

# REPORT ON MACHINERY.

No. 82151

Date of writing Report

19

When handed in at Local Office

20 APR 1921

Received at London Office

Port of

LIVERPOOL

WED. 27 APR. 1921

To. in Survey held at  
Reg. Book

0521 on the

Queen Mary

S.S. Mary Nickerson

Date, First Survey Sept 23<sup>rd</sup> 1920. Last Survey April 18<sup>th</sup> 1921.

(Number of Visits

14

Master R. S. Denner

Built at Chester

By whom built J. G. Abells & Mitchell & Co. Ltd.

Tons } Gross 308.  
Net 113

Engines made at

Kings Lynn

By whom made

A. Dodman & Co.

When built 1920.

Boilers made at

Liverpool

By whom made

Cammell Laird & Co.

when made 1920.

when made 1921.

Registered Horse Power

Owners

Moffatt & Nickerson

Port belonging to

Grimsby

Com. Horse Power as per Section 28

61

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

No.

ENGINES, &c.

London Report 83321

Description of Engines

Compound, Surface Condensing

No. of Cylinders

2

No. of Cranks

2

Dia. of Cylinders

15" x 31"

Length of Stroke

24"

Revs. per minute

Dia. of Screw shaft

as per rule

Material of

screw shaft

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

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

tween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

yes.

If two

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

Dia. of Tunnel shaft

as per rule

as fitted

Dia. of Crank shaft journals

as per rule

as fitted

Dia. of Crank pin

Size of Crank webs

Dia. of thrust shaft under

Boilers

Dia. of screw

Pitch of Screw

No. of Blades

State whether moveable

Total surface

No. of Feed pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Bilge pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Donkey Engines

1

Sizes of Pumps

6" 4"

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

Engine Room

2-3" & 1-3" engine p.p. direct.

In Holds, &c.

2-3" & 1-3" & 1-3"

No. of Bilge Injections

1

sizes

3"

Connected to condenser, or to circulating pump

Cir. p.p.

Is a separate Donkey Suction fitted in Engine room & size

1-3"

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 & at water line.

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 that pipes are carried through the bunkers

4" & 1" hold suction.

How are they protected

wood casing.

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.

Is the Screw Shaft Tunnel water tight

Is it fitted with a watertight door

yes.

worked from

BOILERS, &c.

(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers

1226

Is Forced Draft fitted

no.

No. and Description of Boilers

One single ended.

Working Pressure

150 lbs.

Tested by hydraulic pressure to

280 lbs.

Date of test

1-4-20

No. of Certificate

2118.

Can each boiler be worked separately

Area of fire grate in each boiler

34 sq.

No. and Description of Safety Valves to

each boiler

two direct spring.

Area of each valve

4 sq.

Pressure to which they are adjusted

135 lbs.

Are they fitted with easing gear

yes.

Smallest distance between boilers or uptakes and bunkers or woodwork

7'-6"

Mean dia. of boilers

12'-0"

Length

10'-0"

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

Long. 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

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

Thickness of plates

crown

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

Area 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

Area 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

Steam dome: description of joint to shell

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

Superheater.

Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Pressure to which each is adjusted

Is Easing Gear fitted

Diameter of Safety Valve

Is Easing Gear fitted

Working pressure by rules

Steam dome: description of joint to shell

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

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Diameter of Safety Valve

Is Easing Gear fitted

Working pressure by rules

Steam dome: description of joint to shell

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness



IS A DONKEY BOILER FITTED? *no.*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— *Two top & 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, 6 coupling bolts, 1 set of bilge & feed pump valves, Air & circulating pump valves, main & donkey check valves, safety valves spring, assorted bolts & nuts, iron of various sizes &c.*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops -- *1920*  
During erection on board vessel -- *Sept 22 Oct 13 Nov 8 24 Dec 9 23 Jan 4 18 24 Feb 2 Mar 7 22 Apr 8 18.*  
Total No. of visits *14.*

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders *✓* Slides *✓* Covers *✓* Pistons *✓* Rods *✓*  
Connecting rods *✓* Crank shaft *✓* Thrust shaft *✓* Tunnel shafts *✓* Screw shaft *✓* Propeller *13.10*  
Stern tube *✓* Steam pipes tested *(Hull 27-1-21)* Engine and boiler seatings *8.11.20.* Engines holding down bolts *4.1.21*  
Completion of pumping arrangements *18-4-21.* Boilers fixed *23.11.20.* Engines tried under steam *18-1-21.*  
Completion of fitting sea connections *8.11.20.* Stern tube *13.10.20.* Screw shaft and propeller *8.11.20.*  
Main boiler safety valves adjusted *18-4-21.* Thickness of adjusting washers *P 1/2" S 1/4"*

Material of Crank shaft *✓* Identification Mark on Do. *✓* Material of Thrust shaft *✓* Identification Mark on Do. *✓*

Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts *✓* Identification Marks on Do. *✓*

Material of Steam Pipes *Copper* Test pressure *260 lbs.*

Is an installation fitted for burning oil fuel *no.* Is the flash point of the oil to be used over 150°F. *✓*

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case *no.* If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. *This machinery—Engine, London R. No 33921. Boiler, Liverpool Rpt. No 81928. — has been securely fitted on board & satisfactorily tried under steam, it is eligible in my opinion for classification & to have record of L & C Club No 21. W.T. 130 lbs. — See Secretary's letter E. 8.12.15.*

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC. 4.21. 40 130 lbs

*Roll*  
*4/5/21*

*9/5/21*

The amount of Entry Fee ... £ 2 : 0 :  
1/5 Special ... £ 3 : 1 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ 3 : 17 :  
When applied for, *26 APR 1921*  
When received, *30.4.1921*

Committee's Minute LIVERPOOL, 26 APR 1921

Assigned *L No 6 4:21*  
When fee is paid

*A. J. Bassett*  
Engineer Surveyor to Lloyd's Register of Shipping.