

# REPORT ON MACHINERY.

No. 25058  
SAT. NOV. 18, 1911

Received at London Office

Date of writing Report

19

When handed in at Local Office

19

Port of Sunderland

Date in Survey held at Sunderland  
Reg. Book.

Date, First Survey

25 Nov 1901 Last Survey 3 Nov

1911

(Number of Visits 47)

Gross

3708

Net

2393

on the

S/S Cento

Master

Richardson

Built at

Stana

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

Wortham 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

Tri C P & S

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

13 1/8

Material of

W.S.

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

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

no

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

Length of stern bush

4' 9"

Dia. of Tunnel shaft

12 1/2

Dia. of Crank shaft journals

12 1/8

Dia. of Crank pin

12 1/8

Size of Crank webs

23 1/2 x 8

Dia. of thrust shaft under

12 1/8

Dia. of screw

17 1/4

Pitch of Screw

17 1/4

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

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

No. of Donkey Engines

2

Sizes of Pumps

9 x 10 1/4 x 6"

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

4 1/2"

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

Engine Room

3 of 3 1/2"

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

What pipes are carried through the bunkers

none

How are they protected

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

20/9/11

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

MILERS, &c.—(Letter for record

B)

Manufacturers of Steel

J. Spencer & Sons Ltd

Total Heating Surface of Boilers

4600 sq ft

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 ft

No. and Description of Safety Valves to

2 Spring

Area of each valve

7.04

Pressure to which they are adjusted

185 lbs

Smallest distance between boilers or uptakes and bunkers or woodwork

18"

Mean dia. of boilers

16 ft

Length

10' 6"

Material of shell plates

S

Thickness

1 9/32

Range of tensile strength

28-32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

d. 7 lap

ng. 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 1/8"

Percentage of strength of longitudinal joint

92.63

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

S

Outside diameter

3' 4 1/2"

Length of plain part

6' 4"

Thickness of plates

1 9/32

Description of longitudinal joint

Weld

Working pressure of furnace by the rules

181

Combustion chamber plates: Material

S

Thickness: Sides

1/16"

Back

1/16"

Top

1/16"

Bottom

1 5/32"

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

S

Diameter at smallest part

1' 6"

Area supported by each stay

90

Working pressure by rules

204

End plates in steam space:

Material

S

Thickness

1 9/32"

Pitch of stays

Diameter at smallest part

3' 8"

Area supported by each stay

412

Working pressure by rules

182

Material of Front plates at bottom

S

Thickness

1 9/32"

Greatest pitch of stays

12 3/4 x 10"



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
Valves	No. of Safety Valves	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
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates
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:— One set, top and bottom end bolts thrusts & main bearing bolts & nuts. 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. The foregoing is a correct description, Propeller and shaft. J. Dickinson & Sons Limited, Manufacturer.

Dates of Survey	During progress of work in shops --	1410	Nov. 25	Dec 2. 8. 20. 22	1911	Jan. 5. 11. 16. 19. 23	Feb. 6. 16	Mar. 1. 9. 16. 27. 28. 30
while building	During erection on board vessel ---	Apr. 10. 21. 27	May 4. 22. 25	Jun 12. 13. 29. 30	Jul 5. 25. 31	Aug. 22. 29	Sep. 20. 25. 27	Oct. 2. 17. 18. 20. 24. 28. 31
	Total No. of visits	Nov. 3	(144)					

Dates of Examination of principal parts	Cylinders 21. 4. 11.	Slides 4. 5. 11.	Covers 4. 5. 11.	Pistons 4. 5. 11.	Rods 4. 5. 11.
Connecting rods	4. 5. 11.	Crank shaft 2. 9. 6. 11.	Thrust shaft 2. 9. 6. 11.	Tunnel shafts 2. 9. 6. 11.	Screw shaft 3. 0. 6. 11.
Propeller	3. 0. 6. 11.	Stern tube 3. 0. 6. 11.	Steam pipes tested 18. 10. 11.	Engine and boiler seatings 2. 9. 11.	Engines holding down bolts 6. 10. 11.
Completion of pumping arrangements	2. 3. 10. 11.	Boilers fixed 6. 10. 11.	Engines tried under steam 2. 3. 10. 11.	Thickness of adjusting washers P.B. f 5/16. A. 5/16. S.B. f 7/16. A. 5/16.	
Main boiler safety valves adjusted	2. 3. 10. 11.	Material of Crank shaft S.	Identification Mark on Do. R. J. F.	Material of Thrust shaft S.	Identification Mark on Do. R. J. F.
Material of Tunnel shafts S.	Identification Marks on Do. R. J. F.	Material of Screw shafts W. Im.	Identification Marks on Do. R. J. F.	Material of Steam Pipes Copper.	Test pressure 360 lbs.

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.

The amount of Entry Fee	£ 3	When applied for	15. 11. 19. 11.
Special	£ 35	When received	17. 11. 19. 11.
Donkey Boiler Fee	£		
Travelling Expenses (if any)	£		

Committee's Minute TUE. NOV. 21. 1911

Assigned + L.M.C. 11. 11.

J. W. D. 20/11/11

J. S. Findlay

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

