

REPORT ON MACHINERY.

No. _____ (Received at London Office _____) 18
 No. in Survey held at London Date, first Survey 1 Sept Last Survey 23 Sept 1882
 Reg. Book. S. P. Hutton Charters (Number of Visits 11) # 447
548 on the Bell Built at Newcastle When built 1855
 Engines made at Newcastle Liverpool By whom made J. Jack 96 when made 1870
 Boilers made at for the S. P. Elvamin Wrecked in 1880 when made 1880
 Registered Horse Power 80 Owners E. T. Agins Port belonging to London

ENGINES, &c.—

Description of Engines New Boiler

Diameter of Cylinders _____ Length of Stroke _____ No. of Rev. per minute _____ Point of Cut off, High Pressure _____ Low Pressure _____
 Diameter of Screw shaft _____ Diameter of Tunnel shaft _____ Diameter of Crank shaft journals _____ Diameter of Crank pin _____ size of Crank webs _____
 Diameter of screw _____ Pitch of screw _____ No. of blades _____ state whether moveable _____ total surface _____
 No. of Feed pumps _____ diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____
 No. of Bilge pumps _____ diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____
 Where do they pump from _____
 No. of Donkey Engines _____ Size of Pumps _____ Where do they pump from _____

Are all the bilge suction pipes fitted with roses _____ Are the roses always accessible _____ Are the sluices on Engine room bulkheads always accessible _____
 No. of bilge injections _____ and sizes _____ Are they connected to condenser, or to circulating pump _____

How are the pumps worked _____

Are all connections with the sea direct on the skin of the ship _____ Are they Valves or Cocks _____

Are 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 _____

Are 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 _____

What pipes are carried through the bunkers _____ How are they protected _____

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times _____

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges _____

When were stern tube, propeller, screw shaft, and all connections examined in dry dock _____

Is the screw shaft tunnel watertight _____ and fitted with a sluice door _____ worked from _____

BOILERS, &c.—

Number of Boilers one Description Cylindrical return multibubular
 Working Pressure 60 lbs Tested by hydraulic pressure to 96 lbs Date of test 22 Sept 1882

Description of superheating apparatus or steam chest vertical dome

Can each boiler be worked separately _____ Can the superheater be shut off and the boiler worked separately _____

No. of square feet of fire grate surface in each boiler 50 sq ft. Description of safety valves Spring

No. to each boiler two area of each valve 12' 6" Are they fitted with easing gear yes

No. of safety valves to superheater _____ area of each valve _____ are they fitted with easing gear _____

Smallest distance between boilers and bunkers or woodwork 2 ft to bunker 4" to Bulkhead of Head

Diameter of boilers 144" Length of boilers 10' 0" description of riveting of shell long. seams lap double rivet circum. seams lap double rivet

Thickness of shell plates 13/16 diameter of rivet holes about 1/8 whether punched or drilled punched pitch of rivets 4"

Lap of plating _____ per centage of strength of longitudinal joint 78% 90% working pressure of shell by rules 75 lbs.

Size of manholes in shell 15" x 11" size of compensating rings angle iron

No. of Furnaces in each boiler three outside diameter 36" length, top 7' 0" bottom 9' 6"

Thickness of plates 1/2" description of joint lap. angle rivet if rings are fitted yes greatest length between rings _____

Working pressure of furnace by the rules 88 top. 65 bottom.

Combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"

Pitch of stays to ditto _____ sides 9 x 8" back 9. x 8 top 9 x 8"

If stays are fitted with nuts or riveted heads rivet heads. working pressure of plating by rules 79 lbs.

Diameter of stays at smallest part 1 1/8" working pressure of ditto by rules 83

End plates in steam space, thickness 1/2" pitch of stays to ditto 10 x 13 and angles 3 how stays are secured angles and rivets

Working pressure by rules 64 lbs diameter of stays at smallest part 2 1/4" working pressure by rules 180 lbs.

Front plates at bottom, thickness 5/8 Back plates, thickness 5/8 greatest pitch of stays 10" working pressure by rules 100 lbs.

41901 Don 7/8

Diameter of tubes $3\frac{1}{4}$ pitch of tubes $4\frac{1}{2}$ thickness of tube plates, front $\frac{7}{8}$ back $\frac{7}{8}$
How stayed *Stays* pitch of stays — width of water spaces $11"$
Diameter of Superheater or Steam chest *from 32" to 16"* length $11' 6"$ high.
Thickness of plates $9/16$ description of longitudinal joint *lap* diameter of rivet holes — pitch of rivets —
Working pressure of shell by rules *ample* Diameter of flue — thickness of plates —
If stiffened with rings — distance between rings — Working pressure by rules —
End plates of superheater, or steam chest; thickness *ample* How stayed *disked*
Superheater or steam chest; how connected to boiler *riveted*

DONKEY BOILER— Description
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 —
If fitted with easing gear — If steam from main boilers can enter the donkey boiler —
Diameter of donkey boiler — length — description of riveting —
thickness of shell plates — diameter of rivet holes — whether punched or drilled —
pitch of rivets — lap of plating — per centage of strength of joint —
thickness of crown plates — stayed by —
Diameter of furnace, top — bottom — length of furnace —
thickness of 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 plates — thickness of water tubes —

The foregoing is a correct description,
Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c.) The above boiler was sent to
Lane *be constructed* for the S. S. *Gloamin* (unclassified vessel)
in 1880. The vessel was wrecked shortly afterwards. The boiler
was examined and found to be in a good condition and
the dimensions ^{were found to be} as above. The seacocks which were under
the platform have been shifted. One cock is still in an inaccessible
position & will be removed on the vessel's return to a dry dock
in about 6 months. The tail shaft was found to be smaller than
the crankshaft and will be renewed in 6 months.
The machinery was examined & found to be in good
condition. It is submitted that the machinery of this vessel
is eligible to have the notification L.M.C. 110-82 recorded
in the Register Book provided the tail shaft be replaced by
a thicker one and all coxles be made easily accessible within
6 months. See Secretary's letter to Owners. 26th Sept 1882.

Submitted that this vessel is
eligible to have the notification
L.M.C. 110-82 recorded subject to the
propeller shaft being renewed and
the sea coxles lifted up to the top
of the bulge within six months
D.S. 2/11/82

The amount of Entry Fee .. £ 2 : - : - received by me,
Special £ 6 : 6 : -
Certificate (if required) .. £ : 2 : 6 9 2 1883
To be sent as per margin.
(Travelling Expenses, if any, £)

440
NB 80 Jilt 12 82

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

Committee's Minute

Tuesday, 7th November 1882

L.M.C. 110-82
NB 80 Jilt 12 82
Robert Edmund Taylor & Son, Printers, 10, Old Street, Goswell Road, London, E.C.

Lloyd's Register
Foundation