

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 19

Reg. Book. on the *Twin S.S. "Mani"* (Number of Visits) Tons } Gross Net

Master Built at *San Francisco* By whom built *Union Iron Works* When built

Engines made at By whom made when made

Boilers made at *Bayonne* By whom made *Babcock & Wilcox Co* when made *1916*

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, &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 screw shaft as fitted

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, &c.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & 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 *Lucas Iron & Steel Co*)

Total Heating Surface of Boilers *32096 Sq Ft* 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 Certificate

Can each boiler be worked separately Area of fire grate in each boiler *382 Sq Ft* No. and Description of Safety Valves to each 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 *11/16"* Range of tensile strength *63,000 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 1/32"* Lap of plates or width of butt straps *1 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 bottom

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 *Discs* 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*

007439-007447-0227

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 _____ Fire grate area _____ Description of _____

Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____

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 _____ Per centage of strength of joint _____ Rivets _____ Plates _____

Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____

Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Stayed by _____

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. & 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. All runnings to be examined & fitted and all safety valves to be adjusted under steam.

5 pps to be a to R/R

The amount of Entry Fee £ _____
 Special *N.Y.* £ *281.50* } When applied for, *at 5.70*
 Donkey Boiler Fee £ _____ }
 Travelling Expenses (if any) *£ 25 N.Y.* } 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*

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

