

Rpt. 4.

## REPORT ON MACHINERY.

No. 23602

Received at London Office

WED. 26 APR 1911

Date of writing Report Apr 20 19 11 When handed in at Local Office24/4/10 11 Port of Hull

No. in Survey held at

Date, First Survey

Sep 21<sup>st</sup>

Last Survey

Apr 12<sup>th</sup> 19 11

Reg. Book.

(Number of Visits)

59

App. on the

1/2 Trawler PHRONTIS

Gross Tons

288

Net Tons

114

When built

1911

Master

Built at

Selby

By whom built

Lockhart & Sons

Engines made at

Hull

By whom made

Amos Smith Ltd.

when made

5

Boilers made at

5

By whom made

5

when made

5

Registered Horse Power

Owners

Mount Sham Fishing & Port belonging to Hestwood

Nom. Horse Power as per Section 28

90

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

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

Inverted triple expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

13.22 1/2 37

Length of Stroke

26

Revs. per minute

114

Dia. of Screw shaft

7.73

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

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

2.9

Dia. of Tunnel shaft

6.76

Dia. of Crank shaft journals

7.1

Dia. of Crank pin

7.3

Size of Crank webs

58 1/2 4 3/4

Dia. of thrust shaft under

collars

7 3/4

Dia. of screw

9.8

Pitch of Screw

1 1/2

No. of Blades

4

State whether moveable

No

Total surface

34 ft

No. of Feed pumps

2

Diameter of ditto

23

Stroke

12

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

23

Stroke

12

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

One

Sizes of Pumps

6 1/2 x 6

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

In Engine Room

1-2 (Aft)

In Holds, &amp;c.

2-2 (Forehold & Slushwell)

No. of Bilge Injections

1

sizes

3

Connected to condenser, or to circulating pump

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

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

1-3-11

of Stern Tube

1-3-11

Screw shaft and Propeller

1-3-11

Is the Screw Shaft Tunnel watertight

None

Is it fitted with a watertight door

Yes

worked from

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

Phoenix & Howard Westphalia

Total Heating Surface of Boilers

1590 ft

Is Forced Draft fitted

No

No. and Description of Boilers

1 S.E. Multitubular

Working Pressure

180 lb

Tested by hydraulic pressure to

360 lb

Date of test

17-3-11

No. of Certificate

1793

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

47.5 ft

No. and Description of Safety Valves to

each boiler

2 Spring loaded

Area of each valve

5.93

Pressure to which they are adjusted

185 lb

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

21

Mean dia. of boilers

14.0

Length

10.7 1/2

Material of shell plates

Steel

Thickness

1 3/32

Range of tensile strength

29.33 lb

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

5th Lap

long. seams

5th S. unit

Diameter of rivet holes in long. seams

1 5/32

Pitch of rivets

7 3/4

Lap of plates or width of butt straps

17 1/8

Per centages of strength of longitudinal joint

rivets

85.9

plate

85.08

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

3.33 1/2

Length of plain part

top

78

Thickness of plates

crown

1 1/2

Description of longitudinal joint

Welded

No. of strengthening rings

one

Working pressure of furnace by the rules

191

Combustion chamber plates: Material

Steel

Thickness: Sides

23 1/2

Back

1 1/2

Top

Pitch of stays to ditto: Sides

9 x 7 3/4

Back

9 1/2 x 9

Top

7 3/4 x 9

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

200

End plates in steam space:

