

REPORT ON MACHINERY.

No. 6240

Received at London Office

MONDAY 8 OCT 1883

No. in Survey held at
Reg. Book.

Glasgow Dumbarton Date, first Survey Oct 1882

Last Survey Oct 1883

(Number of Visits)

1034.03

Tons 684.02

on the Screw Steamer "Owari Maru"

Master John Adair Built at Dumbarton By whom built H. Murray & Co

When built 1883

Engines made at Glasgow By whom made James Howden & Co

when made 1883

Boilers made at " By whom made " " " " when made 1883

Registered Horse Power 125 Owners The Union Steam Nav Co of Japan Port belonging to Tokio

ENGINES, &c.—

Description of Engines Compound Inverted Direct Acting
Diameter of Cylinders 28" & 54" Length of Stroke 36" No. of Rev. per minute 80 Point of Cut off, High Pressure Variable Low Pressure
Diameter of Screw shaft 9 3/4" Diam. of Tunnel shaft 9" Diam. of Crank shaft journals 9 3/4" Diam. of Crank pin 10" size of Crank webs 6 1/2 x 12 1/2"
Diameter of screw 12 1/2" Pitch of screw 16 1/2 x 6 1/4" No. of blades 4 state whether moveable Yes total surface 49 sq ft
No. of Feed pumps Two diameter of ditto 3" Stroke 18" Can one be overhauled while the other is at work Yes
No. of Bilge pumps Two diameter of ditto 3" Stroke 18" Can one be overhauled while the other is at work Yes
Where do they pump from All Compartments
No. of Donkey Engines One Size of Pumps 7" Cyl 4" x 6" Stroke Where do they pump from Sea Bilge Hotwell & Lanth.
One Pulsometer
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 4" Are they connected to condenser, or to circulating pump So Circulating
How are the pumps worked By Levers
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 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 None 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 On Slip previous to being launched
the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Upper platform

BOILERS, &c.—

Number of Boilers One Description Double ended Whether Steel or Iron Steel
Working Pressure 90 lbs Tested by hydraulic pressure to 180 lbs Date of test 12th July 1883 Intd JS
Description of superheating apparatus or steam chest None
Can each boiler be worked separately Can the superheater be shut off and the boiler worked separately
No. of square feet of fire grate surface in each boiler 60 sq ft Description of safety valves Direct Spring No. to each boiler Two
Area of each valve 14.52" Are they fitted with easing gear Yes No. of safety valves to superheater 1 area of each valve
Are they fitted with easing gear Yes Smallest distance between boilers and bunkers or woodwork 11" to bunkers Diameter of boilers 12' 1"
Length of boilers 14' 3 1/2" description of riveting of shell long. seams Double riveted circum. seams Double riveted thickness of shell plates 1 1/2"
Diameter of rivet holes 1 1/4" whether punched or drilled Drilled pitch of rivets 8:1" Lap of plating 8"
Per centage of strength of longitudinal joint 77% working pressure of shell by rules 90 lbs size of manholes in shell 16" x 12"
Size of compensating rings Doubling plate fitted No. of Furnaces in each boiler Four
Outside diameter 3' 6" length, top 6' 1/2" bottom through thickness of plates 1 1/2" description of joint welded if rings are fitted Cocks
Greatest length between rings 3' 3" working pressure of furnace by the rules 136 lbs combustion chamber plating, thickness, sides 1/16" back 1/16" top 1/16"
Pitch of stays to ditto, sides 7 1/2" x 7 1/2" back top 7 1/2" x 7 1/2" If stays are fitted with nuts or riveted heads Nuts working pressure of plating by
rules 96 lbs Diameter of stays at smallest part 1 1/4" working pressure of ditto by rules 134 lbs end plates in steam space, thickness 1/16" + 1/16" doubling plate
Pitch of stays to ditto 17" x 16" x 14" how stays are secured By double nuts working pressure by rules 100 lbs diameter of stays at
smallest part 2 1/2" working pressure by rules 108 lbs Front plates at bottom, thickness 1/16" Back plates, thickness
Greatest pitch of stays working pressure by rules Diameter of tubes 3 1/4" pitch of tubes 4 1/2" x 4 7/8" thickness of tube
plates, front 1/16" back 1/16" how stayed By tubes pitch of stays 9 1/4" x 13 1/2" width of water spaces 4"
Diameter of Superheater or Steam chest None length thickness of plates description of longitudinal joint diam. of rivet holes
Pitch of rivets working pressure of shell by rules diameter of flue thickness of plates If stiffened with rings
Distance between rings working pressure by rules end plates of superheater, or steam chest; thickness how stayed
Superheater or steam chest; how connected to boiler

DONKEY BOILER— Description *Round Vertical* 6270 *el*
Made at *Gateshead* by whom made *Clark Chapman & Purney* when made *1883* where fixed *Above main Boiler*
Working pressure *40 lbs* tested by hydraulic pressure to *140 lbs* No. of Certificate *1399* fire grate area *14 ft²* description of safety
valves *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 *No* diameter of donkey boiler *5' 3"* length *10' 6"* description of riveting *Lap Double riveted*
Thickness of shell plates *3/16"* diameter of rivet holes *13/16"* whether punched or drilled *Punched* pitch of rivets *3 1/2"* lap of plating *4 1/2"*
per centage of strength of joint *4/4* thickness of crown plates *3/16"* stayed by *5 Stays 2" dia*
Diameter of furnace, top *4' 0"* bottom *4' 6"* length of furnace *4' 6"* thickness of plates *3/16"* description of joint *Lap single*
Thickness of furnace crown plates *3/16"* stayed by *As above* working pressure of shell by rules *80 lbs*
Working pressure of furnace by rules *44 lbs* diameter of uptake *14"* thickness of plates *3/16"* thickness of water tubes *3/16"*

SPARE GEAR. State the articles supplied: *1 Crank Shaft, 1 Propeller Shaft, 1 pair Crank pin
brasses, 1 pair Crosshead brasses, 1 Slide valve Rod, 1 Air & Circulating pump Rod, 4 Connecting
Rod bolts, 2 main bearing bolts, 1 Set Coupling bolts, 2 Brass Balves with seats for Feed & Bridge
Hel Propeller blades, 40 Boiler & 40 Condenser tubes*

The foregoing is a correct description,

Manufacturer.

James Morrison & Co

General Remarks (State quality of workmanship, opinions as to class, &c. *These Engines & Boilers are of good
workmanship & Materials and are now in good order & safe working
Condition and eligible in my opinion to be noted in the Register
Book* *Lloyds M.C. 10.83*

*This submitted that this
is not a suitable to have
the notification of L.M.C.
received M 9/10/83*

The amount of Entry Fee .. £ *2: 0: 0* received by me, *(M)*

Special £ *18: 15: 0*

Donkey Boiler Fee £ *0: 0: 0*

Certificate (if required) .. £ *0: 0: 0* *5/10/1883*

To be sent as per margin.

(Travelling Expenses, if any, £)

Committee's Minute

+ M

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

Clyde District
Lloyd's Register
Foundation