

REPORT ON MACHINERY.

No. 355.

Received at London Office MONDAY 29 SEPT 1884

No. in Survey held at Aberdeen Date, first Survey 7/2/83 Last Survey 19th Sept 1884
 Reg. Book. 382 on the S.S. Glen-Tanar Tons 1024
 Master P. Eason Built at Aberdeen By whom built A. Hall & Co When built 1884
 Engines made at Aberdeen By whom made Hall Russell & Co when made 1884
 Boilers made at Aberdeen By whom made Hall Russell & Co when made 1884
 Registered Horse Power 150 Owners Aberdeen Glen Ste. Ship Co Port belonging to Aberdeen

ENGINES, &c.—

Description of Engines Direct Acting Compound Int. Cyl. Surface Condensing
 Diameter of Cylinders 30" & 57" Length of Stroke 36" No. of Rev. per minute 65 Point of Cut off, High Pressure 1/2 Low Pressure 1/2
 Diameter of Screw shaft 10 1/2" Diam. of Tunnel shaft 10 1/4" Diam. of Crank shaft journals 10 3/4" Diam. of Crank pin 10 3/4" size of Crank webs 8" x 12 1/2"
 Diameter of screw 14" & 2" Pitch of screw 18" & 0" No. of blades 4 state whether moveable sol total surface 56 feet
 No. of Feed pumps Two diameter of ditto 3" Stroke 2 1/2" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps Two diameter of ditto 3 1/2" Stroke 2 1/2" Can one be overhauled while the other is at work Yes
 Where do they pump from all compartments
 No. of Donkey Engines Two Size of Pumps 8" x 10" & 8" x 7" & 3 1/2" Where do they pump from Tanks & all compartments
thru Condensers & ship side from sea Halwell to boilers and on Deck
 Are all the bilge suction pipes fitted with roses Yes Are the roses always accessible Yes when vessel not loaded
 Are the sluices on Engine room bulkheads always accessible Yes
 No. of bilge injections one and sizes 4 1/2" Are they connected to condenser, or to circulating pump Circulating pump
 How are the pumps worked by levers from after engines
 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 —
 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 before being launched
 Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Top of cylinders

BOILERS, &c.—

Number of Boilers Two Description Circular Tubular Whether Steel or Iron Steel
 Working Pressure 100 lbs Tested by hydraulic pressure to 200 lbs Date of test 20th August 1884
 Description of superheating apparatus on steam chest Horizontal Chest
 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 45 feet Description of safety valves Direct Spring 2 No. to each boiler Two
 Area of each valve 9.62^{sq} ft 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 20" Diameter of boilers 11' 10"
 Length of boilers 9' 8" description of riveting of shell long. seams Butt D.R. circum. seams Lap D.R. Thickness of shell plates 1 1/2"
 Diameter of rivet holes 1 1/8" whether punched or drilled drilled pitch of rivets 3 3/4" Lap of plating 12" & 4 1/2"
 Per centage of strength of longitudinal joint 75 & 76 % working pressure of shell by rules 98 lbs size of manholes in shell 16" x 11 1/2"
 Size of compensating rings angle 5" x 3 1/2" x 3" riveted to shell No. of Furnaces in each boiler Three
 Outside diameter 37" length, top 6' 3" bottom 8' 9" thickness of plates 3 1/2" description of joint Butt S.R. if rings are fitted half angle
 Greatest length between rings 6' 3" working pressure of furnace by the rules 109 lbs combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"
 Pitch of stays to ditto, sides 8 3/4" x 8 3/4" back 8 3/4" x 8 3/4" top round If stays are fitted with nuts or riveted heads nut & both ends working pressure of plating by rules 101 lbs
 Diameter of stays at smallest part 1 1/2" working pressure of ditto by rules 772 lbs end plates in steam space, thickness 1 1/2"
 Pitch of stays to ditto 15" x 15" how stays are secured thru ends & nut working pressure by rules 105 lbs diameter of stays at smallest part 2 3/8" working pressure by rules 6428 lbs Front plates at bottom, thickness 1 3/8" Back plates, thickness 1 3/8"
 Greatest pitch of stays 10" x 8 3/4" working pressure by rules 7291 lbs Diameter of tubes 3 1/4" pitch of tubes 4 1/2" thickness of tube plates, front 1 1/2" back 1 1/2" how stayed Tubes & nut pitch of stays 9" x 9" width of water spaces 1 1/4"
 Diameter of ~~superheater~~ Steam chest 36" length 6' 6" thickness of plates 1 1/2" description of longitudinal joint Lap D.R. diam. of rivet holes 3"
 Pitch of rivets 2 1/8" working pressure of shell by rules 200 lbs 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 3 1/4" how stayed 20 lbs
~~superheater~~ or steam chest; how connected to boiler one neck riveted to shell

DONKEY BOILER— Description *one Round Vertical three Cross Tubes*
 Made at *Aberdeen* by whom made *Hall Russell & Co* when made *1884* where fixed *Stoke hold*
 Working pressure *70 lbs* tested by hydraulic pressure to *140 lbs* No. of Certificate *321* fire grate area *13 feet* description of safety
 valves *Direct Spring Load* No. of safety valves *one* area of each *8.3* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *5.0* length *12.6* description of riveting *Lap double riveted*
 Thickness of shell plates *1/2* diameter of rivet holes *3/4* whether punched or drilled *Punched* pitch of rivets *2 3/8* lap of plating *3 1/2*
 per centage of strength of joint *71 & 74 %* thickness of crown plates *7/16* stayed by *5 flat stays 2 1/4 x 3/4* riveted to top & sides
 Diameter of furnace, top *3.8* bottom *4.4* length of furnace *6.0* thickness of plates *1/2* description of joint *Lap S. R.*
 Thickness of furnace crown plates *1/2* stayed by *Dished* working pressure of shell by rules *91 lbs*
 Working pressure of furnace by rules *77 lbs* diameter of uptake *13* thickness of plates *1/2* thickness of water tubes *5/16*

SPARE GEAR. State the articles supplied:— *Two Top and Bottom end Connecting Rod bolts*
Two main bearing bolts. lot of bolts assorted. one set each valves
and seats for feed and bilge pumps 1/2 set piston springs one
propeller set bottom end connecting rod brasses lot of iron assort &c
 The foregoing is a correct description,
Hall Russell & Co Manufacturers.

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel*
has been built under special survey and in accordance with
plans of boilers submitted for the Committee's approval dated 10/2/83
The material & workmanship are of the best description.

Both engines, and Boilers have been tested under steam
and the safety valves set to 100 lbs per square inch working pressure
and in my opinion all are in good, and safe working order and
eligible to be entered into the Register Book with the distinctive
mark. L.M.C 9.84.

It is submitted that this vessel is
 eligible to have the registration
 + am to 9.84 recorded

29/9/84

The amount of Entry Fee £ 2 : 0 : 0 received by me,

Special £ 22 : 10 : 0

Donkey Boiler Fee £ : :

Certificate (if required) £ : : 23/9/1884

To be sent as per margin.

(Travelling Expenses, if any, £ 5-9-6)

Committee's Minute

FRIDAY 3 OCT 1884

L M C

John Sturrock
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Sunderland District