

Port of

Glasgow

Received at London Office

105.16 AUG 1904

No. in Survey held at

Reg. Book.

Date, first Survey 2nd MarchLast Survey Aug 3rd 1904

(Number of Visits 16)

5th on the

J J Colvraig

Tons { Gross
Net

Master

Built at

Brunswick

By whom built

Langmuir, L.R.D. When built 1904

Engines made at

Glasgow

By whom made

David Rowan & Co

when made 1904

Boilers made at

do

By whom made

do

when made 1904

Registered Horse Power

118

Owners

Port belonging to

Dundee

Nom. Horse Power as per Section 28

72

Is Refrigerating Machinery fitted

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders

15.2-26-43

Length of Stroke 30"

Revs. per minute

Dia. of Screw shaft

as per rule 9.5"

Material of screw shaft

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 39"

Dia. of Tunnel shaft

as per rule 7.93"

Dia. of Crank shaft journals

as per rule 8.32"

Dia. of Crank pin 8.2"

Size of Crank webs 5.2"

Dia. of thrust shaft under

collars 8.2"

Dia. of screw 12.6"

Pitch of screw 12.6"

No. of blades 4

State whether moveable

No

Total surface 48

No. of Feed pumps 2

Diameter of ditto 2.5"

Stroke 15"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps 2

Diameter of ditto 3"

Stroke 15"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines 2

Sizes of Pumps 5.4, 9.2 x 5, 8 x 10 x 8

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

In Engine Room 2-2.4"

In Holds, &c.

3-2.2"

No. of bilge injections 1 sizes 4"

Connected to condenser, or to circulating pump

Is a separate donkey suction fitted in Engine room & size

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

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

Yes

Is it fitted with a watertight door

Yes

worked from

Top grating

BOILERS, &c.—

(Letter for record (5))

Total Heating Surface of Boilers 1954

Is forced draft fitted

No

No. and Description of Boilers

One single ended

Working Pressure 180

Tested by hydraulic pressure to 360 lb

Date of test 5/7/04

Can each boiler be worked separately

Yes

Area of fire grate in each boiler 63

No. and Description of safety valves to

each boiler 2 Cockburn

Area of each valve 5.9

Pressure to which they are adjusted 185 lb

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

abt. 12"

Mean dia. of boilers 14.6"

Length 10.6"

Material of shell plates

Thickness 1.3/4"

Range of tensile strength 28 lb

Are they welded or flanged

no

Descrip. of riveting: cir. seams

D. R. L.

long. seams

D. B. S.

Diameter of rivet holes in long. seams 1.7/16"

Pitch of rivets 8.3/4"

Lap of plates or width of butt straps 19"

Per centages of strength of longitudinal joint

rivets 96.8%

plate 85%

Working pressure of shell by rules 181 lb

Size of manhole in shell

16 x 12"

Size of compensating ring

Flanged

No. and Description of Furnaces in each boiler

3 Dugblon

Material

slut

Outside diameter 3-9.2"

Length of plain part

top

bottom

Thickness of plates

crown

bottom

Description of longitudinal joint

weld

No. of strengthening rings

Working pressure of furnace by the rules 180

Combustion chamber plates: Material

slut

Thickness: Sides

19/32"

Back

19/32"

Top

19/32"

Bottom

Pitch of stays to ditto: Sides

8.2 x 7.2"

Back

7.2 x 8.2"

Top

7.2 x 8.2"

If stays are fitted with nuts or riveted heads

Material of stays

slut

Diameter at smallest part 1.46"

Area supported by each stay 65"

Working pressure by rules 182

End plates in steam space:

Material

slut

Thickness 1.3/2"

Pitch of stays 17.5 x 14.5"

How are stays secured

2 nuts

Working pressure by rules 183

Material of stays

slut

Diameter at smallest part 5.34"

Area supported by each stay 260"

Working pressure by rules 205

Material of Front plates at bottom

slut

Thickness 7/8"

Material of Lower back plate

Thickness 7/8"

Material of Lower back plate

slut

Thickness 7/8"

Greatest pitch of stays 14.3/8"

Working pressure of plate by rules 190 lb

Diameter of tubes 3.2"

Pitch of tubes 4.2 x 4.2"

Material of tube plates

slut

Thickness: Front

1"

Back 7/8"

Mean pitch of stays 9"

Pitch across wide water spaces 14.2"

Working pressures by rules 184 lb

Girders to Chamber tops: Material

slut

Depth and thickness of girder at centre (8 x 7/8) 2

Length as per rule 30"

Distance apart 8.3/4"

Number and pitch of Stays in each 3-7.2"

Working pressure by rules 180 lb

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

How stayed

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

DONKEY BOILER— No. 1 Description Cochran
 Made at Aman By whom made Cochran & Co When made 1904 Where fixed Storehold
 Working pressure 100 tested by hydraulic pressure to 200 No. of Certificate 7121 Fire grate area 19 Description of safety valves Spring
 No. of safety valves 1 Area of each 5.9 Pressure to which they are adjusted 103 1/2 If fitted with easing gear Yes If steam from main boilers can enter the donkey boiler No Dia. of donkey boiler 6' 0" Length 13' 6" Material of shell plates slut Thickness 19/32 Range of tensile strength 27 ton Descrip. of riveting long. seams R. R. L. Dia. of rivet holes 27/32 Whether punched or drilled drilled Pitch of rivets 2 3/4
 Lap of plating 4 1/8" Per centage of strength of joint 79.7 Rivets 79.7 Thickness of shell crown plates 7/16 Radius of do. 3' 0" No. of Stays to do none
 Dia. of stays. — Radius — Diameter of furnace Top 2' 6" Bottom — Length of furnace — Thickness of furnace plates 9/16 Description of joint riveted Thickness of furnace crown plates 9/16 Stayed by none Working pressure of shell by rules 102 lb
 Working pressure of furnace by rules 112 lb Diameter of uptake 2 1/2" Thickness of tube plates 7/8 3/4 Thickness of stay tubes 1/4"

SPARE GEAR. State the articles supplied:— Two top end bolts, 2 bottom end bolts, set of coupling bolts, 2 main bearing bolts, feed & bridge valves, etc.

The foregoing is a correct description,

Manufacturer.

B and Rowan & Co

Dates { During progress of work in shops - 1904 Mar. 3. 30 Apr. 29 May 4. 18. 25 June 8. 24 July 1. 5. 7. 9. 11. 13. 25 Aug 3.
 of Survey { During erection on while board vessel - - -
 building { Total No. of visits 16 Is the approved plan of main boiler forwarded herewith Yes
 " " " donkey " " " No

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

The engines & boilers of this vessel have been constructed under Special Survey & are of good materials & workmanship. They have been securely fitted on board & satisfactorily tried under steam.

This vessel is in my opinion eligible for notation
 * L.M.C. 8.04 in the Register Book.

It is submitted that
 this vessel is eligible for
 THE RECORD. - L.M.C. 8.04

Bab.

18.8.04

18.8.04

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

The amount of Entry Fee. £ 2 : : : When applied for,
 Special " " £ 10 : 16 : : :
 Donkey Boiler Fee " " £ 17 : 14 : : :
 Travelling Expenses (if any) £ : : : When received,
20/8/04 28/8/04

Committee's Minute

Glasgow 15 AUG 1904

Assigned

-i- L. M. & S. 8-04
 When fee is paid

H Gardner-Smith
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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 Foundation