

# REPORT ON MACHINERY.

14562

Port of *Sunderland*

No. *14562*

Received *MONDAY 26 MARCH 1888*

No. in Survey held at *Sunderland*

Date, first Survey *20<sup>th</sup> June 1887* Last Survey *22 March 1888*

Reg. Book.

(Number of Visits *36*)

*2082.21*  
Tons *3194.80*

on the *S.S. "Mieke Maru"*

Master *J.H. Payne* Built at *Sunderland* By whom built *R. Thompson & Sons* When built *1888*

Engines made at *Sunderland* By whom made *John Dickinson* when made *1888*

Boilers made at *Sunderland* By whom made *John Dickinson* when made *1888*

Registered Horse Power *250* Owners *Nippon Yusen Kaisha S.S. Co* Port belonging to *Tokio*

## ENGINES, &c.

Description of Engines *C. I. D. a. S. C. Triple compound, three cranks*

Diameter of Cylinders *25" 40" 66"* Length of Stroke *45"* No. of Rev. per minute *60* Point of Cut off, High Pressure *1/2 stroke* Low Pressure *1/2 stroke*

Diameter of Screw shaft *12 1/2"* Diam. of Tunnel shaft *12 1/4"* Diam. of Crank shaft journals *12 3/4"* Diam. of Crank pin *12 3/4"* size of Crank webs *patent*

Diameter of screw *17-0"* Pitch of screw *19-0"* No. of blades *4* state whether moveable *not* total surface *80 sq*

No. of Feed pumps *2* diameter of ditto *4"* Stroke *21"* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *2* diameter of ditto *4 1/2"* Stroke *21"* Can one be overhauled while the other is at work *yes*

Where do they pump from *Fore. main. engine room. after tanks & peak tanks and wells*

No. of Donkey Engines *2* Size of Pumps *19" x 15 1/4" x 3" x 6"* Where do they pump from *all tanks, wells. sea*

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 *1 1/2"* Are they connected to condenser, or to circulating pump *circulating pumps*

How are the pumps worked *By levers on after engine*

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 *new vessel*

Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *top platform.*

## BOILERS, &c.

Number of Boilers *Two* Description *Ordinary type. dble end* Whether Steel or Iron *Steel excepting tubes & girders*

Working Pressure *150 lbs* Tested by hydraulic pressure to *300 lbs* Date of test *19-1-88.*

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 superheater*

No. of square feet of fire grate surface in each boiler *69 sq* Description of safety valves *direct spring* No. to each boiler *2*

Area of each valve *8.30* 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 *15"* Diameter of boilers *12-3"*

Length of boilers *15-6"* description of riveting of shell long. seams *lap 5 rows of rivets* circum. seams *centre treble, end double* Thickness of shell plates *1 3/8"*

Diameter of rivet holes *1 1/4"* whether punched or drilled *drilled* pitch of rivets *3" 4/6"* Lap of plating *14 3/8"*

Per centage of strength of longitudinal joint *49%* working pressure of shell by rules *153 lbs* size of manholes in shell *16 x 12"*

Size of compensating rings *8" x 1 3/8"* No. of Furnaces in each boiler *4*

Outside diameter *3-11"* length, top *6-0"* bottom *6-0"* thickness of plates *9/16"* description of joint *corrugated* if rings are fitted *no*

Greatest length between rings *—* working pressure of furnace by the rules *150* combustion chamber plating, thickness, sides *1/2"* back *none* top *19"*

Pitch of stays to ditto, sides *7 1/8" x 6 3/4"* back *—* top *8" x 8 1/4"* If stays are fitted with nuts or riveted heads *nuts* working pressure of plating by rules *151*

Diameter of stays at smallest part *1-13* working pressure of ditto by rules *164* end plates in steam space, thickness *1 3/8"*

Pitch of stays to ditto *18 1/4" x 16"* how stays are secured *dble nuts* working pressure by rules *152 lbs* diameter of stays at smallest part *2-6*

working pressure by rules *163 lbs* Front plates at bottom, thickness *3/4"* Back plates, thickness *—*

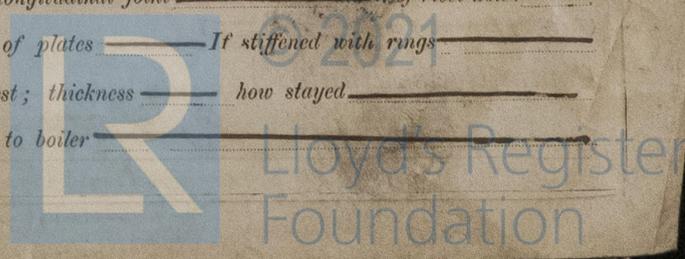
Greatest pitch of stays *—* working pressure by rules *—* Diameter of tubes *3 3/4"* pitch of tubes *4 1/2" x 4 1/2"* thickness of tube plates, front *7/8"* back *7/8"* how stayed *stay tubes* pitch of stays *9 x 9"* width of water spaces *1 1/2"*

Diameter of Superheater or Steam chest *none* length *—* thickness of plate *—* 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 *Cylindrical, single ended, ordinary type, Steel.*  
 Made at *Gateshead* by whom made *Clarke, Chapman, Parsons* when made *20/2 88* here fixed *upper deck*  
 Working pressure *90 lbs* tested by hydraulic pressure to *180 lbs* No. of Certificate *2428* fire grate area *28 sq ft* description of safety valves *direct-spring* No. of safety valves *2* area of each *3.98* if fitted with easing gear *yes* if steam from main boilers enter the donkey boiler *no* diameter of donkey boiler *4-0"* length *8-0"* description of riveting *dbl riveted lap*  
 Thickness of shell plates *1/2"* diameter of rivet holes *15/16"* whether punched or drilled *drilled* pitch of rivets *3 3/4"* lap of plating *4 1/2"*  
 per centage of strength of joint *41%* thickness of ~~end~~ plates *1/16"* stayed by *1 1/2" steel stays 14" pitch*  
 Diameter of furnace ~~top~~ *4-0"* bottom *—* length of furnace *5-6"* thickness of plates *17/32"* description of joint *single butt sh*  
 Thickness of ~~furnace~~ *combustion chamber* plates *1/2"* stayed by *1 1/2" stays 9" pitch* working pressure of shell by rules *90.*  
 Working pressure of furnace by rules *114 lbs* diameter of ~~tubes~~ *tube* *3"* thickness of plates *1/16"* thickness of water tubes *none*

**SPARE GEAR.** State the articles supplied: *Top and bottom connecting rod bolts & nuts, two bearing bolts & nuts, one set of coupling bolts & nuts, feed & bilge pump valves, propeller, bolts, nuts & iron assorted*

The foregoing is a correct description,  
 FOR JOHN DICKINSON *John* Manufacturer of main engines & boilers

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
*The machinery of this vessel has been constructed under special survey the material and workmanship are good and efficient and the engine when tried under steam worked satisfactorily. In my opinion the machinery of this vessel is in good order and safe working condition and eligible for the notification in the Register Book of LMC 388.*

This submitted that has been  
 eligible to have the notification  
 done 3 & 8 recorded  
 26/3/88

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The amount of Entry Fee .. £ *2 : 0* : — received by me, *at 1/10*  
 Special .. £ *32 : 10* : —  
 Donkey Boiler Fee .. £ : : —  
 Certificate (if required) .. £ : : — *28/3 1888*  
 To be sent as per margin.  
 (Travelling Expenses, if any, £ : : —)

*Paul Salmon*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute **TUES 27 MARCH 1888**  
*+ LMC 3/88*

