

REPORT ON MACHINERY

No. 30447
WED. 3-APR. 1918

Received at London Office

Date of writing Report 22-3-18

When handed in at Local Office

28/3/18 Port of Hull

No. in Survey held at
Reg. Book.

Hull

Date, First Survey 8/12/17

Last Survey Mar. 19th 1918

(Number of Visits 34)

Gross 325

Tons Net 150

When built 1918-3

Master

Built at Selby

By whom built Cochrane & Sons Ltd

Engines made at Hull

By whom made Chas. D. Holmes & Co. Ltd (A 16) when made 1918-3

Boilers made at Hull

By whom made Chas. D. Holmes & Co. Ltd (A 29) when made 1918-3

Registered Horse Power

Owners British Admiralty

Port belonging to

om. Horse Power as per Section 28

87

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

GINES, &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 116

Dia. of Screw shaft as per rule 7.2"

Material of screw shaft steel

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

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

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"

as fitted 7 1/2"

Dia. of Crank pin 7 1/2"

Size of Crank web 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 1/2"

No. of Feed pumps one

Diameter of ditto 2 3/4"

Stroke 14 3/4"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps one

Diameter of ditto 2 3/4"

Stroke 14 3/4"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines one & 3 ejects

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 12" diam

In Holds, &c.

one 2" diam in each compartment

all suction also connected to ejector

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" ejector

yes

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

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 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

J. Spencer & Sons Port Talbot & Steel 6' of section

BOILERS, &c.—(Letter for record 3)

Manufacturers of Steel

J. Spencer & Sons Port Talbot & Steel 6' of section

Total Heating Surface of Boilers 14400

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 27-2-18

No. of Certificate 3275

Can each boiler be worked separately

yes

Area of fire grate in each boiler

48

No. and Description of Safety Valves to

each boiler

two spring loaded

Area of each valve

4.9

Pressure to which they are adjusted

205

Are they fitted with easing gear

Smallest distance between boilers

on upstokes and bunkers

on woodwork 8" Bl. Legged

Mean dia. of boilers

165"

Length

10-8"

Material of shell plates

steel

Thickness 1 1/4"

Range of tensile strength

28-32 1/2

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

double

long. seams

J. R. & B. 1

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

8 5/8"

Lap of plates on

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

12" x 16"

Size of compensating ring

7" x 1 1/4"

No. and Description of Furnaces in each boiler

three plain

Material steel

Outside diameter

40"

Length of plain part

top 37 1/2"

bottom 69"

Thickness of plates

crown 3 1/8"

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 3/8"

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

Area supported by each stay

88

Working pressure by rules

211

End plates in steam space:

-

Material

steel

Thickness

1 1/32"

Pitch of stays

19" x 17 1/2"

How are stays secured

D. H. H.

Working pressure by rules

210

Material of stays

steel

Area at smallest part

7.5

Area supported by each stay

335

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 1/2" x 9 1/2"

Working pressure of plate by rules

steel

Diameter of tubes

3 1/2"

Pitch of tubes

4 7/8"

Material of tube plates

steel

Thickness: Front

15/16" + 3/4" dbh

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

Working pressure by rules

201

Steam dome: description of joint to shell

-

% of strength of joint

-

Diam. of rivet holes

-

Diameter

-

Thickness of shell plates

-

Material

-

Description of longitudinal joint

-

How stayed

-

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

-

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

-

Is Easing Gear fitted

-

Diameter of Safety Valve

-

Pressure to which each is adjusted

-

-

-

-

-

-

-

Date of Test

-

-

-

-

-

-

-

-

-

Diameter of Safety Valve

-

Pressure to which each is adjusted

-

-

-

-

-

-

-

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

-

-

-

-

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 oblique pump valves, six gunt 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 sizes*

The foregoing is a correct description,
for CHARLES D. HOLMES & CO. LTD.

Charles D. Holmes.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1917: Dec 8, 17, 21, 28 *Jan* 1918 Jan 3, 10, 16, 21, 24, 25, 29, 30, 31 Feb 4, 6, 8, 11, 12, 13, 14
During erection on board vessel - - 17, 18, 20, 22, 25, 27, 28 Mar 7, 9, 14, 15, 18, 19
Total No. of visits *34*

Is the approved plan of main boiler forwarded herewith *Yes already forwarded*
" " " donkey " " "

Dates of Examination of principal parts—Cylinders *4-2-16* Slides *14-2-18* Covers *11-2-18* Pistons *11-2-18* Rods *4-2-18*
Connecting rods *4-2-18* Crank shaft *4-2-18* Thrust shaft *11-2-18* Tunnel shafts */* Screw shaft *17-12-17* Propeller *17-2-17*
Stern tube *17-12-17* Steam pipes tested *9-3-18* Engine and boiler seatings *21-12-17* Engines holding down bolts *7-3-18*
Completion of pumping arrangements *19-3-18* Boilers fixed *14-3-18* Engines tried under steam *19-3-18*
Completion of fitting sea connections *21-12-17* Stern tube *21-12-17* Screw shaft and propeller *21-12-17*
Main boiler safety valves adjusted *15-3-18* Thickness of adjusting washers *7 1/32 & 7/16*
Material of Crank shaft *Iron* Identification Mark on Do. *2090 FLS* Material of Thrust shaft *steel* Identification Mark on Do. *2094 FLS*
Material of Tunnel shafts */* Identification Marks on Do. */* Material of Screw shafts *steel* Identification Marks on Do. *2046 FLS*
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 *Thursley 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 & 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 2 1/2 lbs. In my opinion the vessel is eligible for the record + L.M.C. 3-18*

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 3.18.

AWD *APRK*
4/4/18.

The amount of Entry Fee ... £ *2* : 0 :
Special ... £ *26* : 2 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, *2/4/1918.*
When received, *5-4-1918*

Frank A. Sturgeon

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRID APR. 5 1918.

Assigned

+ L.M.C. 3.18



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Foundation