

REPORT ON MACHINERY.

No. 60765

Date of writing Report

10

When handed in at Local Office

JUL 29 1911

Port of

Received at London Office

NEWCASTLE ON TYNE

No. in Survey held at NEWCASTLE ON TYNE

Reg. Book.

1273 on the

Machinery of the S.S. Mogileff

Date, First Survey

9th May 1907

Last Survey

28th July

1911

(Number of Visits)

Master

Built at

Newcastle

By whom built

Armstrong Whitworth & Co. Ltd.

Engines made at

Wallace

By whom made

Wallace Shipway & Co. Ltd.

Boilers made at

"

By whom made

when made

Registered Horse Power

Owners

Russian Volunteer Fleet

Port belonging to

Nom. Horse Power as per Section 28

478

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders 27" 45" 75" Length of Stroke 48" Revs. per minute 67

Dia. of Screw shaft

14.87

Material of

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

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

Length of stern bush 5' 5"

Dia. of Tunnel shaft as per rule 12.64 13.4

Dia. of Crank shaft journals as per rule 13.27 14.07

Dia. of Crank pin 14 1/2

Size of Crank webs 9 3/4 x 22

Dia. of thrust shaft under

collars 14 1/2

Dia. of screw 18-0

Pitch of Screw 18-0

No. of Blades 4

State whether moveable

Yes

No. of Feed pumps

4

Diameter of ditto 7 x 9 1/2

Stroke 21

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto 4 3/4

Stroke 24

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

3

Sizes of Pumps 8 x 9 x 8, 7 x 4 1/2 x 7 1/2 x 5 1/2

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

In Engine Room 4 of 3 1/2

In Holds, &c. 1, 2, & 3 two of 3 1/2

No. of Bilge Injections

1

sizes 8"

Connected to condenser, or to circulating pump

6 pumps 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

Yes

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

Dates of examination of completion of fitting of Sea Connections

20/4/11

of Stern Tube

20/4/11

Screw shaft and Propeller

20/4/11

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

top platform

BOILERS, &c.—(Letter for record)

S

Manufacturers of Steel

J. & S. Penner & Sons

Total Heating Surface of Boilers

6504

Is Forced Draft fitted

Yes

No. and Description of Boilers

3

Single ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

21/6/07

No. of Certificate

7517

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

58 1/2

No. and Description of Safety Valves to

each boiler

2 direct spring

Area of each valve

11.04

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

1-5"

Mean dia. of boilers

14-3 3/8

Length

11-6"

Material of shell plates

steel

Thickness

5/16"

Range of tensile strength

28-32 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

double rivet

long. seams

sub d. butt

Diameter of rivet holes in long. seams

1 3/8"

Pitch of rivets

Per centages of strength of longitudinal joint

rivets 89.6

plate 85.4

Working pressure of shell by rules

206 lbs

Size of manhole in shell

16" x 12"

No. and Description of Furnaces in each boiler

3

Morison's

Material

steel

Size of compensating ring

McNeil's

Length of plain part

top 10"

Thickness of plates

crown 9/16"

Description of longitudinal joint

welded

No. of strengthening rings

Yes

Working pressure of furnace by the rules

192 lbs

Combustion chamber plates: Material

steel

Thickness: Sides

5/8"

Back

5/8"

Top

5/8"

Bottom

1 1/16"

Pitch of stays to ditto: Sides

8 2 1/4"

Back

8 2 1/4"

Top

7 1/2" x 7 1/4"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

220 lbs

Material of stays

steel

Diameter at smallest part

1.45"

Area supported by each stay

59"

Working pressure by rules

193 lbs

End plates in steam space:

Material

steel

Thickness

Material

steel

Pitch of stays

1 5/16" x 1 1/4"

How are stays secured

d. nuts

Working pressure by rules

230 lbs

Material of stays

steel

Diameter at smallest part

5.27"

Area supported by each stay

Thickness

1"

Material of Lower back plate

steel

Thickness

1 5/16"

