

REPORT ON MACHINERY.

No. 22607

Port of Glasgow

No. in Survey held at
eg. Book.

Glasgow

Date, first Survey 6th Sept 02

Received at London Office 11th MAR 1903

Last Survey 2nd March 1905

on the Steel Screw Steamer "Hazel Dollar"

(Number of Visits)

Master

Built at Glasgow

By whom built Messrs A. Rodger & Co (383)

Tons { Gross
Net

When built 1905

Engines made at

Glasgow

By whom made

Messrs A. Rodger & Co (121)

when made 1905

Boilers made at

Glasgow

By whom made

Messrs Lindsay, Barnett & Co (1001-2-3)

when made 1905

Registered Horse Power

Owners

Messrs Dollar & Co

Port belonging to

nom. Horse Power as per Section 28 394

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted No

GINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders Three

No. of Cranks Three

No. of Cylinders 25 1/2 : 42 : 70

Length of Stroke 48

Revs. per minute 70

Dia. of Screw shaft

as per rule 14 1/2

Material of

Iron

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

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

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

Length of stern bush 5' 0"

No. of Tunnel shaft

as per rule 12 1/2

as fitted 13 1/2

Dia. of Crank shaft journals

as per rule 13 1/2

as fitted 13 3/4

Dia. of Crank pin

13 3/4

Size of Crank webs

20 1/2 x 8 1/2

lars 13 3/4

Dia. of screw

14' 6"

Pitch of screw

18' 0"

No. of blades 4

State whether moveable

Yes

Total surface

91 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

4"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines Three

Sizes of Pumps

one 9 x 10 x 10 duplex ballast

two 7 x 5 x 8

feed

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

Two 3 1/2" in each (three) hold.

Engine Room

Four 3 1/2"

No. of bilge injections

1 size 7"

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

None

Are all connections with the sea direct on the skin of the ship Yes

Are they Valves or Cocks

Larger valves. Smaller 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

Are all pipes carried through the bunkers Short bilge pipes in combunkers

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 Nov 1902

Is the screw shaft tunnel watertight

Yes

Is it fitted with a watertight door Yes

worked from

Upper E. R. platform.

CLERS, &c.—

(Letter for record 3)

Total Heating Surface of Boilers

6402

Is forced draft fitted

No

Description of Boilers

Three single-ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

360

No. 7357 & 7358

Can each boiler be worked separately Yes

Area of fire grate in each boiler

56

No. and Description of safety valves to

Two direct spring

Area of each valve

5.94

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear Yes

Are all connections between boilers or uptakes and bunkers or woodwork

15"

Mean dia. of boilers

14' 6"

Length

11' 0"

Material of shell plates

Steel

Thickness 1 3/16

Range of tensile strength

28-32

Are they welded or flanged

No

Descrip. of riveting: cir. seams

Double: no: long. seams

Double: straps

Double: no: inside

meter of rivet holes in long. seams

1 1/4"

Pitch of rivets

8 15/16 x 4 15/32

Lap of plates or width of butt straps

1' 6 1/4" x 1 1/16" inside

centages of strength of longitudinal joint

85.90

Working pressure of shell by rules

183

Size of manhole in shell

16 x 12

No. of compensating ring

1 1/16

No. and Description of Furnaces in each boiler

3 "Beighton"

Material

Steel

Outside diameter

3' 9 3/4"

Length of plain part

17' 32"

Description of longitudinal joint

Welded

Working pressure of furnace by the rules

178

Combustion chamber plates: Material

Steel

Thickness: Sides

2 1/32

Back

5/8

Top

2 1/32

Bottom

7/8

No. of stays to ditto: Sides

8 1/2 x 8 1/2

Back

9 x 8 1/4

Top

8 1/2 x 8 1/2

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

181

Material of stays

Steel

Diameter at smallest part

1.725

Area supported by each stay

9 1/4 x 8 3/4

Working pressure by rules

180

End plates in steam space:

11 1/2 x 8 1/4

Material of stays

Steel

Thickness

1 5/32

Pitch of stays

18 1/4 x 17 1/2

How are stays secured

0. Nuts

Working pressure by rules

187

Material of stays

Steel

Material of Front plates at bottom

Steel

Thickness

3/4

Greatest pitch of stays

14

Working pressure of plate by rules

180

Material of tube plates

Steel

Thickness: Front

13 1/16 x 1 5/32

Back

13 1/16

Mean pitch of stays

11"

Working pressures by rules

180

Girders to Chamber tops: Material

Steel

Depth and

8' x 1 3/4

Length as per rule

30 1/2

Distance apart

9"

Number and pitch of Stays in each

Two at 8 1/2"

Working pressure by rules

183

Superheater or Steam chest; how connected to boiler

✓

Can the superheater be shut off and the boiler worked

✓

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

Pitch of rivets

DONKEY BOILER— No. Description None
Made at By whom made When made Where fixed
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 boiler
enter the donkey boiler Dia. of donkey boiler Length Material of shell plates Thickness Range of
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 Descript
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:— 2 Crank pin bolli. 2 Cross head bolli. 2 Main bearing
Set coupling bolli. Lead & bilge pump valves. Assorted bolli & nuts & iron.
2 Propeller blades. 4 Lead check valves. 2 Bal. ORY valves. 1 Set Air & Air pump valves

The foregoing is a correct description,

A. Rodger & Co. Manufacturer.

Dates of Survey { During progress of work in shops— 1904: Sep 6, 9, 10, Oct 3, 11, 17, 24 Nov 1, 7, 16, 17, 22, 29 Dec 13, 1905.
while building { During erection on board vessel— 10, 12, 16, 20, 25, 26, 31, Feb 12, Mar 1, 2
Total No. of visits 24.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

General Remarks (State quality of workmanship, opinions as to class, &c.)

These engines & boilers have been made & fitted under special survey, in accordance with the plans & the Rules. The steam pipes etc have been done as required. The machinery worked satisfactorily under steam.

The machinery in my opinion renders the vessel eligible for the notation & LMC 3.05 in the Register.

The boiler plan & seven certificates of shaft forgings are enclosed to

It is submitted that
this vessel is eligible for
THE RECORD L.M.C. 3.05.

AmS.
21.3.05

21.3.05

The amount of Entry Fee. £ 3 : — :
Special £ 39 : 14 :
Donkey Boiler Fee £ : :
Travelling Expenses (if any) £ : :
When applied for, 20 MAR 1905
When received, 16/3/05

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

Committee's Minute Glasgow 20 MAR 1905

Assigned

+ L.M.C. 3.05.

When fee is paid

MACHINERY CERTIFICATE
Dated 21-3-05



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Foundation