

# REPORT ON MACHINERY.



Port of *Kobe Kobe*

Received at London Office **SAT. 18 DEC 1897**

No. in Survey held at *Reg. Book.* Date, first Survey *18* Last Survey *18*

on the *Myajima Maru* (Number of Visits *X*) Tons *Gross* *Net*

Master *Built at* By whom built *When built*

Engines made at *By whom made* when made *1890*

Boilers made at *By whom made* when made *1888*

Registered Horse Power *Owners* Port belonging to

Nom. Horse Power as per Section 28 *160,974 say 161, in round number.*

ENGINES, &c.— Description of Engines *Direct acting, inverted tri-comp. Surf. Cond. S.C.R.* No. of Cylinders *3*

Diameter of Cylinders *18 1/4" x 29 1/8" x 47"* Length of Stroke *39"* Revolutions per minute *as per rule 8.97*

Diameter of Tunnel shaft *as per rule 8.5215* Diameter of Crank shaft journals *10"* Diameter of Crank pin *10"* Size of Crank webs *18 1/2" x 8"*

Diameter of screw *12 1/10"* Pitch of screw *17 1/9"* No. of blades *4* State whether moveable *Solid* Total surface *57.5 sq ft.*

No. of Feed pumps *2* Diameter of ditto *2 1/4"* Stroke *39"* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *2* Diameter of ditto *2 3/8"* Stroke *39"* Can one be overhauled while the other is at work *yes*

No. of Donkey Engines *3* *1-main boiler feed* *1-donkey* *1-ballast* Sizes of Pumps *3 1/2" x 7" stroke, double act.* No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room *4 to Donkey pump 2 1/2" dia* *4 to Bilge Pump 2 1/2"* In Holds, &c. *2 to Bilge Pump in Fore hold* *2 " " " " Aft hold.* *yes.*

No. of bilge injections *1* sizes *4"* Connected to condenser, or to circulating pump *Is a separate donkey suction fitted in Engine room & size* *yes.*

Are all the bilge suction pipes fitted with roses *yes* Are the roses in Engine room always accessible *yes* Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *They are valves, excepting blow off cock*

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 *2 bilge pipes from Foreholds* How are they protected *by wooden casing*

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times *yes*

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges *yes.*

When were stern tube, propeller, screw shaft, and all connections examined in dry dock *Is the screw shaft tunnel watertight* *yes*

Is it fitted with a watertight door *yes* worked from *Span main deck*

BOILERS, &c.— (Letter for record *Total Heating Surface of Boilers* *1429.245 x 2 = 2858.49 sq ft.*

No. and Description of Boilers *2-Cylindrical Return tube boilers* Working Pressure *Tested by hydraulic pressure to*

Date of test *Can each boiler be worked separately* *yes* Area of fire grate in each boiler *37.927* No. and Description of safety valves to

each boiler *2-Spring loaded* Area of each valve *8.9462* Pressure to which they are adjusted *Are they fitted*

with easing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork *7 1/2"* Mean diameter of boilers *12 1/10"*

Length *11'-1"* Material of shell plates *mild steel* Thickness *1 3/16"* Description of riveting: circum. seams *lap. double* long. seams *double butt, treble*

Diameter of rivet holes in long. seams *1 3/16"* Pitch of rivets *7 1/4"* Lap of plates or width of butt straps *1 1/10 1/2"*

Per centages of strength of longitudinal joint *83.6* Working pressure of shell by rules *180.072* Size of manhole in shell *17 1/8" x 3 3/8" in shell*

Size of compensating ring *2 1/2" x 1 1/16" x 1 1/16" flange plate* No. and Description of Furnaces in each boiler *2-Fox's Corrugated* Material *m. steel* Outside diameter *3' 1 1/8"*

Length of plain part *6 1/4"* Thickness of plates *7/16"* Description of longitudinal joint *weld* No. of strengthening rings *none*

Working pressure of furnace by the rules *200.29* Combustion chamber plates: Material *m. steel* Thickness: Sides *5/8"* Back *5/8"* Top *5/8"* Bottom *3/4"*

