

REPORT ON MACHINERY.

No. 13605

Port of

West Hartlepool

Received at London Office

DEC 12 1908

No. in Survey held at

West Hartlepool

Date, first Survey

17th February, 1908

Last Survey

9th December, 1908

Reg. Book.

Supp. on the

s/s "Herribee"

(Number of Vessels 87)

Gross
Tons

When built 1908

Master

Built at

Blyth

By whom built

Blyth S.B. Co. Ltd

Engines made at

Hartlepool

By whom made

Richardsons, Welfarth & Co. Ltd

when made 1908

Boilers made at

Hartlepool

By whom made

Richardsons, Welfarth & Co. Ltd

when made 1908

Registered Horse Power

Owners Huddart, Parker & Co. Proprietors Ltd

Port belonging to Melbourne

Nom. Horse Power as per Section 28

327

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Direct Acting Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

24"-39"-66"

Length of Stroke

45

Revs. per minute

64

Dia. of Screw shaft

as per rule 13.7

Material of screw shaft

as fitted 14 1/2" steel

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

Length of stern bush

4'-10 1/2"

Dia. of Tunnel shaft

as per rule 12.07

Dia. of Crank shaft journals

as per rule 12.68

Dia. of Crank pin

13 1/4"

Size of Crank webs

22 1/2" x 8 1/2"

Dia. of thrust shaft under

collars

14 3/4"

Dia. of screw

17'-0"

Pitch of Screw

17'-0"

No. of Blades

4

State whether moveable

No

Total surface

90 sq

No. of Feed pumps

2

Diameter of ditto

3 1/4"

Stroke

27"

Can one be overhauled while the other is at work

Yes

No. of Bilge-pumps

2

Diameter of ditto

4"

Stroke

27"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

3

Sizes of Pumps

7 1/2" x 5" x 10"

7" x 4 1/2" x 8"

10" x 11" x 10"

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

In Engine Room

4 - 3 1/2" diam.

In Holds, &c.

10 - 3 1/2" diam.

1 - 3 1/2" Tunnel & hold well.

No. of Bilge Injections

One size

6"

Connected to condenser, or to circulating pump

Circulating

a separate Donkey Suction fitted in Engine room & 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

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

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

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

12.1.09

of Stern Tube

18/11/08

Screw shaft and Propeller

18/11/08

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from Glider cover platform

BOILERS, &c.—(Letter for record)

(7)

Manufacturers of Steel

John Pease & Sons.

Total Heating Surface of Boilers

5181

Is Forced Draft fitted

No

No. and Description of Boilers

3

Single ended Cylindrical

Working Pressure

180 lbs.

Tested by hydraulic pressure to

360 lbs.

Date of test

6/11/08

No. of Certificate

3151

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

55 sq

No. and Description of Safety Valves to

each boiler

2, Spring loaded

Area of each valve

7.07 sq

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

1'-9"

F.W.B.M.

Mean dia. of boilers

14'-6"

Length

10'-6"

Material of shell plates

Steel

Thickness

1 1/32"

Range of tensile strength

28/32 T.M.S.

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

D.P. 24p.

long. seams

T.R.D.B.S.

Diameter of rivet holes in long. seams

1 1/32"

Pitch of rivets

8 7/8"

Lap of plates or width of butt straps

19 1/2"

Per centages of strength of longitudinal joint

rivets 98.4

plate 84.8

Working pressure of shell by rules

209 lbs.

Size of manhole in shell

16 1/2" x 13"

Size of compensating ring

30" x 30" x 1 1/32"

No. and Description of Furnaces in each boiler

3

Moricones

Material

Steel

Outside diameter

44 1/2" x 44 1/4"

Length of plain part

top

Thickness of plates

crown 9 1/16"

Description of longitudinal joint

Welded

No. of strengthening rings

Supp.

Working pressure of furnace by the rules

206

Combustion chamber plates: Material

Steel

Thickness: Sides

19 3/32"

Back

19 3/32"

Top

19 3/32"

Bottom

27 3/32"

Pitch of stays to ditto: Sides

7 1/2" x 8 1/4"

Back

8 1/4" x 8 1/4"

Top

7 1/2" x 8 1/4"

stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

183 lbs.

Material of stays

W. Iron

Diameter at smallest part

1 1/8"

Area supported by each stay

67 sq

Working pressure by rules

232 lbs.

End plates in steam space:

Material

Steel

Thickness

1 1/8"

Pitch of stays

20 3/4" x 16 1/2"

How are stays secured

D.N. & W.

Working pressure by rules

183 lbs.

