

REPORT ON MACHINERY.

25808

No. 4455

No. in Survey held at Port Glasgow & Greenock Date, first Survey Oct. 24th Last Survey Feb. 21st 1880

(Received in London Office 24/2/80)

on the Iron S.S. Taramung Tons 813.71

Master Sarderson Built at Port Glasgow When built 1880

Engines made at Greenock By whom made Kincaid & Co. when made 1880

Boilers made at Port Glasgow By whom made Wallace & Co. when made 1880

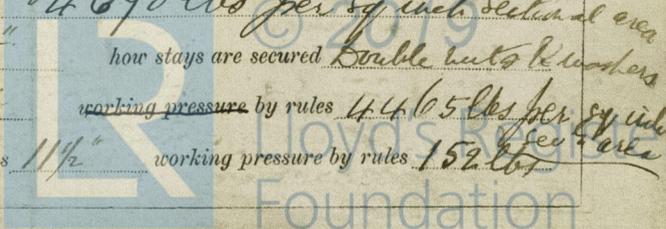
Registered Horse Power 130 Owners Carron & Co. Horraith Port belonging to Melbourne

ENGINES, &c.—

Description of Engines Compound, Inverted, Direct-Acting, Surface condensing
 Diameter of Cylinders 29" & 56" Length of Stroke 39" No. of Rev. per minute 65 Point of Cut off, High Pressure Variable Low Pressure 5/8 stroke
 Diameter of Screw shaft 10" Diameter of Tunnel shaft 9 1/2" Diameter of Crank shaft journals 10" Diameter of Crank pin 10" size of Crank webs 12" x 6 1/2"
 Diameter of screw 13.4" Pitch of screw 16" 3" No. of blades 4 state whether moveable Yes total surface not ascertained
 No. of Feed pumps 2 diameter of ditto 3 1/2" Stroke 20" Can one be overhauled while the other is at work Yes, by shutting cocks
 No. of Bilge pumps 2 diameter of ditto 3 1/2" Stroke 20" Can one be overhauled while the other is at work Yes 5" & 6"
 Where do they pump from Feed pumps from hotwell. Bilge pumps from sea, bilges, tanks.
 No. of Donkey Engines One Size of Pumps 4 1/2" x 10" Where do they pump from Same as main bilge & circulating pump.
Hand pump in Engine Room, which can be worked by main engines.
 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 1 1/2" dia. Are they connected to condenser, or to circulating pump Circulating
 How are the pumps worked By levers, inside and outside centre gudgeon.
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Screw down valves and cocks.
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates As high as bulkers will admit. Are the discharge pipes above or below the deep water line Just above deep water line.
 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 _____ 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 New ship, before being launched.
 Is the screw shaft tunnel watertight _____ and fitted with a sluice door Yes worked from Upper Platform of E. Room.

BOILERS, &c.—

Number of Boilers Two Description Round, Horizontal, Tubular
 Working Pressure 45 lbs Tested by hydraulic pressure to 150 lbs Date of test 4th Jan'y, 1880.
 Description of superheating apparatus or steam chest Longitudinal steam receiver, part in uptake
 Can each boiler be worked separately Yes Can the superheater be shut off and the boiler worked separately No
 No. of square feet of fire grate surface in each boiler 58 sq. ft. Description of safety valves Two direct spring, 15.9 each
 No. to each boiler Two area of each valve 15.9" Are they fitted with easing gear Yes
 No. of safety valves to superheater One area of each valve 4.59" are they fitted with easing gear Yes
 Smallest distance between boilers and bunkers or woodwork 6" to bunkers (iron) Boilers partly seated on wood packing.
 Diameter of boilers 12' 6" Length of boilers 10' 0" description of riveting of shell long. seams Double straps, circum. seams Double riveted, lap.
 Thickness of shell plates 7/8" diameter of rivet holes 7/8" whether punched or drilled Punched pitch of rivets 4 3/8"
 Lap of plating _____ per centage of strength of longitudinal joint 80.0 working pressure of shell by rules 88 lbs
 Size of manholes in shell _____ size of compensating rings _____
 No. of Furnaces in each boiler Three outside diameter 3' 1" length, top 4' 9" bottom 9' 0"
 Thickness of plates 1/2" & 5/8" description of joint Double straps if rings are fitted no greatest length between rings _____
 Working pressure of furnace by the rules 89 lbs at 1/2" thickness of top
 Combustion chamber plating, thickness, sides 15/32" back 1/2" top 15/32"
 Pitch of stays to ditto 8 3/4 x 8 1/2" sides back 8 1/2" x 8 1/2" top 5' x 7' 8" 8 3/4" centres.
 If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 100 lbs at 1/2" thick
 Diameter of stays at smallest part 1 3/8" top low 1 1/2" Strain per sq. inch of stays 84670 lbs per sq. inch sectional area
 Working pressure of ditto by rules _____
 End plates in steam space, thickness 13/16" pitch of stays to ditto 14 1/2" x 15" how stays are secured Double nuts & washers
 Working pressure by rules 44 lbs diameter of stays at smallest part 2 3/8" dia. working pressure by rules 44605 lbs per sq. inch
 Front plates at bottom, thickness 3/4" Back plates, thickness 3/4" greatest pitch of stays 1 1/2" working pressure by rules 152 lbs



