

REPORT ON MACHINERY.

Port of Sunderland

Received at London Office _____ 1901

No. in Survey held at Sunderland Date, first Survey 22nd Jan'y Last Survey 24th Oct, 1901
 Reg. Book. _____ (Number of Visits 22)
 on the Screw Steamer "Corby" Tons { Gross 3496.41
 Net 2279.74
 Master W. Richardson Built at Sunderland By whom built J. R. Thompson & Sons Ltd When built 1901
 Engines made at Sunderland By whom made John Dickinson & Sons Ltd (549) when made 1901
 Boilers made at Sunderland By whom made John Dickinson & Sons Ltd when made 1901
 Registered Horse Power _____ Owners Comythian Shipping Co Ltd Port belonging to Liverpool
 Nom. Horse Power as per Section 28 291 Is Refrigerating Machinery fitted no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 24" 40" 65" Length of Stroke 42 Revs. per minute 70 Dia. of Screw shaft as per rule 11.24 Lgth. of stern bush 57"
 Dia. of Tunnel shaft as per rule 10.8 Dia. of Crank shaft journals as per rule 11.37 Dia. of Crank pin 11 3/4" Size of Crank webs patent Dia. of thrust shaft under collars 12 3/4" Dia. of screw 16'-3" Pitch of screw 16'-3" No. of blades 4 State whether moveable no Total surface 72.5 sqft
 No. of Feed pumps 2 Diameter of ditto 3 1/4" Stroke 21" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 4 1/4" Stroke 21" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 2 Sizes of Pumps feed 6 x 4 x 6 Duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 3 1/2" dia port & starboard wing, one 3 1/2" centre. 3 1/2" aft well. 2 1/2" aft peak In Holds, &c. two 3 1/2" dia in each hold
 No. of bilge injections 1 sizes 4 Connected to condenser, or to circulating pump C.P Is a separate donkey suction fitted in Engine room & size yes 4"
 Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible yes
 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 yes
 Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times yes
 Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges yes
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock two times Is the screw shaft tunnel watertight yes
 Is it fitted with a watertight door yes worked from Top platform.

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 4618 sqft Is forced draft fitted no
 No. and Description of Boilers 2. S. B. Cyl^{al} Multitubular Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs
 Date of test 12-7-01 Can each boiler be worked separately yes Area of fire grate in each boiler 56 sqft No. and Description of safety valves to each boiler two direct Spring Area of each valve 8.3" Pressure to which they are adjusted 165 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 15'-6" Length 10'-6" Material of shell plates Steel
 Thickness 1 5/32" Range of tensile strength 28/32 tons Are they welded or flanged no Descrip. of riveting: cir. seams S. A. Rap long. seams In R. DR S
 Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 9/16" Lap of plates or width of butt straps 18 3/8"
 Percentages of strength of longitudinal joint rivets 92.18% Working pressure of shell by rules 165 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring 8 1/2" x 1 5/32" No. and Description of Furnaces in each boiler 4 plain Material Steel Outside diameter 39"
 Length of plain part top 6'-8" bottom 7'-4" Thickness of plates top 23" bottom 32" Description of longitudinal joint weld No. of strengthening rings yes
 Working pressure of furnace by the rules 162 lbs Combustion chamber plates: Material Steel Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 1"
 Pitch of stays to ditto: Sides 9 x 11 Back 10 x 10 Top 9 x 9 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 162 lbs
 Material of stays Steel Diameter at smallest part 2.03 Area supported by each stay 113.75 Working pressure by rules 161 lbs End plates in steam space:
 Material Steel Thickness 1" Pitch of stays 18 x 16 1/4" How are stays secured S. N. & L. Working pressure by rules 161.2 lbs Material of stays Steel
 Diameter at smallest part 5.05 Area supported by each stay 292.5 Working pressure by rules 172.5 Material of Front plates at bottom Steel
 Thickness 3/4" Material of Lower back plate Steel Thickness 2 5/32" Greatest pitch of stays 12 3/4" x 10" Working pressure of plate by rules 161 lbs
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" Material of tube plates Steel Thickness: Front 29/32" Back 7/8" Mean pitch of stays 9"
 Pitch across wide water spaces 13 1/4" Working pressures by rules 162 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 6 1/4" x 1 x 2 Length as per rule 27 7/16" Distance apart 9" Number and pitch of Stays in each 299 pitch
 Working pressure by rules 171 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked separately yes
 Diameter yes Length yes Thickness of shell plates yes Material yes Description of longitudinal joint yes Diam. of rivet holes yes Pitch of rivets yes Working pressure of shell by rules yes Diameter of flue yes Material of flue plates yes Thickness yes
 If stiffened with rings yes Distance between rings yes Working pressure by rules yes End plates: Thickness yes How stayed yes
 Working pressure of end plates yes Area of safety valves to superheater yes Are they fitted with easing gear yes

[500-13801-Copyable Ink.]



