

REPORT ON MACHINERY.

6270

No. 6240 Received at London Office MONDAY 8 OCT 1883
 No. in Survey held at Glasgow & Dumbarton Date, first Survey Oct 1882 Last Survey Oct 1883
 Reg. Book. (Number of Visits) 1034.03
 on the Screw Steamer "Owari Maru" Tons 684.02
 Master John Adair Built at Dumbarton By whom built H. Murray & Coy When built 1883
 Engines made at Glasgow By whom made James Howden & Coy 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" x 12 1/2"
 Diameter of screw 12 1/6" Pitch of screw 16 1/2" & 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 & Lank.
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 Smith's
 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 — 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 12 1/6"
 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 95 lbs size of manholes in shell 16" x 12"
 Size of compensating rings doubly plate fitted No. of Furnaces in each boiler Four
 Outside diameter 3' 6" length, top 6 1/2" bottom through thickness of plates 1/16" description of joint welded if rings are fitted Co's
 Greatest length between rings 3' 3" working pressure of furnace by the rules 136 lbs combustion chamber plating, thickness, sides 1/16" back — 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 1/6" + 1/16" doubly 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 1/6" 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 5/8" 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 *eds*
 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 1/2* 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 ribbing *Lap double riveted*
 Thickness of shell plates *3/16"* diameter of rivet holes *1 3/16"* 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 *1 1/4"* 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, 1 Connecting
 Rod bolts, 2 main bearing bolts, 1 Set Coupling bolts, 2 Brass valves with seats for feed & bilge
 Hel Propeller blades, 40 Boilers & 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
 certificate is desirable to have
 the notification of L.M.C.
 recorded. J.M. 5/10/83*

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

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

Committee's Minute

+ J.M.

