

## REPORT ON MACHINERY.

No. 22569

Port of

Glasgow

IUES. 13 MAR 1906

Received at London Office

10

No. in Survey held at  
Reg. Book.

Glasgow

Date, first Survey

4 Oct 05

Last Survey

Feb. 27<sup>th</sup> 1906

(Number of Visits 14)

Ship on the

J J "Winga"

Master

Built at Port Glasgow

By whom built

W Hamilton &amp; Co

Tons } Gross  
Net

When built 1906

Engines made at

Glasgow

By whom made

David Rowan &amp; Co

when made 1906

Boilers made at

do

By whom made

do

when made 1906

Registered Horse Power

Owners

Glen &amp; Co

Port belonging to

Glasgow

Nom. Horse Power as per Section 28

139

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

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

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

17-28-46

Length of Stroke

33

Revs. per minute

78

Dia. of Screw shaft

as per rule 10.64

Material of

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

3' 8"

Dia. of Tunnel shaft

as per rule 8.66

Dia. of Crank shaft journals

as per rule 9.09

Dia. of Crank pin

9 1/2"

Size of Crank webs

6 1/2"

Dia. of thrust shaft under

collars

10

Dia. of screw

12 1/2"

Pitch of screw

14 1/2"

No. of blades

4

State whether moveable

No

Total surface

56 1/2"

No. of Feed pumps

2

Diameter of ditto

2 3/4"

Stroke

18"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

3"

Stroke

18"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

3

Sizes of Pumps

6 x 4 x 6, 4 1/2 x 2 1/4 x 4, 6 x 8 1/2 x 6

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

In Engine Room

2-2 1/2"

1-2 1/4"

In Holds, &amp;c.

2-2"

each hold

Tunnel 2 1/2"

No. of bilge injections

1

sizes

4"

Connected to condenser, or to circulating pump

pump

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

2 1/4"

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

—

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

—

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

the screw shaft tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Top gratings

## BOILERS, &amp;c.—No. of Certificate

7875 (Letter for record (S))

Total Heating Surface of Boilers

2240 1/2

Is forced draft fitted

No

No. and Description of Boilers

One Single Ended

Working Pressure

180

Tested by hydraulic pressure to

360 1/2

Date of test

23/12/05

Can each boiler be worked separately

—

Area of fire grate in each boiler

53 1/2

No. and Description of safety valves to

each boiler

2 Cockburn

Area of each valve

5.94

Pressure to which they are adjusted

185 1/2

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

abt 10"

Mean dia. of boilers

15-6"

Length

10-6"

Material of shell plates

steel

Thickness

1 1/4"

Range of tensile strength

28 1/2

Are they welded or flanged

No

Descrip. of riveting: cir. seams

D B L

long. seams

D B S

Diameter of rivet holes in long. seams

1 7/16"

Pitch of rivets

9"

Lap of plates or width of butt straps

19 1/2"

Per centages of strength of longitudinal joint

rivets 89.4

plate 85.4

Working pressure of shell by rules

183 1/2

Size of manhole in shell

16 x 12

Size of compensating ring

2-7 x 2-3

No. and Description of Furnaces in each boiler

3 Dugblon

Material

steel

Outside diameter

48 1/2"

Length of plain part

top 9 1/2"

Thickness of plates

crown 9 1/2"

Description of longitudinal joint

mild

No. of strengthening rings

—

Working pressure of furnace by the rules

182

Combustion chamber plates: Material

steel

Thickness: Sides

7/8"

Back

7/8"

Top

7/8"

Pitch of stays to ditto: Sides

8 x 9"

Back

8 1/2 x 8 3/4"

Top

8 x 9"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

182

Material of stays

steel

Diameter at smallest part

2.07

Area supported by each stay

74 1/2"

Working pressure by rules

220

End plates in steam space:

Material

steel

Thickness

1 7/32"

Pitch of stays

19 3/4 x 16 1/4"

How are stays secured

nuts

Working pressure by rules

184

Material of Front plates at bottom

steel

Diameter at smallest part

6' 4"

Area supported by each stay

324 1/2"

Working pressure by rules

198

Material of Lower back plate

steel

Thickness

7/8"

Material of Lower back plate

steel

Thickness

1 3/16"

Greatest pitch of stays

13 1/4"

Working pressure of plate by rules

180

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2 x 4 3/8"

Material of tube plates

steel

Thickness: Front

3 1/32"

Back

1 3/16"

Pitch across wide water spaces

13 1/4"

Working pressures by rules

192 1/2

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

8 5/8 x 1 x 2

Length as per rule

32"

Distance apart

9"

Number and pitch of Stays in each

3-8"

Working pressure by rules

210

Superheater or Steam chest; how connected to boiler

No

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

—

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

—

—

—



DONKEY BOILER— No. 1 Description *Cylindrical Multitubular Reported Rpt. 5*  
Made at *Glasgow* By whom made *David Rowan & Co.* Date of test *1906* Where fixed *Twin Decks*  
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:— *Propeller shaft, propeller, air & circulating pump valves, 2 top end bolts, 2 bottom end bolts, set of coupling bolts, 2 main bearing bolts, etc.*

The foregoing is a correct description,

*David Rowan & Co.* Manufacturer.

Dates During progress of work in shops— 1905. Oct. 4. 19. Nov. 14. Dec. 7. 16. 21. 23. 28. 29. 1906. Jan. 12. 18. Feb. 26. 27.  
of Survey During erection on board vessel—  
while 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.)

*These engines & boilers 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 to have notation ~~L.M.C.~~ 2 in the Register-Book.*

It is submitted that  
this vessel is eligible for  
THE RECORD *L.M.C. 2.06.*

*Ans.*  
*13.3.06.*

*13.3.06*

The amount of Entry Fee. £ 2 : :  
Special .. .. £ 20 17 : :  
Donkey Boiler Fee .. .. £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 12 MAR 1906 19  
When received, 20 3 06 21 3 06

Committee's Minute

Assigned

*+ L.M.C. 2.06.*

*Glasgow 12 MAR 1906*

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