

## REPORT ON MACHINERY.

8648

Port of Hull

Received at London Office

SAT 10 JUN 1893

No. in Survey held at

Hull

Date, first Survey

Near 3<sup>rd</sup>

Last Survey

June 1<sup>st</sup>

1893

Reg. Book.

(Number of Visits 11)

Built on the

Steam TrawlerSwallows

Tons

Gross 134Net 47

Faster

Built at

Hull

By whom built

Carlisle Co Lim

When built

1893

Engines made at

Hull

By whom made

Carlisle Co Lim

when made

1893

Boilers made at

Hull

By whom made

Carlisle Co Lim

when made

1893

Registered Horse Power

445Owners James H. Fothering Co. L<sup>td</sup>

Port belonging to

Grimby

Nom. Horse Power as per Section 28

47

## ENGINES, &amp;c.—

Description of Engines

Triple Compound Horizontal D.A.

No. of Cylinders

Three

Diameter of Cylinders

11" 17" & 30"

Length of Stroke

21"

Revolutions per minute

120

Diameter of Screw shaft

as per rule 5.304  
as fitted 5.316

Diameter of Tunnel shaft

as per rule 5.01  
as fitted 5.12

Diameter of Crank shaft journals

5.316

Diameter of Crank pin

5.316

Size of Crank webs

6 1/2" x 3 3/8"

Diameter of screw

4.8"

Pitch of screw

9.3"

No. of blades

4

State whether moveable

No

Total surface

21.096

No. of Feed pumps

One

Diameter of ditto

2 1/4"

Stroke

10

Can one be overhauled while the other is at work

-

No. of Bilge pumps

One

Diameter of ditto

3"

Stroke

10

Can one be overhauled while the other is at work

-

No. of Donkey Engines

One

Sizes of Pumps

2" x 4" duplex

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

In Engine Room

One 2"

In Holds, &amp;c.

One 2"bluck with one 3"

Ejector with suction in Engine room bilge &amp; bluck with and discharge on deck

No. of bilge injections

One

sizes

3 3/4"

Connected to condenser, or to circulating pump

pump Is a separate donkey suction fitted in Engine room & size as 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

Yes

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

Suction to forward

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

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

Nov 92

Is the screw shaft tunnel watertight

no tunnel

Is it fitted with a watertight door

-

worked from

-

## BOILERS, &amp;c.—

(Letter for record S)

Total Heating Surface of Boilers

800 sq ft

No. and Description of Boilers

One Cylindrical Smith

Working Pressure

160 lb

Tested by hydraulic pressure to

320 lb

Date of test

4/5/93

Can each boiler be worked separately

-

Area of fire grate in each boiler

28 sq ft

No. and Description of safety valves to

-

Each boiler

has spring loaded

Area of each valve

3.14

Pressure to which they are adjusted

165 lb

Are they fitted

-

with casing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

8"

Mean diameter of boilers

10.0"

Length

9.6"

Material of shell plates

Steel

Thickness

27/32"

Description of riveting: circum. seams

all in lap

long. seams

all shop all

Diameter of rivet holes in long. seams

1 3/16"

Pitch of rivets

6 7/8"

Lap of plates or width of butt straps

12 3/4"

Per centages of strength of longitudinal joint

85%

Working pressure of shell by rules

160 lb

Size of manhole in shell

16.12"

Size of compensating ring

30" x 28" x 27/32"

No. and Description of Furnaces in each boiler

two Plain

Material

Steel

Outside diameter

35"

Length of plain part

6.5"

Thickness of plates

41/64"

Description of longitudinal joint

welded

No. of strengthening rings

none

Working pressure of furnace by the rules

161 lb

Combustion chamber plates: Material

Steel

Thickness: Sides

9/16"

Back

9/16"

Top

9/16"

Bottom

10/16"

Pitch of stays to ditto: Sides

8 3/4"

Back

8"

Top

8"

If stays are fitted with nuts or riveted heads

Yes

Working pressure by rules

161 lb

Material of stays

Steel

Diameter at smallest part

1 3/4"

Area supported by each stay

8 1/4" x 8"

Working pressure by rules

179 lb

End plates in steam space:

-

Material

Steel

Thickness

29/32"

Pitch of stays

15"

How are stays secured

all rivets

Working pressure by rules

166 lb

Diameter at smallest part

2 1/4"

Area supported by each stay

15" x 14 1/2"

Working pressure by rules

165 lb

Material of Front plates at bottom

Steel

Thickness

27/32"

Material of Lower back plate

Steel

Thickness

1 9/16"

Greatest pitch of stays

8"

Working pressure of plate by rules

160 lb

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2"

Material of tube plates

Steel

Thickness: Front

27/32"

Back

27/32"

Mean pitch of stays

9"

Pitch across wide water spaces

13 1/4"

Working pressures by rules

166 lb

Girders to Chamber tops: Material

Iron

Depth and

-

thickness of girder at centre

6" x 15 1/16"

Length as per rule

25"

Distance apart

7 1/2"

Number and pitch of Stays in each

2 - 8"

Working pressure by rules

191 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

-

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 casing gear

-

&lt;



**DONKEY BOILER—** Description *No donkey boiler*

Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_

Working pressure \_\_\_\_\_ tested by hydraulic pressure to \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of safety valves \_\_\_\_\_

No. of safety valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ If fitted with easing gear \_\_\_\_\_ If steam from main boilers enter the donkey boiler \_\_\_\_\_

Diameter of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_

Description of riveting long. seams \_\_\_\_\_ Diameter of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_

Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ Rivets \_\_\_\_\_ 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 \_\_\_\_\_

joint \_\_\_\_\_ Thickness of furnace crown plates \_\_\_\_\_ Stayed by \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_

Working pressure of furnace by rules \_\_\_\_\_ Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_

**SPARE GEAR.** State the articles supplied:— *Two top end bolts. Two bottom end bolts. Two main beam bolts. One set coupling bolts. One set Dead Pump valves. One set Bilge pump valves. Set check valves. Safety valve spring.*

**EARLE'S**  
**SHIPBUILDING & ENGINEERING CO., LIMITED**  
*The foregoing is a correct description,*  
*A. E. Leaton* Manufacturer.

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

*The Machinery and Boiler of this Steam Trawler have been constructed under Special Survey and placed on board in accordance with the Society's Rules. They are now in my opinion in safe working condition and the case is respectfully submitted for the notification **L.M.C 6-93** in the Register Book.*

*It is submitted that this vessel is eligible for*  
**THE RECORD + L.M.C. 6-93**

*W.A.*  
*10-6-93*

Certificate (if required) to be sent to *The Surgeon - Hull*

The amount of Entry Fee..	£	1	:	:	When applied for,
Special .. .. .	£	8	:	:	9/6/18 93
Donkey Boiler Fee .. .	£	:	:	:	When received,
Travelling Expenses (if any) £	:	:	:	:	25/4/18 93

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

**Committee's Minute** **TUES. 13 JUN 1893**  
*Assigned* **+ L.M.C 6, 93**



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