

Rpt. 4.

REPORT ON MACHINERY.

No. 23136

Port of

Received at London Office

19

No. in Survey held at

Sunderland

Date, first Survey 28th May. 06. Last Survey 22nd January 1907

Reg. Book.

(Number of Visits 30)

on the Steel Screw Steamer WESTHAMPTON

Gross 1860.19

Net 1162.07

When built 1904

Master A. W. Foxworthy

Built at Sunderland

By whom built Osborne & Galt

Engines made at

Sunderland

By whom made

Richardsons' Westgarth & Co. Ltd.

when made 1904

Boilers made at

Sunderland

By whom made

Richardsons' Westgarth & Co. Ltd.

when made 1904

Registered Horse Power

Owners British Maritime Trust

Port belonging to West Hartlepool

Nom. Horse Power as per Section 28

190

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

ENGINES, &c.—Description of Engines

Triple Expansion (Inverted)

No. of Cylinders

Three

No. of Cranks

Three

Dia. of Cylinders

20-33-54

Length of Stroke

36

Revs. per minute

40

Dia. of Screw shaft

as per rule 11.24

Material of

Iron

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

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

yes

Length of stern bush

3-10

Dia. of Tunnel shaft

as per rule 9.54

Dia. of Crank shaft journals

as per rule 10.02

Dia. of Crank pin

10 1/4

Size of Crank webs

6 1/2 x 5

Dia. of thrust shaft under

collars

11

Dia. of screw

14-6

Pitch of Screw

14-6

No. of Blades

four

State whether moveable

no

Total surface

66 sq ft

No. of Feed pumps

two

Diameter of ditto

3

Stroke

21

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

two

Diameter of ditto

3

Stroke

21

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

two

Sizes of Pumps

11 x 10, 5 1/2 x 3 1/2 x 2 1/2

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

In Engine Room

four 3" mips.

In Holds, &c.

two 2 1/2" mips in each hold, one

No. of Bilge Injections

one size 4

Connected to condenser, or to circulating pump

pump

Is 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

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

14/12

of Stern Tube

20/12

Screw shaft and Propeller

20/12

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

top platform

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

J. Spencer & Sons Ltd.

Total Heating Surface of Boilers

3060 sq ft

Is Forced Draft fitted

no

No. and Description of Boilers

Two single ended, 4 ft 6 in. diam.

Working Pressure

160 lb.

Tested by hydraulic pressure to

320 lb.

Date of test

13/10/06

No. of Certificate

2536

Can each boiler be worked separately

yes

Area of fire grate in each boiler

42 1/2 sq ft

No. and Description of Safety Valves to

each boiler

two, direct acting

Area of each valve

4.07

Pressure to which they are adjusted

165 lb.

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

18

(Rule Mean dia. of boilers

12-10

Length

10-0

Material of shell plates

steel

Thickness

1

Range of tensile strength

28 1/2 to 32 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

top & R.

long. seams

50 x 50

Diameter of rivet holes in long. seams

1 1/2

Pitch of rivets

4

Lap of plates or width of butt straps

13

Per centages of strength of longitudinal joint

rivets 82.14

plate 81.69

Working pressure of shell by rules

164.5 lb.

Size of manhole in shell

end 16 x 12

Size of compensating ring

flanged

No. and Description of Furnaces in each boiler

three plain

Material

steel

Length of plain part

top 82

bottom 88

Thickness of plates

crown 23

bottom 22

Description of longitudinal joint

weld

No. of strengthening rings

one

Working pressure of furnace by the rules

164.4 lb.

Combustion chamber plates: Material

steel

Thickness: Sides

9/16

Back

21/32

Pitch of stays to ditto: Sides

8 x 8 1/2

Back

9 x 10

Top

8 x 8

If stays are fitted with nuts or riveted heads

no

Working pressure by rules

161 lb.

Material of stays

steel

Diameter at smallest part

1 3/8, 1 1/2, 1 1/4

Area supported by each stay

64, 68, 90

Working pressure by rules

168 lb.

End plates in steam space:

Material

steel

Thickness

1 1/4

Pitch of stays

14 1/2 x 18

How are stays secured

D. N.

Working pressure by rules

160.5 lb.

