

4.

REPORT ON MACHINERY.

No. 33675

Received at London Office

Wed. Feb. 25th 1914

Writing Report

19

When handed in at Local Office

23/2 to 14 Port of

Glasgow SAT. NOV. 14. 1914

Date, First Survey

12/11/13

Last Survey

16/21 1914

(Number of Visits)

Tons

Gross

Net

When built

1914

Built at

Dumbarton

By whom built

Wm. Denny & Bros.

s made at

Dumbarton

By whom made

Denny & Co.

when made

1914

s made at

do.

By whom made

do.

when made

1914

ered Horse Power

Owners

Rivers Steam Navigation Co.

Port belonging to

Calcutta

Horse Power as per Section 28

67

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

NES, &c.—Description of Engines

Compound Twin Screw

No. of Cylinders

2

No. of Cranks / each Eng.

of Cylinders

16 " 32"

Length of Stroke

21 "

Revs. per minute

Dia. of Screw shaft

as per rule 5 3/4

Material of

Steel

screw shaft fitted with a continuous liner the whole length of the stern tube

no liners

Is the after end of the liner made water tight

propeller boss

If the liner is in more than one length are the joints burned

If the liner does not fit tightly at the part

the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

If two

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

Length of stern bush

2'-1"

Tunnel shaft

as per rule 5 3/4

Dia. of Crank shaft journals

as per rule 5 3/4

Dia. of Crank pin

5 3/4

Size of Crank webs

11 1/2 x 4

Dia. of thrust shaft under

5 3/4

Dia. of screw

6'-0"

Pitch of Screw

8'-0"

No. of Blades

3

State whether moveable

no

Total surface

13.5 sq.

Feed pumps

2

Diameter of ditto

3 1/2

Stroke

8"

Can one be overhauled while the other is at work

yes

Bilge pumps

1 (port)

Diameter of ditto

3 1/2

Stroke

8"

Can one be overhauled while the other is at work

—

Donkey Engines

Two

Sizes of Pumps

5 1/4 - 3 1/2 x 5 duplex

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

7-7

Engine Room

In Holds, &c.

Bilge Injections

sizes

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size

the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

Are the sluices on Engine room bulkheads always accessible

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

Are they Valves or Cocks

they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the Discharge Pipes above or below the deep water line

they each fitted with a Discharge Valve always accessible on the plating of the vessel

Are the Blow Off Cocks fitted with a spigot and brass covering plate

pipes are carried through the bunkers

How are they protected

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

of examination of completion of fitting of Sea Connections

of Stern Tube

Screw shaft and Propeller

Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

ERS, &c.—(Letter for record

7)

Manufacturers of Steel

Wm. Beardmore & Co. Ltd.

Heating Surface of Boilers

1150 sq.

Is Forced Draft fitted

yes

No. and Description of Boilers

One single ended

Working Pressure

130 lbs.

Tested by hydraulic pressure to

260 lbs.

Date of test

2.2.14

No. of Certificate

12528

each boiler be worked separately

Area of fire grate in each boiler

38 sq.

No. and Description of Safety Valves to

boiler

2 direct spring

Area of each valve

6.49 sq.

Pressure to which they are adjusted

Are they fitted with easing gear

test distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

11'-10 3/8"

Length

10'-0 1/8"

Material of shell plates

steel

thickness

13

Range of tensile strength

28,320 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

DR lap

seams

DRS. TR

Diameter of rivet holes in long. seams

4/8"

Pitch of rivets

6"

Lap of plates or width of butt straps

13"

percentages of strength of longitudinal joint

rivets 91.5

plate 85.4

Working pressure of shell by rules

144 lbs.

Size of manhole in shell

14" x 13"

of compensating ring

34 x 34 x 13/16

No. and Description of Furnaces in each boiler

2 Deighton

Material

steel

Outside diameter

44 3/4"

h of plain part

top

bottom

Thickness of plates

crown 7/16

bottom 7/16

Description of longitudinal joint

welded

No. of strengthening rings

—

ing pressure of furnace by the rules

140

Combustion chamber plates: Material

steel

Thickness: Sides

9/16

Back

9/16

Top

9/16

Bottom

4/8

of stays to ditto: Sides

8 1/2 x 9

Back

8 7/8 x 8 5/8

Top

9 1/2 x 8

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

143

rial of stays

(2 1/2 ton min) Area

Diameter at smallest part

1 1/4"

Area supported by each stay

46 sq.

Working pressure by rules

130

End plates in steam space:

rial

Steel

Thickness

15/16

Pitch of stays

18 x 17 1/2

How are stays secured

DN & W

Working pressure by rules

130

eter at smallest part

4 9/16

Area supported by each stay

320

Working pressure by rules

159

Material of Front plates at bottom

steel

ness

25/32

Material of Lower back plate

steel

Thickness

23/32

Greatest pitch of stays

13 3/4

Working pressure of plate by rules

132

eter of tubes

2 3/4

Pitch of tubes

3 3/4 x 3 3/4

Material of tube plates

steel

Thickness: Front

25/32

Back

13/16

Mean pitch of stays

7 1/2"

across wide water spaces

13 3/4

Working pressures by rules

280

Girders to Chamber tops: Material

steel

Depth and

Shippers of girder at centre

2 plates 7 1/2 x 3 3/4

Length as per rule

30"

Distance apart

9 1/2"

Number and pitch of stays in each

3 of 8"

ing pressure by rules

142

Superheater or Steam chest; how connected to boiler

none

Can the superheater be shut off and the boiler worked

tely

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

fitted with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

ing pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Foundation

005791-005810-0251

005791-005810-0253 1/2

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

(Sgd) Harry Clarke

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1913 Nov. 12-19-26 Dec. 4-11-19-30 1914 Jan. 14-22-30 Feb. 2-12-16
{ During erection on board vessel - - -
Total No. of visits 13.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 4-12-13 Slides 30-1-14 Covers 4-12-13 Pistons 14-1-14 Rods 14-1-14
Connecting rods 4-12-13 Crank shaft 12-2-14 Thrust shaft 12-2-14 Tunnel shafts 14-1-14 Screw shaft 19-12-13 Propeller 19-12-13
Stern tube 19-12-13 Steam pipes tested (one) 16-2-14 Engine and boiler seatings Engines holding down bolts

Completion of pumping arrangements Boilers fixed Engines tried under steam

Main boiler safety valves adjusted Thickness of adjusting washers

Material of Crank shaft Identification Mark on Do. and Material of Thrust shaft steel Identification Mark on Do.

Material of Tunnel shafts steel Identification Marks on Do. 784 Hf Material of Screw shafts steel Identification Marks on Do.

Material of Steam Pipes (one) Iron Test pressure 390 lbs " "

Is an installation fitted for burning oil fuel Is the flash point of the oil to be used over 150° F.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case If so, state name of vessel

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

The engines and boilers of this vessel have been constructed under special survey in accordance with the rules and approved plans enclosed. Materials and workmanship are good.

This machinery is being shipped to Calcutta. When it has been fitted on board; safety valves adjusted; engines tried under steam and arrangements made for protecting the intermediate shafts and for giving access to bearings of same, the vessel will be eligible to have the notation +LMC (with date)

The amount of Entry Fee ... £ 1 : 0 :
2/3 Special ... £ 6 : 18 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 24/2 1914
When received, 26/2 1914

Committee's Minute

TUE NOV 17 1914

Assigned

(Sgd) Harry Clarke

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping



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