

REPORT ON MACHINERY.

15845

No. 15845 Port of Sunderland Received at London Office THURS 8 JUL 1891
 No. in Survey held at S'land Date, first Survey 1st July 90 Last Survey 1st Dec 1890
 Reg. Book. on the S/S "Umona" (Number of Visits 22) Tons { Gross 2031.33
 Net 1288.23
 Master R. Lewis Built at S'land By whom built J. Loring When built 1890
 Engines made at S'land By whom made G. Clark & Co when made 1890
 Boilers made at " By whom made " when made 1890
 Registered Horse Power 250 Owners Bullard & Co Port belonging to London
L.R.P. 216

ENGINES, &c.—

Description of Engines Tri compound 3 cranks No. of Cylinders 3
 Diam. of Cylinders 31" 34" 56" Length of Stroke 42" Rev. per minute 70 Point of Cut off, High Pressure 5/8 Low Pressure 5/8
 Diameter of Screw shaft 11 1/2" Diam. of Tunnel shaft 10 7/8" Diam. of Crank shaft journals 11 1/2" Diam. of Crank pin 11 1/2" size of Crank webs 8 1/2" x 21 1/2"
 Diameter of screw 14" - 6" Pitch of screw 18" - 3" No. of blades 4 state whether moveable f total surface 64 1/2 sq ft
 No. of Feed pumps 2 diameter of ditto 3" Stroke 2 1/2" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 diameter of ditto 4 1/4" Stroke 2 1/2" Can one be overhauled while the other is at work yes
 Where do they pump from Bilges of all compartments
 No. of Donkey Engines 2 Size of Pumps 8" x 10" + 3 1/2" x 5" Where do they pump from Galves, bilges, sea
howell boilers
 Are all the bilge suction pipes fitted with roses yes Are the roses always accessible yes Are the sluices on Engine room bulkheads always accessible yes
 No. of bilge injections 1 and sizes 4" Are they connected to condenser, or to circulating pump C.P.
 How are the pumps worked by levers off L.P. engine
 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 none How are they protected —
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yes
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges yes
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock while building
 Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from top platform

BOILERS, &c.—

No. of Boilers 2 Description Cyl. multi S. ended Material Steel Letter (for record) (S.)
 Working Pressure 150 lbs Tested by hydraulic pressure to 320 lbs Date of test 22-10-90
 Description of superheating apparatus or steam chest none
 Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately yes
 No. of square feet of fire grate surface in each boiler 53 sq ft Description of safety valves Spring No. to each boiler 2
 Area of each valve 9.6" Are they fitted with easing gear yes No. of safety valves to superheater — area of each valve —
 Are they fitted with easing gear yes Smallest distance between boilers and bunkers or woodwork 12" Diameter of boilers 13.8"
 Length of boilers 10' - 6" description of riveting of shell long. seams t. r. butt circum. seams d. r. lap Thickness of shell plates 1 1/2"
 Diameter of rivet holes 1 1/16" whether punched or drilled d. pitch of rivets 8" Lap of plating 1 1/4" Straps
 Per centage of strength of longitudinal joint 85.1 working pressure of shell by rules 155 lbs size of manholes in shell 16" x 13"
 Size of compensating rings 7 3/4" x 1 1/4" No. of Furnaces in each boiler 3 Description of Furnaces Ribbed
 Outside diameter 3' - 3 1/2" length 6' - 6" thickness of plates 9/16" description of joint welded if rings are fitted no
 Greatest length between rings — working pressure of furnace by the rules 179 combustion chamber plating, thickness, sides 7/16" back 9/16" top 9/16"
 Pitch of stays to ditto, sides 7/8" x 7/8" back 7/8" x 7/8" top d. angle If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 167 Diameter of stays at smallest part 1 1/2" working pressure of ditto by rules 177 end plates in steam space, thickness 1 1/16"
 Pitch of stays to ditto 14 3/4" x 14" how stays are secured d. nuts working pressure by rules 150 lbs diameter of stays at smallest part 2 3/8" working pressure by rules 193 lbs Front plates at bottom, thickness 1 1/16" Back plates, thickness 3/4"
 Greatest pitch of stays 11" working pressure by rules 150 Diameter of tubes 3 1/2" pitch of tubes 4 1/16" x 4 3/4" thickness of tube plates, front 7/8" back 3/4" how stayed Sty tubes pitch of stays 9 1/8" x 9 1/2" width of water spaces 1 1/2" x 1 1/2"
 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 —
 Heating Surface 3440 sq ft

DONKEY BOILER— Description *Vertical. Mullen "Victoria"*
Made at *Galeshead* by whom made *Clark Chapman & Co* when made *10/90* where fixed *Stoke Newington*
Working pressure *60 lbs.* tested by hydraulic pressure to *120 lbs.* No. of Certificate *3382* fire grate area *198* description of safety
valves *Spring* No. of safety valves *2* area of each *7.06 sq. in.* if fitted with easing gear *Yes* if steam from main boilers can
enter the donkey boiler *No* diameter of donkey boiler *6' 0"* length *12' 0"* description of riveting *Cap & r.*
Thickness of shell plates *3/8"* diameter of rivet holes *3/4"* whether punched or drilled *2* pitch of rivets *2 3/4"* lap of plating *3 5/8"*
per centage of strength of joint *72.5* thickness of crown plates *7/32"* stayed by *1-1 1/8" off Stays 5 gusset Stays 10 x 7/16*
Diameter of furnace, top — bottom *5' 0"* length of furnace — thickness of plates *7/2"* description of joint *Cap Single*
Thickness of furnace crown plates *9/16"* stayed by *4 rows 18 off Stays 11" pitch* working pressure of shell by rules *75.5*
Working pressure of furnace by rules *80 lbs.* diameter of uptake — thickness of plates *7/8 + 1/16"* thickness of water tubes *10 B.W.G.*

SPARE GEAR. State the articles supplied:— *1 Set of connecting rod top bottom end bolts
nuts. 1 set of main bearing bolts. 1 set of coupling bolts nuts. 1 set
of feed and bilge pump valves. Spare propellers— nuts bolts
& assorted iron*

The foregoing is a correct description,

Henry Clark Manufacturer. *main engines boilers*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery and boilers
of this vessel have been constructed of good materials
and workmanship under Special Survey. The main
steam pipe was tested by hydraulic to twice the working
pressure the valves on the main boilers being set at 160 lbs.
In my opinion this vessel is eligible for the notation of.*
L.M.C. 12/90.

Electric lighting— This vessel has electric lighting arrangements
fitted by J. H. Holmes & Co of Newcastle. The Dynamo is of the
slow speed type giving an E.M.F. of 60 volts. The installation
is on the single wire system. The smallest wire being 10 B.W.G.
The insulation of all the wires appears to be efficient & where
carried through bulkheads is led through wooden ferrules.
A volt meter is supplied. There are 3 circuits supplying
65 lamps. I am of opinion that this arrangement is in
accordance with the requirements of the Society's Rules
& Circulars.

*It is submitted that this vessel is
eligible to have + L.M.C. 12-90 recorded
N.D.
8-1-91*

The amount of Entry Fee .. £ 2 : 0 : 0 received by me,

Special .. £ 30 : 12 : 0

Donkey Boiler Fee .. £ - : - : -

Certificate (if required) .. £ - : - : -

To be sent as per margin.

(Travelling Expenses, if any, £ - : - : -)

Committee's Minute

9 JAN 1891

+ L.M.C. 12/90

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



Lloyd's Register
Foundation