

## REPORT ON MACHINERY.

No. 39852.

WED. APR 21 1920

Received at London Office

Date of writing Report

19

When handed in at Local Office

16.4.

1920

Port of

Glasgow.

in Survey held at

TROON.

Date, First Survey

14.2.19.

Last Survey

12 April

1920

Book.

on the

s.s. "HERON"

(Number of Visits)

79

Tons

Gross

Net

When built

1920.

ster G. G. Branthwaite

built at TROON.

By whom built

Aulsebrook &amp; Co. (N° 367)

When made

1920.

ines made at

TROON

By whom made

Aulsebrook &amp; Co. (N° 102)

when made

1920.

lers made at

GLASGOW

By whom made

Dunsmuir &amp; Jackson (N° 119)

when made

1920.

istered Horse Power

292

Owners

General Steam Navigation Co. Ltd.

Port belonging to

London.

n. Horse Power as per Section 28

291.7

Is Refrigerating Machinery fitted for cargo purposes

Yes

Is Electric Light fitted

Yes.

INES, &amp;c.—Description of Engines

Triple Expansion Surf. Cond.

No. of Cylinders

3.

No. of Cranks

3.

of Cylinders

23" 34 1/2" 60"

Length of Stroke

39"

Revs. per minute

95

Dia. of Screw shaft

as per rule

12 1/2"

Material of

Iron.

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

Yes

If two

are fitted, is the shaft lapped or protected between the liners

Yes

Length of stern bush

5'-8 1/8"

of Tunnel shaft

as per rule

11 1/2"

Dia. of Crank shaft journals

as per rule

11 1/2"

Dia. of Crank pin

11 1/2"

Size of Crank webs

2 1/4 x 1/2"

Dia. of thrust shaft under

as fitted

12 1/2"

Total surface

63.5 sq.

of Feed pumps

2.

Diameter of ditto

4"

Stroke

20"

Can one be overhauled while the other is at work

Yes.

of Bilge pumps

2.

Diameter of ditto

4"

Stroke

20"

Can one be overhauled while the other is at work

Yes.

of Donkey Engines

9.

Sizes of Pumps

1-6 x 8 1/2"

Stroke

20"

Can one be overhauled while the other is at work

Yes.

connected to both Bilge and Donkey pumps

Engine Room

4-2 1/2"

1-2 1/2" (Lancet)

1-6 x 8 1/2"

Stroke

20"

Can one be overhauled while the other is at work

Yes.

connected to both Bilge and Donkey pumps

Bilge Injections

1. sizes

7"

Connected to condenser, or to circulating pump

pump.

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

Yes.

1-3 1/2"

If 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

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

pipes are carried through the bunkers

Hold Bilge Suctions

How are they protected

Wood ceiling

All Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Yes

The Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Yes

Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

E.R. Upper deck level

ERS, &amp;c.—(Letter for record

S.)

Manufacturers of Steel

D. Colville &amp; Sons, J. Spencer &amp; Sons.

Heating Surface of Boilers

5154 sq.

Is Forced Draft fitted

Yes

No. and Description of Boiler

Two single ended marine

ing Pressure

180 lbs.

Tested by hydraulic pressure to

360 lbs.

Date of test

38. 1.20

39. 1.20

No. of Certificate

15063

15064

Each boiler be worked separately

Yes

Area of fire grate in each boiler

83 1/2 sq.

No. and Description of Safety Valves to

15063

15064

Boiler Pair spring loaded

Yes

Area of each valve

8.29 sq.

Pressure to which they are adjusted

185 lbs.

Are they fitted with easing gear

Yes.

Least distance between boiler uptakes and bunkers

6'-6"

Mean dia. of boilers

14'-0 1/2"

Length

11'-6"

Material of shell plates

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Stages of strength of longitudinal joint

rivets

plate

Working pressure of shell by rules

Size of manhole in shell

compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

of plain part

top

Thickness of plates

crown

Description of longitudinal joint

bottom

No. of strengthening rings

ing pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

f stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

End plates in steam space:

al of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

Material of stays

al

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of Front plates at bottom

t smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Working pressure of plate by rules

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Material of Front plates at bottom

r of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

s of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

ing pressure by rules

Steam dome: description of joint to shell

% of strength of joint

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

HEATER. 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

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

REPORT.

