & L.M.C. 9.18

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 9.18.

W.D.A.

9/9/18.

APR

The amount of Entry Fee ... £ 2 : 0 :
Special ... £ 26 : 2 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 5-9-1918
When received, 16-9-1918

Committee's Minute

TUE. 10 SEP. 1918

Assigned

L.M.C. 9.18

18-9-18
10-9-18
MACHINERY CERTIFICATE

Frank L. Stanger

Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation