

## REPORT ON MACHINERY.

Port of **WEST HARTLEPOOL**Hull No. 12517  
Lu No. 22105

FRI, 6 JAN 1905

No. in Survey held at

Hartlepool

Reg. Book.

60 Sup. on the

Steel S. S. "Claremont"

(Std) 8th. Sept. 1904. Received at London Office (Std) 20th. Dec. 1904.  
Date, first Survey 26<sup>th</sup> May 1904 Last Survey 8<sup>th</sup> Dec. 1904

(Number of Visits) (Std) 8. 70.

Gross 3883

Net 2476

When built 1904

Master G. W. Turner

Built at Sunderland

By whom built W. Dofford &amp; Sons Ltd.

Engines made at

Hartlepool

By whom made

Richardsons, Westgarth &amp; Co. Ltd.

when made

1904

Boilers made at

Hartlepool

By whom made

do

do

when made

1904

Registered Horse Power

Owners

The Stanley Line Ltd.

Port belonging to West Hartlepool.

Nom. Horse Power as per Section 28

307

Is Refrigerating Machinery fitted

no

Is Electric Light fitted

no

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

Triple expansion

No. of Cylinders

three

No. of Cranks

three

Dia. of Cylinders

23½-39-66

Length of Stroke

45

Revs. per minute

60

Dia. of Screw shaft

as per rule 13½

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

in 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

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

Yes

If two

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

Yes

Length of stern bush

4-4

Dia. of Tunnel shaft

as per rule 11-94

Dia. of Crank shaft journals

as per rule 12-5

Dia. of Crank pin

13

Size of Crank webs

8x25

Dia. of thrust shaft under

collars

collars

13

Dia. of screw

16-9

Pitch of screw

16-6

No. of blades

4

State whether moveable

no

Total surface

84.6 sq. ft.

No. of Feed pumps

2

Diameter of ditto

3

Stroke

24

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

3½

Stroke

24

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2

Sizes of Pumps

Feed 4x6 duplex

Ballast

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

In Engine Room

In Engine Room

Four 3½ dia.

In Holds, &amp;c.

Fore Hold two 3½ in. Main Hold two 3½ in.

No. of bilge injections

one

sizes

5

Connected to condenser, or to circulating pump

Is a separate donkey suction fitted in Engine room &amp; size

Yes

3½

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

X

What pipes are carried through the bunkers

none

How are they protected

Yes

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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

Is the screw shaft tunnel watertight

Yes

Is it fitted with a watertight door

yes

worked from

Top platform

## BOILERS, &amp;c.—

(Letter for record S.)

Total Heating Surface of Boilers

4603 sq. ft.

Is forced draft fitted

No

No. and Description of Boilers

Two single ended.

by Mull

Working Pressure

180 lbs.

Tested by hydraulic pressure to

360 lbs.

Date of test

16-11-04

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

48.34 sq. ft.

No. and Description of safety valves to

each boiler

Two

Spring direct

Area of each valve

7.06 sq. in.

Smallest distance between boilers or uptakes and bunkers or woodwork

12

Mean dia. of boilers

15-9

Length

10-6

Material of shell plates

steel

Thickness

1 9/32

Range of tensile strength

28-32

Are they welded or flanged

no

Descrip. of riveting: cir. seams

double

long. seams

treble

Diameter of rivet holes in long. seams

1 9/32

Pitch of rivets

8 5/8

Lap of plates or width of butt straps

18

Per centages of strength of longitudinal joint

rivets 86-8

plate 85-2

Working pressure of shell by rules

181.6 lbs.

Size of manhole in shell

13 x 16 1/2

Size of compensating ring

29 x 30 x 1 9/32

No. and Description of Furnaces in each boiler

3

Morrison

Material

steel

Outside diameter

49 1/2

Length of plain part

top 8

Thickness of plates

crown 1 9/32

Description of longitudinal joint

weld

No. of strengthening rings

Working pressure of furnace by the rules

190 lbs.

Combustion chamber plates: Material

steel

Thickness: Sides

Pitch of stays to ditto: Sides

4 1/2 x 8 1/2

Back

8

Top

4 1/2 x 8 1/2

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

183 lbs.

Material of stays

steel

Diameter at smallest part

1 3/8

Area supported by each stay

66 sq. in.

Working pressure by rules

180 lbs.

End plates in steam space:

Material

steel

Thickness

1

Pitch of stays

16 1/2 x 15 1/8

How are stays secured

D. A. M.

Working pressure by rules

180 lbs.

Material of stays

steel

Diameter at smallest part

Diameter at smallest part

2 1/2

Area supported by each stay

262 sq. in.

Working pressure by rules

180 lbs.

