

## REPORT ON MACHINERY.

No. 19911

Received at London Office

FRI. 27 MAR 1908

Date of writing Report

26/3/1908

When handed in at Local Office

26/3/1908 Port of Hull.

No. in Survey held at  
Reg. Book.

Hull.

Date, First Survey

Nov 20/07

Last Survey

Mar. 16<sup>th</sup> 1908.

(Number of Visits 32)

Ship on the

Hawker LABRADOR

Master

Built at

Selly.

By whom built

Colman &amp; Sons.

Tons

Gross 399

Net 249

When built

1908

Engines made at

Hull.

By whom made

Amos &amp; Smith

when made

S.

Boilers made at

S.

By whom made

S.

when made

S.

Registered Horse Power

-

Owners

J. Hull.

Port belonging to

Boulogne

Nom. Horse Power as per Section 28

99.

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

Yes.

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

Inverted, triple expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

14-23-38

Length of Stroke

27

Revs. per minute

116

Dia. of Screw shaft

as per rule 8 1/2

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

Length of stern bush

40

Dia. of Tunnel shaft

as per rule 7 1/2

Dia. of Crank shaft journals

as per rule 7 1/2

Dia. of Crank pin

7 1/2

Size of Crank webs

15 1/2 x 5

Dia. of thrust shaft under

collars

7 1/2

Dia. of screw

10 1/2

Pitch of Screw

11 1/2

No. of Blades

4

State whether moveable

No.

Total surface

36 sq.

No. of Feed pumps

2.

Diameter of ditto

2 1/2

Stroke

18

Can one be overhauled while the other is at work

Yes.

No. of Bilge pumps

2.

Diameter of ditto

2 1/2

Stroke

18

Can one be overhauled while the other is at work

Yes.

No. of Donkey Engines

2.

Sizes of Pumps

5 x 3 1/2 x 5 - 6 1/2 x 6 1/2 x 6

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

In Engine Room

1/2, 1/2 from upper engine pump main Holds, &amp;c.

3-2

(Foot hold, stoke well, &amp; water

No. of Bilge Injections

1

sizes

3 1/2

Connected to condenser, or to circulating pump

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

2

Ejector

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

Hot &amp; return

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

4.1.08

of Stern Tube

4.1.08.

Screw shaft and Propeller

4.1.08.

Is the Screw Shaft Tunnel watertight

None

Is it fitted with a watertight door

Yes.

worked from

Yes.

## BOILERS, &amp;c.—(Letter for record 5)

Manufacturers of Steel

Wm Beaumont &amp; Sons

Total Heating Surface of Boilers

1765 sq.

Is Forced Draft fitted

No.

No. and Description of Boilers

1 S.E. Murchison.

Working Pressure

180 lbs.

Tested by hydraulic pressure to

360 lbs.

Date of test

12.2.08.

No. of Certificate

1632.

Can each boiler be worked separately

Yes.

Area of fire grate in each boiler

53.62 sq.

No. and Description of Safety Valves to

each boiler

2 Spring loaded.

Area of each valve

4.41.

Pressure to which they are adjusted

184 lbs.

Are they fitted with easing gear

Yes.

Smallest distance between boilers or uptakes and bunkers or woodwork

6"

Mean dia. of boilers

14'-0"

Length

11'-0"

Material of shell plates

Steel.

Thickness

1 1/4"

Range of tensile strength

28-32

Are the shell plates welded or flanged

No.

Descrip. of riveting: cir. seams

S.R. Lap.

long. seams

28/18 units

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

7.87

Lap of plates or width of butt straps

17 1/2"

Per centages of strength of longitudinal joint

rivets 88.

plate 88.3.

Working pressure of shell by rules

180.

Size of manhole in shell

16 x 12"

Size of compensating ring

40 x 30 x 1 1/2"

No. and Description of Furnaces in each boiler

3 plain

Material

Steel.

Outside diameter

3'-4 1/2"

Length of plain part

top 6'-11 1/2"

Thickness of plates

bottom 6'-7 1/2"

Description of longitudinal joint

lapped.

No. of strengthening rings

-

Working pressure of furnace by the rules

180.

Combustion chamber plates: Material

Steel.

