

# REPORT ON MACHINERY.

Received at London Office FRI 18 MAY 1894

No. 12954 Port of Glasgow  
 No. in Survey held at Glasgow Date, first Survey 29<sup>th</sup> August 1891 Last Survey 10<sup>th</sup> May 1894  
 Reg. Book. 478 on the S. S. Holme Wood (x Scale Force) (Number of Visits 19)  
 Master Green Built at Workington By whom built R. Williamson & Son When built 1883  
 Engines made at Ayr By whom made J & T Young when made 1883  
 Boilers made at Glasgow By whom made Hutson & Son when made 1894  
 Registered Horse Power 50 Owners R. Williamson & Son Port belonging to Workington

## ENGINES, &c.—

Description of Engines \_\_\_\_\_ No. of Cylinders \_\_\_\_\_  
 Diam. of Cylinders \_\_\_\_\_ Length of Stroke \_\_\_\_\_ Rev. per minute \_\_\_\_\_ Point of Cut off, High Pressure \_\_\_\_\_ Low Pressure \_\_\_\_\_  
 Diameter of Screw shaft \_\_\_\_\_ Diam. of Tunnel shaft \_\_\_\_\_ Diam. of Crank shaft journals \_\_\_\_\_ Diam. of Crank pin \_\_\_\_\_ size of Crank webs \_\_\_\_\_  
 Diameter of screw \_\_\_\_\_ Pitch of screw \_\_\_\_\_ No. of blades \_\_\_\_\_ state whether moveable \_\_\_\_\_ total surface \_\_\_\_\_  
 of Feed pumps \_\_\_\_\_ diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_  
 of Bilge pumps \_\_\_\_\_ diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_  
 do they pump from \_\_\_\_\_  
 of Donkey Engines \_\_\_\_\_ Size of Pumps \_\_\_\_\_ Where do they pump from \_\_\_\_\_

• All the bilge suction pipes fitted with roses \_\_\_\_\_ Are the roses always accessible \_\_\_\_\_ Are the sluices on Engine room bulkheads always accessible \_\_\_\_\_  
 No. of bilge injections \_\_\_\_\_ and sizes \_\_\_\_\_ Are they connected to condenser, or to circulating pump \_\_\_\_\_  
 How are the pumps worked \_\_\_\_\_  
 Are all connections with the sea direct on the skin of the ship \_\_\_\_\_ Are they Valves or Cocks \_\_\_\_\_  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates \_\_\_\_\_ Are the discharge pipes above or below the deep water line \_\_\_\_\_  
 Are they each fitted with a discharge valve always accessible on the plating of the vessel \_\_\_\_\_ Are the blow off cocks fitted with a spigot and brass covering plate \_\_\_\_\_  
 What pipes are carried through the bunkers \_\_\_\_\_ How are they protected \_\_\_\_\_  
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times \_\_\_\_\_  
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges \_\_\_\_\_  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock \_\_\_\_\_  
 Is the screw shaft tunnel watertight \_\_\_\_\_ and fitted with a sluice door \_\_\_\_\_ worked from \_\_\_\_\_

