

Port of *Glasgow*

Received at London Office

No. in Survey held at
Reg. Book.*Glasgow*Date, first Survey *26th May 1892* Last Survey *2nd 9* 1903(Number of Visits *4*)

on the

S.S. Colong

Master

Built at

Glasgow

By whom built

London & Glasgow E. & S. 1862

Tons

Gross

Net

When built

1893

Engines made at

Glasgow

By whom made

London & Glasgow E. & S. 1862

when made

1893

Boilers made at

Glasgow

By whom made

London & Glasgow E. & S. 1862

when made

1893

Registered Horse Power

550

Owners

China Mutual Steam Navigation Co. Ltd.

Port belonging to

London

Nom. Horse Power as per Section 28

297

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c.—Description of Engines

*Triple Expansion Direct Acting*No. of Cylinders *Three*

No. of Cranks

Dia. of Cylinders *24¹/₂ 29 64*Length of Stroke *48*Revs. per minute *75*

Dia. of Screw shaft

as per rule 12¹/₂

Material of

as fitted 12¹/₂ screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Is the after end of the liner made water tight

in the propeller boss

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

Dia. of Tunnel shaft

as per rule 11¹/₂

Dia. of Crank shaft journals

as per rule 12¹/₂

Dia. of Crank pin

12¹/₂

Size of Crank webs

22¹/₂ x 9

Dia. of thrust shaft under

collars

Dia. of screw

17¹/₂

Pitch of screw

16¹/₂

No. of blades

Four

State whether moveable

Yes

Total surface

78 sq. ft.

No. of Feed pumps

Two

Diameter of ditto

4

Stroke

24

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

Two

Diameter of ditto

4¹/₂

Stroke

24

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

One

Ballast pump

*Size of Rump**4¹/₂*

Diameter

x 12

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

2¹/₂ 4¹/₂

In Engine Room

*Three**3¹/₂ diam.*

In Holds, &c.

*Two**3¹/₂ from No. 1 hold**Two**3¹/₂*

No. of bilge injections

Two

sizes

5¹/₂ x 4

Connected to

*condenser, or to circulating pump**Yes*

Is a separate donkey suction fitted in Engine room & size

*Yes**4*

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

None

How are they protected

Yes

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 launching

Is the screw shaft tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Upper Deck

BOILERS, &c.—No. of Certificate

(Letter for record *S*)

Total Heating Surface of Boilers

4654 sq. ft.

Is forced draft fitted

Yes

No. and Description of Boilers

Two cylindrical Multitubular

Working Pressure

160 lbs

Tested by hydraulic pressure to

320 lbs

Date of test

20.10.92

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

523 sq. ft.

No. and Description of safety valves to

each boiler

Two spring loaded

Area of each valve

11.04 sq. ft.

Pressure to which they are adjusted

160 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

12

Mean dia. of boilers

14'-3"

Length

11'-3"

Material of shell plates

*steel*Thickness *1¹/₂* Range of tensile strength

Are they welded or flanged

Descrip. of riveting: cir. seams

Lap. Double Riv.

long. seams

Butt. Double Riv.

Diameter of rivet holes in long. seams

1¹/₂

Pitch of rivets

8¹/₂ x 3¹/₄

Lap of plates or width of butt straps

22¹/₂

Per centages of strength of longitudinal joint

*rivets 86.6**plate 83*

Working pressure of shell by rules

184 lbs

Size of manhole in shell

16' x 12'

Size of compensating ring

No. Keils

No. and Description of Furnaces in each boiler

*Three**Passout*

Material

Steel

Outside diameter

43"

Length of plain part

*top 8'-0"**bottom 8'-0"*

Thickness of plates

*top 3¹/₂"**bottom 3¹/₂"*

Description of longitudinal joint

Welded

No. of strengthening rings

on bottom

Working pressure of furnace by the rules

161 lbs

Combustion chamber plates: Material

steel

Thickness: Sides

7¹/₂"

Back

7¹/₂"

Top

7¹/₂"

Pitch of stays to ditto: Sides

7 x 7

Back

7¹/₂ x 6¹/₂

Top

7¹/₂ x 7

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

161 lbs

Material of stays

steel

Diameter at smallest part

1¹/₂ x 1¹/₂

Area supported by each stay

54.47 sq. ft.