Diameter of tubes $3\frac{3}{4}$ " pitch of tubes $5 \times 4\frac{1}{8}$ " thickness of tube plates, front $\frac{3}{4}$ " back $\frac{1}{16}$ "
 How stayed *Tubes* pitch of stays *About 14×10 g. dist.* width of water spaces $5\frac{1}{2}$ "
 Diameter of Superheater or Steam chest $4' 0"$ length $9' 0"$
 Thickness of plates $\frac{1}{16}$ & $\frac{1}{2}$ " description of longitudinal joint *Double riveted* diameter of rivet holes $1"$ front $4"$ front $\frac{3}{4}"$ back pitch of rivets $3"$ back
 Working pressure of shell by rules 120 lbs. Diameter of flue *lap* thickness of plates *lap*
 If stiffened with rings _____ distance between rings _____ Working pressure by rules _____
 End plates of superheater, or steam chest; thickness $\frac{1}{2}$ " & $\frac{1}{16}$ " How stayed *Four through stays*
 Superheater or steam chest; how connected to boiler *Copper steam pipes*

DONKEY BOILER— Description *Round, vertical, cross tubes*
 Made at *Glasgow* By whom made *Wallace & Co* when made *1849*
 Where fixed *In storehold* working pressure 45 lbs Tested by hydraulic pressure to 150 lbs No. of Certificate
 Fire grate area 10 sq ft Description of safety valves *One direct spring* No. of safety valves *One* area of each $4"$
 If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *Yes, by opening cocks.*
 Diameter of donkey boiler $14' 6"$ length $9' 9"$ description of riveting *Double riveted*
 thickness of shell plates $\frac{7}{16}$ " diameter of rivet holes $\frac{3}{4}"$ whether punched or drilled *Punched*
 pitch of rivets $3"$ lap of plating $4"$ *approx* per centage of strength of joint 68
 thickness of crown plates $\frac{7}{16}$ " stayed by *Four stays*
 Diameter of furnace, top $3' 3"$ bottom $3' 10"$ length of furnace *Extreme height $5' 9"$ with cross tubes*
 thickness of plates $\frac{7}{16}$ " description of joint *Single riveted, lap.*
 thickness of furnace crown plates $\frac{7}{16}$ " stayed by *Keptake & four stays*
 Working pressure of shell by rules 83 lbs working pressure of furnace by rules 81 lbs *approx.*
 diameter of uptake $12-14"$ thickness of plates $\frac{3}{8}"$ thickness of water tubes $\frac{3}{8}"$

The foregoing is a correct description,
Amcais Donall No Manufacturer's.

General Remarks (State quality of workmanship, opinions as to class, &c. *Workmanship generally good.*)
Pumping arrangements more than ordinarily elaborate, as circulated pump is arranged to pump from tanks & bilges if required, and lead of piping very intricate.
Pumping arrangements as approved by Secy's letter of 14th Feb 1880, have been satisfactorily carried out.
The machinery & boilers of this vessel have been constructed under special survey, eligible in my opinion to be classed "Lloyd's M.C."

The amount of Entry Fee .. £ 0: 0: 0 received by me,
 Special *MM* .. £ 19: 10: 0
 Certificate (if required) .. £ 0: 0: 0 *14th Feb 1880*
 To be sent as per margin.
 (Travelling Expenses, if any, £)

Alfred H. Alchin
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute 18

Greenock
 It is submitted that the vessel appear eligible to be classed as recommended
M 24/1/80 + Lloyd's M 6 280