

## REPORT ON MACHINERY.

No. 61328

THU. NOV. 16. 1911

SAT. NOV. 18. 1911

Date of writing Report

10

When handed in at Local Office

10

Port of

Received at London Office

No. in Survey held at  
Reg. Book.

Date, First Survey

25<sup>th</sup> May

Last Survey

2<sup>nd</sup> Nov. 1911

13. Upon the Machinery of the S.S. Cruise

(Number of Visits 2)

Gross 1016

Net 421

Master

Built at

Newcastle

By whom built

W. Dobson &amp; Co

When built

1911

Engines made at

Newcastle

By whom made

Wallace's Shipway & Eng<sup>rs</sup>

when made

1911

Boilers made at

"

By whom made

"

when made

1911

Registered Horse Power

Owners

Lancashire &amp; Yorkshire Ry Co

Port belonging to

Goole

Nom. Horse Power as per Section 28

331

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

## ENGINES, &amp;c.—Description of Engines

Triple expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

22" 36" &amp; 61"

Length of Stroke

39"

Revs. per minute

93

Dia. of Screw shaft

as per rule 12.22

Material of

steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

no liner

Is the after end of the liner made water tight

in the propeller boss

✓

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

✓

If two

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

✓

Length of stern bush

4'-3"

Dia. of Tunnel shaft

as per rule 10.87

Dia. of Crank shaft journals

as per rule 11.32

Dia. of Crank pin

11.56

Size of Crank webs

23 1/2" x 7 1/2"

Dia. of thrust shaft under

collars

11 3/4"

Dia. of screw

13-6"

Pitch of Screw

16-9"

No. of Blades

4

State whether moveable

no

Total surface

61 5/8"

No. of Feed pumps

(2) ✓

Diameter of ditto

7"

Stroke

18"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

4"

Stroke

22"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2

Sizes of Pumps

4" x 4" x 5" &amp; 9" x 10" x 10"

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

In Engine Room

three 2 1/2"

In Holds, &amp;c. Two in each hold of 2 1/2" and one

in tunnel well of 2 1/2"

No. of Bilge Injections

1

sizes

7"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room &amp; 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

main 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

Forward tank &amp; bilge 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

Dates of examination of completion of fitting of Sea Connections

19/9/11

of Stern Tube

19/9/11

Screw shaft and Propeller

19/9/11

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

main deck

## BOILERS, &amp;c.—(Letter for record

S)

Manufacturers of Steel

J. &amp; S. Pinner &amp; Sons

Total Heating Surface of Boilers

4948

Is Forced Draft fitted

Yes

No. and Description of Boilers

2 Single ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

4/8/11

No. of Certificate

8173

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

62 5/8

No. and Description of Safety Valves to

each boiler

2 direct spring

Area of each valve

9.6

Pressure to which they are adjusted

187 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

9"

Mean dia. of boilers

14-9 1/2"

Length

11-6"

Material of shell plates

steel

Thickness

1 1/2"

Range of tensile strength

29-33 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

double lap

long. seams

butt &amp; lap

Diameter of rivet holes in long. seams

1 1/32"

Pitch of rivets

8 5/8"

Lap of plates or width of butt straps

18 3/8"

Per centages of strength of longitudinal joint

rivets 86.9

plate 85.85

Working pressure of shell by rules

181.5 lbs

Size of manhole in shell

17" x 13"

Size of compensating ring

McNeil

No. and Description of Furnaces in each boiler

3 Horizontal

Material

steel

Outside diameter

47 3/8"

Length of plain part

top 1 1/2"

Thickness of plates

crown 9/16"

bottom 1/2"

Description of longitudinal joint

welded

No. of strengthening rings

✓

Working pressure of furnace by the rules

186 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 3/4" x 9 1/2"

Back

10" x 8 1/2"

Top

9 1/2" x 8 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

180.8

Material of stays

steel

Diameter at smallest part

2.03

Area supported by each stay

80

Working pressure by rules

190 lbs

End plates in steam space:

Material

steel

Thickness

1 5/8"

