

REPORT ON MACHINERY

No. 29407

Received at London Office

TUE. 4-JUL. 1916

Date of writing Report

19

When handed in at Local Office

3-7-16 Port of

Hull

No. in Survey held at

Hull

Date, First Survey

12-5-15

Last Survey

23-6-1916

Reg. Book

49 on the

Steam Trawler "LOUIS BOTHA"

(Number of Visits)

67

Gross Tons

226

Net Tons

109

Master

✓

Built at

Beverley

By whom built

Cook, Wilton & Gummell

When built

1916

Engines made at

Hull

By whom made

Amos & Smith Ltd (N. 2730) when made

1916

Boilers made at

Hull

By whom made

Amos & Smith Ltd

when made

1916

Registered Horse Power

Owners

A. L. Black

Port belonging to

Grimsby

Nom. Horse Power as per Section 28

75

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Triple expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

12", 21", 34"

Length of Stroke

24"

Revs. per minute

110

Dia. of Screw shaft

as per rule 7.23"

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

✓

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

34"

Dia. of Tunnel shaft

as per rule 6.48"

as fitted 6.34"

Dia. of Crank shaft journals

as per rule 6.8"

as fitted 7"

Dia. of Crank pin

7"

Size of Crank webs

13 3/4"

Dia. of thrust shaft under

collars

7"

Dia. of screw

8.9"

Pitch of Screw

11.0"

No. of Blades

4

State whether moveable

No

Total surface

29 sq.

No. of Feed pumps

1

Diameter of ditto

2 5/8"

Stroke

12"

Can one be overhauled while the other is at work

✓

No. of Bilge pumps

1

Diameter of ditto

2 5/8"

Stroke

12"

Can one be overhauled while the other is at work

✓

No. of Donkey Engines

1

Sizes of Pumps

6 1/4"

4 3/4"

6"

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

In Engine Room

two 2" one forward and one aft

In Holds, &c.

two 2" fore hold and stokehold

2" ejector from all bilges

No. of Bilge Injections

1

size

3

Connected to condenser, or to circulating pump

pumps

Is a separate Donkey Suction fitted in Engine room & size

2 1/2" 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

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

forward hold suction

How are they protected

wood casings

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

27-1-16

of Stern Tube

27-1-16

Screw shaft and Propeller

27-1-16

Is the Screw Shaft Tunnel watertight

✓

Is it fitted with a watertight door

✓

worked from

✓

BOILERS, &c.—(Letter for record)

S

Manufacturers of Steel

Steel Co. of Scotland

Total Heating Surface of Boilers

1268 sq. ft.

Is Forced Draft fitted

No

No. and Description of Boilers

one single ended

Working Pressure

200 lbs.

Tested by hydraulic pressure to

400 lbs.

Date of test

15-5-16

No. of Certificate

3138

Can each boiler be worked separately

✓

Area of fire grate in each boiler

31.5 sq. ft.

No. and Description of Safety Valves to

each boiler

2 spring loaded

Area of each valve

3.97 sq. in.

Pressure to which they are adjusted

204 lbs.

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

abt. 7"

Mean dia. of boilers

12.9 1/16"

Length

10'0"

Material of shell plates

S

Thickness

1 5/32"

Range of tensile strength

28-32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

D. R.

long. seams

V.S.D.B.S.

Diameter of rivet holes in long. seams

1 3/16"

Pitch of rivets

7 3/4"

Gap of plates or width of butt straps

16 3/4"

Per centages of strength of longitudinal joint

rivets 91.4

plate 84.67

Working pressure of shell by rules

200

Size of manhole in shell

16" x 12"

Size of compensating ring

40 x 30 x 1 1/8"

No. and Description of Furnaces in each boiler

3 plain

Material

S

Outside diameter

3'1 5/8"

Length of plain part

top 81 3/4"

bottom 81 3/4"

Thickness of plates

crown 13"

bottom 16"

Description of longitudinal joint

Welded

No. of strengthening rings

✓

Working pressure of furnace by the rules

214

Combustion chamber plates: Material

S

Thickness: Sides

3/4"

Back

3/2"

Top

16"

Bottom

4"

Pitch of stays to ditto: Sides

8 3/4" x 9 1/2"

Back

8 x 9 1/4"

Top

8 1/2 x 9 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

202

Material of stays

S

Diameter at smallest part

2.046"

Area supported by each stay

79.5 sq. in.

