

REPORT ON MACHINERY.

8686 (W. 8686) No. 624 (Mdb) Port of Middlesbrough-on-Tees Received at London Office 6 JAN 92
 No. in Survey held at Stockton-on-Tees Date, first Survey 10th Sept Last Survey 28th Nov 1891
 Reg. Book. on the Screw Steamer "Honiton" (Number of Visits 2) Tons { Gross 2454 Net 1585
 Master Page Built at West Hartlepool By whom built Furness, Withy & Co Ltd When built 1891
 Engines made at Stockton-on-Tees By whom made Blair & Co Limited when made 1891
 Boilers made at Stockton-on-Tees By whom made Blair & Co Limited when made 1891
 Registered Horse Power 230 Owners Commercial S.S. Co Ltd Port belonging to London
 Manufacturers HP 200 Rule HP 245
 ENGINES, &c.—
 Description of Engines Triple expansion, Inverted, Direct Acting, 3 cranks. No. of Cylinders Three
 Diam. of Cylinders 22½"-34"-61" Length of Stroke 42" Rev. per minute 60 Point of Cut off, High Pressure ·5 Low Pressure ·5
 Diameter of Screw shaft 12½" Diam. of Tunnel shaft 11½" Diam. of Crank shaft journals 12" Diam. of Crank pin 12½" size of Crank webs 19½" x 8½"
 Diameter of screw 16' 0" Pitch of screw 16' 0" No. of blades 4 state whether moveable no total surface 71 sq. ft.
 No. of Feed pumps 2 diameter of ditto 3½" Stroke 30" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 diameter of ditto 4½" Stroke 30" Can one be overhauled while the other is at work Yes
 Where do they pump from Fore, Main & after Holds, Engine room, Sea, Tanks, Funnel & after peak.
 No. of Donkey Engines Two Size of Pumps (4" x 8") (9" x 10") Where do they pump from Feed - Sea, Hotwell & Tanks.
Ballast - Fore, Main & after Holds, Engine room, Tanks, Funnel and after peak.
 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 2 and sizes 4½" Are they connected to condenser, or to circulating pump Circulating pump.
 How are the pumps worked By levers from the crosshead of the after 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 Awash.
 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 New vessel.
 Is the screw shaft tunnel watertight yes and fitted with a sluice door Yes worked from Top platform in engine room.

BOILERS, &c.—
 No. of Boilers Two Description 6 ft 6 in. diam. single ended Material Steel Letter (for record) S.
 Working Pressure 160 lbs. Tested by hydraulic pressure to 320 lbs Date of test 10th November 1891 (10345)
 Description of superheating apparatus or steam chest None Heating surface 3740 sq. feet.
 Can each boiler be worked separately Yes Can the superheater be shut off and the boiler worked separately ✓
 No. of square feet of fire grate surface in each boiler 44 Description of safety valves Direct spring No. to each boiler Two.
 Area of each valve 4.06 sq. in. 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 About 10" Diameter of boilers 14' 6 3/8"
 Length of boilers 10' 0" description of riveting of shell long. seams D.B. Shape, Triple circum. seams Lap Double Thickness of shell plates 1 1/16"
 Diameter of rivet holes 1 1/8" whether punched or drilled Drilled pitch of rivets 8 1/4" 4 1/2" Lap of plating 1 1/4" wide. 6 1/2"
 Per centage of strength of longitudinal joint 84 working pressure of shell by rules 164 lbs size of manholes in shell 16" x 12"
 Size of compensating rings 28" x 24" x 1 1/8" No. of Furnaces in each boiler 3 Description of Furnaces Ribbed.
 Outside diameter 3' 5" length 6' 3" thickness of plates 1/2" description of joint Welded. if rings are fitted ✓
 Greatest length between rings ✓ working pressure of furnace by the rules 169 lbs combustion chamber plating, thickness, sides 3/8" back 3/8" top 7/16"
 Pitch of stays to ditto, sides 1/2" x 1/2" back 1/2" x 1/2" top 1/2" x 1/2" If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 182 lbs Diameter of stays at smallest part 1 1/8" diam working pressure of ditto by rules 145 lbs end plates in steam space, thickness 1 1/2"
 Pitch of stays to ditto 15" x 15" how stays are secured Double nut washers working pressure by rules 227 lbs diameter of stays at smallest part 2 1/2" diam working pressure by rules 163 lbs Front plates at bottom, thickness 1" Back plates, thickness 1"
 Greatest pitch of stays 11 1/4" x 7 1/4" working pressure by rules 185 lbs Diameter of tubes 3 1/2" pitch of tubes 4 1/2" x 4 5/8" thickness of tube plates, front 1" back 7/8" how stayed Stay tubes pitch of stays 13 1/2" x 9 1/4" width of water spaces 1 1/4" x 5"
 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 ✓

Steel
DONKEY BOILER— Description *Cestus patent*
Made at *Gateshead* by whom made *Clarke, Chapman & Co* when made *10.9.91* where fixed *In Store hold*
Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs*. No. of Certificate *3403* fire grate area *18 sq. ft* description of safety
valves *Spring* No. of safety valves *one* area of each *9.62* if fitted with easing gear *yes* if steam from main boiler
enter the donkey boiler *no* diameter of donkey boiler *6'0"* length *15'0"* description of riveting *Lap D.R.*
Thickness of shell plates *3/16"* diameter of rivet holes *1/8"* whether punched or drilled *no* pitch of rivets *3 3/16"* lap of plating *4"*
per centage of strength of joint *72* thickness of crown plates *3/16"* stayed by *Six - 1 1/2" x 1/2" Stays*
Diameter of furnace, top *2'8"* bottom *5'1"* length of furnace *4'6"* thickness of plates *3/16"* description of joint *Lap Single*
Thickness of furnace crown plates *3/16"* stayed by *Same as shell crown plates* working pressure of shell by rules *94 lbs*
Working pressure of furnace by rules *98 lbs* diameter of ^{live} uptakes *10 to 13"* thickness of plates *3/16"* thickness of water ^{live} tubes *3/16"*

SPARE GEAR. State the articles supplied:— *One Propeller, One crank shaft, A set of bolts & nuts for the connecting rod, main bearing, & shaft coupling, A set of valves for the air circulating, feed & bilge pumps, A set of piston rings, Bolts, nuts, & Iron assorted.*

The foregoing is a correct description.

Robt Blair & Co
4/11 Blair

Manufacturers of all kinds of Engines & Boilers.

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

The main steam pipes have been tested by hydraulic pressure to 320 lbs per sq. in. and found tight. The Engines and main Boilers have been constructed under Special Survey, and the materials and workmanship employed are of the best description. They have been examined under steam and worked satisfactorily.

The Machinery throughout is now in good and efficient condition, and will be eligible in my opinion to have the notation *L.M.C. 12.91.* marked in the Society's Register Book when the following work has been completed: All sluice valves, and suction pipes in holds to be finished as per approved plans, Riveting of funnel shaft stools to be completed; Watertight doors to be fitted on engine room bulkheads; Donkey boiler to be secured in place, mountings to be fitted and its safety valve adjusted under steam; and Spare gear to be supplied.

The above-mentioned work has been executed and the spare gear supplied in accordance with the Rules.

R. Stoddart

MACHINERY CERTIFICATE
WRITTEN.

Certificate (if required) to be sent to

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

Special £ *32* : *5* : -

Donkey Boiler Fee £ : : -

5.1.1892

(Travelling Expenses, if any, £)

Committee's Minute

JAN. 12 JAN 1892

+ L.M.C. 12.91

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



Lloyd's Register
Foundation