

## REPORT ON MACHINERY.

Port of

Hull.

Received at London Office

MON 25 JUL 1898

No. in Survey held at  
Reg. Book.

Date, first Survey

July 14/97

Last Survey

July 4<sup>th</sup> 1898

(Number of Visits 30)

No. in

Survey held at

Hull.

Reg. Book.

116

on the

Trawler

"Fermos"

Master

Roberts

Built at

Beverley

By whom built

Cochran &amp; Cooper Ltd

When built 1898

Engines made at

Hull

By whom made

Amos &amp; Smith

when made 1898

Boilers made at

Hull

By whom made

do. do.

when made 1898

Registered Horse Power

45.

Owners

Ocean Steam Fishing Co. Ltd

Port belonging to

Grimsby

Nom. Horse Power as per Section 28

51

Is Electric Light fitted

✓

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

Triple Exp. Int. cyls.

No. of Cylinders

3

No. of Cranks

3

Diameter of Cylinders

10 $\frac{1}{2}$  x 18 x 30

Length of Stroke

22

Revolutions per minute

112

Diameter of Screw shaft

as per rule 5.75

Diameter of Tunnel shaft

as per rule 4.95

Diameter of Crank shaft journals

6 $\frac{1}{4}$ 

Diameter of Crank pin

6 $\frac{1}{4}$ 

Size of Crank webs

12 $\frac{1}{2}$  x 4

Diameter of screw

7 $\frac{1}{2}$  x 9

Pitch of screw

10 $\frac{1}{2}$  3"

No. of blades

4

State whether moveable

no

Total surface

20 $\frac{1}{2}$  sq ft

No. of Feed pumps

One

Diameter of ditto

2 $\frac{1}{2}$ 

Stroke

11

Can one be overhauled while the other is at work

✓

No. of Bilge pumps

One

Diameter of ditto

3

Stroke

11

Can one be overhauled while the other is at work

✓

No. of Donkey Engines

One

Sizes of Pumps

5 $\frac{1}{2}$  x 2 $\frac{1}{2}$ 

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

In Engine Room

Two 2" dia.

In Holds, &amp;c.

One 2" dia.

No. of bilge injections

1

sizes

3"

Connected to condenser, or to circulating pump

pump

Is a separate donkey suction fitted in Engine room &amp; size

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

valves &amp; cocks

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

hold suction

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

new

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

810 sq ft

Is forced draft fitted

no

No. and Description of Boilers

One single ended mult.

Working Pressure

200

Tested by hydraulic pressure to

400

Date of test

8/6/98

Can each boiler be worked separately

✓

Area of fire grate in each boiler

28 $\frac{1}{2}$  sq ft

No. and Description of safety valves to

each boiler

Two spring loaded

Area of each valve

4.9 sq in

Pressure to which they are adjusted

205

Are they fitted

with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

7"

Mean diameter of boilers

10 $\frac{1}{2}$  6"

Length

9' 6"

Material of shell plates

steel

Thickness

1 $\frac{1}{16}$ 

Description of riveting: circum. seams

drilled

long. seams

drill straps

Diameter of rivet holes in long. seams

1 $\frac{1}{8}$ 

Pitch of rivets

7.04

Lap of plates or width of butt straps

16"

triple riveted

Per centages of strength of longitudinal joint

rivets 98

plate 84

Working pressure of shell by rules

210

Size of manhole in shell

16 x 12

Size of compensating ring

30 x 1 $\frac{1}{16}$ 

No. and Description of Furnaces in each boiler

2 Holmes'

Material

steel

Outside diameter

36"

Length of plain part

top 14"

bottom 14"

Thickness of plates

crown 5 $\frac{1}{8}$ 

Description of longitudinal joint

welded

No. of strengthening rings

✓

Working pressure of furnace by the rules

210

Combustion chamber plates: Material

steel

Thickness: Sides

10 $\frac{1}{16}$ 

Back

10 $\frac{1}{16}$ 

Top

10 $\frac{1}{16}$ 

Bottom

10 $\frac{1}{16}$  7 $\frac{1}{8}$ 

Pitch of stays to ditto: Sides

7 $\frac{1}{4}$ 

Back

7 $\frac{1}{4}$ 

Top

7 $\frac{1}{4}$ 

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

208 257

Material of stays

steel

Diameter at smallest part

1 $\frac{3}{8}$ 

Area supported by each stay

52 sq in

Working pressure by rules

227

End plates in steam space:

Material

steel

Thickness

3 $\frac{1}{32}$ 

Pitch of stays

14 7 $\frac{1}{8}$ 

How are stays secured

nuts

Working pressure by rules

200

Material of stays

steel

Diameter at smallest part

2 $\frac{1}{2}$ 

Area supported by each stay

181 sq in

Working pressure by rules

270

Material of Front plates at bottom

steel

Thickness

1 $\frac{1}{16}$ 

Material of Lower back plate

steel

Thickness

1 $\frac{1}{16}$ 

Greatest pitch of stays

12"

Working pressure of plate by rules

200

Diameter of tubes

3 $\frac{1}{2}$ 

Pitch of tubes

4 3 $\frac{1}{4}$ 

Material of tube plates

steel

Thickness: Front

1 $\frac{1}{16}$ 

Back

5 $\frac{3}{64}$ 

Mean pitch of stays

9 $\frac{1}{2}$ 

Pitch across wide water spaces

13 3 $\frac{1}{4}$ 

Working pressures by rules

202

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

7 $\frac{1}{4}$  x 2

Length as per rule

29

Distance apart

7 $\frac{1}{4}$ 

Number and pitch of Stays in each

3.

7 $\frac{1}{4}$ 

Working pressure by rules

200

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 easing gear

Lloyd's Register

Foundation

HULL 16-0082



## 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 can enter the donkey boiler \_\_\_\_\_

Description of riveting long. seams \_\_\_\_\_ Diameter of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_

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 of 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:— 2 top end bolts, 2 bottom end bolts, 2 main bearing bolts, 1 set coupling bolts, 1 set feed pump valves, 1 set bilge pump valves, set of check valves, 1 safety valve spring — The vessel is provided with masts and rails as a trawler — The foregoing is a correct description, Amos & Smith Manufacturer.

Dates of Survey while building { During progress of work in shops — 1897: July 14, Aug. 19, Sep. 1, 22, Oct. 1, 8, 14, 20, Nov. 8, 18, 23, 30, Dec. 9, 14, 1898: Jan. 21, Feb. 21, Mar. 8, 15, 17, 28, 31.  
During erection on board vessel — Apr. 6, 22, 26, May 10, 17, Jun 8, 29, July 2, 4 =  
Total No. of visits 30

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

The machinery of this vessel has been constructed under Special Survey and placed on board in accordance with the Society's Rules and is eligible in my opinion for the notification + L.M.C. 7.98 in the Register Book —

Range of tensile strength of steel 26 to 30 tons.

Dia. of crank shaft journals 6 1/4" —

Dia. of thrust shaft under collars — 6 1/4" — I.H.P.

It is submitted that this vessel is eligible for THE RECORD.

+ L.M.C. 7.98

25/7/98

The amount of Entry Fee. £ 1 : : : When applied for, 22/7/98 \$4.50  
Special .. .. £ 8 : : :  
Donkey Boiler Fee .. .. £ : : :  
Travelling Expenses (if any) £ : : : When received, 30.7.98

Committee's Minute

TUES. 26 JUL 1898

MACHINERY CERTIFICATE WRITTEN

Assigned

+ L.M.C. 7.98

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



Lloyd's Register Foundation