

REPORT ON MACHINERY.

3469

No. 269

(Received at London Office) Rec'd 16th JULY, 1883.

No. in Survey held at Aberdeen

Date, first Survey 24/11/82

Last Survey 5th July 1883

Reg. Book.

(Number of Visits)

on the SS Saint Rogwald

Tons 450.98

Master James Mason

Built at Aberdeen

When built 1883

Engines made at Aberdeen

By whom made Hall Russell & Co when made 1883

Boilers made at Aberdeen

By whom made Hall Russell & Co when made 1883

Registered Horse Power 250

Owners North of Scotland & Orkney Port belonging to Aberdeen
Shetland Steam Nav. Co.

ENGINES, &c.—

Description of Engines Direct Acting Compound Invt. Eyr Surface Condensing

Diameter of Cylinders 36" & 70" Length of Stroke 48" No. of Rev. per minute 65 Point of Cut off, High Pressure Exp Low Pressure 1/2

Diameter of Screw shaft 12" steel Diameter of Tunnel shaft 12" Diameter of Crank shaft journals 13" Diameter of Crank pin 13" size of Crank webs 10" x 19"

Diameter of screw 13" 2" Pitch of screw 23" 0" No. of blades 4 state whether moveable bell total surface 58.6 feet

No. of Feed pumps two diameter of ditto 3 3/4" Stroke 29" Can one be overhauled while the other is at work yes

No. of Bilge pumps two diameter of ditto 3 3/4" Stroke 29" Can one be overhauled while the other is at work yes

Where do they pump from all compartments

No. of Donkey Engines one Size of Pumps 8" x 10" x 4 1/2" Where do they pump from all compartments, Sea

Helwell - to boilers. thro Condenser, ship side and on Deck

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 4 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 launch

Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from upper deck

BOILERS, &c.—

Number of Boilers two Description Steel Circular Tubular fired from one end

Working Pressure 90 lbs Tested by hydraulic pressure to 180 lbs Date of test 6th June 1883

Description of ~~boilers~~ steam chest Horizontal drums

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 72 feet Description of safety valves Direct Spring Load (Jumballs)

No. to each boiler 2 area of each valve 19.63" 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 15" 0" Length of boilers 10" 5" description of riveting of shell long. seams Butt D.R. circum. seams 2ap D.R.

Thickness of shell plates 4 1/8" diameter of rivet holes 1 1/4" whether punched or drilled drilled pitch of rivets 5"

Lap of plating 12" x 5" per centage of strength of longitudinal joint 75-80% working pressure of shell by rules 100 lbs

Size of manholes in shell 16" x 13 1/2" size of compensating rings 5" x 3 1/2" x 7/8"

No. of Furnaces in each boiler 4 outside diameter 40" length, top 7" 0" bottom 7" 0"

Thickness of plates 9/16" description of joint Butt S.R. if rings are fitted no greatest length between rings —

Working pressure of furnace by the rules 101 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 7/8" steel working pressure of ditto by rules 6954 lbs

End plates in steam space, thickness 3/32" pitch of stays to ditto 16" x 16" how stays are secured this ends nuts

Working pressure by rules 97 lbs diameter of stays at smallest part 2 1/8" steel working pressure by rules 6582 lbs

Front plates at bottom, thickness 3/4" Back plates, thickness 3/4" greatest pitch of stays 12 x 8 3/4" working pressure by rules 7875 lbs

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

Form No. 8-21/6 (21) 1000.

Foundation

3469 ABn

Diameter of tubes $3\frac{1}{2}$ " pitch of tubes $4\frac{5}{8}$ " thickness of tube plates, front $\frac{3}{4}$ " back $\frac{3}{4}$ "
 How stayed *tubes stays* pitch of stays $9\frac{1}{2}$ " x $9\frac{1}{2}$ " width of water spaces $1\frac{3}{8}$ "
 Diameter of ~~Superheater~~ Steam chest $3\frac{1}{6}$ " length $7\frac{0}{0}$ "
 Thickness of plates $\frac{1}{2}$ " description of longitudinal joint *lap S.R.* diameter of rivet holes $\frac{13}{16}$ " pitch of rivets $2\frac{1}{8}$ "
 Working pressure of shell by rules $17\frac{1}{2}$ lbs Diameter of flue $\frac{1}{2}$ " thickness of plates $\frac{1}{2}$ "
 If stiffened with rings $\frac{1}{2}$ " distance between rings $\frac{1}{2}$ " Working pressure by rules $\frac{1}{2}$ "
 End plates of ~~superheater~~ steam chest; thickness $\frac{3}{4}$ " How stayed *disked and one $2\frac{3}{4}$ " bolt stay*
~~Superheater~~ steam chest; how connected to boiler *by one malleable neck riveted to shells*

DONKEY BOILER— Description *one round vertical*
 Made at *Aberdeen* By whom made *Hall Russell & Co* when made *1883*
 Where fixed *on deck* working pressure 90 lbs Tested by hydraulic pressure to 180 lbs No. of Certificate *263*
 Fire grate area 14 feet Description of safety valves *direct S.V.* No. of safety valves *one* area of each $7\frac{1}{4}$ "
 If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no*
 Diameter of donkey boiler $5\frac{1}{2}$ " length $9\frac{0}{0}$ " description of riveting *lap S.R. in lap S.R.*
 thickness of shell plates $\frac{1}{2}$ " diameter of rivet holes $\frac{3}{4}$ " whether punched or drilled *punched*
 pitch of rivets $2\frac{3}{4}$ " lap of plating $\frac{1}{2}$ " per centage of strength of joint 72%
 thickness of crown plates $9\frac{0}{0}$ " *doubling plate inside stayed by $2\frac{1}{2}$ " bolt stays thro tops of boiler & furnace*
 Diameter of furnace, top $3\frac{1}{10}$ " bottom $4\frac{1}{8}$ " length of furnace $5\frac{1}{3}$ "
 thickness of plates $\frac{1}{2}$ " description of joint *lap S.R.*
 thickness of furnace crown plates $7\frac{0}{0}$ " stayed by *as above*
 Working pressure of shell by rules 90 lbs working pressure of furnace by rules $87\frac{1}{2}$ lbs
 diameter of uptake $1\frac{1}{2}$ " thickness of plates $\frac{1}{2}$ " thickness of water tubes $5\frac{1}{16}$ "

The foregoing is a correct description,
Hall Russell & Co Manufacturers

General Remarks (State quality of workmanship, opinions as to class, &c. *The Engines and Boilers of*)
this vessel have been built under special survey. The material and workmanship are of the best description. The boilers have been tested under steam and the safety valves set to 90 lbs working pressure, and the engines seen at work, 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 R.M.C. 7, 83 .

It is submitted that this vessel is eligible to have the certificate + £m 67 83 recorded
R. S. 16/7/83

The amount of Entry Fee .. £ 3 : 0 : 0 received by me,
 Special £ 32 : 10 : 0
 Certificate (if required) .. £ . : 5 : 0 18
 To be sent as per margin.
 (Travelling Expenses, if any, £ 5.9.6)

Committee's Minute TUESDAY 17 JULY 1883 18

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

