

REPORT ON MACHINERY.

No. 11115.

Date of writing Report

22nd Dec 1921 - When handed in at Local Office23rd Dec 1921

Received at London Office

WED DEC. 28 1921

No. in Survey held at
Reg. Book.

Southampton

Date, First Survey

1st Nov 1920

Last Survey

19th Dec 1921

38402. on the SS "MAID OF SPETSAI."

No. 1000

(Number of Visits 53.)

Gross 1512

Net 885

Master

Built at

Southampton

By whom built

J. I. Thornycroft & Co. Ltd.

When built

1921.

Engines made at

Southampton

By whom made

J. I. Thornycroft & Co. Ltd.

when made

1921.

Boilers made at

Southampton

By whom made

J. I. Thornycroft & Co. Ltd.

when made

1921.

Registered Horse Power

Owners

Byron S.S. Co. Ltd. M. Embiricos

Nom. Horse Power as per Section 28

175.176

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

18" 30" 50"

Length of Stroke

33.

Revs. per minute

86.

Dia. of Screw shaft

as per rule 10 5/8"

Material of

S.

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

✓

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

3'-6"

Dia. of Tunnel shaft

as per rule 9 1/4" 9.03

Dia. of Crank shaft journals

as per rule 9 5/8" 9.48

Dia. of Crank pin

10 1/4"

Size of Crank web

14 1/2" x 6 1/4"

of thrust shaft under

collars

collars 9 3/4"

Dia. of screw

13'-8"

Pitch of Screw

14'-2"

No. of Blades

4.

State whether movable

no.

Total surface

60 1/2 sq ft

No. of Feed pumps

2.

Diameter of ditto

3"

Stroke

18"

Can one be overhauled while the other is at work

yes.

No. of Bilge pumps

2.

Diameter of ditto

3 1/2"

Stroke

18"

Can one be overhauled while the other is at work

yes.

No. of Donkey Engines

AUX. FEED 1/2" x 5 1/2" x 18"

GEN. SERVICE 1/2" x 11 1/2" x 18"

ONE BALLAST 4 1/2" x 7" x 18"

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

In Engine Room Three 2 1/4" Two 2 1/4" COFFERDAM

In Engine Room

Three 2 1/4"

Two 2 1/4"

COFFERDAM

ONE 2 1/4" TUNNEL WELL.

TWO 2 1/4" AFTER COFFERDAM.

No. of Bilge Injections

1

sizes

5"

Connected to condenser, or to circulating pump

pump.

Is a separate Donkey Suction fitted in Engine room & size

yes 2 1/2"

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

below.

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

none.

How are they protected

✓

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

ER AND UPPER DECK.

BOILERS, &c.—(Letter for record

S.)

Manufacturers of Steel

David Colville & Sons Ltd Motherwell.

Total Heating Surface of Boilers

3000

Is Forced Draft fitted

no.

No. and Description of Boilers

2 Single-ended.

Working Pressure

180 lbs.

Tested by hydraulic pressure to

360 lbs.

Date of test

14.7.21.

No. of Certificate

356.

Can each boiler be worked separately

yes.

Area of fire grate in each boiler

40 sq ft

No. and Description of Safety Valves to

each boiler

2 Spring-loaded

Area of each valve

4.908 sq in

Pressure to which they are adjusted

182 lbs.

Are they fitted with easing gear

yes.

Smallest distance between boilers or uptakes and bunkers or woodwork

10"

Mean dia. of boilers

13'-0"

Length

10'-6"

Material of shell plates

S.

Thickness

1 3/32"

Range of tensile strength

29-33.

Are the shell plates welded or flanged

no.

Descrip. of riveting: cir. seams

DRL.

long. seams

TROBS.

Diameter of rivet holes in long. seams

1 1/16"

Pitch of rivets

7 3/8"

Lap of plates or width of butt straps

15 5/8"

Per centages of strength of longitudinal joint

rivets 86.7.

plate 86.

Working pressure of shell by rules

181.

Size of manhole in shell

12' x 16."

Size of compensating ring

✓

No. and Description of Furnaces in each boiler

2

corrugated

Material

S.

Outside diameter

49"

Length of plain part

top

bottom

Thickness of plates

crown 9 1/16"

Description of longitudinal joint

welded.

No. of strengthening rings

none

Working pressure of furnace by the rules

180.

Combustion chamber plates: Material

S.

Thickness: Sides

3 3/32"

Back

3 3/32"

Top

3 3/32"

Bottom

3 3/32"

Pitch of stays to ditto: Sides

9 3/8" x 10 1/4"

Back

9 3/8" x 10 1/4"

Are stays fitted with nuts or riveted heads

nuts.

Working pressure by rules

185.

Material of stays

S.

Area at smallest part

2.71 sq in

Area supported by each stay

96.4

Working pressure by rules

252

End plates in steam space:

S.

Material

S.

Thickness

1 1/16"

Pitch of stays

18 1/4" x 19"

How are stays secured

DNs & Ws

Working pressure by rules

188.

