

REPORT ON MACHINERY.

No. 13491.

JUL 1895

Port of

Glasgow

Received at London Office

18

No. in Survey held at
Reg. Book.

Dumbarton

Date, first Survey

29th August 1894 last Survey 25th June 1895

(Number of Visits)

on the

S.S. "Okhla"

Gross 5288
Tons Net 3436
When built 1895

Master A. Houghton Built at Dumbarton

By whom built Wm. Denny & Co.

Engines made at Dumbarton

By whom made

Denny & Co.

when made 1895

Boilers made at Dumbarton

By whom made

Denny & Co.

when made 1895

Registered Horse Power 229

Owners British India S. N. Co.

Port belonging to Glasgow

Nom. Horse Power as per Section 28 315

ENGINES, &c.

Description of Engines

Triple expansion inverted double

No. of Cylinders

Three

Diameter of Cylinders 26 $\frac{1}{2}$ " 42" 66 $\frac{1}{2}$ " Length of Stroke 51" Revolutions per minute 120 Diameter of Crank shaft journals 13 $\frac{1}{4}$ " Diameter of Crank pin 13 $\frac{1}{4}$ " Size of Crank webs 9 $\frac{1}{2}$ x 24 $\frac{1}{2}$ "
Diameter of Tunnel shaft as per rule 12 $\frac{1}{2}$ " Diameter of Crank shaft journals 13 $\frac{1}{4}$ " Diameter of Crank pin 13 $\frac{1}{4}$ " Size of Crank webs 9 $\frac{1}{2}$ x 24 $\frac{1}{2}$ "
Diameter of screw 19" 6" Pitch of screw 20" 0" No. of blades four State whether moveable yes Total surface 95.4
No. of Feed pumps 2 Diameter of ditto 4" Stroke 28" Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 Diameter of ditto 3 $\frac{1}{2}$ " Stroke 28" Can one be overhauled while the other is at work yes
No. of Donkey Engines five Sizes of Pumps 4" 3" 2" 1" 1" 1" and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room four 3 $\frac{1}{2}$ " in suction, 2" in tunnel, 1" in holds, &c. 1" 3" 2" 1" 1" 1" in fore and aft holds

No. of bilge injections 4 sizes 7" Connected to condenser, or to circulating pump corp. Is a separate donkey suction fitted in Engine room & size 3 $\frac{1}{2}$ "
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 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 Bilge pipes to fore hold How are they protected under ceiling
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 apparently
Is it fitted with a watertight door yes worked from upper platform

BOILERS, &c.

(Letter for record 5)

Total Heating Surface of Boilers 4714

How does forced draft

No. and Description of Boilers two cylindrical Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs
Date of test 6.5.95 Can each boiler be worked separately yes Area of fire grate in each boiler 52.5 No. and Description of safety valves to each boiler two spring loaded Area of each valve 7.67 Pressure to which they are adjusted 165 lbs Are they fitted with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork stand clear Mean diameter of boilers 175 lbs
Length 41' 6" Material of shell plates Steel Thickness 1 $\frac{1}{2}$ " Description of riveting: circum. seams lap 2 x 3 knots, seams 1 knot 5 knots
Diameter of rivet holes in long. seams 1 $\frac{1}{32}$ " Pitch of rivets 8 $\frac{1}{4}$ " Lap of plates or width of butt straps 18 $\frac{1}{8}$ "
Per centages of strength of longitudinal joint rivets 91.4 Working pressure of shell by rules 160 lbs Size of manhole in shell 13" x 17"
Size of compensating-ring 18 x 9 $\frac{1}{2}$ " No. and Description of Furnaces in each boiler three Adams Material Steel Outside diameter 43"
Length of plain part 8' 2" Thickness of plates crown 39/16" Description of longitudinal joint welded No. of strengthening rings four
Working pressure of furnace by the rules 163 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 1/16"
Pitch of stays to ditto: Sides 8 x 7 3/4" Back 8 Top 8 x 8 1/2" If stays are fitted with nuts or riveted heads none Working pressure by rules 170 lbs
Material of stays Steel Diameter at smallest part 1 1/4" Area supported by each stay 66 Working pressure by rules 175 lbs End plates in steam space: Material Steel Thickness 1" Pitch of stays 15 x 17" How are stays secured D nuts Working pressure by rules 164 lbs Material of stays Steel
Diameter at smallest part 1 1/4" Area supported by each stay 255 lbs Working pressure by rules 170 lbs Material of Front plates at bottom Steel
Thickness 3/4" Material of Lower back plate Steel Thickness 7/8" Greatest pitch of stays 13" Working pressure of plate by rules approved
Diameter of tubes 2 1/2" Pitch of tubes 33/4" Material of tube plates Steel Thickness: Front 3/4 x 9/16" Back 3/4" Mean pitch of stays 8 1/2"
Pitch across wide water spaces 14 1/2" Working pressures by rules 151, 200 lbs Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 8 1/2 x 2 x 7/8" Length as per rule 33" Distance apart 8 1/4" Number and pitch of Stays in each 3 x 8"
Working pressure by rules 167 lbs 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 End plates: Thickness How stayed
Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

13791 Gls.

DONKEY BOILER—

Description

See Supplementary Report

Made at

By whom made

When made

Where fixed

in Deck House

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

Diameter of donkey boiler

Length

Material of shell plates

Thickness

Description of riveting long. seams

Diameter 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:—

No required by the rules, also 1 tail shaft, 2 propeller blades, $\frac{1}{3}$ crank shaft, one air pump rod, one circulating pump rod. Piston rings for each engine & for piston valves, 2 Safety Valve Springs etc.

The foregoing is a correct description,

Dacey & Co

Manufacturer.

General Remarks

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

The engines and boilers of this vessel have been built under the conditions of special Survey. They have been securely fitted on board and satisfactorily tested under steam.

The material and workmanship is good.

In my opinion this vessel is eligible for the record + L.M.C. 6.95

The above remarks were written in anticipation of a surveyor being present at the trial trip, the vessel has however left for Cardiff without the machinery having been seen at work.

The Cardiff surveyors have been requested to visit the vessel and report whether the machinery has worked satisfactorily on the run round to their port.

In my opinion this vessel will be eligible for the record + L.M.C. 6.95. when the machinery has been reported upon from Cardiff as having worked satisfactorily.

Certificate (if required) to be sent to

The amount of Entry Fee..

£ 3 : "

When applied for,

Special

£ 35 : 15

25/6/95

Donkey Boiler Fee

£

4 : "

When received,

Travelling Expenses (if any)

£

4 : "

28/6/95

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

Committee's Minute

Assigned

+ L.M.C. 6.95

TUES 16 JUL 1895



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