

## REPORT ON MACHINERY.

No. 13325

Port of *New York*

MON 14 MAY 1917

Received at London Office 19

No. in Survey held at *Bayonne* Date, first Survey Last Survey 19Reg. Book. on the *Twin S.S. "Mani"* (Number of Visits )Master Built at *San Francisco* By whom built *Union Iron Works* Tons } Gross  
Net

Engines made at By whom made when made

Boilers made at *Bayonne* By whom made *Babcock & Wilcox Co* when made *9/16*

Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

## ENGINES, &amp;c.—Description of Engines

No. of Cylinders

No. of Cranks

Dia. of Cylinders Length of Stroke Revs. per minute Dia. of Screw shaft as per rule Material of }  
as fitted screw shaft }

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Is the after end of the liner made water tight

in the propeller boss If the liner is in more than one length are the joints burned If the liner does not fit tightly at the part

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two

liners are fitted, is the shaft lapped or protected between the liners Length of stern bush

Dia. of Tunnel shaft as per rule Dia. of Crank shaft journals as per rule Dia. of Crank pin Size of Crank webs Dia. of thrust shaft under

collars Dia. of screw Pitch of Screw No. of Blades State whether moveable Total surface

No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room In Holds, &amp;c.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room &amp; size

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Dates of examination of completion of fitting of Sea Connections of Stern Tube Screw shaft and Propeller

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record (S) ) Manufacturers of Steel *Union Iron & Steel Co*Total Heating Surface of Boilers *32096 Sq. Ft.* Is Forced Draft fitted No. and Description of Boilers *8 Water Tube (39W)*Working Pressure *250 lbs* Tested by hydraulic pressure to *500 lbs* Date of test No. of CertificateCan each boiler be worked separately Area of fire grate in each boiler *382 Cu. Ft.* No. and Description of Safety Valves toeach boiler *One 3 1/2" Duplex* Area of each valve *9.62 Sq. In.* Pressure to which they are adjusted *250 lbs.* Are they fitted with easing gear *Yes.*Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers *48"* Length *13'-10 1/2"* Material of shell plates *Steel*Thickness *1 1/16"* Range of tensile strength *63000 lbs* Are the shell plates welded or flanged *No* Descrip. of riveting: cir. seams *DR. LAP.*long. seams *DR. D.B.S.* Diameter of rivet holes in long. seams *29/32"* Pitch of rivets *2 3/8"* Length of plates or width of butt straps *13'-10 1/2"*Per centages of strength of longitudinal joint rivets *92* Working pressure of shell by rules *33 1/2 lbs* Size of manhole in shell *15" x 11"*Size of compensating ring *Flange ring* No. and Description of Furnaces in each boiler *One* Material *Steel - Brick Lined*

Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

Material *Steel* Thickness *3/4"* Pitch of stays How are stays secured *Disks* Working pressure by rules *34 1/2 lbs* Material of stays

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes *4"* Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater *1.76 Sq. In.* Are they fitted with easing gear *Yes*

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# VERTICAL DONKEY BOILER—

Manufacturers of Steel

No.	Description		
Made at	By whom made	When made	Where fixed
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted
If fitted with easing gear	If steam from main boilers can enter the donkey boiler	Dia. of donkey boiler	Length
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates
Working pressure of furnace by rules	Thickness of furnace crown plates	Stayed by	Description of joint
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

*Babcock & Wilcox*

Manufacturer.

*W. P. Hudson*  
Supt.

Dates of Survey while building  
 During progress of work in shops— July 24, 27 Aug 1-4-7-11-14 Sept 7-11-12-15 Oct. 2-7-10-13-14-16-18-27  
 During erection on board vessel—  
 Total No. of visits

Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods  
 Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller  
 Stern tube Steam pipes tested Engine and boiler seatings Engines holding down bolts  
 Completion of pumping arrangements Boilers fixed Engines tried under steam  
 Main boiler safety valves adjusted Thickness of adjusting washers  
 Material of Crank shaft Identification Mark on Do. Material of Thrust shaft Identification Mark on Do.  
 Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.  
 Material of Steam Pipes Test pressure

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

*These Boilers have been built under Special Survey and in accordance with the approved plans. The Workmanship and materials are both of good quality. The Boilers have been erected in the works, drums, elements and super heaters have been tested to 500 lbs per sq. inch and found tight & sound. They have now been dismantled for shipment. To complete the Survey, the boilers to be re-erected in vessel and tested by hydraulic pressure to 500 lbs per sq. inch. All runnings to be examined & fitted and all safety valves to be adjusted under steam.*

*5 ft to be a 6 ft*

The amount of Entry Fee—  
 Special .. *N.Y.* £ 281.50  
 Donkey Boiler Fee .. £  
 Travelling Expenses (if any) *£1.25 N.Y.*

When applied for,

at 5%  
 19...

When received,

23/5/17

*W. P. Hudson*

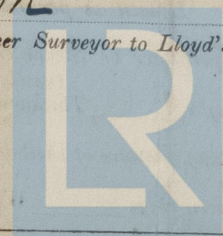
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

New York APR 26 1917

Assigned

*See other report*



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Certificate (if required) to be sent to  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)