

REPORT ON MACHINERY. *Continued.*

THUR 22 APR 1897

Port of *Glasgow.*

Received at London Office.....18

No. in Survey held at *Glasgow.* Date, first Survey Last Survey 18
 Reg. Book. on the *Screw Steamer Kawachi Maru.* (Number of Visits.....)
 Master Built at *Glasgow* By whom built *Saper Shanks & Bell.* When built 1894.
 Engines made at *Glasgow.* By whom made *Dunsmuir & Jackson.* when made 1894.
 Boilers made at *Glasgow.* By whom made *Dunsmuir & Jackson.* when made 1894.
 Registered Horse Power Owners *Nippon Yusen Kaisha Ltd.* Port belonging to *Tokio.*
 Nom. Horse Power as per Section 28 Is Electric Light fitted *Yes.*

ENGINES, &c.—Description of Engines

No. of Cylinders

No. of Cranks

Diameter of Cylinders Length of Stroke Revolutions per minute Diameter of Screw shaft as per rule as fitted.
 Diameter of Tunnel shaft as fitted Diameter of Crank shaft journals Diameter of Crank pin Size of Crank webs
 Diameter of screw Pitch of screw No. of blades State whether moveable Total surface
 No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work
 No. of Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work
 No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room In Holds, &c.
 No. of bilge injections sizes Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size
 Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible
 Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the discharge pipes above or below the deep water line
 Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate
 What pipes are carried through the bunkers How are they protected
 Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times
 Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock Is the screw shaft tunnel watertight
 Is it fitted with a watertight door *Particulars of Single Ended Boilers.*

BOILERS, &c.—

(Letter for record *S.*) Total Heating Surface of BoilersIs forced draft fitted *No.*

No. and Description of Boilers *Number 1 & 2 Single Ended.* Working Pressure *200 lbs.* Tested by hydraulic pressure to *400 lbs.*
 Date of test *24/11/96* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *51 sq. ft.* No. and Description of safety valves to each boiler *Two: Direct Spring* Area of each valve *4.9 sq. in.* Pressure to which they are adjusted *205 lbs.* Are they fitted with easing gear *Yes* Smallest distance between boilers or uptakes and bunkers or woodwork *About 5 feet* Mean diameter of boilers *13.5"*
 Length *10' 0"* Material of shell plates *Steel.* Thickness *1 1/8"* Description of riveting: circum. seams *Lap Double* longitudinal seams *Butt Straps.*
 Diameter of rivet holes in long. seams *1 1/8"* Pitch of rivets *9 1/2"* *one on two rows* width of butt straps *21"*
 Per centages of strength of longitudinal joint: rivets *88* plate *84.8* Working pressure of shell by rules *223 lbs.* Size of manhole in shell *16" x 12"*
 Size of compensating ring *Wheeler's Ring* No. and Description of Furnaces in each boiler *3: Corrugated.* Material *Steel.* Outside diameter *41"*
 Length of plain part top *36' 6"* bottom *36' 6"* Thickness of plates crown *9 1/8"* Description of longitudinal joint *Welded* No. of strengthening rings *—*
 Working pressure of furnace by the rules *218 lbs.* Combustion chamber plates: Material *Steel* Thickness: Sides *19" x 5"* Back *5"* Top *5"* Bottom *1 1/2"*
 Pitch of stays to ditto: Sides *7/8" x 8 3/8"* Back *8 1/8" x 8 3/8"* Top *7/8" x 8 3/8"* If stays are fitted with nuts or riveted heads *Hub* Working pressure by rules *203 lbs.*
 Material of stays *Steel.* Diameter at smallest part *1 1/2"* Area supported by each stay *66 sq. in.* Working pressure by rules *208 lbs.* End plates in steam space: Material *Steel.* Thickness *1 1/8"* Pitch of stays *18 1/2" x 18"* How are stays secured *Double nuts & washers.* Working pressure by rules *293 lbs.* Material of stays *Steel.*
 Diameter at smallest part *3 3/8"* Area supported by each stay *333 sq. in.* Working pressure by rules *202 lbs.* Material of Front plates at bottom *Steel.* Thickness *1 3/8"* Material of Lower back plate *Steel* Thickness *3/4"* Greatest pitch of stays *13 3/4"* Working pressure of plate by rules *232 lbs.*
 Diameter of tubes *3 1/4"* Pitch of tubes *4 5/8" x 4 5/8"* Material of tube plates *Steel.* Thickness: Front *13/16"* Back *1/8"* Mean pitch of stays *9.85"*
 Pitch across wide water spaces *14 1/4"* Working pressures by rules *262 lbs. 283 lbs.* Girders to Chamber tops: Material *Steel.* Depth and thickness of girder at centre *4 1/2" x 2"* Length as per rule *28"* Distance apart *8 3/8"* Number and pitch of Stays in each *2: 7 3/4"*
 Working pressure by rules *241 lbs.* Superheater or Steam chest; *none connected to boiler* *none.* Can the superheater be shut off and the boiler worked separately
 Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

15122.99

DONKEY BOILER— 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 _____ Pressure to which they are adjusted _____ If fitted with easing gear _____ If steam from main boilers can
enter the donkey boiler _____ Diameter of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____
Description of riveting long. seams _____ Diameter of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____
Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Thickness of shell crown plates _____ Radius of do. _____ No. of Stays to do. _____
Dia. of stays _____ Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace 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 uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied :—

The foregoing is a correct description,

Manufacturer.

Almon & Jackson

Dates { During progress of
of Survey { work in shops - -
while { During erection on
building { board vessel - -
Total No. of visits

General Remarks (State quality of workmanship, opinions as to class, &c.)

Certificate (if required) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee. . . £ : : When applied for, _____
Special £ : : _____ 18 _____
Donkey Boiler Fee . . . £ : : When received, _____
Travelling Expenses (if any) £ : : _____ 18 _____
W. H. Austin & A. McKend
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Assigned

FRI. 23 APR 1897

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