## BOILERS, &c.—

No. of Boilers One Description S. E. Multitubular Material Steel Letter (for record) \_\_\_\_\_  
 Working Pressure 80 lbs. Tested by hydraulic pressure to 160 lbs. Date of test 9<sup>th</sup> November 1891.  
 Description of superheating apparatus or steam chest None  
 Can each boiler be worked separately \_\_\_\_\_ Can the superheater be shut off and the boiler worked separately \_\_\_\_\_  
 No. of square feet of fire grate surface in each boiler 3009 ft. Description of safety valves d. Spring No. to each boiler two  
 Area of each valve 40" 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 9" Diameter of boilers 10'-0"  
 Length of boilers 9'-6" description of riveting of shell long. seams treb riv. lap circum. seams d. lap Thickness of shell plates 37/64  
 Diameter of rivet holes 15/16" whether punched or drilled drilled pitch of rivets 3 3/4" Lap of plating 7"  
 Percentage of strength of longitudinal joint 45% working pressure of shell by rules 81 lbs. size of manholes in shell 12 x 16  
 Size of compensating rings 5/8 dbl. pt. No. of Furnaces in each boiler two Description of Furnaces plain  
 Outside diameter 36" length 6'-5" thickness of plates 15/32 description of joint d. butt str. if rings are fitted \_\_\_\_\_  
 Greatest length between rings \_\_\_\_\_ working pressure of furnace by the rules 83 lbs. combustion chamber plating, thickness, sides 15/32 back 15/32 top 15/32  
 Pitch of stays to ditto, sides 9" back 9" top 9 1/4" If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 83 lbs. Diameter of stays at smallest part 1 1/2" working pressure of ditto by rules 101 lbs. and plates in steam space, thickness 5/8 washers  
 Pitch of stays to ditto 14 1/2" x 14 1/2" how stays are secured d. nuts working pressure by rules 83 lbs. diameter of stays at smallest part 2" iron working pressure by rules 89 lbs. Front plates at bottom, thickness 5/8" Back plates, thickness 5/8"  
 Greatest pitch of stays 12 1/4" working pressure by rules 80 lbs. Diameter of tubes 3 1/4" pitch of tubes 4 3/8" thickness of tube plates, front 5/8" back 5/8" how stayed stubes pitch of stays 8 1/2" x 13 1/8" width of water spaces 6 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 \_\_\_\_\_

[142.—L.R.P.H.—2400.—Form No. 8.—Copyable Ink.]



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NO DONKEY BOILER—

Description

Made at \_\_\_\_\_ by whom made \_\_\_\_\_ when made \_\_\_\_\_ where fixed \_\_\_\_\_

Working pressure \_\_\_\_\_ tested by hydraulic pressure to \_\_\_\_\_ No. of Certificate \_\_\_\_\_ fire grate area \_\_\_\_\_ description of safety valves \_\_\_\_\_

No. of safety valves \_\_\_\_\_ area of each \_\_\_\_\_ if fitted with easing gear \_\_\_\_\_ if steam from main boilers can enter the donkey boiler \_\_\_\_\_ diameter of donkey boiler \_\_\_\_\_ length \_\_\_\_\_ description of riveting \_\_\_\_\_

Thickness of shell plates \_\_\_\_\_ diameter of rivet holes \_\_\_\_\_ whether punched or drilled \_\_\_\_\_ pitch of rivets \_\_\_\_\_ lap of plating \_\_\_\_\_

per centage of strength of joint \_\_\_\_\_ thickness of crown plates \_\_\_\_\_ stayed by \_\_\_\_\_

Diameter of furnace, top \_\_\_\_\_ bottom \_\_\_\_\_ length of furnace \_\_\_\_\_ thickness of plates \_\_\_\_\_ description of joint \_\_\_\_\_

Thickness of furnace crown plates \_\_\_\_\_ stayed by \_\_\_\_\_ working pressure of shell by rules \_\_\_\_\_

Working pressure of furnace by rules \_\_\_\_\_ diameter of uptake \_\_\_\_\_ thickness of plates \_\_\_\_\_ thickness of water tubes \_\_\_\_\_

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

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

The old boiler has been taken out of the vessel and a new one, of the dimensions given on other side, fitted in its place and properly secured. This boiler has been built under special survey and is of good workmanship and material, the safety valves have been adjusted to a working pressure of 80 lbs per sq. inch.

For particulars of docking and examination of engines see Barrow Report.

The vessel is now in our opinion eligible to be noted in the Society's Register: *L.M.C. 5. 94*  
*N.B. 94.*

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 4-92 and N.B. 11-91

on acct of tear & wear a new main boiler was fitted  
W.A.  
21. 5. 94

Certificate (if required) to be sent to

The amount of Entry Fee .. £ : : received by me,  
Special .. .. £ : :  
Donkey Boiler Fee .. .. £ 3 : 3 :

14/5 1894

John Sanderford James Morrison  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

(Travelling Expenses, if any, £)

Committee's Minute

TUES. 22 MAY 1894

+ L.M.C. 4. 92  
+ N.B. 11. 91.

FRIDAY 21 SEP 1894

FRIDAY 19 OCT 1894



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