Pitch of stays

20 5/8" x 20 5/8"

How are stays secured

double nuts

Working pressure by rules

185 lbs

Material of stays

steel

Diameter at smallest part

7.24

Area supported by each stay

416.4

Working pressure by rules

180.7

Material of Front plates at bottom

steel

Thickness

1"

Material of Lower back plate

steel

Thickness

3 1/2"

Greatest pitch of stays

14 1/4"

Working pressure of plate by rules

181 lbs

Diameter of tubes

2 1/2"

Pitch of tubes

3 3/8" x 3 3/8"

Material of tube plates

steel

Thickness: Front

1"

Back

3/4"

Mean pitch of stays

7 1/4" x 7 1/4"

Pitch across wide water spaces

13 1/4"

Working pressures by rules

204 lbs

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

8 1/4" x 1 1/2"

Length as per rule

31 1/8"

Distance apart

8 1/2"

Number and pitch of stays in each

two

9 1/2"

Working pressure by rules

189 lbs

Superheater or Steam chest; how connected to boiler

✓

Can the superheater be shut off and the boiler worked

separately

✓

Diameter

✓

Length

✓

Thickness of shell plates

✓



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 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	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	

FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED.

*Manufacturer.*

1911

Dates of Survey while building	{	During progress of work in shops - -	May 25. Jun 9. 14. 26. 28. Jul 5. 10. 17. 21. 26. 31. Aug. 1. 4. 9. 17. 29. Sep. 4. 14. 19. 20. 21. 23.
		During erection on board vessel - -	Oct. 2. 13. 18. 31. Nov. 2
		Total No. of visits	27
		Is the approved plan of main boiler forwarded herewith <i>Yes</i>	

*Is the approved plan of main boiler forwarded herewith*

Dates of Examination of principal parts—Cylinders 29/8 & 14/9/11 Slides 26/7/11 Covers 9/8 & 20/9/11 Pistons 29/8/11 Rods 29/9/11  
 ng rods 9/8 & 29/9/11 Crank shaft 21/7 & 29/8/11 Thrust shaft 4/9/11 Tunnel shafts 4/9/11 Screw shaft 4/9/11 Propeller 4/9/11  
 be 21 & 26/7/11 Steam pipes tested 23/8/11 Engine and boiler seatings 23/9/11 Engines holding down bolts 19/10/11  
 on of pumping arrangements 31/10/11 Boilers fixed 18/10/11 Engines tried under steam 34/10/11  
 for safety valves adjusted 31/10/11 Thickness of adjusting washers front 0 13/32 5 3/8 2 5/16 1 7/8 3 3/16  
 of Crank shaft *steel* Identification Mark on Do. 29/8/11 W.C. Material of Thrust shaft *steel* Identification Mark on Do. 4/9/11 *bb.*  
 of Tunnel shafts *steel* Identification Marks on Do. 4/9/11 *bb.* Material of Screw shafts *steel* Identification Marks on Do. 4/9/11 *bb.*  
 of Steam Pipes *Soft mild steel iron* ✓ Test pressure 540 lbs. ✓

*General Remarks* (State quality of workmanship, opinions as to class, &c.)

The engines and boilers of this vessel have been built under  
 special survey, the materials used are good, and the work-  
 manship is satisfactory, they have been properly fitted on board  
 and secured, and afterwards tried under steam.

In my opinion the machinery is eligible to have the record of  $\boxplus$  L.M.C. 11. 11 in the Register Book.

It is submitted that  
this vessel is eligible for  
THE RECORD + LMC. 11. 11.

JWR  
18/11/11

The amount of Entry Fee	.. £	3 :	:	When applied for,
Special	.. .. £	36 : 11 :	:	<b>NOV 10 1911</b>
Donkey Boiler Fee	.. .. £	:	:	When received
Travelling Expenses (if any)	£	:	:	<b>NOV 13 1911</b>

Charles Cooper  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping,

## Committee's Minute

TUE NOV 21 1911

*Assigned*

+ Lm 6 11. 11

MACHINERY CERTIFICATE  
WRITTEN