Pitch of stays to ditto: Sides *6 7/8" x 7 1/2"* Back *7 1/2" x 7 1/2"* Top *8" x 6 1/2"* If stays are fitted with nuts or riveted heads *nut* Working pressure by rules *210.94*

Material of stays *m. steel* Diameter at smallest part *1.2308 side (inner)* Area supported by each stay *48.125 sq in* Working pressure by rules *22.201* End plates in steam space:

Material *m. steel* Thickness *1"* Pitch of stays *16" x 16"* How are stays secured *double nut washers* Working pressure by rules *185* Material of stays *m. steel*

Diameter at smallest part *2.59* Area supported by each stay *256 sq in* Working pressure by rules *185.22* Material of Front plates at bottom *m. steel*

Thickness *7/8"* Material of Lower back plate *m. s.* Thickness *1 1/16"* Greatest pitch of stays *4 1/2" x 7 1/2"* Working pressure of plate by rules *546.6*

Diameter of tubes *3 1/2"* Pitch of tubes *4 5/8" vert x 4 3/4"* Material of tube plates *m. s.* Thickness: Front *1"* Back *3/4"* Mean pitch of stays *10 1/16"*

Pitch across wide water spaces *1' 2 1/2"* Working pressures by rules *170.5* Girders to Chamber tops: Material *m. s.* Depth and

thickness of girder at centre *7 1/4" x 2 1/2"* Length as per rule *2 1/5 1/8"* Distance apart *8"* Number and pitch of Stays in each *3 x 6 1/2"*

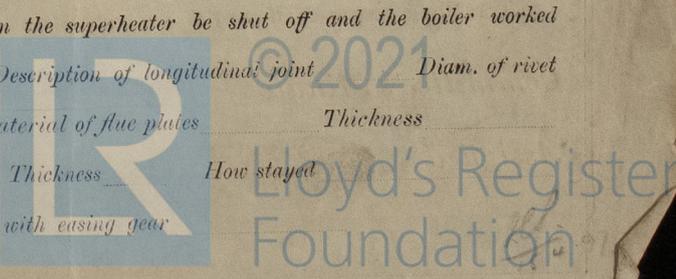
Working pressure by rules *246.8* Superheater or Steam chest; how connected to boiler *no.* Can the superheater be shut off and the boiler worked

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 *Cochran's Vertical multitubular boiler*

Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_  
Working pressure tested by hydraulic pressure to \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area *10.56* Description of safety valves *Spring loaded*  
No. of safety valves *2* Area of each *3.1416* Pressure to which they are adjusted \_\_\_\_\_ If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no* Diameter of donkey boiler *415 3/8"* Length *9' 9 7/8"* Material of shell plates *M.S.* Thickness *1/2"*  
Description of riveting long. seams *lap. double welded* Diameter of rivet holes *13/16"* Whether punched or drilled \_\_\_\_\_ Pitch of rivets *2 1/2"*  
Lap of plating *4 1/2"* Per centage of strength of joint \_\_\_\_\_ Rivets *20.5-1* Plates *67.5* Thickness of shell crown plates *1/2"* Radius of do. *9' 19"* No. of Stays to do. *3*  
Dia. of stays. *2 5/8"* Diameter of furnace Top *spherical* Bottom *3' 9" ext.* Length of furnace \_\_\_\_\_ Thickness of furnace plates *1/2"* Description of joint *lap* Thickness of furnace crown plates *1/2"* Stayed by *no stay* Working pressure of shell by rules *140.37*  
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.

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

*State all the particulars of survey & examine as to Class.*

Certificate (if required) to be sent to \_\_\_\_\_

The amount of Entry Fee. . . £ : : When applied for,  
Special . . . . . £ : : .....18.....  
Donkey Boiler Fee . . . . . £ : : When received,  
Travelling Expenses (if any) £ : : .....18.....

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

Committee's Minute **FRI. 31 DEC 1897**

Assigned



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