

REPORT ON MACHINERY.

No. 62600

Date of writing Report 1st July 1912 When handed in at Local Office 1-7-12

Received at London Office WED. JUL. 10. 1912

No. in Survey held at Newcastle

Date, First Survey 9th Mar 1911 Last Survey 1st July 1912

Reg. Book.

on the S.S. La Rosalina

(Number of Visits)

Master

Built at Newcastle

By whom built Palmes' Co. Ltd.

Engines made at Newcastle

By whom made Palmes' Co. Ltd.

Boilers made at do

By whom made do

Registered Horse Power

Owners Messrs. Withy & Co. Ltd.

Port belonging to W. Hartlepool

Nom. Horse Power as per Section 28 1045

Is Refrigerating Machinery fitted for cargo purposes Yes

Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines

Twin screw, Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 25" - 41 1/2" - 70"

Length of Stroke 48"

Revs. per minute 86

Dia. of Screw shaft as per rule 14.24"

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

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 4' - 11"

Dia. of Tunnel shaft as per rule 13.19"

as fitted 13 1/4"

Dia. of Crank shaft journals as per rule 13.84"

as fitted 14 1/8"

Dia. of Crank pin 14 1/8"

Size of Crank webs 18 3/4 x 9 1/2"

Dia. of thrust shaft under

collars 14 1/8"

Dia. of screw 16 - 6"

Pitch of Screw 18' - 0"

No. of Blades 3

State whether moveable Yes

Total surface 81 sq

No. of Feed pumps 4

Diameter of ditto 4 3/4"

Stroke 27"

Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2

Diameter of ditto 5 1/2"

Stroke 27"

Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2

Sizes of Pumps 14" x 12" x 12" + 10" x 6 1/2" x 10"

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

In Engine Room 2 Centrifugal 2 wing 3 1/2"

In Holds, &c. No. 1 hold 2 - 3 1/2" No. 2 hold 2 - 3 1/2" No. 3 hold

2 - 3 1/2" No. 4 hold 2 - 3 1/2" No. 5 hold 2 - 3 1/2"

Lumber Well 1 - 3" hold well 1 - 3 1/2"

No. of Bilge Injections 4 sizes 10"

Connected to condenser, or to circulating pump Yes

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 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 Below

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 Hold suction

How are they protected Wood casings

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 14 - 12 - 11

of Stern Tube 14 - 12 - 11

Screw shaft and Propeller 14 - 12 - 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. Spence & Sons & Palmes' Co

Total Heating Surface of Boilers 15696

Is Forced Draft fitted Yes

No. and Description of Boilers

Sigsbee, single-ended

Working Pressure 200 lbs

Tested by hydraulic pressure to 400 lbs

Date of test 3 - 8/9/11

No. of Certificate 3 - 8213

Can each boiler be worked separately Yes

Area of fire grate in each boiler 63.6 sq

No. and Description of Safety Valves to

each boiler Two, Spring

Area of each valve 8.29 sq

Pressure to which they are adjusted 200 lbs

Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 19"

Mean dia. of boilers 15 - 6"

Length 12' - 0"

Material of shell plates Steel

Thickness 1 1/32"

Range of tensile strength 29 - 32 1/2

Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams 8 - Lap

long. seams 2 BS. 7 Rivet

Diameter of rivet holes in long. seams 1 1/32"

Pitch of rivets 10 1/4"

Lap of plates or width of butt straps 22 3/8"

Per centages of strength of longitudinal joint

rivets 87

plate 85

Working pressure of shell by rules 234 lbs

Size of manhole in shell 16" x 12"

Size of compensating ring 32 1/2" x 28 1/2" x 1 1/32"

No. and Description of Furnaces in each boiler 3 - Morrison

Material Steel

Outside diameter 49 3/4"

Length of plain part top

Thickness of plates crown 11"

bottom 76"

Description of longitudinal joint Welded

No. of strengthening rings

Working pressure of furnace by the rules 227 lbs

Combustion chamber plates: Material Steel

Thickness: Sides 2 1/32"

Back 2 1/32"

Top 2 1/32"

Bottom 1"

Pitch of stays to ditto: Sides 8 1/2" x 8"

Back 8 1/2" x 8"

Top 8 1/2" x 8"

If stays are fitted with nuts or riveted heads Nuts

Working pressure by rules 205 lbs

End plates in steam space:

Material of stays Steel

Diameter at smallest part 2.03"

Area supported by each stay 7 1/4 sq

Working pressure by rules 256 lbs

Material of stays Steel

Material of stays Steel

Thickness 1 1/2"

