

REPORT ON MACHINERY.

No. 14654

Received at London Office

No. in Survey held at Newcastle
Reg. Book.

Date, first Survey 2nd October 1883 Last Survey 19th June 1884

(Number of Visits 20) 2460

on the Screw Steamer "Oni Maru"

Tons 1512

Master S. J. Waller Built at Newcastle By whom built S. W. S. Armstrong & Mitchell & Co. When built 1884

Engines made at Newcastle By whom made Waller & Clifway & Engineering when made 1884

Boilers made at Don By whom made Don when made 1884

Registered Horse Power 350 Owners Kioto Unyu Kaisha Port belonging to Yokohama

ENGINES, &c.—

Description of Engines Inverted Compound Surface Condensing

Diameter of Cylinders 42 & 78 Length of Stroke 54 No. of Rev. per minute 62 Point of Cut off, High Pressure .56 Low Pressure .5

Diameter of Screw shaft 14 1/2 Diam. of Tunnel shaft 13 5/8 Diam. of Crank shaft journals 14 1/2 Diam. of Crank pin 14 1/2 size of Crank webs 31 1/4 & 9 1/2

Diameter of screw 16-0 Pitch of screw 24-6 No. of blades 4 state whether moveable yes total surface 78 ft²

No. of Feed pumps 2 diameter of ditto 4 1/2 Stroke 22 1/2 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 diameter of ditto 4 1/2 Stroke 22 1/2 Can one be overhauled while the other is at work yes

Where do they pump from 5 Bilge sections in E.S., 2 Bilge B.S., M. hold 3, F. hold 2, A. hold 1

No. of Donkey Engines Two Size of Pumps 10 x 10 & 5 x 9 Where do they pump from All bilges as above

2 Peak tank 1. A. hold tank 3. E.S. tanks 3. M. hold tank 3. F. hold tank. F. hold tank.

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 1 and sizes 5 1/4 Are they connected to condenser, or to circulating pump Con.

How are the pumps worked Lever over Condenser

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 at line

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 — 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 now

Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from Top platform of engine room

BOILERS, &c.—

Number of Boilers Four Description Cylindrical Whether Steel or Iron Steel

Working Pressure 85 lbs Tested by hydraulic pressure to 170 lbs Date of test 13th December 1883

Description of superheating apparatus or steam chest None

Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately no

No. of square feet of fire grate surface in each boiler 59.4 Description of safety valves Spring No. to each boiler 2

Area of each valve 14.19 Are they fitted with easing gear yes No. of safety valves to superheater — area of each valve —

Are they fitted with easing gear — Smallest distance between boilers and bunkers or woodwork 18" Diameter of boilers 14-6

Length of boilers 10-0 description of riveting of shell long. seams Butt. & Strap circum. seams Double lap Thickness of shell plates 27/32

Diameter of rivet holes 1 1/16 whether punched or drilled Drilled pitch of rivets 4 3/8 Lap of plating Strap 11 1/2

Percentage of strength of longitudinal joint 75% working pressure of shell by rules 93 lbs size of manholes in shell 16 x 12

No. of compensating rings 6 x 7/8 No. of Furnaces in each boiler 3

Inside diameter 41 length, top 6-6 bottom 6-0 thickness of plates 3/16 description of joint Butt & Strap if rings are fitted half

Greatest length between rings 6-0 working pressure of furnace by the rules 109 combustion chamber plating, thickness, sides 1/2 back 1/2 top 1/2

Pitch of stays to ditto, sides 8 1/2 back 8 3/8 top 22 If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 104

Diameter of stays at smallest part 1 3/8 working pressure of ditto by rules 161 end plates in steam space, thickness 3/8

Pitch of stays to ditto 16 1/4 how stays are secured By nuts working pressure by rules 111 lbs diameter of stays at smallest part 2 3/8

working pressure by rules 136 Front plates at bottom, thickness 1/16 Back plates, thickness 1/16

Greatest pitch of stays 9" working pressure by rules — Diameter of tubes 3 1/2 pitch of tubes 4 3/4 thickness of tube plates, front 3/4 back 3/4

how stayed tubes pitch of stays 14 1/4 width of water spaces 4"

Diameter of Superheater or Steam chest none length — thickness of plates — description of longitudinal joint — diam. of rivet holes —

No. 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 —

SS. Oni Maru
Shue. Report No. 14654

Report No. 27/1884 sent to Genl. 11/7/84

Results of Shell tests. Quant. Shell fired. Report sent forwarded.

NWC791-0053

DONKEY BOILER—

Description

Vertical 3 cross tubes.

Made at *Gateshead* by whom made *Clark Chapman & Co* when made *17.3.84* where fixed *Stokeholme*
 Working pressure *70* tested by hydraulic pressure to *140* No. of Certificate *1632* fire grate area *12½* description of safety
 valves *Spring* No. of safety valves *1* area of each *74"* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *4-9* length *10-6* description of riveting *Double Lap*
 Thickness of shell plates *7/16* diameter of rivet holes *13/16* whether punched or drilled *yes* pitch of rivets *3 5/8* lap of plating *4 7/8*
 per centage of strength of joint *74* thickness of crown plates *1/2* stayed by *Disked & Stays* *1 7/8* diam
 Diameter of furnace, top *3-5* bottom *4-0* length of furnace *5-0* thickness of plates *1/2* description of joint *Single Lap*
 Thickness of furnace crown plates *1/2* stayed by *Same as crown of shell* working pressure of shell by rules *88 1/2*
 Working pressure of furnace by rules *83 1/2* diameter of uptake *12* thickness of plates *3/8* thickness of water tubes *3/8*

SPARE GEAR.

State the articles supplied:—

*Spare gear as per list of
 Society's requirements. Spare H.P. piston complete. Spare
 crank pin. Spare propeller. Spare
 crank pin*

The foregoing is a correct description.

FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LD.

June 26/84

W Boyd

Manufacturer.

General Remarks

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

*The Machinery of this
 vessel has been specially surveyed during construction
 The materials and workmanship are sound and satisfactory
 and eligible in my opinion to have the notation
 + Lloyd's M.C. & - 84 in the Society's Register
 Book.*

The amount of Entry Fee .. £ 3 : - : - received by me,
 Special .. £ 34 : 10 : -
 Donkey Boiler Fee .. £ - : - : -
 Certificate (if required) *1-1/2* .. £ - : - : - *1-1/2 July 1884*
 To be sent as per margin.
 (Travelling Expenses, if any, £ - : - : -)

Committee's Minute

FRIDAY 4 JULY 1884

W Boyd

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

Robert Brockat
Newcastle