

REPORT ON MACHINERY.

No. 14424

No. in Survey held at *Newcastle*
Reg. Book.

Date, first Survey *12th Nov 1883* Last Survey *30th July 1884*
Received at London Office

on the *S.S. "Sagami Maru"*

(Number of Visits *26*) Tons *1499*
1162

Master *W. Day* Built at *Newcastle* By whom built *La. Armstrong Mitchell & Co.* When built *1884*

Engines made at *Newcastle* By whom made *Wallace & Simpson Engineering Co.* when made *1884*

Boilers made at *Do* By whom made *Do* when made *1884*

Registered Horse Power *225* Owners *Kiudo Kuryu Kaisha* Port belonging to *Tokio*

ENGINES, &c.—

Description of Engines *Inverted Compound Surface Condensing*

Diameter of Cylinders *34 & 66* Length of Stroke *42* No. of Rev. per minute *✓* Point of Cut off, High Pressure *.6* Low Pressure *.6*

Diameter of Screw shaft *12* Diam. of Tunnel shaft *11* Diam. of Crank shaft journals *12* Diam. of Crank pin *12* size of Crank webs *14 1/2 x 7*

Diameter of screw *15-6* Pitch of screw *17-6* No. of blades *4* state whether moveable *yes* total surface *60*

No. of Feed pumps *2* diameter of ditto *3 3/4* Stroke *24* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *2* diameter of ditto *3 3/4* Stroke *24* Can one be overhauled while the other is at work *yes*

Where do they pump from *Engine space 5; M. hold 2; F. hold 2, A. hold 1, Tunnel hold 1, All Tanks. Sea*

No. of Donkey Engines *2* Size of Pumps *10 x 12 & 4 x 8* Where do they pump from *All Bilges as above*

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 *1* and sizes *5* Are they connected to condenser, or to circulating pump *no*

How are the pumps worked *Lever on condenser*

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 *at level*

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*

Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *Top platform of engine room*

BOILERS, &c.—

Number of Boilers *Two* Description *Cy. return tubes* Whether Steel or Iron *Steel*

Working Pressure *90* Tested by hydraulic pressure to *180* Date of test *29th March 1884*

Description of superheating apparatus or steam chest *Horizontal cylinder in neck*

Can each boiler be worked separately *yes* Can the superheater be shut off and the boiler worked separately *—*

Total area of square feet of fire grate surface in each boiler *58* Description of safety valves *Spring* No. to each boiler *2*

Area of each valve *14.19* 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 *18* Diameter of boilers *14-0*

Length of boilers *10-6* description of riveting of shell long. seams *Butt & S* circum. seams *Lap & S* Thickness of shell plates *1 1/8*

Diameter of rivet holes *1* whether punched or drilled *Drilled* pitch of rivets *3 3/4* Lap of plating *Ships 10 1/2*

Percentage of strength of longitudinal joint *73%* working pressure of shell by rules *91* size of manholes in shell *15 x 11 1/2*

Size of compensating rings *6 x 7/8* No. of Furnaces in each boiler *3*

Outside diameter *40* length, top *6-9* bottom *6-6* thickness of plates *1 1/8* description of joint *Butt & S* if rings are fitted *yes*

Greatest length between rings *6-6* working pressure of furnace by the rules *97* combustion chamber plating, thickness, sides *1/2* back *1/2* top *1/2*

Distance between rings *—* working pressure by rules *—* end plates of superheater, or steam chest; thickness *1/2* how stayed *Decided to*

Machine when Tested & Supplied
2. P. H. Low Walker on type
H. Burrell, S. J. P.

17724
Report no. 1884 sent to Gen. 8/10/84



NWC791-0267

DONKEY BOILER— Description *Steel Boiler, Vertical 3 rows tubes*
 Made at *Southend* by whom made *Clark Chapman & Co* when made *6-5-84* where fixed *on deck*
 Working pressure *70* tested by hydraulic pressure to *140* No. of Certificate *1674* fire grate area *13* ~~ft~~ description of safety valves *Spring*
 No. of safety valves *1* area of each *7"* if fitted with easing gear *yes* if steam from main boilers can enter the donkey boiler *no*
 diameter of donkey boiler *5-0* length *11-0* description of riveting *R L*
 Thickness of shell plates *5/16* diameter of rivet holes *5/8* whether punched or drilled *no* pitch of rivets *2 3/16* lap of plating *3 1/2*
 percentage of strength of joint *70* thickness of crown plates *7/16* stayed by *Diagonal & 4 Stays 1 1/2 dia*
 Diameter of furnace, top *3-8 1/4* bottom *4-2 1/2* length of furnace *5-3* thickness of plates *7/16* description of joint *R L*
 Thickness of furnace crown plates *7/16* stayed by *as above* working pressure of shell by rules *70*
 Working pressure of furnace by rules *70* diameter of uptake *12* thickness of plates *5/8* thickness of water tubes *3/8*

SPARE GEAR. State the articles supplied:— *Half crank Shaft, Propeller Shaft & 4 propeller blades, valve spindle, high pressure packing ring, valve & seat for circulating pump, air pump bucket, set of feed or bilge valves & seats (piston patent) 2 main bearing bolts & nuts, 2 WP end bolts & nuts, 2 bottom end bolts & nuts, set of coupling bolt & nuts, a quantity of bolts & nuts & iron.*
 The foregoing is a correct description,
 Manufacturer. *W Brody Director*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been specially surveyed during construction the material and workmanship found eligible in our opinion to have the notification L. No. 674 in the Register Book of the Society.*

This submitted that this vessel is eligible to have the notification of L. No. 674 recorded 11/8/84

W Brody

The amount of Entry Fee .. £ *2* : - : - ^{to be} received by me,
 Special £ *31* : *5* : -
 Donkey Boiler Fee £ - : - : -
 Certificate (if required) *gratis* : - : - — 18—
 To be sent as per margin.
 (Travelling Expenses, if any, £ - - -)

paid 11/8/84

John Perrekat & Richard Stiles
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute
 FRIDAY 8 AUGUST 1884