

REPORT ON MACHINERY.

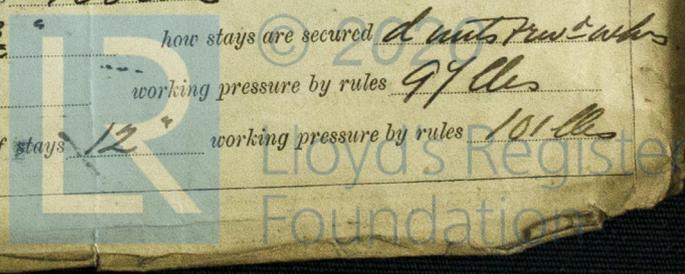
(Received at London Office 6th OCT. 1882.)

16226
 No. in Survey held at Newcastle Date, first Survey 23rd May Last Survey 5th Oct. 1882
 Book. 1543
 on the Screw Steamer "Hlyde" Tons 1022
 No. of Hull 1882
 Built at Newcastle When built 1882
 By whom made Walker & Shipman when made 1882
 By whom made Hampford when made 1882
 Owners Hlyde Steu. Ship Co. (Lim) Port belonging to London
 Registered Horse Power 150

GINES, &c.—
 Description of Engines Compound inverted screw
 Diameter of Cylinders 32 & 62 Length of Stroke 36 No. of Rev. per minute 60 Point of Cut off, High Pressure .5 Low Pressure .5
 Diameter of Screw shaft 10 3/4 Diameter of Tunnel shaft 10 1/4 Diameter of Crank shaft journals 10 3/4 Diameter of Crank pin 10 3/4 size of Crank webs 13 x 4
 Diameter of screw 14.3 Pitch of screw 15.0 No. of blades 4 state whether moveable no total surface 30 sq ft
 No. of Feed pumps 2 diameter of ditto 3 3/4 Stroke 20 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 diameter of ditto 3 3/4 Stroke 20 Can one be overhauled while the other is at work yes
 Where do they pump from all tanks holds, bilges & tunnel well
 No. of Donkey Engines two Size of Pumps 10 x 10 Where do they pump from same as main engines
from sea & condenser, into condenser, boiler, on deck & overboard
 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 5" Are they connected to condenser, or to circulating pump circ pump
 How are the pumps worked by lever over condenser
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks 2 Valves & 4 Cocks
 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
 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 new vessel
 Is the screw shaft tunnel watertight ✓ and fitted with a sluice door yes worked from main deck

BOILERS, &c.—
 Number of Boilers two Description Cylindrical suspended steel
 Working Pressure 90 lbs Tested by hydraulic pressure to 180 lbs Date of test Sept 7th 1882 No 967
 Description of superheating apparatus or steam chest vertical domes
 Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately no
 No. of square feet of fire grate surface in each boiler 36.32 Description of safety valves spring
 No. to each boiler two area of each valve 9.620 Are they fitted with easing gear yes
 No. of safety valves to superheater none area of each valve — are they fitted with easing gear —
 Smallest distance between boilers and bunkers or woodwork 10"
 Diameter of boilers 12.6 Length of boilers 10.6 description of riveting of shell long. seams double row & batts circum. seams double row & lap
 Thickness of shell plates 3/32 diameter of rivet holes 1" whether punched or drilled drilled pitch of rivets 4 1/2"
 Lap of plating 5/4 percentage of strength of longitudinal joint 75.8 working pressure of shell by rules 90.2 lbs
 Size of manholes in shell 15" x 11 1/2 size of compensating rings 3 x 3/4
 No. of Furnaces in each boiler 2 outside diameter 3.6 length, top 7.0 bottom 8.10
 Thickness of plates 9/16 description of joint double batts if rings are fitted 1/2 greatest length between rings 7.0
 Working pressure of furnace by the rules 96.4 lbs
 Combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"
 Pitch of stays to ditto 8 1/2" back 8 1/4" top 1.9" rad.
 If stays are fitted with nuts or riveted heads riveted heads working pressure of plating by rules 94 lbs
 Diameter of stays at smallest part 1 1/4" working pressure of ditto by rules 108 lbs
 End plates in steam space, thickness 13/16 pitch of stays to ditto 1 1/8" how stays are secured dr into rivets
 Working pressure by rules 89.5 lbs diameter of stays at smallest part 2 1/2" working pressure by rules 97 lbs
 Front plates at bottom, thickness 11/16 Back plates, thickness 11/16 greatest pitch of stays 12" working pressure by rules 101 lbs

NWC 782-0108



Diameter of tubes $3\frac{1}{4}$ " pitch of tubes $4\frac{5}{8}$ " thickness of tube plates, front $\frac{13}{16}$ " back $\frac{3}{4}$ "
 How stayed *tube stays* pitch of stays $13\frac{1}{8}$ " width of water spaces 12"
 Diameter of Superheater or Steam chest 3.9" length 5.6"
 Thickness of plates $\frac{1}{2}$ " description of longitudinal joint *lap & rivet* diameter of rivet holes $\frac{3}{4}$ " pitch of rivets $2\frac{1}{2}$ "
 Working pressure of shell by rules 130 lbs Diameter of flue \checkmark thickness of plates \checkmark
 If stiffened with rings \checkmark distance between rings \checkmark Working pressure by rules \checkmark
 End plates of superheater, or steam chest; thickness $\frac{5}{8}$ " How stayed *dished*
 Superheater or steam chest; how connected to boiler *Contracted steel vessel*

DONKEY BOILER— Description *Vertical with cross tubes*
 Made at *Stockton* By whom made *Henry Porter* when made *11-8-82*
 Where fixed *stockhold* working pressure *80 lbs* Tested by hydraulic pressure to *160 lbs* No. of Certificate *462*
 Fire grate area *19 sq'* Description of safety valves *Spring* No. of safety valves *Two* area of each *7.07*
 If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no*
 Diameter of donkey boiler *6:0"* length *13:0"* description of riveting *lap double riveted*
 thickness of shell plates $\frac{9}{16}$ " diameter of rivet holes $\frac{13}{16}$ " whether punched or drilled *punched*
 pitch of rivets $2\frac{3}{4}$ " lap of plating $4\frac{1}{8}$ " per centage of strength of joint *70.4*
 thickness of crown plates $\frac{5}{8}$ " stayed by *light stays* $1\frac{1}{2}$ " dia
 Diameter of furnace, top *60"* bottom *64"* length of furnace *5:0"*
 thickness of plates $\frac{5}{8}$ " description of joint *lap single riveted*
 thickness of furnace crown plates $\frac{5}{8}$ " stayed by *stays & uprights*
 Working pressure of shell by rules *90 lbs* working pressure of furnace by rules *82 lbs*
 diameter of uptake *15"* thickness of plates $\frac{3}{8}$ " thickness of water tubes $\frac{3}{8}$ "

The foregoing is a correct description, FOR THE WALLSEND SLIPWAY & ENGINEERING CO. L^{td}
 Manufacturer. *Joseph Ward Sec^y*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been built under Special Survey the materials & workmanship are sound & good & eligible in my opinion to be classed as Lloyd's M.C. 10.82 in the Society's Register Book.*

Submitted that this vessel is eligible to have M.C. 10.82
M.C. 10.82

The amount of Entry Fee ... £ 3 : - : - received by me,
 Special ... £ 22 : 10 : - } *W.L.S.*
 Certificate (if required) *State* ... 4th Oct. 18

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

Committee's Minute *Tuesday, 10th October, 1882*