

## REPORT ON MACHINERY.

No. 22428

Port of GlasgowReceived at London Office 17 JAN 1905No. in Survey held at  
g. Book.Date, first Survey 4 JulyLast Survey 29 Dec 1902(Number of Visits 14)

on the

Steel S.S. "Glenpark"Tons }  
Gross  
Net

Master

Built at GlasgowBy whom built Messrs Geo. Brown & CoWhen built 1904

Engines made at

Glasgow

By whom made

Messrs Ross & Duncan (631.)when made 1904

Boilers made at

do

By whom made

do

(1010.)

when made

do

Registered Horse Power

99

Owners

Messrs J. & J. Senholm

Port belonging to

Glasgow

Nom. Horse Power as per Section 28

107

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

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

Triple Expansion

No. of Cylinders

Three

No. of Cranks

3

Dia. of Cylinders

16" : 26" : 44"

Length of Stroke

33"

Revs. per minute

70

Dia. of Screw shaft

as per rule 9.28

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

Is 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

Yes

If two

boilers are fitted, is the shaft lapped or protected between the liners

✓

Length of stern bush

3' 4"

Dia. of Tunnel shaft

as per rule 8.4

Dia. of Crank shaft journals

as per rule 8.4

Dia. of Crank pin

8.2

Size of Crank webs

5.5" x 12"

Dia. of thrust shaft under

collars

8.2

Dia. of screw

11" 9

Pitch of screw

15" 0"

No. of blades

4

State whether moveable

No

Total surface

47 sq. ft.

No. of Feed pumps

Two

Diameter of ditto

3"

Stroke

16.5"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

Two

Diameter of ditto

3"

Stroke

16.5"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

Three

Sizes of Pumps

6" x 4" x 6"

Duplex

Donkey pump

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

6" x 4" x 6"

In Engine Room

One 2.5" & two 2"

In Holds, &amp;c.

No 1 hold, one 2.5"No 2 Two 2"Aft hold, two 2"

No. of bilge injections

1

sizes

4"

Connected to condenser, or to circulating pump

Cir. p.

Is a separate donkey suction fitted in Engine room &amp; size

Yes 2.5"

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

Inward bilge suction & oneaft. bilge suction star side

How are they protected

Wooden 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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

New vessel

Is the screw shaft tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Upper Eng. Rm. platform

## BOILERS, &amp;c.—

(Letter for record a)

Total Heating Surface of Boilers

1547.6

Is forced draft fitted

No

No. and Description of Boilers

One single ended

Working Pressure

160

Tested by hydraulic pressure to

320

Date of test

30.11.04

Can each boiler be worked separately

✓

Area of fire grate in each boiler

49.6

No. and Description of safety valves to

each boilerTwo, Spring loaded

Area of each valve

6.49

Pressure to which they are adjusted

165 lb

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

8"

Mean dia. of boilers

14.6"

Length

10.6"

Material of shell plates

Steel

Thickness

1.32

Range of tensile strength

28-32

Are they welded or flanged

No

Descrip. of riveting: cir. seams

O.R. lap

long. seams

Str. R.W. Strap

Diameter of rivet holes in long. seams

1.18"

Pitch of rivets

7.75" & 3.13/16"

Lap of plates or width of butt straps

1.4 1/2" x 1.16"

Per centages of strength of longitudinal joint

88.2

Working pressure of shell by rules

165 lb

Size of manhole in shell

12 x 16

Size of compensating ring

7 x 1.32

No. and Description of Furnaces in each boiler

3 Fox's

Material

Steel

Outside diameter

44 3/4"

Length of plain part

top

Thickness of plates

bottom

Description of longitudinal joint

Welded

No. of strengthening rings

—

Working pressure of furnace by the rules

196

Combustion chamber plates: Material

Steel

Thickness: Sides

9/16"

Back

9/16"

Top

9/16"

Bottom

1 1/16"

Pitch of stays to ditto: Sides

7 1/2 x 8 1/4"

Back

8 x 8 1/4"

Top

7 1/2 x 7"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

261

End plates in steam space:

Material of stays

Iron

Diameter at smallest part

1 3/4"

Area supported by each stay

7 1/2 x 7"

Working pressure by rules

163

Material of stays

Iron

Material

Steel

Thickness

27/32"

