

# REPORT ON MACHINERY.

No. 81744.

Received at London Office

SAT. JAN. 15 1921

Form of writing Report

19

When handed in at Local Office

10 JAN 1921 Port of

Liverpool

in Survey held at

Ellesmere Port

Date, First Survey Dec 1<sup>st</sup>

Last Survey Dec 22<sup>nd</sup> 1920

g. Book.

6060 on the

S.S. "Delia"

(Number of Visits 6)

Tons

Gross 1225

Net 700

Master

Built at Lübeck

By whom built Schiffbau. V. Henry Koch.

When built 1914

Engines made at

Hamburg

By whom made

Ottensener Maschinenfabrik.

when made

1914

Boilers made at

Lübeck.

By whom made

Henry Koch

when made

1914

Registered Horse Power

Owners

J. Currie & Co

Port belonging to London.

Net Horse Power as per Section 28

162. ✓

Is Refrigerating Machinery fitted for cargo purposes

no.

Is Electric Light fitted

yes.

GINES, &c.—Description of Engines

Triple Expansion.

No. of Cylinders

3

No. of Cranks

3

No. of Cylinders

18 3/4, 29 7/8, 46 15/16 ✓

Length of Stroke

32 1/2 ✓

Revs. per minute

—

Dia. of Screw shaft

as per rule

app. 10 3/4

Material of screw shaft

—

The screw shaft fitted with a continuous liner the whole length of the stern tube Continuous liner. 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 ✓ If the liner does not fit tightly at the part

been the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two

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

Length of stern bush 5'-7"

No. of Tunnel shaft

as per rule

app. 9 1/4

Dia. of Crank shaft journals

as per rule

app. 9 1/4

Dia. of Crank pin

9 13/16

Size of Crank webs

15 3/4 x 6

Dia. of thrust shaft under

bars

9 7/8

Dia. of screw

12'-8"

Pitch of Screw

12'-0"

No. of Blades

4

State whether moveable

no

Total surface

51.7 sq ft

No. of Feed pumps

2

Diameter of ditto

2 1/2

Stroke

21 1/2

Can one be overhauled while the other is at work

yes.

No. of Bilge pumps

2

Diameter of ditto

2 9/16

Stroke

21 1/2

Can one be overhauled while the other is at work

yes.

No. of Donkey Engines

2.

Sizes of Pumps

Duplex 6.8

133.59

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

12.5

In Holds, &c.

No. 2-3.

noz (after) 2-3.

Engine Room

4-2 1/4" tunnel

1-2 1/4"

No. of Bilge Injections

1

sizes

4 3/4"

Connected to condenser, or to circulating pump

Direct

Is a separate Donkey Suction fitted in Engine room & size

1-3"

yes.

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.

all connections with the sea direct on the skin of the ship yes. Are they Valves or Cocks both.

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 both.

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.

at pipes are carried through the bunkers none. How are they protected —

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes.

the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes.

The Screw Shaft Tunnel watertight yes. Is it fitted with a watertight door yes. worked from Main deck.

MANUFACTURERS, &c.—(Letter for record

S)

Manufacturers of Steel —

Total Heating Surface of Boilers

2715 sq ft

Is Forced Draft fitted

no

No. and Description of Boilers

2.

L. S. E. Multitubular.

Working Pressure

199 lbs.

Tested by hydraulic pressure to

300 lbs.

Date of test

20-12-20

No. of Certificate

—

Can each boiler be worked separately

yes.

Area of fire grate in each boiler

36.1 sq ft

No. and Description of Safety Valves to

boiler

2.

Direct spring.

Area of each valve

5.9 sq ft

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

12"

Mean dia. of boilers

14.0"

Length

141"

Material of shell plates

steel

Thickness

1.02"

Range of tensile strength

28.5-32 tons

Are the shell plates welded or flanged

flanged

Descrip. of riveting: cir. seams

ends DR.

ends DR.

ends DR.

ends DR.

