

## REPORT ON MACHINERY.

No. 30974

SAT. 22 MAR. 1919

Date of writing Report

19

When handed in at Local Office

19/3/19 Port of Hull

Received at London Office

No. in Survey held at  
Reg. Book.

Hull

Date First Survey 27/6/18

Last Survey

13/3/1919

(Number of Visits 39)

Gross 324

Net 148

When built 1919

Master

Built at

Lilly

By whom built

Cochran &amp; Sons Ltd

Engines made at

Hull

By whom made

Chas. &amp; Holmes &amp; Co Ltd

when made 1919

Boilers made at

Hull

By whom made

Chas. &amp; Holmes &amp; Co Ltd

when made 1919

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

ENGINES, &amp;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 114

Dia. of Screw shaft

as per rule 8.29"

Material of steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

no

Is the after end of the liner made water tight

in the propeller boss

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

on liner thicker gland fitted

Length of stern bush 36"

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 webs 4 1/2" x 11"

Dia. of thrust shaft under

collars 7 1/2"

Dia. of screw 9'-7 1/2"

Pitch of Screw 11'-0"

No. of Blades 4

State whether moveable no

Total surface 33 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 1/2" dia.

SIZES OF PUMPS 6, 4 1/2 x 6"

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

In Engine Room two

2" dia.

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

all suction also connected to suction

No. of Bilge Injections one

size 3 1/2"

Connected to condenser, or to circulating pump yes

Is a separate Donkey Suction fitted in Engine room &amp; size 3" 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 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 &amp; ventilation

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

worked from

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

Manufacturers of Steel

Port-Caltre &amp; J. Spencer &amp; Sons

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 8-11-18

No. of Certificate 3334

Can each boiler be worked separately

yes

Area of fire grate in each boiler 48 sq ft

No. and Description of Safety Vabs to

each boiler two spring loaded

Area of each valve 4.9 sq ft

Pressure to which they are adjusted 200

Are they fitted with easing gear yes

Smallest distance between boilers

compartment and bunkers

8" Blagden

dia. of boilers 165"

Length 10'-8"

Material of shell plates steel

Thickness 1 5/16"

Range of tensile strength 28-32 tons

Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams double

long. seams 1 R &amp; B 1

Diameter of rivet holes in long. seams 1 1/4"

Pitch of rivets 8 3/8"

Top of plates or width of butt straps 1"

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 5/16"

No. and Description of Furnaces in each boiler

Three plain

Material steel

Outside diameter 40"

Length of plain part

top 78 1/2"

bottom 69"

Thickness of plates

crown 3 13/16"

Description of longitudinal joint

welded

No. of strengthening rings

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 208

Material of stays steel

Area at smallest part 2.07 sq ft

Area supported by each stay 88 sq ft

Working pressure by rules 211

En plates in steam space:

Material steel

Thickness 1 3/32"

Pitch of stays 19" x 17 1/2"

How are stays secured

8 ft x 6 ft

Working pressure by rules 210

Material of stays steel

Area at smallest part 7.6 sq ft

Area supported by each stay 335 sq ft

Working pressure by rules 233

Material of Front plate at bottom

steel

Thickness 1 5/16"

Material of Lower back plate

steel

Thickness 1 5/16"

Material of Lower back plate

Thickness 1 5/16"

Greatest pitch of stays 13 1/2" x 9 1/2"

Working pressure of plate by rules 216

Diameter of tubes 3 1/2"

Pitch of tubes 4 3/8"

Material of tube plates

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"

Working pressure by rules 201

Steam dome: description of joint to shell

yes

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

SUPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

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

yes

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

yes

Lloyd's Register

Foundation

005421-003428-0125



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

The foregoing is a correct description,

*Arthur James Smeaton*  
*Charles Holmes & Co Ltd.* Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1918 Jan 27. Feb 10. 18. 26. 28. Aug 13. 15. 19. 22. 26. 30. Oct 3. 7. 11. 12. 16. 19. 24. 27. 31. 1. 4. 9. 14. 18. 24. 26. 29. - 1919 Jan 4. Mar 25. 11. 13. During erection on board vessel -- Total No. of visits *39.*

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

" " " donkey " " " *Yes*

Dates of Examination of principal parts—Cylinders *19-9-18* Slides *26-10-18* Covers *27-9-18* Pistons *1-10-18* Rods *6-11-18*

Connecting rods *9-10-18* Crank shaft *8-11-18* Thrust shaft *26-10-18* Tunnel shafts ☒ Screw shaft *30-8-18* Propeller *30-8-18*

Stern tube *30-8-18* Steam pipes tested *18-12-18* Engine and boiler seatings *11-9-18* Engines holding down bolts *18-12-18*

Completion of pumping arrangements *11/3/19* Boilers fixed *18-12-18* Engines tried under steam *11/3/19*

Completion of fitting sea connections *11-9-18* Stern tube *11-9-18* Screw shaft and propeller *11-9-18*

Main boiler safety valves adjusted *4-1-19* Thickness of adjusting washers *7/16 2 1/16*

Material of Crank shaft *steel* Identification Mark on Do *2181 FLS* Material of Thrust shaft *steel* Identification Mark on Do *2178 FLS*

Material of Tunnel shafts ☒ Identification Marks on Do. ☒ Material of Screw shafts *steel* Identification Marks on Do *2154 FLS*

Material of Steam Pipes *solid drawn copper* Test pressure *400*

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 *yes* If so, state name of vessel *Therese Blau*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been built under special survey, the materials & workmanship are good on completion the machinery was tried under full working conditions with satisfactory results.*

*The machinery throughout is now in a good & efficient condition and eligible in our opinion to be classed and to have the notation  $\boxtimes$  LMC 3-19 marked in the Society's Register Book.*

It is submitted that this vessel is eligible for THE RECORD + LMC 3. 19.

The amount of Entry Fee ... £ *2* : 0 :  
Special ... £ *26* : 2 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, *21/3 1919*  
When received, *5.11. 1919*

*Frank L. Sturges*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 25 MAR. 1919

Assigned

*+ L.M.C. 3.19*

MACHINERY SETTING



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