

REPORT ON MACHINERY.

No. 14054

Received at London Office WEDNESDAY 2 JULY 1884

No. in Survey held at Newcastle

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

Reg. Book.

(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 Do By whom made Do when made 1884

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

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 1/2 & 9 1/2

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

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 suction in E.S., 2 Bilge B.S., M hold 3, F hold 2, A hold 1

No. of Donkey Engines Two Size of Pumps 10x10 & 5x9 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 peak 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 No

How are the pumps worked Lever over Condensers

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

Area 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 27/52

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

Percentage of strength of longitudinal joint 75% working pressure of shell by rules 95 lbs size of manholes in shell 16 x 12

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

Outside diameter 41 length, top 6-6 bottom 6-0 thickness of plates 27/16 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

Distance 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 2/8

Distance 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 —

Number 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
Spec. Report No. 14054

Report No. 27/1884 sent Oct. 17/84

Results of Shell tests. Crank Shaft & Engine Report sent forward.

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 *70"* 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 *✓* 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 14 Stays 1 7/8 dia*
 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 H.P.
~~*spare valves, spare piston rods, spare propeller, &c*~~
Spare crank pin

The foregoing is a correct description.

FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LD
 June 26/84 *W Boyd* Manufacturer.
Builder

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. 6-84 in the Society's Register*
Book,

It is submitted that this vessel
is eligible to have the
notation + M.C. 6-84
noted
3/1/84

The amount of Entry Fee .. £ 3 : - : - received by me,
 Special .. £ 34 : 10 : -
 Donkey Boiler Fee .. £ - : - : -
 Certificate (if required) *1-21* : - : - *1-21 July 1884*
 To be sent as per margin.
 (Travelling Expenses, if any, £ - : - : -)

W. Boyd
Wm Prockat
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRIDAY 4 JULY 1884*

W. Boyd