Material of Front plates at bottom

steel

Thickness

3/8

Material of Lower back plate

Thickness

3/8

Material of Lower back plate

steel

Thickness

25/32

Greatest pitch of stays

12 3/4

Working pressure of plate by rules

186 lbs.

Diameter of tubes

Pitch of tubes

4 1/2

Material of tube plates

steel

Thickness: Front

1

Back

3/4

Mean pitch of stays

11 1/2

Pitch across wide water spaces

14 1/4

Working pressures by rules

189 lbs.

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

8 x 13

Length as per rule

31

Distance apart

Working pressure by rules

181 lbs.

Superheater or Steam chest; how connected to boiler

none

Can the superheater be shut off and the boiler worked

separately

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

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

Yes

X

X

X

X

X

X

X

Is it fitted with a watertight door

yes

worked from

Top platform

Is the screw shaft tunnel watertight

yes



**DONKEY BOILER—** No. one Description Single ended, Horizontal, Multi Tube, Plain furnaces.  
 Made at Swansea By whom made M. Bradford & Co. (Ld.) When made 1904 Where fixed deck  
 Working pressure 80 lb. tested by hydraulic pressure to 160 lb. No. of Certificate 2304 Fire grate area 30 sq. Description of safety valves Direct opening  
 No. of safety valves two Area of each 5.94 Pressure to which they are adjusted 85 lb. If fitted with easing gear yes If steam from main boilers can enter the donkey boiler no Dia. of donkey boiler 9-0 Length 9-0 Material of shell plates steel Thickness 5/8 Range of tensile strength 24 1/2 Descrip. of riveting long. seams Lap tubular Dia. of rivet holes 25/32 Whether punched or drilled drilled Pitch of rivets 3 1/8 Lap of plating 5 1/2 Per centage of strength of joint 88 Rivets 48 Thickness of shell cross plates 23/32 Radius of do. flat No. of stays to do. 21 Dia. of stays 1 1/8 Diameter of furnace Top 31 Bottom — Length of furnace 6-3 Thickness of furnace plates 7/16 Description of joint Lap angle Thickness of furnace cross plates 15 1/2 Stays by 1 3/8 + 1 1/4 new stay Working pressure of shell by rules 81 lb. Working pressure of furnace by rules 90 lb. Diameter of uptake 3 Thickness of uptake plates 5/16 Thickness of water tubes 5/16

**SPARE GEAR.** State the articles supplied:—2 bon. rod top + 2 bon. rod bottom end bolt + nut, 2 Main bearing and one set of coupling bolts, one set of feed, bilge + air pump valves, A quantity of assorted bolts nuts + iron, propeller, white metal for one crank pin bush, one valve each for main + donkey feed, check, 5 condenser + 5 boiler tubes + safety valve spring.

The foregoing is a correct description,  
 For **RICHARDSON, WESTGARTH & CO., LIMITED.**

Manufacturer.

Managing Director.

Dates of Survey { During progress of work in shops - 1904 May. 26, 27, 30, 31, June. 1, 2, 4, 6, 16, 17, 20, 29, July. 8, 27, Sept. 6, 8, 13, 15, 16, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29, 30, Oct. 3, 4, 7, 8, 10, 11, 12, 13, 14, 17, 18  
 During erection on board vessel - 19. 20, 21, 22, 25, 26, 27, 28, 31, Nov. 2, 4, 5, 9, 10, 11, 14, 15, 16, 18, 21, 22, 23, 24, 28, 29, 30, Dec. 1, 2, 8, - (all) ship 18, 21, 24, 10, 13, Nov. 13, Dec. 19, 20.  
 building { Total No. of visits. 70 - (Sld.) - 8 = 78. Is the approved plan of main boiler forwarded herewith yes  
 " " " donkey " " " yes

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

The main steam pipes have been tested by hydraulic pressure to 360 lbs. per sq. in. and found tight.  
 The engines and boilers of this vessel have been built under Special Survey in accordance with the Rule requirements, the materials and workmanship being good + efficient; When completed and fitted on board were tried under steam at moorings with satisfactory results, and is now eligible, in our opinion, to have **+LMC 1204** marked in the Register Book.

It is submitted that  
 this vessel is eligible for  
**THE RECORD.**

**+LMC 1204**

*JSM*

*RS 9.1.05*

*9.1.05*

The amount of Entry Fee.. £ 3 : :  
 Special .. £ 35 : 7 :  
 Donkey Boiler Fee Not paid 2 : 2 :  
 Travelling Expenses (if any) £ : :  
 Committee's Minute

TUES. 10 JAN. 1905

Assigned

**+LMC 1204**

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



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Lloyd's Register  
 Foundation

W. H. H. H. H. H.

Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.