

REPORT ON MACHINERY.

No. 16491

Received at London Office

WED. JUN. 25. 1913

Date of writing Report

19

When handed in at Local Office

20/6/13 Port of Greenock

No. in Survey held at Greenock
Reg. Book.

Date, First Survey

25th June 1912

Last Survey

16th June 1913.

(Number of Visits 65)

on the SCREW STEAMER "GERASIMOS".

Gross 3845

Net 2379

When built 1910

Master

Built at Old Kipatrik By whom built Kapier Miller Ltd.

Engines made at Greenock

By whom made John G. Kincaid & Co. Ltd. when made 1910

Boilers made at Greenock

By whom made John G. Kincaid & Co. Ltd. when made 1910

Registered Horse Power

Owners

N. D. Lykiardopoulos

Port belonging to Cephalonia

Nom. Horse Power as per Section 28

361

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders Three

No. of Cranks Three

Dia. of Cylinders 25"-41"-68"

Length of Stroke 48"

Revs. per minute 65

Dia. of Screw shaft

as per rule 14.28

Material of screw shaft

Steel

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 the length

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 4' 10 1/2"

Dia. of Tunnel shaft

as per rule 12.7

Dia. of Crank shaft journals

as per rule 13.3

Dia. of Crank pin 13 1/8"

Size of Crank webs 20 x 8 1/2"

Dia. of thrust shaft under

collars 13 1/8"

Dia. of screw 14' 6"

Pitch of Screw 18' 0"

No. of Blades 4

State whether moveable

No

Total surface 96 sq. ft.

No. of Feed pumps 2

Diameter of ditto 3 1/2"

Stroke 27"

Can one be overhauled while the other is at work

Yes

Woodson's Pumps

No. of Bilge pumps 2

Diameter of ditto 4"

Stroke 27"

Can one be overhauled while the other is at work

Yes

10 1/2 x 8 x 18"

No. of Donkey Engines 2

Sizes of Pumps 8 x 6 x 8

9 x 13 x 10

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

In Engine Room Three - 3 1/2" dia.

In Holds, &c. 4" 1/2 Hold 2-3 1/2" dia. 4" 2" Hold 2-3 1/2" dia.

No. of Bilge Injections 1

size 6"

Connected to condenser, or to circulating pump

C.P.

Is a separate Donkey Suction fitted in Engine room & size

Yes 3 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

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

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

Dates of examination of completion of fitting of Sea Connections

See Report

of Stern Tube

See Report

Screw shaft and Propeller

19/5/13

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Upper platform

BOILERS, &c.—(Letter for record

S.)

Manufacturers of Steel

Steel Coy of Scotland.

See Report

Total Heating Surface of Boilers 5749 sq. ft.

Is Forced Draft fitted

No

No. and Description of Boilers 3: Cylindrical built

Single

Working Pressure 180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test 18/2/13

No. of Certificate 1100

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

55 sq. ft.

No. and Description of Safety Valves to

each boiler 2: Direct Spring

Area of each valve

5.9 sq. in.

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

4' 8"

Mean dia. of boilers

14' 6"

Length

11' 0"

Material of shell plates

Steel

Thickness 1 1/4"

Range of tensile strength

28 1/2 to 32 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

Lap Double

long. seams

See Report

Diameter of rivet holes in long. seams

1 1/4"

Pitch of rivets

8 1/2"

Lap of plates or width of butt straps

18 1/4"

Per centages of strength of longitudinal joint

rivets 91.6

plate 85.3

Working pressure of shell by rules

183 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

28 x 32 x 1 1/4

No. and Description of Furnaces in each boiler

3: Doughton's

Material

Steel

Outside diameter

46 1/4"

Length of plain part

top 7' 2 1/4"

Thickness of plates

crown 9' 1/4"

Description of longitudinal joint

Weld

No. of strengthening rings

None

Working pressure of furnace by the rules

191 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

8"

Back

8"

Top

8"

Bottom

16"

Pitch of stays to ditto: Sides

8 1/2" x 8 1/2"

Back

9" x 8"

Top

8 1/2" x 8 1/2"

If stays are fitted with nuts or riveted heads

None

Working pressure by rules

186 lbs

Material of stays

Steel

Diameter at smallest part

1 1/2" full

Area supported by each stay

72 sq. in.

Working pressure by rules

223 lbs

End plates in steam space:

Material

Steel

Thickness

1 1/4"

Pitch of stays

17 1/2" x 20"

How are stays secured

See Report

Working pressure by rules

182 lbs

Material of stays

Steel

Diameter at smallest part

2 3/8"

Area supported by each stay

336 sq. in.