Pitch of stays 16 1/2" x 15 1/2"

How are stays secured 8 - Nuts

Working pressure by rules 205 lbs

Material of stays Steel

Diameter at smallest part 6.10"

Area supported by each stay 25.6 sq

Working pressure by rules 248 lbs

Material of Front plates at bottom Steel

Thickness 1"

Material of Lower back plate Steel

Thickness 29/32"

Greatest pitch of stays 14"

Working pressure of plate by rules 207 lbs

Diameter of tubes 2 1/2"

Pitch of tubes 3 3/4" x 3 3/4"

Material of tube plates Steel

Thickness: Front 1"

Back 29/32"

Mean pitch of stays 8 1/2"

Pitch across wide water spaces 13 1/2"

Working pressures by rules 210 lbs

Girders to Chamber tops: Material Steel

Depth and

thickness of girder at centre 8 1/2" x 13 1/4"

Length as per rule 30"

Distance apart 8 5/8"

Number and pitch of stays in each 2 - 8 1/2"

Working pressure by rules 220 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

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 casing 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:— 2-top-end, 2-bottom-end + 2 main-bearing bolts + nuts
 1 set of coupling bolts 1 set of feed + bilge pump valves, 1 complete set
 of piston rings + springs, a quantity of assorted bolts nuts + iron. 1 screw shaft,
 2 propeller blades, 1 pair crank bushes, 1 air pump rod, 2 slide valve spindles, 2 slide valve springs.
 The foregoing is a correct description, *Palmer's Shipbuilding & Iron Co. Ltd.*

Manufacturer.

J.W. Reed & Co.

Dates of Survey while building	During progress of work in shops	1911 Mar. 9-14-17-27-28-30. Apr. 5-6-7-20-24-28. May 8-10-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31. Jun. 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31. Jul. 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31. Aug. 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31. Sep. 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31. Oct. 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31. Nov. 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31. Dec. 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31.
	During erection on board vessel	1912 Jan. 5-12-22-31. Feb. 13-14-27. Mar. 15. Apr. 1-11-20-29. May 31. Jun. 4-7.
	Total No. of visits	89

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

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 10-7-11 Slides 12-6-11 Covers 12-6-11 Pistons 12-5-11 Rods 22-5-11
 Connecting rods 12-6-11 Crank shafts 9-6-11 Thrust shafts 4-7-11 Tunnel shafts 25-7-11 Screw shafts 20-9-11 Propellers 20-9-11
 Stern tube 6-7-11 Steam pipes tested 14-2-12 Engine and boiler seatings 5-1-12 Engines holding down bolts 27-2-12
 Completion of pumping arrangements 27-2-12 Boilers fixed 27-2-12 Engines tried under steam 27-2-12
 Main boiler safety valves adjusted 27-2-12 Thickness of adjusting washers *PF. P₁ S₁ L₁. CF. P₂ S₂ L₂. SF. P₃ S₃ L₃. PA. P₄ S₄ L₄. CA. P₅ S₅ L₅. SA. P₆ S₆ L₆.*
 Material of Crank shafts *Steel* Identification Mark on Do. *TF 6-11* Material of Thrust shafts *Steel* Identification Mark on Do. *TF 7-11*
 Material of Tunnel shafts *Steel* Identification Marks on Do. *TF 7-11* Material of Screw shafts *Steel* Identification Marks on Do. *TF 9-11*
 Material of Steam Pipes *Steel* Test pressure 600 lbs

General Remarks (State quality of workmanship, opinions as to class, &c.) *The engines and boilers of this vessel have been constructed under special survey and the materials and workmanship are found and good. The engines have been tried under steam and the boiler safety valves adjusted at the working pressure. The machinery is now in good and safe working condition and eligible in my opinion to remain as classed and to have the notation of +LMC-7-12. A report on the Refrigerating machinery is forwarded herewith. A report on the Electric Installation will be forwarded when received from the Electrician.*

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

+LMC 7-12

The amount of Entry Fee	£ 3 : 0 : 0	When applied for.
Special	£ 71 : 2 : 6	<i>JUN 28 1912</i>
Donkey Boiler Fee	£ ✓ : ✓ :	When received.
Travelling Expenses (if any)	£ ✓ : ✓ :	<i>JUN 29 1912</i>

Committee's Minute

Assigned

FRI. III. 12-1912

+LMC 7-12

F.D.

MACHINERY CERTIFICATE

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



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