

REPORT ON MACHINERY.

Port of

Glasgow

Received at London Office

JAN 13 1903

No. in Survey held at
7. Book.

Glasgow

Date, first Survey 15th SeptLast Survey 26th Dec 1902

(Number of Visits 22)

on the

S. TRAWLER

"ELITE."

Tons
Gross
Net

ster

Built at

Glasgow

By whom built

Mackie & Thomson

When built 1902

ines made at

Glasgow

By whom made

Muir & Houston Ltd

when made 1902

ilers made at

Glasgow

By whom made

Muir & Houston Ltd

when made 1902

gistered Horse Power

Owners

Port belonging to

m. Horse Power as per Section 28

48

Is Refrigerating Machinery fitted

No.

Is Electric Light fitted

No.

GINES, &c.—Description of Engines

Triple expansion—Screw

No. of Cylinders

3

No. of Cranks

3

a. of Cylinders

11, 18, 30"

Length of Stroke

22"

Revs. per minute

115

Dia. of Screw shaft

as per rule 6.91.7

Lgth. of stern bush

32"

a. of Tunnel shaft

as per rule 5.86

Dia. of Crank shaft journals

as per rule 6.16

Dia. of Crank pin

6 1/2"

Size of Crank webs

3 7/8"

Dia. of thrust shaft under

lars

6 3/4"

Dia. of screw

8" 4"

Pitch of screw

9" 0"

No. of blades

4

State whether moveable

no

Total surface

27 sq. ft.

o. of Feed pumps

1

Diameter of ditto

2 1/2"

Stroke

10"

Can one be overhauled while the other is at work

✓

o. of Bilge pumps

1

Diameter of ditto

2 1/2"

Stroke

10"

Can one be overhauled while the other is at work

✓

o. of Donkey Engines

One

Sizes of Pumps

6" x 3" x 6"

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

Engine Room

Two 2" dia.

In Holds, &c.

One 2" dia.

o. of bilge injections

1

sizes 2 3/4" Connected to condenser, or to circulating pump

Is a separate donkey suction fitted in Engine room & size

yes 2"

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

Valves & 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

none

How are they protected

✓

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

before launch

Is the screw shaft tunnel watertight

none

Is it fitted with a watertight door

✓

worked from

✓

OILERS, &c.—

(Letter for record

(S.)

Total Heating Surface of Boilers

750 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

6/12/02

Can each boiler be worked separately

✓

Area of fire grate in each boiler

24 sq. ft.

No. and Description of safety valves to

each boiler

2 Patent Spring

Area of each valve

2.4"

Pressure to which they are adjusted

205 lbs

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

9"

Mean dia. of boilers

10" 3"

Length

9" 4"

Material of shell plates

steel

Thickness

3 1/2"

Range of tensile strength

28 to 32

Are they welded or flanged

no

Descrip. of riveting: cir. seams

double

long. seams

treble

Diameter of rivet holes in long. seams

1 1/8"

Pitch of rivets

7 1/2"

Lap of plates or width of butt straps

17"

Percentages of strength of longitudinal joint

rivets 85

Working pressure of shell by rules

203 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

the heels

No. and Description of Furnaces in each boiler

2 plain

Material

steel

Outside diameter

3" 2"

Length of plain part

top 5" 0"

Thickness of plates

crown 2 1/2"

Description of longitudinal joint

welded

No. of strengthening rings

none

Working pressure of furnace by the rules

204 lbs

Combustion chamber plates: Material

steel

Thickness: Sides

7/8"

Back

7/8"

Top

7/8"

Bottom

1 3/16"

Pitch of stays to ditto: Sides

8" x 8"

Back

8" x 8"

Top

8" x 7 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

211 lbs

Material of stays

steel

Diameter at smallest part

2.03"

Area supported by each stay

64"

Working pressure by rules

254 lbs

End plates in steam space:

Material

steel

Thickness

1 1/2"

Pitch of stays

15" x 15"

How are stays secured

nuts

Working pressure by rules

210 lbs

Material

steel

Front plates at bottom

steel

Thickness

1 3/16"

Greatest pitch of stays

12 1/2" x 8"

Working pressure of plate by rules

207 lbs

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2" x 4 1/2"

Material of tube plates

steel

Thickness: Front

7/8"

Back

2 1/2"

Mean pitch of stays

9"

Pitch across wide water spaces

14"

Working pressures by rules

258 lbs

Girders to Chamber tops: Material

steel

Depth and

Thickness of girder at centre

8" x 2" - 1 1/8"

Length as per rule

2" 10"

Distance apart

7 1/2"

Number and pitch of Stays in each

3-8"

Working pressure by rules

215 lbs

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

✓

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

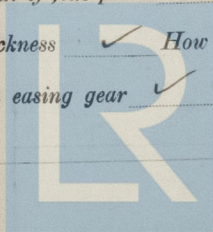
✓

Area of safety valves to superheater

✓

Are they fitted with easing gear

✓

Lloyd's Register
Foundation

DONKEY BOILER— No. *None* Description ☒

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 ☒
 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 ☒ 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:— *Two top end & two bottom end connecting rod bolts, two main bearing bolts, one set of coupling bolts, & one set of feed & bilge pump valves, etc.*

The foregoing is a correct description,
 For **MUR & HOUSTON, LIMITED** Manufacturer.
James Stewart

Dates of Survey while building { During progress of work in shops - - 1902: Sep 15, 22 Oct 6, 10, 14, 22, 28, 30 Nov 3, 7, 11, 18, 20, 24 Dec 2, 6, 10, 11, 16, 17, 25, 26
 { During erection on board vessel - -
 Total No. of visits *22* Is the approved plan of main boiler forwarded herewith *yes*
 " " " donkey " " " ☒

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

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 ☒

The machinery of this vessel has been constructed under Special Survey, the materials & workmanship are of good quality, it has been securely fastened on board tried under steam, & found satisfactory.
In my opinion it is eligible to be classed in the Register Book with the record of + L.M.C. 12.02.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 12.02

AM.
14.1.03
RL
14.1.03

The amount of Entry Fee. . £ 1 : : When applied for, 12/11/1903
 Special £ 87 4 : : When received, 31.1.1903
 Donkey Boiler Fee . . . £ : :
 Travelling Expenses (if any) £ : :
 812.03

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

Committee's Minute *Glasgow. 12 JAN. 1903*
+ L.M.C. 12.02
 Assigned *When repaired*