

# REPORT ON MACHINERY

No. 20992

SAT. 13 MAR 1909

Port of Hull.

Received at London Office

No. in Survey held at Hull.

Date, first Survey Nov 28/08

Last Survey Mar 5<sup>th</sup> 1909

Reg. Book.

77 on the S. Hawk - SCOMBER

(Number of Visits 28)

Master

Built at Selby

By whom built Locke & Sons

Tons Gross 270

Net 102

When built 1909

Engines made at Hull.

By whom made C. D. Holmes & Co.

when made 5

Boilers made at 5

By whom made 5

when made 5

Registered Horse Power 1

Owners Mount Sham Fishing Co. Ltd.

Port belonging to Hutton

Nom. Horse Power as per Section 28 77

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted No

## ENGINES, &c.—Description of Engines

Mounted Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 13-22-36

Length of Stroke 26

Revs. per minute 110

Dia. of Screw shaft as per rule 7.61

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 Yes

Length of stern bush 36

Dia. of Tunnel shaft as per rule 6.74

Dia. of Crank shaft journals as per rule 7.07

Dia. of Crank pin 7.5

Size of Crank webs 14x12 Dia. of thrust shaft under

collars 7 1/2

Dia. of screw 9 1/2

Pitch of Screw 11-3

No. of Blades 4

State whether moveable No

Total surface 34 sq

No. of Feed pumps 2

Diameter of ditto 2 1/2

Stroke 26

Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2

Diameter of ditto 2 1/2

Stroke 26

Can one be overhauled while the other is at work Yes

No. of Donkey Engines one

Sizes of Pumps 2 1/2 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 (Fore hold & stow well)

2 Glycer suction in all holds with discharge on deck.

No. of Bilge Injections 1 sizes 3

Connected to condenser, or to circulating pump Yes

Is a separate Donkey Suction fitted in Engine room & size 2 1/2 Glycer

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 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

Dates of examination of completion of fitting of Sea Connections 21.12.08

of Stern Tube 21.12.08

Screw shaft and Propeller 21.12.08

Is the Screw Shaft Tunnel watertight None

Is it fitted with a watertight door Yes

worked from Yes

## BOILERS, &c.—(Letter for record S)

Manufacturers of Steel Steel Co of Scotland

Total Heating Surface of Boilers 1275 sq

Is Forced Draft fitted No

No. and Description of Boilers 1 S.E. Multitubular

Working Pressure 180 lbs

Tested by hydraulic pressure to 360

Date of test 20.2.09

No. of Certificate 1689

Can each boiler be worked separately Yes

Area of fire grate in each boiler 45 sq

No. and Description of Safety Valves to

each boiler 1 Spring loaded

Area of each valve 4.9

Pressure to which they are adjusted 185

Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 16

Mean dia. of boilers 13.6

Length 10.9

Material of shell plates Steel

Thickness 1/2

Range of tensile strength 28-32

Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams SA Lap

long. seams SA Lap

Diameter of rivet holes in long. seams 1 3/16

Pitch of rivets 8

Lap of plates or width of butt straps 18

Per centages of strength of longitudinal joint

rivets 90

plate 85

Working pressure of shell by rules 183

Size of manhole in shell 16 x 12

Size of compensating ring 7 x 1 1/2

No. and Description of Furnaces in each boiler 3 Plain

Material Steel

Outside diameter 3.2

Length of plain part

top 7.8

bottom 7.6

Thickness of plates

crowns 1.22

bottom 1.22

Description of longitudinal joint welded

No. of strengthening rings one

Working pressure of furnace by the rules 187

Combustion chamber plates: Material Steel Thickness: Sides 4/8 Back 3/32 Top 4/8 Bottom 4/8

Pitch of stays to ditto: Sides 9 1/2 x 9 1/2

Back 9 1/2 x 9 1/2

Top 9 1/2 x 9 1/2

If stays are fitted with nuts or riveted heads Yes

Working pressure by rules 186

Material of stays Steel

Diameter at smallest part 1 3/8

Area supported by each stay 108

Working pressure by rules 199

End plates in steam space:

Material Steel

Thickness 1 1/4

Pitch of stays 20 x 20

How are stays secured St. wash

Working pressure by rules 185

Material of stays Steel

Diameter at smallest part 7.9

Area supported by each stay 400

Working pressure by rules 205

Material of Front plates at bottom Steel

Thickness 1

Material of Lower back plate Steel

Thickness 7/16

Greatest pitch of stays 14 1/2 x 9

Working pressure of plate by rules 183

Diameter of tubes 2 1/2

Pitch of tubes 5 x 5

Material of tube plates Steel

Thickness: Front 1

Back 7/8

Mean pitch of stays 10

Pitch across wide water spaces 13 3/4

Working pressures by rules 189

Girders to Chamber tops: Material Steel

Depth and

thickness of girder at centre 10 x 2

Length as per rule 3-2

Distance apart 9 1/2

Number and pitch of stays in each 209 1/2

Working pressure by rules 194

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

**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 rod bolts & nuts, two main bearing bolts, one set of coupling bolts & nuts, one set of feed & bilge pump valves, one set of air & circulating pump valves, one main & one donkey feed check valve, assorted bolts & nuts etc.*

The foregoing is a correct description,  
**CHARLES D. HOLMES & Co. Ltd.** Manufacturer.

*Harold J. Sheardson* DIRECTOR. 1908:— Nov 28. Dec 2. 4. 9. 11. 16. 17. 18. 21. 22. 24. 1909:— Jan 7. 12. 15. 18. 22

Dates of Survey while building: During progress of work in shops - - - - -  
 During erection on board vessel - - - - - Jan 26. 29. Feb 3. 6. 10. 13. 16. 20. 27 Mar 2. 4. 5.  
 Total No. of visits 28

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

Dates of Examination of principal parts—Cylinders *31.12.08* Slides *3.2.09* Covers *7.1.09* Pistons *3.2.09* Rods *26.1.09*  
 Connecting rods *22.1.09* Crank shaft *26.1.09* Thrust shaft *26.1.09* Tunnel shafts ✓ Screw shaft *17.12.08* Propeller *17.12.08*  
 Stern tube *17.12.08* Steam pipes tested *26.2.09* Engine and boiler seatings *21.12.08* Engines holding down bolts *26.2.09*  
 Completion of pumping arrangements *5.3.09* Boilers fixed *26.2.09* Engines tried under steam *27.2.09*  
 Main boiler safety valves adjusted *27.2.09* Thickness of adjusting washers *A 5/16 F 1/4*  
 Material of Crank shaft *Iron* Identification Mark on Do. *471.5.W.G. 26.1.09* Material of Thrust shaft *Iron* Identification Mark on Do. *471.5.W.G. 26.1.09*  
 Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Iron* Identification Marks on Do. *471.5.W.G. 17.12.08*  
 Material of Steam Pipes *Solid drawn copper* Test pressure *350 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 tested & secured on board in accordance with the Rules. They are now in good working condition & eligible in my opinion to have record of 4-L.M.C. 3-09 in the Register Book.*)

It is submitted that this vessel is eligible for **THE RECORD. + L.M.C. 3.09.**

*H. Ad.*  
 13/3/09.

**ARR**  
 13-3-09

The amount of Entry Fee	£	5.0.0	When applied for.
Special	£	11.0.0	12.3.1909
Donkey Boiler Fee	£	8.0.0	When received.
Travelling Expenses (if any)	£	8.0.0	31.3.1909

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

Committee's Minute **TUES 16 MAR 1909**  
 Assigned *+ L.M.C. 3.09*



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