

# REPORT ON MACHINERY.

No. 25758  
SAT. NOV. 18. 1911

Received at London Office

Date of writing Report

When handed in at Local Office

19

Port of Sunderland

Date in Survey held at Sunderland

Date, First Survey

25 Nov 1910 Last Survey 3 Nov

1911

Reg. Book.

on the

S/S Cento

(Number of Visits 47)

Gross 3708

Net 2393

Master Richardson

Built at

Spain

By whom built

J. L. Thompson & Sons

When built 1911

Engines made at

Sled

By whom made

S. Dickinson & Sons Ltd.

when made 1911

Boilers made at

do

By whom made

do

when made 1911

Registered Horse Power

Owners

Wainwright Shipping Co. Ltd.  
(R. Nicholson & Sons)

Port belonging to

Liverpool

Nom. Horse Power as per Section 28 304

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted no

## ENGINES, &c.—Description of Engines

TRIPLE

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 24 1/2, 40, 66

Length of Stroke 45

Revs. per minute 70

Dia. of Screw shaft

as per rule 13.8 Material of screw shaft W.S.  
as fitted 14

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

Is the propeller boss yes If the liner is in more than one length are the joints burned no

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 no

If two

shafts are fitted, is the shaft lapped or protected between the liners no

Length of stern bush 4' 9"

Dia. of Tunnel shaft

as per rule 12.2

Dia. of Crank shaft journals

as per rule 12.8

Dia. of Crank pin 12 1/8

Size of Crank webs 23 1/2 x 8 Dia. of thrust shaft under

rollers 12 1/8

Dia. of screw 17 1/4

Pitch of Screw 17 1/4

No. of Blades 4

State whether moveable f

Total surface 85 sq'

No. of Feed pumps 2

Diameter of ditto 3 1/2

Stroke 22 1/2

Can one be overhauled while the other is at work yes

yes

No. of Bilge pumps 2

Diameter of ditto 4 1/2

Stroke 22 1/2

Can one be overhauled while the other is at work yes

yes

No. of Donkey Engines 2

Sizes of Pumps 9 x 10 & 4 x 6

Diap. 4"

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

Engine Room 3 of 3 1/2

In Holds, &c. 2 of 3 1/2 in each hold

No. of Bilge Injections 1

sizes 4"

Connected to condenser, or to circulating pump CP

Is a separate Donkey Suction fitted in Engine room & size yes 4"

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

How are they protected none

How are they protected none

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

yes

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

yes

Dates of examination of completion of fitting of Sea Connections 20/9/11

of Stern Tube 20/9/11

Screw shaft and Propeller 20.9.11

Is the Screw Shaft Tunnel watertight yes

Is it fitted with a watertight door yes

worked from top platform

## BOILERS, &c.—(Letter for record B)

Manufacturers of Steel J. Spencer & Sons Ltd.

Total Heating Surface of Boilers 4600 sq'

Is Forced Draft fitted no

No. and Description of Boilers 2 S. ended

Working Pressure 180 lbs

Tested by hydraulic pressure to 360 lbs

Date of test 29.6.11

No. of Certificate X 2974

Can each boiler be worked separately yes

Area of fire grate in each boiler 40 sq'

No. and Description of Safety Valves to

each boiler 2 Spring

Area of each valve 7.07

Pressure to which they are adjusted 185 lbs

Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 18"

Mean dia. of boilers 16 ft

Length 10.6

Material of shell plates B

Thickness 1 9/32

Range of tensile strength 28-32

Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams d. lap

Long. seams butt

Diameter of rivet holes in long. seams 1 3/8

Pitch of rivets 9 5/16

Gap of plates or width of butt straps 1 8/8

Percentage of strength of longitudinal joint 85.23

Working pressure of shell by rules 183 lbs

Size of manhole in shell 16" x 12"

Size of compensating ring 8 3/4 x 1 3/32

No. and Description of Furnaces in each boiler 4 plain

Material B

Outside diameter 3' 4 1/2"

Length of plain part 6' 4 1/2"

Thickness of plates 1 9/32

Description of longitudinal joint Weld

No. of strengthening rings —

Working pressure of furnace by the rules 181

Combustion chamber plates: Material B

Thickness: Sides 1/8

Back 1/8

Top 1/8

Bottom 1 3/32

Pitch of stays to ditto: Sides 9 x 10

Back 9 x 10

Top 9 x 9 1/2

If stays are fitted with nuts or riveted heads nuts

Working pressure by rules 181

Material of stays B

Diameter at smallest part 1.6

Area supported by each stay 90

Working pressure by rules 204

End plates in steam space:

Material B Thickness 1 9/32 Pitch of stays 1 1/2 x 2 3/4

How are stays secured d. nuts

Working pressure by rules 181

Material of stays B

Diameter at smallest part 3' 8"

Area supported by each stay 412

Working pressure by rules 182

Material of Front plates at bottom B

Thickness 1 9/32

Material of Lower back plate B

Thickness 1 9/32

Greatest pitch of stays 12 3/4 x 10

Working pressure of plate by rules 181

Diameter of tubes 3 1/4

Pitch of tubes 4 1/2 x 4 1/2

Material of tube plates B

Thickness: Front 1/8

Back 1/8

Mean pitch of stays 9 x 9

Working pressures by rules 249 lbs

Girders to Chamber tops: Material B

Depth and thickness of girder at centre 6 3/4 x 2

Length as per rule 2.4 1/2

Distance apart 9 1/2

Number and pitch of stays in each 2 @ 9'

Working pressure by rules 184

Superheater or Steam chest: how connected to boiler

Can the superheater be shut off, and the boiler worked

separately yes

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

How stayed

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

Working pressure of end plates

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Working pressure of end plates

VERTICAL DONKEY BOILER— Manufacturers of Steel

Form with fields for No., Description, Made at, By whom made, When made, Where fixed, Working pressure, Valves, etc.

SPARE GEAR. State the articles supplied:— One set, top and bottom end bolts thrusts, main bearing bolts, truss, set of coupling bolts & nuts, set of feed and bilge valves, check valves for main & donkey feed, safety valve spring, assorted iron, nuts bolts & several plain boiler tubes, propeller and shaft.

The foregoing is a correct description, John Dickinson & Sons Limited.

Manufacturer. J. Dickinson & Sons Ltd

Table with columns for Dates of Survey while building, During progress of work in shops, and Total No. of visits.

Table with columns for Dates of Examination of principal parts, including Cylinders, Slides, Covers, Pistons, etc.

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery and boilers of this vessel have been built under special survey, materials good, workmanship good and boilers built in accordance with plan approved by Committee.

In my opinion this vessel is eligible for the record of L.M.C. 11/1911

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 11.11.

J.W.D. 20/11/11. J.W.D. Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Table with columns for The amount of Entry Fee, Special, Donkey Boiler Fee, Travelling Expenses (if any).

Committee's Minute TUE NOV. 21. 1911 Assigned + L.M.C. 11.11



Vertical text on the right margin including 'Date of writing', 'No. in Reg. Book', 'Master', 'Engines made', 'Boilers made', 'Registered Ho', 'MULTITU', '(Letter for re', 'show', 'since', 'num', 'from', 'not be', 'ck for', 'Top 11 X 10', 'smallest part', 'Pitch of stays', 'Area supporte', 'Lower back pl', 'Pitch of tubes', 'water spaces', 'girder at centr', 'Working press', 'separately', 'holes', 'If stiffened wit', 'Working press', 'Dates of Survey while building', 'Dur', 'won', 'Dur', 'boa', 'GENERAL', 'Survey Fe', 'Travelling', 'Committee', 'Assigned'.

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