Material of stays

steel

Diameter at smallest part

2 1/4

Area supported by each stay

315

Working pressure by rules

160 lb.

Material of Front plates at bottom

steel

Thickness

3/4

Material of Lower back plate

steel

Thickness

1 3/16

Greatest pitch of stays

21 x 15 1/2

Working pressure of plate by rules

180 lb.

Diameter of tubes

3 1/4

Pitch of tubes

4 1/2 x 4 1/2

Material of tube plates

steel

Thickness: Front

3/4

Back

3/4

Mean pitch of stays

11 1/4

Pitch across wide water spaces

13 1/2

Working pressures by rules

159.5 lb.

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

8 x 1 1/2

Length as per rule

28 1/2

Distance apart

8

Number and pitch of stays in each

two 8

Working pressure by rules

168 lb.

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

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

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

—

Area of safety valves to superheater

—

Are they fitted with easing gear

—

—

—

If not, state whether, and when, one will be sent

Is a Report also sent on the Hull of the Ship?

VERTICAL DONKEY BOILER—

Manufacturers of Steel

Please see Attached Report No.

No. _____ Description _____

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 set coupling bolts & nuts, two each top end, bottom end & main bearing bolts & nuts, one set each feed & bilge pump, also one propeller & propeller shaft, mounted both train 12.*

RICHARDSONS, WESTGARTH & CO., LTD

The foregoing is a correct description,

Manufacturers

Frederic H. Russell

ASSISTANT MANAGER.

Dates of Survey while building { During progress of work in shops - } 1906. May 22, Aug. 2, 8, 14, 22, 23, 27. Sept: 4, 6, 7, 10, 12, 14, 15, 24. Oct: 1, 3, 5, 13, 19, 24. Nov: 13. Dec: 3, 12, 14, 17, 20, 22, 25.

{ During erection on board vessel - } - 27 Jan 22.

Total No. of visits 30

Is the approved plan of main boiler forwarded herewith *yes*" " " donkey " " " *no*

Dates of Examination of principal parts—Cylinders *28/5 31/5* Slides *14/9 24/9* Covers *27/8 14/9* Pistons *10/9* Rods *23/8*

Connecting rods *23/8 27/8* Crank shaft *23/8 27/8* Thrust shaft *4/9 6/9 7/9* Tunnel shafts *2/9 14/9 18/9 24/9* Screw shaft *8/24 10/30 14/10 19/11* Propeller *31/5 5/10 12/10*

Stern tube *24/9 14/12* Steam pipes tested *7/12 24/12* Engine and boiler seatings *7/12* Engines holding down bolts *19/12 12/12*

Completion of pumping arrangements *22/1* Boilers fixed *20/12 22/1* Engines tried under steam *25/12*

Main boiler safety valves adjusted *25/12* Thickness of adjusting washers *13/12 13/12 13/12 13/12 13/12*

Material of Crank shaft *steel* Identification Mark on Do. *444 2 28-6-06 7-17* Material of Thrust shaft *iron* Identification Mark on Do. *307 D AB*

Material of Tunnel shafts *iron* Identification Marks on Do. *308 D AB* Material of Screw shafts *iron* Identification Marks on Do. *369 D 370 D AB AB*

Material of Steam Pipes *Copper, Reddram, 4" bore 16.5 in.* Test pressure *400 lb*

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

The machinery of this vessel has been constructed under special survey the material & workmanship sound & good. The Boilers & steam pipes have been subjected to test by hydraulic pressure in accordance with the Rules the machinery worked satisfactorily at the Mornings & the safety valves have been adjusted under steam to their working pressure.

This vessel is eligible in my opinion to have the Notation
** L.M.C. 1.07 in the Register Book*

It is submitted that
 this vessel is eligible for
 THE RECORD *L.M.C. 1.07*

The amount of Entry Fee. £ 2 : : When applied for, *29.1.1907*

Special £ 78 : 10 : : *30.1.07*

Donkey Boiler Fee £ : : : *30.1.07*

Travelling Expenses (if any) £ : : : *14.2.1907*

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

Committee's Minute

Assigned

FRI. FEB 1 1907

MACHINERY CERTIFICATE
WRITTEN.

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Lloyd's Register
Foundation