

REPORT ON MACHINERY.

No. 23283

Port of

Glasgow

Received at London Office

11th 21 NOV 1905

No. in Survey held at

Glasgow

Date, first Survey

9th Jan

Last Survey

Nov 2nd 1905

Reg. Book.

on the

S.S. "Matoppro"

Master

Built at Port Glasgow

By whom built

W Hamilton & Co

When built 1905

Engines made at

Glasgow

By whom made

D Rowan & Co

when made 1905

Boilers made at

Glasgow

By whom made

do

when made 1905

Registered Horse Power

Owners

Bucknall Bros

Port belonging to

London

Nom. Horse Power as per Section 28

487

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"-44"-73"

Length of Stroke

48"

Revs. per minute

Dia. of Screw shaft

as per rule 14.8"

Material of screw shaft

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

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

5-3"

Dia. of Tunnel shaft

as per rule 13.57"

Dia. of Crank shaft journals

as per rule 14.25"

Dia. of Crank pin

14.3"

Size of Crank webs

9 1/4"

Dia. of thrust shaft under

collars

15"

Dia. of screw

17-6"

Pitch of screw

17-0"

No. of blades

4

State whether moveable

Yes

Total surface

100"

No. of Feed pumps

2 1/2

Diameter of ditto

4"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2 1/2

Diameter of ditto

4 1/2"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

4 + 2 feed

Sizes of Pumps

9 1/2 x 12 1/2, 5 1/2 x 8 1/2, 4 1/2 x 6 1/2

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

In Engine Room

6 - 3 1/2"

In Holds, &c.

2 - 1 1/2" holds 2 - 3 1/2"

No. of bilge injections

1 size 6"

Connected to condenser, or to circulating pump

Is a separate donkey suction fitted in Engine room & size

Yes

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

For suction

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

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 gratings

BOILERS, &c.—No. of Certificate

7562 (Letter for record (5))

Total Heating Surface of Boilers

6687

Is forced draft fitted

Hawdon's

No. and Description of Boilers

Three Single Ended

Working Pressure

200 lb

Tested by hydraulic pressure to

400 lb

Date of test

31/5/05

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

57.75"

No. and Description of safety valves to

each boiler

Two Cockburn

Area of each valve

8.39"

Pressure to which they are adjusted

210 lb

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

2'-6"

Mean dia. of boilers

14'-9"

Length

11'-6"

Material of shell plates

Steel

Thickness

1 5/16"

Range of tensile strength

28 1/2 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

17/16"

Pitch of rivets

9 1/2"

Lap of plates or width of butt straps

21"

Per centages of strength of longitudinal joint

rivets 26.8%

plate 84.87%

Working pressure of shell by rules

200 lb

Size of manhole in shell

16 x 12"

Size of compensating ring

2'-7 x 2'-3 x 1 5/8"

No. and Description of Furnaces in each boiler

3 Deighton

Material

Steel

Outside diameter

3' 10 3/16"

Length of plain part

top 2'

bottom 2'

Thickness of plates

crown 3' 19/32"

Description of longitudinal joint

weld

No. of strengthening rings

—

Working pressure of furnace by the rules

204

Combustion chamber plates: Material

Steel

Thickness: Sides

2 1/8"

Back

7/8"

Top

2 1/32"

Bottom

15/16"

Pitch of stays to ditto: Sides

8 x 8 1/4"

Back

7 x 7"

Top

8 x 9"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

206

Material of stays

Steel

Diameter at smallest part

2.07"

Area supported by each stay

72"

Working pressure by rules

230

End plates in steam space:

Material

Steel

Thickness

1 1/8"

Pitch of stays

18 1/4 x 15 1/2"

How are stays secured

D. nuts

Working pressure by rules

200

Material of stays

Steel

Diameter at smallest part

6.4"

Area supported by each stay

278"

Working pressure by rules

230

Material of Front plates at bottom

Steel

Thickness

7/16"

Material of Lower back plate

Steel

Thickness

15/16"

Greatest pitch of stays

14 1/4"

Working pressure of plate by rules

212 lb

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2 x 4 1/2"

Material of tube plates

Steel

Thickness: Front

1 1/2"

Back

7/8"

Mean pitch of stays

11 7/8"

Pitch across wide water spaces

14 1/4"

Working pressures by rules

200 lb

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

(8 1/4 x 11) x 2

Length as per rule

31"

Working pressure by rules

235

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

If stiffened with rings

Distance between rings

Working pressure by rules

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

End plates: Thickness

How stayed

Working pressure by rules

End plates: Thickness

How stayed

Working pressure by rules

End plates: Thickness

How stayed

Working pressure by rules

End plates: Thickness

How stayed

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 Cylindrical - Reported Separately.
 Made at _____ By whom made David Rowan & Co Date of test _____ Where fixed Tuen Dick's
 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:— Tail shaft, 2 propeller blades, 1 eccentric strap,
for bottom end brasses, air pump bucket & rod, circulating pump
bucket & rod, air pump head valve seat & guard, set of air &
circulating pump valves, etc., & the bolts etc. required by the Rules.

The foregoing is a correct description,

David Rowan & Co Manufacturer.

Dates { During progress of work in shops - { 1905. Jan 9. Feb 9. 15. Mar. 1. 2. 7. 11. 21. Apr. 4. 6. 16. 27. May 3. 17. 19. 22.
 of Survey { During erection on board vessel - { Jan 12. 16. 29. July 12. Aug. 1. 11. 19. 25. Nov. 18.
 while building { Total No. of visits 25.
 Is the approved plan of main boiler forwarded herewith Yes
 " " " donkey " " " " Yes

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 11.0 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD L M C 11.05. F.D. ELEC. LIGHT.

W. L. Smith
21.11.05
21.11.05

The amount of Entry Fee... £ 3 : :
 Special... £ 44 : 7 :
 Donkey Boiler Fee... £ : :
 Travelling Expenses (if any) £ : :
 Glasgow 20 NOV 1905

Committee's Minute

Assigned

L M C 11.05

TUES. 31 JUL 1906

TUES. 11 SEP 1906

MACHINERY CERTIFICATE
 WRITTEN, 21.11.05

FRI. 18 MAY 1906

FRI. NOV 16 1906

Lloyd's Register
 Foundation

No. in Sur
 Reg. Book.

Master

Engines made

Boilers made

Registered Ho

MULTITU

(Letter for re

Boilers On

No. of Certif

safety valves

Are they fitte

Smallest dist

Material of

Descrip. of

Lap of plat

rules 10

boiler 2

Description

plates: Ma

Top $9\frac{3}{4}$ "

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Topmast

Rigging

Sails.

EQUIP

Number of
 Certificate.

55188

55186

55187

28219

28218

Number of
 Certificate.

28948

28947

Iron Steam C
 or Steel Wire

Boats TW

Pumps, N

Windlass is

Engine Ro

What arrang

Coal Bunk

Number of S

Ceiling in

Cargo Hat

State size No

Number of V

Bulwarks,

The above is

Builder's S

Form No. 1B.

certificate (if required) to be sent to

(The Surveyor are requested not to write on or below the space for Committee's Minute.)