Working pressure by rules

186 lbs

Material of Front plates at bottom

Steel

Thickness

1 1/2"

Material of Lower back plate

Steel

Thickness

8"

Greatest pitch of stays

14 1/2"

Working pressure of plate by rules

193 lbs

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2" x 4 1/2"

Material of tube plates

Steel

Thickness: Front

1 1/2"

Back

3/4"

Mean pitch of stays

10' 4"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

181 lb. 186 lb.

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

9 1/2" x 1 1/2"

Length as per rule

32 1/2"

Distance apart

8 1/2"

Number and pitch of stays in each

3: 8 1/2"

Working pressure by rules

202 lbs

Superheater or Steam chest; how connected to boiler

None

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

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

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

Yes

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Yes

Working pressure of end plates

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Yes

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Yes

Working pressure of end plates

VERTICAL DONKEY BOILER—

No. *None*. Description

Made at _____ By whom made _____ When made _____ Where fired _____
 Working pressure tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____
 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 _____ Rivets _____ Plates _____
 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:— *2 main Bearing Bolts, 2 Crank Pin Bolts, 2 Crosshead Bolts, 1 set Coupling Bolts, 1 set of Fund & Helpe Pump valves, 1 set Air Circulating Pump valves, 12 Condenser tubes, 2 safety valve springs, 12 fund King studs & nuts, 6 Escape valve spring, 6 Boiler tubes, 1 set Springs for H.P. Piston, 1 C.I. Propeller, 8 Bars of Iron. Bolts & nuts assorted sizes.*

The foregoing is a correct description,

John G. Knicaid & Co. Ltd. Manufacturer.

Dates of Survey while building
 During progress of work in shops -- *1912 June 25, July 22-30, Aug. 21-27, Oct. 18-21, 30, Nov. 4-8, 18-22, 26, Dec. 4-6, 10-12, 15, 19-25*
 During erection on board vessel --- *1913 Jan 7-14, 15-21, 24-26, 31, Feb 5-10, 12-14, 18-25, 28, Mar. 4-6, 12-18, 20-26, April 1-10, 14-15, 23, May 2-16*
 Total No. of visits *55*

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

Dates of Examination of principal parts—Cylinders *18/11/12* Slides *18/11/12* Covers *18/6/13* Pistons *4/12/12* Rods *18/10/12*
 Connecting rods *18/10/12* Crank shaft *See Report* Thrust shaft *See Report* Tunnel shafts *See Report* Screw shaft *See Report* Propeller *2/5/13*
 Stern tube *10/2/13* Steam pipes tested *30/5/13* Engine and boiler seatings *See Report* Engines holding down bolts *30/5/13*
 Completion of pumping arrangements *30/5/13* Boilers fixed *16/6/13* Engines tried under steam *16/6/13*
 Main boiler safety valves adjusted *10/6/13* Thickness of adjusting washers *R.B. PL 4 1/2 x 1 1/4 12" C.B. PL 4 1/2 x 1 1/4 12" S.B. PL 4 1/2 x 1 1/4 12" 19" 19"*
 Material of Crank shaft *Steel* Identification Mark on Do. *2807 H.S.* Material of Thrust shaft *Steel* Identification Mark on Do. *2821 H.S.*
 Material of Tunnel shafts *Steel* Identification Marks on Do. *2844 & 2849 H.S.* Material of Screw shafts *Steel* Identification Marks on Do. *2837 H.S.*
 Material of Steam Pipes *Copper 4 1/2" dia x 6' long* Test pressure *400 lbs*

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Engines and Boilers of this vessel were built under Special Survey and the materials and workmanship are good. When completed they underwent full power trials in the dock and were found to work satisfactorily.

*The machinery throughout is now in good and efficient condition and eligible in my opinion to have the record of **LMC 6, 13** marked in the Society's Register Book.*

It is submitted that
 this vessel is eligible for
THE RECORD. + LMC 6.13.

The amount of Entry Fee .. £ *3* : . : . When applied for, *20/6/13*
 Special .. £ *38* : 1 : . : .
 Donkey Boiler Fee .. £ : : : . When received, *25/6/13*
 Travelling Expenses (if any) £ : : : .

Committee's Minute **GLASGOW** 24 JUN 1913

Assigned **+ LMC 6.13**

Wm. Austin
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.