Greatest pitch of stays

13 3/16"

Working pressure of plate by rules

217 lbs

Diameter of tubes

2 1/2"

Pitch of tubes

3 3/8" x 3 5/8"

Material of tube plates

steel

Thickness: Front

1"

Back

3/4"

Mean pitch of stays

7 1/16"

Pitch across wide water spaces

13"

Working pressures by rules

212 lbs

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

8 1/2" x 1 1/2"

Length as per rule

30 1/16"

Distance apart

Working pressure by rules

188 lbs

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

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

Lloyd's Register

Foundation

W618-0089

VERTICAL DONKEY BOILER—

Manufacturers of Steel

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	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 top end & 2 bottom end bolts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed & bidge pump valves, 1 set of piston springs, a quantity of assorted bolts, nuts and iron. Spare propeller shaft 2 top end & 1 bottom end bearing &c.

The foregoing is a correct description,

FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED,

Manufacturer.

Dates of Survey while building	During progress of work in shops—	1907	May 9. 10. 13. 15. 27. 29. Jun. 3. 4. 12. 13. 19. 20. 21. Jul. 2. 4. 8. 11. Aug. 1. 9. 26. Sep. 3. 4. 24. Nov. 13. Dec.
	During erection on board vessel—	1908	Jan. 17. Feb. 26. Jun. 5. 15. Sep. 14. Nov. 5. Mar. 19. Apr. 20. 26. May 2. 4. 16. 20. Jun. 9. 10. 29. Jul. 5. 24. 25
	Total No. of visits	45	

Is the approved plan of main boiler forwarded herewith ☒

Dates of Examination of principal parts—	Cylinders 3/6 & 4/1/07	Slides 4/1/07	Covers 11/1/07	Pistons 4/1/07	Rods 4/1 & 13/1/07
Connecting rods 4/1 & 13/1/07	Crank shaft 3/9/07	Thrust shaft 4/9/07	Tunnel shafts 26/8/07	Screw shaft 17/1/08	Propeller 26/2/08
Stern tube 26/2/08	Steam pipes tested 14/4/11	Engine and boiler seatings 2/5/11	Engines holding down bolts 16/5/11		
Completion of pumping arrangements 29/6/11	Boilers fixed 4/5/11	Engines tried under steam 29/5/11			
Main boiler safety valves adjusted 29/5/11	Thickness of adjusting washers 5 5/8" P 5/2" C 5 5/8" P 5/2" P 5 3/4" P 5 1/2"				
Material of Crank shaft Steel	Identification Mark on Do. 4/8/07 JTF	Material of Thrust shaft Steel	Identification Mark on Do. 4/9/07 JTF		
Material of Tunnel shafts Steel	Identification Marks on Do. 26/8/11	Material of Screw shafts Steel	Identification Marks on Do. 26/11/07 JTF		
Material of Steam Pipes Wrought iron	Test pressure 540 lbs				

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been built under special survey, the materials used are good and the workmanship is satisfactory. The engines and boilers have been properly fitted on board and secured, the safety valves have been adjusted and the engines tried under steam. In my opinion this vessel is eligible to have the record of + L.M.C. 7.11.

The engines & boilers were built in 1907, before being fitted on board the engines and boilers were opened up examined and overhauled, in my opinion the machinery may be considered as new now.

After the trial trip, the vessel was placed in dry dock one broken blade of propeller removed, opposite blade to that found broken also renewed.

The amount of Entry Fee	£ 3 :	When applied for,
Special	£ 43 : 18 :	JUL 29 1911
Donkey Boiler Fee	£ 46 : 18 :	When received,
Travelling Expenses (if any)	£ :	578 1/2

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

Committee's Minute

FRI AUG 4 - 1911

Assigned

+ L.M.C. 7.11



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Lloyd's Register Foundation

ENGINEERING CERTIFICATE
WRITTEN

NEWCASTLE ON TYNE

Certificate (if required) to be sent to
(The Surveyors are requested not to write on or below the space for Committee's Minute.)