Working pressure by rules

234

End plates in steam space

Material

S

Thickness

1 1/16"

Pitch of stays

16 1/2" x 15 3/4"

How are stays secured

Screwed

Working pressure by rules

206

Material of stays

S

Diameter at smallest part

6.1"

Area supported by each stay

260 sq. in.

Working pressure by rules

244

Material of Front plates at bottom

S

Thickness

1 1/16"

Greatest pitch of stays

14 1/2" x 8"

Working pressure of plate by rules

222

Diameter of tubes

3 1/2"

Pitch of tubes

4 1/2" x 5"

Material of tube plates

S

Thickness: Front

1 1/16"

Back

7/8"

Mean pitch of stays

10.8"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

206 lbs.

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

8" x 2"

Length as per rule

2.8 3/4"

Distance apart

8 1/2"

Working pressure by rules

211

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

✓

IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

no

SPARE GEAR. State the articles supplied:—

Two top end bolts and nuts. Two main bearing bolts and nuts. one set of coupling bolts and nuts. one check valve; a quantity of bolts and nuts and iron of various sizes; one donkey check valve

1 set of feed & bridge pump valves +

2 bottom end connecting rod bolts. serial. ltr. 5.7.16

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1915 - May 12, 19, 21, 27, June 4, 10, 12, 26, July 1, 9, 14, 30, Aug 6, 13, 20, 27, Sep 3, 10, 20, 25, Oct 5, 12, 19, 29, Nov 5, 12, 19, 26, 29, Dec 3, 7, 13, 17, 21, 30 - 1916 - Jan 7, 19, 20, 27, 28, Feb 4, 18, 24, 25, Mar 2, 8, 9, 15, 17, 22, 30, 31, Apr 6, 7, 13, 18, 28, 29, May 6, 13, 15, 20, 27, Jun 3, 9, 20, 23, 29
During erection on board vessel - - -
Total No. of visits 67

Is the approved plan of main boiler forwarded herewith?

yes

donkey

yes

Dates of Examination of principal parts—Cylinders 4-2-16 Slides 27-5-16 Covers 4-2-16 Pistons 2-3-16 Rods 2-3-16

Connecting rods 27-5-16 Crank shaft 27-5-16 Thrust shaft 27-5-16 Tunnel shafts ✓ Screw shaft 17-12-15 Propeller 17-12-15

Stern tube 17-12-15 Steam pipes tested 10-6-15 Engine and boiler seatings 27-1-16 Engines holding down bolts 9-6-15

Completion of pumping arrangements 23-6-16 Boilers fixed 9-6-15 Engines tried under steam 20-6-15

Main boiler safety valves adjusted 20-6-15 Thickness of adjusting washers P. $\frac{3}{8}$ " S. $\frac{7}{16}$ "

Material of Crank shaft Steel Identification Mark on Do. 27-5-16 Material of Thrust shaft Iron Identification Mark on Do. 27-5-16

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 17-12-15

Material of Steam Pipes S.D. Copper ✓ Test pressure 400 lbs. per sq. inch

Is an installation fitted for burning oil fuel no Is the flash point of the oil to be used over 150°F. ✓

Have the requirements of Section 49 of the Rules been complied with ✓

Is this machinery duplicate of a previous case? Yes If so, state name of vessel "Caridon"

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been constructed under special survey in accordance with the approved plans and the rules of this Society; the materials and workmanship are good; the boiler and steam pipes have been tested as above by hydraulic pressure and found sound and good.

The machinery has been properly fitted and secured on board, and on completion tried under steam and found satisfactory.

The Safety valves have been adjusted under steam and tested for accumulation, which did not exceed 210 lbs. per sq. inch

In my opinion the vessel is eligible for the record + I.M.C. 6.16

It is submitted that this vessel is eligible for THE RECORD + I.M.C. 6.16

The amount of Entry Fee ... £ 1 : - : - When applied for.

Special ... £ 11 : 5 : - 3/7/16

Donkey Boiler Fee ... £ 1 : - : - When received.

Travelling Expenses (if any) £ 2 : - : - 31.7.16

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

Committee's Minute FRI 7-JUL 1916

Assigned + Lm 6.6.16

MACHINERY CERTIFICATE WRITTEN



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