Thickness: Sides

4 1/2"

Back

4 1/2"

Top

5"

Bottom

4 1/2"

Pitch of stays to ditto: Sides

10 x 7 1/2"

Back

9 3/4 x 8"

Top

9 x 7 1/2"

If stays are fitted with nuts or riveted heads

None.

Working pressure by rules

245.

Material of stay

Steel.

Diameter at smallest part

1 3/4"

Area supported by each stay

75 sq.

Working pressure by rules

248.

End plates in steam space:

Material

Steel.

Thickness

1 1/4"

Pitch of stays

18 x 16"

How are stays secured

Stake back

Working pressure by rules

184.

Material of stays

Steel.

Diameter at smallest part

6'-10"

Area supported by each stay

288 sq.

Working pressure by rules

220.

Material of Front plates at bottom

Steel.

Thickness

3 3/4"

Material of Lower back plate

Steel.

Thickness

3 3/4"

Greatest pitch of stays

15 1/2 x 9 3/4"

Working pressure of plate by rules

180.

Diameter of tubes

3 1/2"

Pitch of tubes

4 3/4 x 4 1/2"

Material of tube plates

Steel.

Thickness: Front

3 3/4"

Back

3 3/4"

Mean pitch of stays

9 1/4"

Pitch across wide water spaces

14"

Working pressures by rules

182.

Girders to Chamber tops: Material

Iron

Depth and

thickness of girder at centre

9 1/2 x 2"

Length as per rule

2'-10"

Distance apart

9'

Number and pitch of stays in each

30 7 1/2"

Working pressure by rules

198.

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

# 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 & large pump valves, one set of air pump valves, one set of circulating pump valves, assorted bolts & nuts etc.

The foregoing is a correct description,

Manufacturer.

FOR AMOS & SMITH

W. S. Hilly

MANAGING PARTNER

Dates of Survey while building	During progress of work in shops—	1907—Nov 20, 23, 27. Dec. 3, 12, 14, 21. 1908—Jan 3, 4, 6, 10, 14, 18, 21, 23, 27, 29. Feb 3, 4, 8, 11, 12, 17, 18.
	During erection on board vessel—	Feb 21, 25, 26. Mar 2, 6, 10, 12, 16.
	Total No. of visits	32

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

" " " donkey " " "

Dates of Examination of principal parts—Cylinders	29.1.08	Slides	6.2.08	Covers	2.2.08	Pistons	6.2.08	Rods	18.1.08
Connecting rods	29.1.08	Crank shaft	27.1.08	Thrust shaft	9.2.08	Tunnel shafts	—	Screw shaft	24.2.08
Propeller	4.1.08	Stern tube	2.1.08	Steam pipes tested	25.2.08	Engine and boiler seatings	4.1.08	Engines holding down bolts	24.2.08
Completion of pumping arrangements	16.3.08	Boilers fixed	6.2.08	Engines tried under steam	6.3.08				
Main boiler safety valves adjusted	6.3.08	Thickness of adjusting washers	15 F 3/4"						
Material of Crank shaft	Steel	Identification Mark on Do.	415 F.M.B. 42.08	Material of Thrust shaft	Steel	Identification Mark on Do.	415 F.M.B. 42.08		
Material of Tunnel shafts	—	Identification Marks on Do.	—	Material of Screw shafts	Iron	Identification Marks on Do.	405 F.M.B. 12.1.08		
Material of Steam Pipes	Solid drawn Copper	Test pressure	360 lb.						

## 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 on board in accordance with the Rules. They are now in good working condition & eligible in my opinion to have the Notation L.M.C. 3-08 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD, L.M.C. 3-08. ELEC. LIGHT.

J.H. 27.3.08

E.S. 27.3.08

The amount of Entry Fee	£ 1 : : : : : When applied for,
Special	£ 14 : 7 : : : : 24/3/1908
Donkey Boiler Fee	£ : : : : : When received,
Travelling Expenses (if any)	£ 8 : 2 : : : : 31.3.1908

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

Committee's Minute

TUES. 31 MAR 1908

Assigned

+ L.M.C. 3-08  
Elec. Light.

MACHINERY CERTIFICATE  
WRITTEN.



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Foundation

Null

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