

Rpt. 4.

REPORT ON MACHINERY.

No. 64996

THU. OCT. 23. 1913

Received at London Office

Date of writing Report

When handed in at Local Office

OCT 22 1913

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at

South Shields

Date, First Survey

4th April 1913

Last Survey

3-11-1913

Reg. Book

15 m upon the

S.S. "Sigulina"

(Number of Visits)

47

Master

Le Lock

Built at

Sunderland

By whom built

Osborne Graham & Co.

When built

1913

Engines made at

South Shields

By whom made

George J. Grey

when made

1913

Boilers made at

South Shields

By whom made

J. J. Belknap & Co.

when made

1913

Registered Horse Power

Owners

J. J. Belknap & Co.

Port belonging to

Rowen

Nom. Horse Power as per Section 28

744

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Triple Expansion surface Controlling

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

17"-28"-46"

Length of Stroke

30"

Revs. per minute

Dia. of Screw shaft

as per rule 9.5"

Material of

S.M. 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

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

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

Yes

Length of stern bush

3'-4"

Dia. of Tunnel shaft

as per rule 8.39"

Dia. of Crank shaft journals

as per rule 8.8"

Dia. of Crank pin

9.8"

Size of Crank webs

17 1/2" x 5 1/4"

collars

9.8"

Dia. of screw

11'-9"

Pitch of Screw

12'-9"

No. of Blades

44

State whether moveable

No

Total surface

No. of Feed pumps

2

Diameter of ditto

2 3/4"

Stroke

16"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

3 1/4"

Stroke

16"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2

Sizes of Pumps

6x4x6"

7x9x8"

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

n Engine Room

3

(2 1/2" port 2 1/2" centre 2 1/2" star)

In Holds, &c. / stokehold Port 2 1/2"; 1 Skn 2 1/2".

After Hold well

1-2 1/2"

Tunnel well 1-2 1/2"

No. of Bilge Injections

1

sizes

3 1/2"

Connected to condenser, or to circulating pump

pumps

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

None

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

None

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

* Seen in Sunderland.

Dates of examination of completion of fitting of Sea Connections

15. 9. 13

of Stern Tube

22. 9. 13

Screw shaft and Propeller

29. 9. 13

The Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Top Platform

VALVES, &c.—(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers

2400

Is Forced Draft fitted

No. and Description of Boilers

Working Pressure

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Area of fire grate in each boiler

No. and Description of Safety Valves to

each boiler

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

g. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Percentages of strength of longitudinal joint

rivets

plate

Working pressure of shell by rules

Size of manhole in shell

No. of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

bottom

Thickness of plates

crown

bottom

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

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

Material of lower back plate

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

Pitch across wide water spaces

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

Material

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

No. of Visits

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

Lloyd's Register Foundation

VERTICAL DONKEY BOILER—Manufacturers of Steel

No.	Description		When made	Where fixed
Made at	By whom made			
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:— 1 Propeller. 2 Top end Bolt nuts, 2 Bottom end Bolt nuts, 2 main Bearing Bolts, 1 set coupling Bolts, 1 set of junk ring Bolt, 1 set each of air, circulating, feed & bilge pump valves, 1 main & 1 Donkey feed check valve, 1 piston ring for each cylinder, 2 safety valve springs, assorted bolts and nuts & iron of various sizes.

The foregoing is a correct description,

G. J. J. J. Manufacturer.

Dates of Survey while building	During progress of work in shops --	During erection on board vessel --	Total No. of visits	Is the approved plan of main boiler forwarded herewith
1913	Apr. 4 8 9 14 15 22 30 May 14 22 27 Jun 3 6 11 19 30 Jul 3 7 10 14 23 25 29 Aug 6	11 18 21 28 29 30 Sep 3 9 10 15 17 19 29 Oct 1 4 8	40 (at R.W.C.) + 7 = 47	Yes

Dates of Examination of principal parts—Cylinders	14: 5: 13	Slides	3: 6: 13	Covers	22: 5: 13	Pistons	3: 6: 13	Rods	3: 6: 13
Connecting rods	22: 5: 13	Crank shaft	3: 7: 13	Thrust shaft	10: 9: 13	Tunnel shafts	9: 9: 13	Screw shaft	9: 9: 13
Stern tube	28: 7: 13	Steam pipes tested	4: 10: 13	Engine and boiler seatings	29: 9: 13	Engines holding down bolts	8: 10: 13		
Completion of pumping arrangements	8: 10: 13	Boilers fixed	8: 10: 13	Engines tried under steam	8: 10: 13				
Main boiler safety valves adjusted	8: 10: 13	Thickness of adjusting washers	Pat. Bolts 5 7/16"	Star Bolts 5 15/16"					
Material of Crank shaft	S.M. Steel	Identification Mark on Do.	339S.W.D.M.	Material of Thrust shaft	S.M. Steel	Identification Mark on Do.	153 W.S.		
Material of Tunnel shafts	S.M. Steel	Identification Marks on Do.	159 W.S. 3129 M.B.	Material of Screw shaft	S.M. Steel	Identification Marks on Do.	117 R.L.A.		
Material of Steam Pipes	Solid Drawn Copper	Test pressure	360 lb. sq. in.						

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been constructed under special survey. The materials and workmanship are sound & good. The main & auxiliary machinery have been tried under steam. The Bolts safety valves have been adjusted to their working pressure under steam. The machinery is now in good and safe working condition & is eligible, in my opinion to have the notation L.M.C. 11.13 in the Register Book

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 11.13.

The amount of Entry Fee	£ 2 : 06	When applied for.	OCT 22 1913
Special	£ 21	When received.	11/11/13
Donkey Boiler Fee	£		
Travelling Expenses (if any)	£		

Committee's Minute

FRI. NOV. 7-1913

Assigned

+ L.M.C. 11.13

MACHINERY CERTIFICATE
WRITTEN

R. Lee Ames Lewis Davis
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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Lloyd's Register
Foundation

Date of writing
No. in Sur
Reg. Book.
15 on t

Master
Engines made
Boilers made
Registered Ho

MULTITU

(Letter for r)

Boilers

No. of Certificate

safety valves

Are they fitted

Smallest dista

Material of sh

Descrip. of ri

rules 180

boiler

Description of

plates: Mater

Top 9 x 8

smallest part

Pitch of stays

Area supporte

Lower back p

Pitch of tubes

water spaces

girder at cen

Working pres

separately

holes

If stiffened w

Working pre

GENERAL

under

quality

360

Pressure

Survey

Travelling

Committ

Assigned