Area at smallest part

9.11 sq in

Area supported by each stay

356 sq in

Working pressure by rules

266

Material of Front plates at bottom

S.

Thickness

1"

Material of Lower back plate

S.

Thickness

1"

Greatest pitch of stays

14 1/2" x 10 1/4"

Working pressure of plate by rules

220.

Diameter of tubes

3 3/4"

Pitch of tubes

4 7/8" x 4 1/2"

Material of tube plates

S.

Thickness: Front

1"

Back

1 3/16"

Mean pitch of stays

9 7/8"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

182

Girders to Chamber tops: Material

S.

Depth and

thickness of girder at centre

9 x 1 1/2"

Length as per rule

31 1/2"

Distance apart

9 3/8"

Number and pitch of stays in each

2 at 10 1/4"

Working pressure by rules

206

Steam dome: description of joint to shell

%

of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

SUPERHEATER. Type

Date of Approval of Plan

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

Pressure to which each is adjusted

Is Easing Gear fitted

Tested by Hydraulic Pressure to

2021

IS A DONKEY BOILER FITTED?

no.

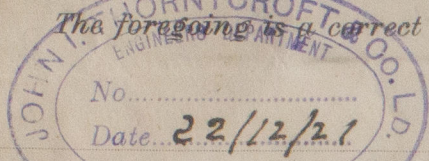
If so, is a report now forwarded?

✓

SPARE GEAR. State the articles supplied:—

Two each top and bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, one set of Coupling bolts and nuts, one set each feed and bilge pump valves, iron of various sizes, a quantity of assorted bolts, nuts, etc. one Tail shaft, one propeller, one set piston springs, two main check valves, two aux. check valves, two safety valve springs, two feed pump escape valve springs, six Condenser tubes, 20 condenser ferrules, twelve junk ring studs

The foregoing is a correct description,



No. 22/12/21
Date 22/12/21

J. Donaldson, Manufacturer.

SOUTHAMPTON

Dates of Survey while building	During progress of	1-9-24-30	H4-	3-11-20-25-26	1-2-9-11-17-18	4-14-31	4-9-14-18-23
	work in shops --	11-20	12-20	1-21	2-21	3-21	4-21
	During erection on	4-9-10-24	1-21-27	14-28	18-25	6-14-19-30	11-14-17-19-24
	board vessel --	5-21	6-21	7-21	8-21	9-21	10-21
	Total No. of visits	14-17-19	12-21	= 53.			

Is the approved plan of main boiler forwarded herewith
11-21.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 6.9.21. Slides 6.9.21. Covers 6.9.21. Pistons 14.9.21. Rods 19.10.21. Connecting rods 19.10.21. Crank shaft 30.9.21. Thrust shaft 4.11.20. Tunnel shafts 13.12.20. Screw shaft 27.10.20. Propeller 14.10.21. Stern tube 14.10.21. Steam pipes tested 17.10.21. Engine and boiler seatings 14.10.21. Engines holding down bolts 3.11.21. Completion of pumping arrangements 19.12.21. Boilers fixed 3.11.21. Engines tried under steam 19.12.21. Completion of fitting sea connections 14.10.21. Stern tube 14.10.21. Screw shaft and propeller 14.10.21. Main boiler safety valves adjusted 14.12.21. Thickness of adjusting washers SBP 21" S 23" PBP 23" S 25"

Material of Crank shaft S. Identification Mark on Do. 5020. Material of Thrust shaft S. Identification Mark on Do. 5343. Material of Tunnel shafts S. Identification Marks on Do. 5338. Material of Screw shafts S. Identification Marks on Do. 5312. Material of Steam Pipes Copper. Test pressure 30 lbs.

Is an installation fitted for burning oil fuel yes.

Is the flash point of the oil to be used over 150°F. yes.

Have the requirements of Section 49 of the Rules been complied with yes.

Is this machinery duplicate of a previous case no. If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. The Machinery Boilers of this vessel have been built under Special Survey in accordance with the Rules. The materials and workmanship are sound and good. The Boilers tested by hydraulic pressure and with the engines secured on board and tested under steam they are now in good order and safe working condition and respectfully submitted as being eligible in my opinion to be classed with notations of + LMC 12.21. and fitted for oil fuel 12.21 in the Register book.

The Boilers were fitted for oil fuel, which worked efficiently under full conditions.

It is submitted that this vessel is eligible for

THE RECORD. + L.M.C. - 12.21. C.L.

Fitted for Oil Fuel, 12.21, F.P. above 150°F.

The amount of Entry Fee ... £ 3 : 0 : 0
Special ... £ 43 : 15 : 0
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 23/12/1921
When received, 18/1/1922

J. G. MacKillop

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 3 JAN 1922

Assigned

+ L.M.C. 12.21 C.L.

Fitted for oil fuel 12.21
F.P. above 150°F.

CERTIFICATE WRITTEN



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