

REPORT ON MACHINERY.

No. 4434

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Reg. Book.

on the Barque "Alexander Lawrence" Tons 1205

Master H. Browley Built at Dumbarton By whom built A. Mc Millan & Son When built 1886

Engines made at _____ By whom made _____ when made _____

Boilers made at _____ By whom made _____ when made _____

Registered Horse Power _____ Owners A. Lawrence Son & Co. Port belonging to London

ENGINES, &c.—

Description of Engines

Diameter of Cylinders _____ Length of Stroke _____ No. of Rev. per minute _____ Point of Cut off, High Pressure _____ Low Pressure _____

Diameter of Screw shaft _____ Diam. of Tunnel shaft _____ Diam. of Crank shaft journals _____ Diam. 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 _____ Description _____ Whether Steel or Iron _____

Working Pressure _____ Tested by hydraulic pressure to _____ Date of test _____

Description of superheating apparatus or steam chest _____

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 _____ Description of safety valves _____ No. to each boiler _____

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

Are they fitted with easing gear _____ Smallest distance between boilers and bunkers or woodwork _____ Diameter of boilers _____

Length of boilers _____ description of riveting of shell long. seams _____ circum. seams _____ Thickness of shell plates _____

Diameter of rivet holes _____ whether punched or drilled _____ pitch of rivets _____ Lap of plating _____

Per centage of strength of longitudinal joint _____ working pressure of shell by rules _____ size of manholes in shell _____

Size of compensating rings _____ No. of Furnaces in each boiler _____

Outside diameter _____ length, top _____ bottom _____ thickness of plates _____ description of joint _____ if rings are fitted _____

Greatest length between rings _____ working pressure of furnace by the rules _____ combustion chamber plating, thickness, sides _____ back _____ top _____

Pitch of stays to ditto, sides _____ back _____ top _____ If stays are fitted with nuts or riveted heads _____ working pressure of plating by _____

rules _____ Diameter of stays at smallest part _____ working pressure of ditto by rules _____ end plates in steam space, thickness _____

Pitch of stays to ditto _____ how stays are secured _____ working pressure by rules _____ diameter of stays at _____

smallest part _____ working pressure by rules _____ Front plates at bottom, thickness _____ Back plates, thickness _____

Greatest pitch of stays _____ working pressure by rules _____ Diameter of tubes _____ pitch of tubes _____ thickness of tube _____

plates, front _____ back _____ how stayed _____ pitch of stays _____ width of water spaces _____

Diameter of Superheater or Steam chest _____ length _____ thickness of plates _____ description of longitudinal joint _____ diam. of rivet holes _____

Pitch of rivets _____ working pressure of shell by rules _____ 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 _____ how stayed _____

Superheater or steam chest; how connected to boiler _____

GLS152-0441

Lloyd's Register
Foundation

Sailing Ship "Alexander Lawrence"

7737 gals.

DONKEY BOILER— Description *Vertical (2 cross tubes)*
Made at *Gateshead* by whom made *Clark Chapman & Co* when made *1886* where fixed *On Deck*
Working pressure *60 lbs* tested by hydraulic pressure to *120 lbs* No. of Certificate *2173* fire grate area *98 sq ft* description of safety valves *Direct Spring* No. of safety valves *one* area of each *7 sq ft* if fitted with easing gear *yes* if steam from main boilers can enter the donkey boiler
diameter of donkey boiler *4' 0"* length *8' 0"* description of riveting *Double lap*
Thickness of shell plates *11/32"* diameter of rivet holes *3/16"* whether punched or drilled *punched* pitch of rivets *2 3/4"* lap of plating *3 5/8"*
per centage of strength of joint *72%* thickness of crown plates *9/16"* stayed by *Three stays 1 3/8" dia (steel)*
Diameter of furnace, top *2' 8 3/8"* bottom *3' 4 7/8"* length of furnace *4' 4"* thickness of plates *9/16"* description of joint *Single lap*
Thickness of furnace crown plates *7/16"* stayed by *as above* working pressure of shell by rules *103 lbs*
Working pressure of furnace by rules *44 lbs* diameter of uptake *10"* thickness of plates *9/16" iron* thickness of water tubes *—*
Signed J.B. 1/11/86

SPARE GEAR. State the articles supplied:— *Examined this boiler under steam and set the Safety valve to the working pressure. It is now in good order & safe working condition.*
James Morrison 14/12/86

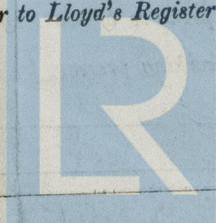
The foregoing is a correct description,
Manufacturer.

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

The amount of Entry Fee .. £ : : received by me,
Special .. £ : :
Donkey Boiler Fee .. £ : :
Certificate (if required) .. £ : : 18
To be sent as per margin.
(Travelling Expenses, if any, £)

It is noticed that no fee is charged for this work.
M.D.
16/12/86

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



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