SEPARATE

SEE

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Lloyd's Register Foundation

W300-0031



IS A DONKEY BOILER FITTED? *No.*If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied: *4 top end bolts & nuts, 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 set coupling bolts, 1 set feed & bilge pump valves, 1 pair crank pin brasses, 1 guide shoe, 4 bolts forecentric top ends, 1 set packing blocks rings & springs for valve spindle, 1 set packing blocks rings & springs for piston rods, 12 pin ring bolts, 100 condenser ferrules, 100 tube packings, 1 air pump head valve & guard, 1 set air pump valves, 1 set valve & seats for one Weirs pump, 1 set valves & seats for all auxiliaries, 1 main feed check valve, 6 tube stoppers, quantity gauge glasses, woodite ring, assorted bolts & nuts, washers, firebars, and iron of various sizes.*

The foregoing is a correct description.

FOR AILSA SHIPBUILDING CO., LIMITED.

*J. M. Moughton*

Manufacturer.

Dates of Survey while building  
During progress of work in shops --  
During erection on board vessel --  
Total No. of visits

1919. Feb 4-7-26. Mar 3-11-14. 20-24. Apr 26-4-7-14-18. 23-28. May 13-19-22. June 2-16-23-24. July 1-8-10-16. Aug 5-14-19-25-29. Sept 4-8-12-24. Oct 2-7-10-13-16-28-29. Nov 4-6-10-13-19-27. Dec 1-4-9-12-17-19-25-26.  
1920. Jan 15-17-22-26-29. Feb 13-17-23-27. Mar 1-3-15-19-22-26-30-31. Apr 1-12.  
79.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 10.7.19 Slides 12.12.19 Covers 19.11.19 Pistons 19.11.19 Rods 14.3.19  
Connecting rods 14.3.19 Crank shaft 19.8.19 Thrust shaft 19.8.19 Tunnel shafts 4.11.19 Screw shaft 31.10.19 Propeller 28.10.19  
Stern tube 8.9.19 Steam pipes tested 3.3.20. Engine and boiler seatings 28.10.19 Engines holding down bolts 26.1.20  
Completion of pumping arrangements 3.3.20. Boilers fixed 24.2.20. Engines tried under steam 12.4.20  
Completion of fitting sea connections 28.10.19 Stern tube 28.10.19 Screw shaft and propeller 10.11.19  
Main boiler safety valves adjusted 30.3.20. Thickness of gaskets washers *P. 3/8" x 1/2" S. 7/16" x 1/2"*  
Material of Crank shaft *Steel* Identification Mark on Donkey *Steel* Identification Mark on Donkey  
Material of Tunnel shafts *Steel* Identification Marks on Donkey *Steel* Identification Marks on Donkey  
Material of Steam Pipes *Steel* Test pressure *54 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 *No* If so, state name of vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, &c. *The materials and workmanship are good. This machinery has been built under special survey in accordance with the rules and approved plans, securely fitted aboard and tried with satisfactory results under steam. It is, in our opinion, eligible for classification with record + L.M.C. 4,20.*

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

+ L.M.C. 4.20

bols. 23/4/20

*JUD**G.R.S.*

The amount of Entry Fee ... £ 2.0.0. When applied for,  
Special ... £ 22.4.0. 19.4.19.20  
Donkey Boiler Fee ... £ : : When received,  
Travelling Expenses (if any) £ 5.15. 23.4.19.20

Committee's Minute GLASGOW 20 APR 1920

Assigned + LMC 4.20

MACHINERY CERT.  
WRITTEN 21.4.20

Date of writing Report

No. in Survey held  
Reg. Book.

on the

Master *W. G. Bran*

Engines made at

Boilers made at

Registered Horse Power

MULTITUBULAR

Letter for record

Boilers *Two single*No. of Certificate *150*

Safety valves to each

Are they fitted with

Smallest distance betw

Material of shell plat

Descrip. of riveting:

weld

Boiler 4 Corrugated

Description of longitud

Material

Top 9 1/2 x 9 1/2 " of stays

Smallest part 2'07"

Each of stays 20 x 16 1/2

Area supported by each

Lower back plate

Pitch of tubes 4 1/16 x 14

Water spaces 14 1/2

Order at centre 11"

Working pressure by r

305 Port *Gle*

106 request

*Shpblg*

Specially Surveyed wh

106 hereby eng

For boilers up to

Horse Power, one si

above 200. The Nom

than £2 2s.

MEM.—In except

all cases where trave

to be defrayed by th

No. *B.119-20*

This request is made up

Foreign Shipping, which

While the Committee use thei

and that neither the Committe

port or certificate issued by t

for any error of judgment.

Secretary,

Lloyd's Register of

signed

Foundation

*Glasgow**16.4.20*

Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.



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