

REPORT ON MACHINERY.

No. 19631

WED. 4 DEC 1907

Port of Hull

Received at London Office

19

No. in Survey held at Hull

Date, first Survey July 9th

Last Survey

Nov 27th 1907

Reg. Book.

36 Supp on the

S/Hawar BUCENTAUR

(Number of Visits 33)

Master

Built at Selby

By whom built

Lockhart & Sons

Tons { Gross 184

Net 88

When built 1907

Engines made at Hull

By whom made

Chas. D. Holmes & Co.

when made 1907

Boilers made at Hull

By whom made

Hull

when made 1907

Registered Horse Power 57

Owners

Port belonging to Grimsby

Nom. Horse Power as per Section 28

57

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Triple

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders

11 1/2 x 14 1/2 x 32

Length of Stroke 23

Revs. per minute 112

Dia. of Screw shaft

as per rule 1 1/2

Material of

screw shaft 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

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 31

Dia. of Tunnel shaft

as per rule 5 1/2

Dia. of Crank shaft journals

as per rule 6 1/2

Dia. of Crank pin 6 1/2

Size of Crank webs 4 1/2 x 12 1/2

Dia. of thrust shaft under

collars 6 1/2

Dia. of screw 8 1/2

Pitch of Screw 11 1/2

No. of Blades 4

State whether moveable

No

Total surface 24 1/2

No. of Feed pumps 1

Diameter of ditto 2

Stroke 23

Can one be overhauled while the other is at work

No. of Bilge pumps 1

Diameter of ditto 2

Stroke 23

Can one be overhauled while the other is at work

No. of Donkey Engines 1

Sizes of Pumps 2 3/4 x 5

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

In Engine Room 2-2 (Fore & Aft)

In Holds, &c. 2-2 (Starboard & Main Deck)

2" Engine suction from all bilges & discharge on deck

No. of Bilge Injections 1

sizes 2 3/4

Connected to condenser, or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room & size 2 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

Hull Suctions

How are they protected

Hull 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

9.9.07

of Stern Tube

9.9.07

Screw shaft and Propeller

9.9.07

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

BOILERS, &c.—(Letter for record 8)

Manufacturers of Steel

Steel & of Scotland

Total Heating Surface of Boilers 9304

Is Forced Draft fitted

Yes

No. and Description of Boilers

1 S.E. 9 Main

Working Pressure 180 lbs.

Tested by hydraulic pressure to

360 lbs.

Date of test 15.11.07

No. of Certificate 1612

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

294

No. and Description of Safety Valves to

each boiler 2 Spring loaded

Area of each valve

3.97

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

6"

Mean dia. of boilers

11 1/6

Length 9 1/6

Material of shell plates

Thickness 3/4"

Range of tensile strength 28-32

Are the shell plates welded or flanged

Yes

Descrip. of riveting: cir. seams

long. seams 2 B.S. 5

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

7 1/2"

Lap of plates or width of butt straps 15"

Per centages of strength of longitudinal joint

rivets 90

plate 85.5

Working pressure of shell by rules

184

Size of manhole in shell

17 x 13

Size of compensating ring

7 1/2 x 3 1/2

No. and Description of Furnaces in each boiler

2 plain

Material

Steel

Outside diameter 3 1/4"

Length of plain part

top 5 1/2

bottom 5 1/2

Thickness of plates

crown 3/4

bottom 3/4

Description of longitudinal joint

Welded

No. of strengthening rings

Working pressure of furnace by the rules

197

Combustion chamber plates: Material

Steel

Thickness: Sides

3/4"

Back 1/2"

Top 1/2"

Bottom 3/4"

Pitch of stays to ditto: Sides

9 x 9

Back 9 x 9

Top 8 x 7 1/2

If stays are fitted with nuts or riveted heads

Yes

Working pressure by rules 194

Material of stays

Steel

Diameter at smallest part

1 1/2"

Area supported by each stay

84.3

Working pressure by rules

221

End plates in steam space:

Material

Steel

Thickness

1 1/2"

Pitch of stays

15 x 15

How are stays secured

Stitching

Working pressure by rules 185

Material of stays

Steel

Diameter at smallest part

1 1/2"

Area supported by each stay

225

Working pressure by rules

211

Material of Front plates at bottom

Thickness

3/4"

Material of Lower back plate

Steel

Thickness

3/4"

Greatest pitch of stays

16"

Working pressure of plate by rules 180

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 1/2"

Mean pitch of stays 9 1/2"

Pitch across wide water spaces

16 1/2"

Working pressures by rules 180

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

8 x 1 1/2"

Length as per rule

2 1/2"

Distance apart

7 1/2"

Working pressure by rules

187

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

Lloyd's Register

Foundation

W1307-0231

VERTICAL DONKEY BOILER— Manufacturers of Steel

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:— *Two top & two bottom end connecting rods & nuts, two main bearing bolts, one set of coupling bolts, one set of feed & high pump valves, one main & one donkey feed check valve, assorted bolts & nuts etc.*

The foregoing is a correct description,

Charles D. Holmes Manufacturer.

Dates of Survey while building { During progress of work in shops— 1907:— July 9. 26. 30 Aug 9. 17. 20. 28 Sep 9. 13. 14. 16. 17. 21. 25. 28 Oct. 1. 5. 7. 9
 { During erection on board vessel — Oct. 15. 18. 23. 25. 29. 31. Nov 5. 8. 11. 13. 15. 22. 23. 27.
 Total No. of visits 33.

Is the approved plan of main boiler forwarded herewith *R/L 19590*

" " " donkey " " "

Dates of Examination of principal parts—Cylinders *5.11.07* Slides *13.11.07* Covers *11.11.07* Pistons *8.11.07* Rods *8.11.07*
 Connecting rods *9.11.07* Crank shaft *29.10.07* Thrust shaft *28.8.07* Tunnel shafts ✓ Screw shaft *17.8.07* Propeller *17.8.07*
 Stern tube *17.8.07* Steam pipes tested *22.11.07* Engine and boiler seatings *9.9.07* Engines holding down bolts *22.11.07*
 Completion of pumping arrangements *27.11.07* Boilers fixed *22.11.07* Engines tried under steam *22.11.07*
 Main boiler safety valves adjusted *22.11.07* Thickness of adjusting washers *2 1/2 A 5*
 Material of Crank shaft *Iron* Identification Mark on Do. *362. T.H.G. 13.11.07* Material of Thrust shaft *Iron* Identification Mark on Do. *362. T.H.G. 5.11.07*
 Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Iron* Identification Marks on Do. *362. T.H.G. 19.10.07*
 Material of Steam Pipes *Sold drawn Copper* Test pressure *360 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery & boiler of this vessel have been constructed under Special Survey, are of good material & workmanship & have been fitted & secured in accordance with the Rules. They are now in good working condition & eligible in my opinion to have the Notation L.M.C. 11.07 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. *L.M.C. 11.07.*

JLC 4.12.07

W.S. 4.12.07

The amount of Entry Fee.. £ *1* : : : When applied for. *3/12/07*
 Special £ *8* : *11* : : :
 Donkey Boiler Fee £ : : : : When received, *31.12.07*
 Travelling Expenses (if any) £ : *4* : : :

Committee's Minute

FRI. 6 DEC 1907

Assigned

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