Pitch of stays

13 1/2 x 15 1/4"

How are stays secured

Don't nuts

Working pressure by rules

266

Material of Front plates at bottom

Steel

Diameter at smallest part

3"

Area supported by each stay

13 1/2 x 15 1/4"

Working pressure by rules

266

Material of Front plates at bottom

Steel

Thickness

13/16"

Material of Lower back plate

Steel

Thickness

13/16"

Greatest pitch of stays

14 1/4"

Working pressure of plate by rules

171

Diameter of tubes

3 1/2"

Pitch of tubes

5" x 4 7/8"

Material of tube plates

Steel

Thickness: Front

13/16"

Back

13/16"

Mean pitch of stays

12"

Pitch across wide water spaces

15 inches

Working pressures by rules

164

Girders to Chamber tops: Material

Iron

Depth and

thickness of girder at centre7 x 1 3/4"

Length as per rule

30"

Distance apart

7"

Number and pitch of Stays in each

3 at 7 1/2"

Working pressure by rules

163

Superheater or Steam chest; how connected to boiler

✓

Can the superheater be shut off and the boiler worked

separately



**DONKEY BOILER—** No. 1 Description *Vertical. Set cross tubes.*  
 Made at *Motherwell* By whom made *Messrs John Marshall & Co* When made *1904* Where fixed *Stokehold*  
 Working pressure *80 lb* tested by hydraulic pressure to *160* No. of Certificate *7284* Fire grate area *21°* Description of safety valves *One spring*  
 No. of safety valves *One* Area of each *11.04* Pressure to which they are adjusted *85 lb* If fitted with easing gear *Yes* If steam from main boiler  
 enter the donkey boiler *No* Dia. of donkey boiler *6' 0"* Length *12' 0"* Material of shell plates *Steel* Thickness *1/2"* Range of  
 strength *27 to 32 tons* Descrip. of riveting long. seams *Double riv. lap* Dia. of rivet holes *13/16"* Whether punched or drilled *Drilled* Pitch of rivets  
 Lap of plating *4"* Per centage of strength of joint Rivets *67* Thickness of shell crown plates *5/8"* Radius of do. *6' 0"* No. of Stays to do. *2*  
 Dia. of stays. *1 5/8"* Diameter of furnace Top *5' 0"* Bottom *5' 4"* Length of furnace *7' 6"* Thickness of furnace plates *9/16"* Descrip.  
 joint *Welded* Thickness of furnace crown plates *5/8"* Stayed by *Same as shell crown* Working pressure of shell by rules *100 lb*  
 Working pressure of furnace by rules *80 lb* Diameter of uptake *16"* Thickness of uptake plates *1/2"* Thickness of water tubes *3/8"*

**SPARE GEAR.** State the articles supplied:— *Two crosshead bolts & two crank pin bolts. Two main bearing bolts. Set of coupling bolts. Feed & tilge pump valves. Assorted iron & bolts. Set piston rings for each piston. Spare propeller. Boiler & condenser tubes. Fire bars.*

The foregoing is a correct description,  
*James Duncan* Manufacturer.

Dates of Survey { During progress of work in shops - } 1904 July 4 Aug 4 Sept 8 23 Oct 10 17 24 Nov 8 16 22 24 30 Dec 29  
 { During erection on board vessel - }  
 building { Total No. of visits } 14

Is the approved plan of main boiler forwarded herewith *Yes*  
 " " " donkey " " " *Yes*

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
*The machinery & boiler of this vessel have been constructed under special survey & the workmanship is good. The vessel & machinery are the same as the S/S "Wellpark" (G.L. Report No 22379).*

*The machinery in my opinion renders the vessel eligible for the notation S LMC 12.04*

It is submitted that  
 this vessel is eligible for  
 THE RECORD S LMC 12.04

*Ans.*  
*18.1.05*  
*18.1.05*

Certificate (if required) is to be sent to the Committee's Minute.

The amount of Entry Fee. £ 2 : - :  
 Special .. .. £ 16 : 1 :  
 Donkey Boiler Fee .. .. £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 16 JAN 1905  
 When received, 18.1.05

*Arthur L. Jones*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *Glasgow 16 JAN 1905*

Assigned *+ LMC 12.04*

MACHINERY CERTIFICATE  
 WRITTEN, 17.1.05