

REPORT ON MACHINERY.

No. 28457.
IMUK 6 JAN 1910

Received at London Office

Date of writing Report

19

When handed in at Local Office

4/1/10 Port of Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey

S. M. May 1899

Last Survey

31st Dec 1909

19 on the

J. J. "Kirkdale"

(Number of Visits 32.)

Gross 4731.63.
Net 3047.03.Master *Archibald J. Gibson*

Built at Port Glasgow

By whom built Russell & Co (2-610)

When built 1909

Engines made at Glasgow

By whom made David Rowan & Co (2-513)

when made 1909

Boilers made at do

By whom made do

when made 1909

Registered Horse Power

Owners J. R. Cuthbertson & Co

Port belonging to Glasgow

Nom. Horse Power as per Section 28

494

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders 26 1/2 - 44 - 72

Length of Stroke 48

Revs. per minute 74

Dia. of Screw shaft

as per rule 14.8

Material of

slit

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

No

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

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

Length of stern bush 5'-0"

Dia. of Tunnel shaft

as per rule 13.21

as fitted 13 1/4

Dia. of Crank shaft journals

as per rule 13.867

as fitted 13 7/8

Dia. of Crank pin 14

Size of Crank webs 8 7/8

Dia. of thrust shaft under

collars 14 3/8

Dia. of screw 18'-0"

Pitch of Screw 18'-2"

No. of Blades 4

State whether moveable

No

Total surface

100 #

No. of Feed pumps 2

Diameter of ditto 4"

Stroke 34"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps 2

Diameter of ditto 4 1/2"

Stroke 24"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines 3

Sizes of Pumps 9x12x10, 8x5x8, 5 1/2x3 1/2x5

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

In Engine Room

4 - 3 1/2"

In Holds, &c. 2 - 3 1/2" each hold

Tunnel well 2 1/2"

No. of Bilge Injections 1

sizes 6"

Connected to condenser, or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room & size

Yes 3 1/2"

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

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

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

7 or 8 Suctions

How are they protected Wood covering

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

Dates of examination of completion of fitting of Sea Connections

7

of Stern Tube

8

Screw shaft and Propeller

Brancock Rpt.

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))

Manufacturers of Steel

William Beardmore & Co Ltd

Total Heating Surface of Boilers 7119 #

Is Forced Draft fitted

Yes

No. and Description of Boilers

3 Single Ended

Working Pressure 180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test 1/11/09

No. of Certificate 10171

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

56.5 #

No. and Description of Safety Valves to

each boiler

Lockburn Double

Area of each valve

9.6

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

18"

Mean dia. of boilers

14'-6"

Length

11'-6"

Material of shell plates

Thickness 1 5/16"

Range of tensile strength

28,450-32

Are the shell plates 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

9 3/8"

Lap of plates or width of butt straps

21"

Per centages of strength of longitudinal joint

rivets 98

plate 84.6

Working pressure of shell by rules

206 lbs

Size of manhole in shell

16 x 12

Size of compensating ring

Flanged

No. and Description of Furnaces in each boiler

3 Double

Material

slit

Outside diameter

Length of plain part

top

bottom

Thickness of plates

crown 9 1/16

Description of longitudinal joint

weld

No. of strengthening rings

Working pressure of furnace by the rules

195

Combustion chamber plates: Material

slit

Thickness: Sides

9 1/16

Back

9 1/16

Top

Pitch of stays to ditto: Sides

7 5/8 x 7 7/8

Back

7 5/8 x 7 7/8

Top

7 5/8 x 7 7/8

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

182

Material of stays

slit

Diameter at smallest part

Material of stays

slit

Thickness 1 3/8"

Pitch of stays

24 x 18 1/2"

How are stays secured

D. R. L.

Working pressure by rules

190

Material of stays

Diameter at smallest part

8.85"

Area supported by each stay

440 #

Working pressure by rules

209

Material of Front plates at bottom

slit

Thickness 7/8"

Material of Lower back plate

slit

Thickness 7/8"

Material of tube plates

slit

Thickness 1 3/16"

Greatest pitch of stays

13 1/2"

Working pressure of plate by rules

187

Diameter of tubes

2 1/2"

Pitch of tubes

Pitch across wide water spaces

13 1/2"

Working pressures by rules

183

Girders to Chamber tops: Material

slit

Depth and

thickness of girder at centre

8 3/4 x 1/2 x 2

Length as per rule

32 3/16"

Working pressure by rules

180

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

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

W573-0030

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. Description *None*

Made at By whom made When made Where fixed

Working pressure tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of Safety

Valves No. of Safety Valves Area of each Pressure to which they are adjusted Date of adjustment

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 Plates

Working pressure of shell by rules 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

Working pressure of furnace by rules Thickness of furnace crown plates Stayed by

Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied:— Tail shaft & nut, C. 1 propeller, 1 pr. crank pin bushes, air pump bucket & rod, vic. pump bucket & rod, set air pump valves, set safety valve springs, etc., & the bolts & nuts required by the Rules.

The foregoing is a correct description,

Manufacturer.

for David Rowan & Co

Dates of Survey while building { During progress of work in shops - 1909. May 5. 17. 20. 24. June 15. 22. 23. July 3. 14.
During erection on board vessel - Aug 3. 10. 20. 26. 31. Sep 1. 14. 22. 30. Oct 1. 18. 19. 27. Nov 1. 11. 16. Dec 1. 8. 10.
Total No. of visits 32

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

Dates of Examination of principal parts—Cylinders *31/8/09* Slides *30/9/09* Covers *8/10/09* Pistons *18/10/09* Rods *18/10/09*
Connecting rods *18/10/09* Crank shaft *14/9/09* Thrust shaft *22/9/09* Tunnel shafts *22/9/09* Screw shaft *22/9/09* Propeller *28/10/09*
Stern tube *22/9/09* Steam pipes tested *8 & 11/12/09* Engine and boiler seatings *10/12/09* Engines holding down bolts *10/12/09*
Completion of pumping arrangements *31/12/09* Boilers fixed *10/12/09* Engines tried under steam *31/12/09*
Main boiler safety valves adjusted *15/12/09* Thickness of adjusting washers *Start. 5 3/8 P 3/2. Centre. 5 1/2 P 3/2. Out. 5 3/2 P 3/2*
Material of Crank shaft *S M Steel* Identification Mark on Do. *as per report* Material of Thrust shaft *S M Steel* Identification Mark on Do. *as per report*
Material of Tunnel shafts *S M Steel* Identification Marks on Do. *as per report* Material of Screw shaft *S M Steel* Identification Marks on Do. *do*
Material of Steam Pipes *Copper* Test pressure *360 lbs per sq. in.*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been built under special survey. The materials & workmanship are of good quality, it has been securely fitted on board and a full speed trial run which was satisfactory (Speed on measured mile 12.2 knots).*

In our opinion the machinery of this vessel is now eligible for record of L M C 12-09 in register book.

Eight forging reports now attached.

It is submitted that this vessel is eligible for THE RECORD + LMC. 12.09.

FD.

JWD 7/10

The amount of Entry Fee £ 3 : : When applied for, *4/11/1909*
Special £ 44-14-0. £ 44. 14 : :
Donkey Boiler Fee : : When received, *12/1/1910*
Travelling Expenses (if any) £ : : *13-1-0*

Committee's Minute GLASCOW 5 JAN. 1910

Assigned + LMC 12.09

J.D.

as per report

MACHINERY CERTIFICATE WRITTEN 6.1.10



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