Lap of plates or width of butt straps

2.4-4"

Diameter of rivet holes in long. seams

1.19"

Pitch of rivets

13-33"

Lap of plates or width of butt straps

Percentages of strength of longitudinal joint

97.7%

Working pressure of shell by rules

210 lbs.

Size of manhole in shell

11.8" x 15.74"

No. and Description of Furnaces in each boiler

2

Corrugated

Material

steel

Outside diameter

38.5"

Length of plain part

top

bottom

Thickness of plates

top

bottom

Description of longitudinal joint

welded.

No. of strengthening rings

none

Working pressure of furnace by the rules

229 lbs.

Combustion chamber plates: Material

steel

Thickness: Sides

1.629

Back

1.629

Top

1.629

Bottom

1.866

Length of stays to ditto: Sides

4.28 x 7.28

Back

4.28 x 7.28

Top

4.28 x 7.28

Material of stays

steel

Area at smallest part

1.4"

Area supported by each stay

7.28 x 7.28

Working pressure by rules

208 lbs.

End plates in steam space:

Material

steel

Thickness

1.885"

Pitch of stays

14.17 x 15.74"

How are stays secured

Drawn + riv. 1.885"

Working pressure by rules

Area at smallest part

5.4"

Area supported by each stay

2.22"

Working pressure by rules

250 lbs.

Material of Front plates at bottom

steel

Thickness

1.885"

Greatest pitch of stays

12.2 x 7.28"

Working pressure of plate by rules

262 lbs.

Diameter of tubes

3 1/4"

Pitch of tubes

4.7 x 4.5"

Material of tube plates

steel

Thickness: Front

1.885"

Back

1.9"

Mean pitch of stays

9.75"

Working pressures by rules

290 lbs.

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

8.26 x (2 x 6.3)

Length as per rule

28.4"

Distance apart

Number and pitch of stays in each

3 - 7.28"

Working pressure by rules

217 lbs.

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

—

No. of rivets

Working pressure of shell by rules

—

Crown plates

Superheater. Type

Schmidt

Date of Approval of Plan

—

Tested by Hydraulic Pressure to

—

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

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. set of coupling bolts. set of bilge & feed pump valves. check valves. & sets of piston rings. bolts. nuts & various sizes of iron. & other details of spares.*

The foregoing is a correct description,

Manufacturer.

Dates of Survey *Dec 1. 6. 10. 15. 20. 22.*  
During progress of work in shops --  
During erection on board vessel --  
Total No. of visits *6*

Is the approved plan of main boiler forwarded herewith *No.*

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods  
Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller  
Stern tube Steam pipes tested Engine and boiler seatings Engines holding down bolts  
Completion of pumping arrangements Boilers fixed Engines tried under steam  
Completion of fitting sea connections Stern tube — — — Screw shaft and propeller  
Main boiler safety valves adjusted *22. 13. 20.* Thickness of adjusting washers *PB - P<sup>19</sup>/<sub>64</sub> S - 11/<sub>16</sub>. SB - P<sup>5</sup>/<sub>16</sub> S. 5/<sub>16</sub>*  
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 *Steel.* Test pressure *600 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.)

*In accordance with London letter of 10. 12. 1920, this machinery has been opened up throughout, the scantlings of the boilers found to be in accordance with the submitted plan, and all found to be in good order and safe working condition - See Liverpool Report herewith.*

*In my opinion this vessel's machinery is eligible for classification & to have records Club 12. 20. 12. 20.*

Certificate (if required) to be sent to

The amount of Entry Fee ... £ : : When applied for  
Special ... £ : :  
Donkey Boiler Fee ... £ : : When received.  
Travelling Expenses (if any) £ : : 19

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

Committee's Minute

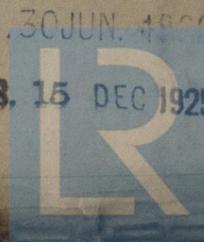
Assigned

*See report attached*

LIVERPOOL 14 JAN 1921

FRI. 30 JUN. 1922

TUES. 15 DEC 1925



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