DONKEY BOILER— No. *one* Description *Vertical*
 Made at *Gateshead* By whom made *Clark Chapman & Co Ltd* When made *14.8.01* Where fixed *on deck*
 Working pressure *115 lb* tested by hydraulic pressure to *230 lb* No. of Certificate *6140* Fire grate area *25 sq ft* Description of safety valves *direct spring*
 No. of safety valves *2* Area of each *8.2* Pressure to which they are adjusted *715 lb* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No* Dia. of donkey boiler *7 ft* Length *15 ft* Material of shell plates *Steel* Thickness *9/16* Range of tensile strength *28 ton* Descrip. of riveting long seams *S.R. Lap* Rivets *68.5%* Thickness of shell crown plates *3/4* Radius of do. *7 ft* No. of Stays to do. *7*
 Lap of plating *4 13/16* Per centage of strength of joint *70.3%* Plates *70.3%* Thickness of shell crown plates *3/4* Radius of do. *7 ft* No. of Stays to do. *7*
 Dia. of stays *1 1/2* Diameter of furnace *6'-3"* Bottom *Length of furnace 3'-1"* Thickness of furnace plates *11/16* Description of joint *S.R. Lap* Thickness of furnace crown plates *2 3/32* Stayed by *Yes* Working pressure of shell by rules *115 lb*
 Working pressure of furnace by rules *Yes* Diameter of uptake *2 1/2* Thickness of uptake plates *F 13/16 B 3/4* Thickness of water tubes *10.10.9.*

SPARE GEAR. State the articles supplied: *Two top end bolts and nuts, two bottom end bolts and nuts, two main bearing bolts and nuts, set of coupling bolts and nuts, spare feed and bilge pump valves, assorted iron bolts & nuts, (Spare Tail end shaft spare propeller.)*

The foregoing is a correct description,
John Dickinson & Sons, Limited,
J. Dickinson Manufacturer of *main engine boilers*

Dates of Survey while building
 During progress of work in shops - - Director *1901 - Jan. 22, Apr. 4, May 20, 21, 22, June 11, 12, 18, 21, July 1, 6, 12, 29, Sept 14*
 During erection on board vessel - - *11, 12, Oct. 1, 4, 7, 10, 14, 24*
 Total No. of visits *22* Is the approved plan of main boiler forwarded herewith *Yes*
 " " " donkey " " " *Yes*

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

Material of screw shaft *wrought iron* Is the screw shaft fitted with a continuous liner the whole length of the stern tube *No*
 Is the after end of the liner made water tight in the propeller boss *Yes* If the liner is in more than one length are the joints burned *Yes*
 If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *Yes* If two liners are fitted, is the shaft lapped or protected between the liners *Painted*

The machinery built under Special Survey the material and workmanship found good and efficient -
The main boilers and steam pipes tested under hydraulic pressure 320 lb. per square inch and found sound and satisfactory -
The Engines tried under steam at their working pressures & found satisfactory -
In my opinion this vessel is worthy of the notification R.M.C. 10.01 to be made in the Register Book -

It is submitted that this vessel is eligible for THE RECORD, + L.M.C. 10.01.

The amount of Entry Fee. £ *2* : : When applied for, *5.11.01*
 Special £ *34* 11 : : 19..01
 Donkey Boiler Fee £ : : : When received, *7.11.01*
 Travelling Expenses (if any) £ : : : 19..01

L.S. M.S.
6.11.01 6.11.01
Leonard Shallerors.
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

FRI. NOV 8 1901

Committee's Minute

Assigned

+ L.M.C. 10.01



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Certificate (if required) to be sent to the Surveyors or below the space for Committee's Minute.