Material of stays

Steel

Diameter at smallest part

1 3/8 = 2.375

Area supported by each stay

107

Working pressure by rules

180

Material of stays

Steel

Material

Steel

Thickness

1 3/32

Pitch of stays

17 1/2 x 8

How are stays secured

Washer

Working pressure by rules

Diameter at smallest part

6.10

Area supported by each stay

3.5

Working pressure by rules

201

Material of Front plates at bottom

Steel

Thickness

27

Material of Lower back plate

Steel

Thickness

27

Greatest pitch of stays

14 3/4 x 9 1/2

Working pressure of plate by rules

270

Diameter of tubes

3 1/2

Pitch of tubes

4 15/16

Material of tube plates

Steel

Thickness: Front

27

Back

27

Mean pitch of stays

9 1/2 x 9 1/2

Pitch across wide water spaces

14 3/4

Working pressures by rules

197

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

9 x 2

Length as per rule

3-0

Distance apart

9

Number and pitch of stays in each

32 7 3/4

Working pressure by rules

188

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

Steel

Description of longitudinal joint

Diam. of rivet

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue



# 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	Radius of do.	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 & nuts, one set of coupling bolts & nuts, one set of feed & barge pump valves, one main & one donkey feed chest valve, one set of air pump valves, assorted bolts & nuts etc.*

FOR AMOS & SMITH LTD.

The foregoing is a correct description,

Manufacturer.

*W. H. H. H.*

Dates of Survey while building	During progress of work in shops --	10.10.11 - Sep 21. 23 Oct 8. 27. 31 Nov 2. 5. 9. 10. 15. 17. 22. 24. 26. 28. 30 Nov 29. Dec 2. 8. 13. 16. 20. 22. 30
	During erection on board vessel --	11.11.11 - Jan 5. 10. 12. 17. 21. 23. 25. 27. Feb 6. 2. 4. 6. 7. 8. 9. 15. 17. 20. 24. Mar 1. 2. 8. 11. 13. 17. 21. 23. 24
	Total No. of visits	59.
	Is the approved plan of main boiler forwarded herewith	yes ✓

Dates of Examination of principal parts—		Cylinders 20. 2. 11	Slides 21. 3. 11	Covers 21. 3. 11	Pistons 8. 3. 11	Rods 21. 3. 11
Connecting rods 8. 3. 11		Crank shaft 21. 3. 11	Thrust shaft 8. 3. 11	Tunnel shafts ✓	Screw shaft 20. 2. 11	Propeller 20. 2. 11
Stern tube 20. 2. 11		Steam pipes tested 31. 3. 11	Engine and boiler seatings 1. 3. 11	Engines holding down bolts 24. 3. 11		
Completion of pumping arrangements 12. 4. 11		Boilers fixed 1. 4. 11	Engines tried under steam 5. 4. 11			
Main boiler safety valves adjusted 5. 4. 11		Thickness of adjusting washers S 3 P 36				
Material of Crank shaft S		Identification Mark on Do. 21. 3. 11	Material of Thrust shaft S	Identification Mark on Do. 8. 3. 11		
Material of Tunnel shafts ✓		Identification Marks on Do. ✓	Material of Screw shafts Iron	Identification Marks on Do. 689. 20. 2. 11		
Material of Steam Pipes Polished 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 on board in accordance with the rules. They are now in good working condition & are respectfully submitted as being eligible in my opinion to have record of L.M.C. 4. 11 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. + LMC 4. 11.

*JWD 16/4/11*

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

The amount of Entry Fee .. £	10. 4. 11	When applied for, 24. 4. 11
Special .. £	13. 10. 4.	
Donkey Boiler Fee .. £		When received, 28. 4. 11
Travelling Expenses (if any) £	10. 10.	

Committee's Minute

28 APR 1911

Assigned

*Thme 4. 11*



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Lloyd's Register Foundation

These

Signal Le

Official

132

No., Date, &

Whether Br Foreign

Brit

Number of

Number of

Rigged

Stern

Build

Galleries

Head

Framework

vessel

Number of

Number of

and their

Total to quarter to bottom

No. of sets of Engines.

D

One

No. of Shafts.

Des

One

Num

Iron

Load

Under Ton

Space or sp

Turret or T

Forecastle.

Bridge spac

Peop or Br

Side House

Deck Hous

Chart Hou

Spaces for

Section 7

1894

Excess of E

G

Deductions

R

NOTE. 2Th

Open

less

NOTE-1. 2

space

Nat

No. of Ow

Name, Res

The m

place

man

Dated

(830) (70635)