

REPORT ON MACHINERY.

No. 365

Received at London Office MONDAY 21 DEC 1884

No. in Survey held at Aberdeen Date, first Survey 10th July 84 Last Survey 3rd Decr 1884

Reg. Book. on the S.S. "Gleneagles" Tons

Master J. Grant Built at Aberdeen By whom built Hall Russell & 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 70 Owners J. Fleming Port belonging to Aberdeen

ENGINES, &c.—

Description of Engines Direct Acting Compound 2wt. Cyls surface Condensing

Diameter of Cylinders 22" & 41" Length of Stroke 27" No. of Rev. per minute 90 Point of Cut off, High Pressure 1/2 Low Pressure 1/2

Diameter of Screw shaft 7" steel Diam. of Tunnel shaft 7" Diam. of Crank shaft journals 7 1/2" Diam. of Crank pin 7 1/2" size of Crank webs 5" x 8 3/4"

Diameter of screw 9" 9" Pitch of screw 15" 0" No. of blades 4 state whether moveable Sol. total surface 35 feet

No. of Feed pumps one diameter of ditto 2 1/2" Stroke 14 1/2" Can one be overhauled while the other is at work —

No. of Bilge pumps one diameter of ditto 2 1/2" Stroke 17 1/2" Can one be overhauled while the other is at work —

Where do they pump from all compartments

No. of Donkey Engines one Size of Pumps 7" x 8" x 3 1/2" Where do they pump from Sea Hotwell Tank.

all compartments to boiler on Deck thro Condenser & ship side

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 one and sizes 2 1/2" Are they connected to condenser, or to circulating pump Circulating

How are the pumps worked by levers from 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 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 one Description Circular Tubular Whether Steel or Iron Steel

Working Pressure 100 lbs Tested by hydraulic pressure to 200 lbs Date of test 17th November 1884

Description of ~~superheating apparatus~~ steam chest Vertical chest

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 41.8 feet Description of safety valves Direct Spring 2 No. to each boiler two

Area of each valve 11.04 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 9" Diameter of boilers 12" 0"

Length of boilers 9" 0" description of riveting of shell long. seams Butt D.N. circum. seams Lap D.N. Thickness of shell plates 7/8"

Diameter of rivet holes 1 3/16" whether punched or drilled drilled pitch of rivets 4 3/4" Lap of plating 12 3/4" & 6 3/4"

Per centage of strength of longitudinal joint 75 & 79% working pressure of shell by rules 117 lbs size of manholes in shell 16" x 11"

Size of compensating rings 5" x 3 1/2" x 3/4" No. of Furnaces in each boiler three

Outside diameter 38" length, top 6" 2" bottom 8" 3" thickness of plates 1 1/2" description of joint butt S.N. if rings are fitted no

Greatest length between rings — working pressure of furnace by the rules 106 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 Nuts both ends working pressure of plating by rules 101 lbs

Diameter of stays at smallest part 1 3/8" B.T. working pressure of ditto by rules 772 1/2 lbs end plates in steam space, thickness 1 3/16"

Pitch of stays to ditto 15" x 15" how stays are secured thro ends nuts working pressure by rules 106 lbs diameter of stays at smallest part 2 3/8" B.T. working pressure by rules 6428 lbs Front plates at bottom, thickness 1 3/16" Back plates, thickness 1 3/16"

Greatest pitch of stays 11 1/2" x 8 3/4" working pressure by rules 3354 lbs Diameter of tubes 3 1/4" pitch of tubes 4 1/2" thickness of tube plates, front 1/16" back 1/16" how stayed tubes thru pitch of stays 13 1/2" x 9" width of water spaces 1 1/4"

Diameter of ~~Superheater~~ Steam chest 3" 0" length 4" 4" thickness of plates 7/16" description of longitudinal joint Lap D.N. diam. of rivet holes 1 3/16"

Pitch of rivets 2 1/2" working pressure of shell by rules 172 1/2 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 3/4" how stayed one butt stay

thro centre 3" diam Superheater or steam chest; how connected to boiler riveted to shells

State of Report is also sent in the Hull of the Ship



ABNS-0118

3570 ABN

DONKEY BOILER *See 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:— *Two each Top & Bottom end connecting rod bolts two main bearing bolts lot bolts assorted one set coupling bolts one set each feed & bilge pump valves one set piston springs pieces of iron various sizes &c &c*

The foregoing is a correct description,
Wm Russell & Co. Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *The Machinery of this vessel has been built under special survey, the material & workmanship are of the best description.*

*The engines and boiler have been tested under steam, and the safety valves set to 100 lbs working pressure, and all found satisfactory, 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 **⊕ I.M.C 12.84.***

This submitted that this vessel is eligible to have the certificate & I.M.C
received M 27/1/84

The amount of Entry Fee *£ 1 : 0 : 0* received by me,
 Special *£ 10 : 10 : 0*
 Donkey Boiler Fee *£ : : :*
 Certificate (if required) *£ : : : 15 Dec 1884*
To be sent as per margin.
 (Travelling Expenses, if any, *£ 3 : 1 : 6*)

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

Committee's Minute

TUESDAY 23 DEC 1884

