

REPORT ON MACHINERY.

No. 38900
Est. No. 17541
THU. 16 OCT. 1919

Received at London Office

Date of writing Report

19

When handed in at Local Office

7/7/19 Port of Glasgow

in Survey held at Glasgow & Greenock

Date, First Survey 20/11/18

Last Survey 25 June 1919

Greenock.

g. Book.

(Number of Visits 10)

on the steel steamer Siris

Gross 5242
Net 3266

Builder Mathew

Built at Greenock

By whom built Harland & Wolff (No 571)

When built 1919

Plates made at Glasgow

By whom made Harland & Wolff (No 1054)

when made 1919

Plates made at Glydebank

By whom made John Brown & Co (No 279)

when made 1919

Rated Horse Power

Owners The Royal Mail Packet Co Ltd Port belonging to London

Horse Power as per Section 28

517

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

No. of Cylinders 27-44-73

Length of Stroke 48"

Revs. per minute 70

Dia. of Screw shaft

as per rule 14 7/8"
as fitted 15 1/2"

Material of screw shaft Steel

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

propeller boss yes If the liner is in more than one length are the joints burned no

If the liner does not fit tightly at the part

in 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

Length of stern bush 60 1/2"

Dia. of Tunnel shaft

as per rule 13.33"
as fitted 13 1/2"

Dia. of Crank shaft journals

as per rule 13.9"
as fitted 14 1/2"

Dia. of Crank pin 14 1/2"

Size of Crank webs 28x9"

Dia. of thrust shaft under

is 14 3/4"

Dia. of screw 17-6"

Pitch of Screw 16-6"

No. of Blades 4

State whether moveable no

Total surface 982 sq ft

No. of Feed pumps 2

Diameter of ditto 4"

Stroke 24"

Can one be overhauled while the other is at work yes

Bilge pumps 2

Diameter of ditto 4"

Stroke 24"

Can one be overhauled while the other is at work yes

Donkey Engines Two

Sizes of Pumps 7x18 - 14x24

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

Engine Room 7000 sq ft

In Holds, &c. same 3 1/2"

Tunnel 3 1/2"

Circulating Pump separate engine

Bilge Injections same sizes 8"

Connected to condenser, or to circulating pump yes

Is a separate Donkey Suction fitted in Engine room & size same 3 1/2"

Are 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 yes

Are 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 both

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

Are the pipes carried through the bunkers yes How are they protected yes

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

Date of examination of completion of fitting of Sea Connections 10/6/19 of Stern Tube 10/6/19 Screw shaft and Propeller 24/6/19

Is Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top of shaft

ENGINES, &c.—(Letter for record S) Manufacturers of Steel See Separate Report.

Heating Surface of Boilers 7668 sq ft Is Forced Draft fitted yes No. and Description of Boilers Three single ended

Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 6/5/19 No. of Certificate 14669

Can each boiler be worked separately yes Area of fire grate in each boiler 63.7 sq ft No. and Description of Safety Valves to

each boiler Two lifting Area of each valve 9.62 sq ft Pressure to which they are adjusted 185 lb Are they fitted with easing gear yes

Least distance between boilers or uptakes and bunkers or woodwork 25" Mean dia. of boilers

Length

Material of shell plates

Range of tensile strength

Are the shell plates welded or flanged

Description of riveting: cir. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Percentage of strength of longitudinal joint

Working pressure of shell by rules

Size of manhole in shell

No. and Description of Furnaces in each boiler

Material

Outside diameter

Thickness of plates

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Working pressures by rules

Girders to Chamber tops: Material

Depth and

Thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

Working pressure of end plates

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Lloyd's Register Foundation

1619-0218

VERTICAL DONKEY BOILER—

Manufacturers of Steel

None

No.	Description			
Made at	By whom made	When made	Where fixed	
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment
If fitted with easing gear	If steam from main boilers can enter the donkey boiler		Dia. of donkey boiler	Length
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams	
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating	Per centage of strength of joint
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint
Working pressure of furnace by rules	Thickness of furnace crown plates		Radius of do.	Stayed by
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey	

SPARE GEAR. State the articles supplied:— *Two top and bottom iron bottom end bolts. Two main bearing bolts. One set coupling bolts. One set dead pump valves. One set Bilge pump valves. Three check valves. Three smoking check valves. Dead escape valve opening. Inspection bolts.*

The foregoing is a correct description,
For HARLAND & WOLFF, LTD.

J. Greenock
Engine Manufacturer
MANAGER of STEEL ENGINE WORKS

Dates of Survey while building: During progress of work in shops -- 1918 Nov 20, Dec 3, 9, 1919 Jan 14, Feb 19, Mar 12, 20, June 4, 23, 25
During erection on board vessel --- Greenock (1919) May 23, 27, June 10, 24, July 1, 15, 16, 23, 29, Aug 5, 12, 19, 25, 27, Sept 3, 17, 24, 25
Total No. of visits 10

Dates of Examination of principal parts—Cylinders 13.3.19 Slides 13.3.19 Covers 11.1.19 Pistons 14.1.19 Rods 13.3.19
Connecting rods 13.3.19 Crank shaft 4.6.19 Thrust shaft 4.6.19 Tunnel shafts 4.6.19 Screw shaft 4.6.19 Propeller 4.6.19
Stern tube 23/5/19 Steam pipes tested at Harrow Engine and boiler seatings 10/6/19 Engines holding down bolts 29/7/19
Completion of pumping arrangements 25/9/19 Boilers fixed 17/9/19 Engines tried under steam 25/9/19
Main boiler safety valves adjusted 23/9/19 Thickness of adjusting washers P 1/2 5 9/32 P 1/2 5 4/32 P 3/2 5 1/2
Material of Crank shaft Steel Identification Mark on Do. 1054 JE Material of Thrust shaft Steel Identification Mark on Do. 626
Material of Tunnel shafts Steel Identification Marks on Do. * Material of Screw shafts Steel Identification Marks on Do. T.05
Material of Steam Pipes Iron Test pressure 500 lb

General Remarks (State quality of workmanship, opinions as to class, &c.)
* 2450 245 2409 2411 575
489 3751 2728 521 2410
W.G.H. J.P. J.F. W.C.H. W.G.H.
The Engines have been built under special survey. Materials and workmanship are good. Engines have been sent to Greenock to be fitted on board.

The Machinery and Articles of this vessel have been constructed under special survey and placed on board in accordance with the Lloyds Rules. They are now in our opinion in safe working condition and report duly submitted for the satisfaction of L.M.C. 10 F.D. in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 10.19 F.D.
Roll 16/10/19

The amount of Entry Fee .. £ 3 : : When applied for, 14/10/19
Special .. £ 34 : 8 : 9/12/19
Donkey Boiler Fee (GRK) .. £ 11 : 9 :
Travelling Expenses (if any) £ 34 : :
When received, 5/12/19

Committee's Minute
Assigned Defered.
GLASGOW 78 JOL 1919
+ L.M.C. 10.19 F.D.
16/10/19

Certificate (if required) to be sent to Committee's Minute.