Material of stays

Steel

Diameter at smallest part

3"

Area supported by each stay

20 3/4" x 16 1/2"

Working pressure by rules

209

Material of Front plates at bottom

Steel

Thickness

7/8"

Material of Lower back plate

Steel

Thickness

7/8"

Greatest pitch of stays

14" x 8 1/8"

Working pressure of plate by rules

202

Diameter of tubes

3 1/2"

Pitch of tubes

4 3/4" x 4 3/4"

Material of tube plates

Steel

Thickness: Front

15 1/16"

Back

25 3/32"

Mean pitch of stays

9 1/2" x 11 7/8"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

182 lbs.

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

8" x 1 3/4"

Working pressure by rules

185

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

holes

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

Working pressure by rules

End plates: Thickness

How stayed

Working pressure by rules

End plates: Thickness

How stayed

Working pressure by rules

End plates: Thickness

How stayed

Working pressure by rules

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. _____ Description *No donkey boiler fitted.*

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety 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 _____ Rivets _____ Plates _____

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 _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— *One propeller and propeller shaft, 1/3" crank shaft, one air pump bucket and rod, one circulating pump bucket and rod, two top end bolts, two bottom end bolts, two main bearing bolts, one set of coupling bolts, one set of feed and bilge pump valves, one set of rings & springs for each piston, assorted bolts and nuts & Thomson's patent coupling.*

The foregoing is a correct description,

Manufacturers

Managing Director.

Dates of Survey while building

During progress of work in shops—	1908 Feb. 14, 24, 25, Mar. 1, 10, 13, 16, 20, 25, Apr. 1, 13, 14, 22, 25, May 5, 15, 22, June 1, 12, July 1, 17, 20, 22, 24, 31, Aug. 12, 18, 24, 25, 31, Sept. 2, 11, 15, 16, 18, 21, 22,
During erection on board vessel—	Oct. 2, 24, 25, 29, Nov. 1, 2, 5, 6, 7, 8, 10, 12, 13, 14, 15, 17, 19, 20, 21, 22, 23, 24, 27, 28, 29, Dec. 1, 2, 3, 5, 6, 7, 9, 10, 12, 13, 14, 15, 19, 23, 24, 25, 27, 30, Jan. 1, 2, 3, 7, 9,
Total No. of visits	87

Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—

Cylinders	22/10/08	Slides	2/10/08	Covers	22/10/08	Pistons	2/10/08	Rods	26/10/08
Connecting rods	2/10/08	Crank shaft	15/10/08	Thrust shaft	14/10/08	Tunnel shafts	24/11/08	Screw shaft	28/10/08
Stern tube	30/10/08	Steam pipes tested	2/12/08	Engine and boiler seatings	17/11/08	Engines holding down bolts	25/11/08		
Completion of pumping arrangements	8/12/08	Boilers fixed	8/12/08	Engines tried under steam	8/12/08				
Main boiler safety valves adjusted	8/12/08	Thickness of adjusting washers	7th. Boiler T.V. 3/16" 1st. Boiler A.V. 3/16" 2nd. Boiler S.V. 3/16" 3rd. Boiler S.V. 3/16"						

Material of Crank shaft *S.M.S. Steel* Identification Mark on Do. *4687* Material of Thrust shaft *S.M.S. Steel* Identification Mark on Do. *4687*

Material of Tunnel shafts *S.M.S. Steel* Identification Marks on Do. *4687* Material of Screw shaft *S.M.S. Steel* Identification Marks on Do. *4687*

Material of Steam Pipes *Lap welded wrought iron* Test pressure *600 lbs per sq. in.*

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

To complete the Survey the feed and bilge pump valves (spare set) require to be put on board. This will be done at Blyth. Surveyors advised. *Examined on board, see memo dtd 12/11/09. J.W.D. 13/1/09*

The Machinery and Boilers of this vessel have been constructed under Special Survey and placed on board in accordance with the Society's Rules. They are now in our opinion in safe working condition and the case is respectfully submitted for the notation **L.M.C.** (with date) on completion of the Survey.

It is submitted that this vessel is suitable for THE RECORD + L.M.C. 1.09.

Elec. light.

J.W.D. 13/1/09

The amount of Entry Fee..	£ 3 : 0 : 0	When applied for,	11-12-1908
Special	£ 36 : 7 : 9		
Donkey Boiler Fee ..	£ 39 : 7 : 9	When received,	15/1/09
Travelling Expenses (if any) £	:		

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

Committee's Minute

FRI. 15 JAN 1909

Assigned

MACHINERY CERTIFICATE WRITTEN.



Lloyd's Register Foundation