

REPORT ON MACHINERY.

Donkey Boiled.

Port of *Nagasaki*

Received at London Office _____ 18

No. in Survey held at _____ Date, first Survey _____ Last Survey _____ 18
 Reg. Book. _____ (Number of Visits _____)
 on the *Steel Screw Steamer "Niigata Maru"* Tons { Gross *2183*
 Net *1353*
 Master _____ Built at _____ By whom built *Mitsui Bishi No 147 S/S* When built _____
 Engines made at _____ By whom made _____ when made _____
 Boilers made at *Nagasaki* By whom made *Mitsui Bishi Ship. & Eng. Wks* when made *1903*
 Registered Horse Power _____ Owners _____ Port belonging to _____
 Nom. Horse Power as per Section 28 _____ Is Electric Light fitted _____

ENGINES, &c.—Description of Engines No. of Cylinders _____ No. of Cranks _____

Diameter of Cylinders _____ Length of Stroke _____ Revolutions per minute _____ Diameter of Screw shaft _____
 Diameter of Tunnel shaft _____ 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 of 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 _____ worked from _____ *Donkey Boiler*

BOILERS, &c.— (Letter for record _____) Total Heating Surface of Boilers *736.4* Is forced draft fitted

No. and Description of Boilers *Single Ended Multitubular* Working Pressure *120 lb* Tested by hydraulic pressure to *240 lb*
 Date of test *11/4/03* Can each boiler be worked separately Area of fire grate in *each* boiler *20.4* No. and Description of safety valves to
 each boiler *Two Direct Spring* Area of each valve *2" dia* Pressure to which they are adjusted *125 lb* Are they fitted
 with easing gear *Yes* Smallest distance between boilers or uptakes and bunkers or woodwork *butts abt 18"* Mean diameter of boilers *9" 0"*
 Length *9" 2"* Material of shell plates *Steel* Thickness *23/32* Description of riveting: circum. seams *Doub. riv.* long. seams *Doub. Straps*
 Diameter of rivet holes in long. seams *15/16* Pitch of rivets *5" x 2 1/2"* Lap of plates or width of butt straps *10 1/2" x 1/16*
 Per centages of strength of longitudinal joint *85.4* Working pressure of shell by rules *147 lb* Size of manhole in shell *16 x 12*
 Size of compensating ring *34 x 32 x 3/8* No. and Description of Furnaces in each boiler *Two Plain with Adamson Rings* Material *Steel* Outside diameter *30 7/8*
 Length of plain part *4 1/2* Thickness of plates *1/16* Description of longitudinal joint *Welded* No. of strengthening rings *One*
 Working pressure of furnace by the rules *145* Combustion chamber plates: Material *Steel* Thickness: Sides *1/2* Back *1/2* Top *1/2* Bottom *9/16*
 Pitch of stays to ditto: Sides *7 1/2 x 8 1/4* Back *6 3/4 x 8 3/4* Top *8 1/2 x 7 1/2* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *139*
 Material of stays *Steel* Diameter at smallest part *1 1/4"* Area supported by each stay *59* Working pressure by rules *166* End plates in steam space:
 Material *Steel* Thickness *27/32* Pitch of stays *14 1/2 x 13 1/2* How are stays secured *Doub. nut & washer* Working pressure by rules *143* Material of stays *Steel*
 Diameter at smallest part *2"* Area supported by each stay *174* Working pressure by rules *180* Material of Front plates at bottom *Steel*
 Thickness *1/16* Material of Lower back plate *Steel* Thickness *1/2"* Greatest pitch of stays *13 1/2"* Working pressure of plate by rules *120 lb*
 Diameter of tubes *3"* Pitch of tubes *4 3/8 x 4 1/4* Material of tube plates *Steel* Thickness: Front *1/16* Back *5/8"* Mean pitch of stays *8 7/8"*
 Pitch across wide water spaces *13 1/2* Working pressures by rules *120 lb* Girders to Chamber tops: Material *Steel* Depth and
 thickness of girder at centre *5 x 3 1/4 (2 pl)* Length as per rule *23"* Distance apart *7 1/2"* Number and pitch of Stays in each *Two at 8 1/4*
 Working pressure by rules *143* Superheater or Steam chest; how connected to boiler _____ 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 _____

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.

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

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

ENGINES—Length of stern bush _____ Diameter of crank shaft journals _____ as per rule _____ Diameter of thrust shaft under collars _____
 as fitted _____

BOILERS—Range of tensile strength _____ Are they welded or flanged _____ **DONKEY BOILERS**—No. _____ Range of tensile strength _____

Is the approved plan of main boiler forwarded herewith _____ Is the approved plan of donkey boiler forwarded herewith _____

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.....

11th AUG 1903

Committee's Minute
 Assigned

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



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