

REPORT ON MACHINERY.

23543

Port of Liverpool Received at London Office THURS 5 DEC 1889
 No. in Survey held at Liverpool Date, first Survey May 1889 Last Survey 26 Nov 1889
 g. Book. S. S. "Gorak" (Number of Visits 34) 2013.52
 on the S. S. "Gorak" Tons 1975.88
 Built at Liverpool By whom built Richard Richardson & Co When built 1889
 Engines made at Liverpool By whom made Richard Richardson & Co when made 1889
 Makers made at do By whom made do when made 1889
 Registered Horse Power 350 Owners George Swaddy & Co Port belonging to Liverpool

GINES, &c.—
 Description of Engines Quadruple Expansion four cranks
 Diameter of Cylinders 21.29.42.60 Length of Stroke 42 No. of Rev. per minute 32 1/2 Point of Cut off, High Pressure 32 1/2 Low Pressure 33 1/2
 Diameter of Screw shaft 11 1/4 Diam. of Tunnel shaft 10 3/8 Diam. of Crank shaft journals 11 1/4 Diam. of Crank pin 11 1/4 size of Crank webs 7 1/2 x 18
 Diameter of screw 1 1/4 Pitch of screw 17 1/2 No. of blades 4 state whether moveable no total surface 75-8
 of Feed pumps 1 diameter of ditto 4 Stroke 9 Can one be overhauled while the other is at work yes
 of Bilge pumps 2 diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work yes
 Where do they pump from Engine Space. Holds. Tanks. After well. Hot well & Sea
 of Donkey Engines 2 Size of Pump 4 x 9 & 8 x 10 Where do they pump from Engine Space. Holds
After well. Hot well & Sea
 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
 of bilge injections 1 and sizes 4 Are they connected to condenser, or to circulating pump Circulating pump
 Are the pumps worked Levers over Condenser
 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
 Are all pipes 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
 Have the stern tube, propeller, screw shaft, and all connections examined in dry dock —
 Is the screw shaft tunnel watertight — and fitted with a sluice door yes worked from Upper platform

BOILERS, &c.—
 Number of Boilers 2 Description Cylindrical Simple end Whether Steel or Iron Steel
 Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 6.9.89. To J.C. 2975
 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 —
 Area of square feet of fire grate surface in each boiler 5-5 Description of safety valves Spring No. to each boiler 2
 Area of each valve 5.94 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 Ship Side Diameter of boilers 13.9
 Length of boilers 10.6 description of riveting of shell long. seams N.B. Straps circum. seams Lap double Thickness of shell plates 1 1/2
 Diameter of rivet holes 1 1/8 whether punched or drilled Drilled pitch of rivets 8 1/4 Lap of plating 23 1/2
 Percentage of strength of longitudinal joint 83.3 working pressure of shell by rules 180.4 size of manholes in shell 16 x 12
 of compensating rings 7 1/2 x 1 1/2 No. of Furnaces in each boiler 3
 Inside diameter 3.6 length, top 7.0 bottom 9.0 thickness of plates 1 1/2 description of joint Welded if rings are fitted —
 Shortest length between rings — working pressure of furnace by the rules 180 combustion chamber plating, thickness, sides 5/8 back 5/8 top 5/8
 Number of stays to ditto, sides 8 back 8 top 20 If stays are fitted with nuts or riveted heads into working pressure of plating by rules 187
 Diameter of stays at smallest part 1 1/2 working pressure of ditto by rules 180 end plates in steam space, thickness 1 1/2
 Number of stays to ditto 14 1/2 x 14 1/2 how stays are secured Welded working pressure by rules 181 diameter of stays at smallest part 2 1/2
 working pressure by rules 180 Front plates at bottom, thickness 4/6 Back plates, thickness 1 1/2
 Shortest pitch of stays 12 1/2 working pressure by rules 180 Diameter of tubes 3 1/2 pitch of tubes 4 1/2 x 4 1/2 thickness of tube plates, front 1 1/2 back 1 1/2 how stayed Takes pitch of stays 9 1/2 width of water spaces 5
 Diameter of Superheater or Steam chest none length — thickness of plates — description of longitudinal joint — diam. of rivet holes —
 Number 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 —

Report made 30th Dec 1889

Description of furnaces

NWC 11-0235

DONKEY BOILER—

Description

Horizontal tubular two furnaces

Made at Reverend by whom made Richard Richardson & Co when made 6.9.89 where fixed On deckWorking pressure 80 tested by hydraulic pressure to 100 No. of Certificate 2976 fire grate area 27.2 description of safetyvalves Spring No. of safety valves 2 area of each 1.94 if fitted with easing gear 308 if steam from main boilersenter the donkey boiler ho diameter of donkey boiler 8.6 length 8.6 description of riveting Lap tubesThickness of shell plates 1 3/32 diameter of rivet holes 3/4 whether punched or drilled drilled pitch of rivets 2 1/8 lap of plating 5per centage of length of joint 74 thickness of crown plates 5/8 stayed by 6 blue stayDiameter of furnace, top 2.8 bottom - length of furnace 6.0 thickness of plates 7/16 description of joint LapThickness of furnace crown plates 1 1/2 stayed by 1 1/2 Stay stay working pressure of shell by rules 80Working pressure of furnace by rules 89 diameter of uptake 1 1/2 thickness of plates 5/8 thickness of water tubes Ordina

SPARE GEAR. State the articles supplied:—

2 Main bearing bolts & nuts. 2 top end
bolts & nuts. 2 bottom end bolts & nuts. 1 Set of Shaft coupling
bolts & nuts. 1 pair of top end and 1 pair of bottom end bracket
friction rings & springs. propeller. 2 yard valves & seats. 2 Bilge
valves & seats. Nuts & bolts & iron

The foregoing is a correct description,

Richard Richardson & Co

Manufacturer.

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

The machinery has been
 Specially Surveyed during construction the material and
 workmanship good and renders the vessel eligible in my
 opinion to have the Read + L.N.C. 11.89 in the Register
 Book of the Society.

Heating Surface = 3564 sqH.P. as per rule 235 H.P.

It is submitted that this vessel is
 eligible to have + L.N.C. 11-89 recorded
 R.D.

5-12-89

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

Special £ 31 : 15 : -

Donkey Boiler Fee £ - : - : -

Certificate (if required) £ gratis 7.12.1889

To be sent as per margin.

(Travelling Expenses, if any, £)

Committee's Minute

FRIDAY 6 DEC 1889

+ L.N.C. 11/89

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