Working pressure by rules

182 lbs

End plates in steam space:

Material

steel

Thickness

3¹/₂"

Pitch of stays

14¹/₂ x 14¹/₂

How are stays secured

Welded

Working pressure by rules

191 lbs

Material of stays

steel

Diameter at smallest part

2¹/₂"

Area supported by each stay

206.6 sq. ft.

Working pressure by rules

78 lbs

Material of Front plates at bottom

steel

Thickness

1¹/₂"

Material of Lower back plate

steel

Thickness

1¹/₂"

Greatest pitch of stays

11¹/₂ x 7¹/₂

Working pressure of plate by rules

164 lbs

Diameter of tubes

2¹/₂"

Pitch of tubes

3¹/₂ x 3¹/₂

Material of tube plates

steel

Thickness: Front

7¹/₂"

Back

3¹/₂"

Mean pitch of stays

7¹/₂ x 7¹/₂

Pitch across wide water spaces

13 x 11¹/₂

Working pressures by rules

179 x 164 lbs

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

7¹/₂ x 1¹/₂

Length as per rule

30

Distance apart

7¹/₂

Number and pitch of Stays in each

Three 7"

Working pressure by rules

DONKEY BOILER— No. _____ Description *Cylindrical Multitubular Single ended*
 Made at *Glasgow* By whom made *London & Glasgow E. & J. B. Co.* Date of test *1893* Where fixed *on deck*
 Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *2117* Fire grate area *27 1/2 sq ft* Description of safety valves *Direct spring*
 No. of safety valves *Two* Area of each *5.9 sq ft* Pressure to which they are adjusted *80 lbs* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No*
 Dia. of donkey boiler *8' 6"* Length *8' 3"* Material of shell plates *Steel* Thickness *1/16"* Range of tensile strength _____
 Descrip. of riveting long. seams *Laps Double riv.* Dia. of rivet holes *1/16"* Whether punched or drilled *Drilled* Pitch of rivets *2 1/16"*
 Lap of plating *4 1/4"* Per centage of strength of joint _____ Rivets *67.4* Thickness of shell *end* plates *1/16"* Radius of do. _____ No. of Stays to do. _____
 Dia. of stays. _____ Diameter of furnace Top *34"* Bottom _____ Length of furnace *5' 6"* Thickness of furnace plates *1/2"* Description of joint *Welded* *Single Riv. Corn. Header* Thickness of furnace *corn* plates *1/2"* Stayed by *1 1/2" screwed stay bolts* Working pressure of shell by rules *86 lbs*
 Working pressure of furnace by rules *117 lbs* Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied:— *As required by the Rules. Tail shaft & propeller blades one crank, one valve spindle, one pump rod. one pair of bottom end brasses*

The foregoing is a correct description,

London & Glasgow E. & J. B. Co.
 Manufacturer. *(Sgd) Jas. W. Shepherd.*

Dates _____
 of Survey _____
 while _____
 building _____
 Total No. of visits _____

Is the approved plan of main boiler forwarded herewith _____

" " " donkey " " "

General Remarks (State quality of workmanship, opinions as to class, &c. *The vessel's boilers & machinery have been built under the condition of special survey and has been securely fitted on board and satisfactorily tried under steam.*

The material & workmanship are good.

Howden's system of forced draught has been fitted to these boilers

It is submitted that the vessel is eligible for the record

L. M. C. 9-93

The amount of Entry Fee.. £ *2* : : When applied for,
 Special £ *24* . *8* : : *4/9/1893*
 Donkey Boiler Fee £ : : When received,
 Travelling Expenses (if any) £ : : *6/9/1893*

(Sgd) E. E. Strömeyer & J. Pennington
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *8th September 1893*

Assigned

L. M. C. 9-93



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