4.

REPORT ON MACHINERY

No. 14770

Writing Report Mar 4 1918 When handed in at Local Office Mar 1918 Port of New York

Survey held at Jersey City & Bayonne N.J. Date, First Survey Feb-1918. Last Survey July-27th-1918. (Number of Visits)

Book. on the Machinery of the National S.B.Co's S/S "WAR MYSTERY" Tons Gross 3484 Net 2078

er W. B. Davies. Built at Orange, Texas. By whom built National Shipbuilding Co. When built 1918.

es made at Jersey City N.J. By whom made Vulcan Iron Works Inc. when made 1918.

s made at Bayonne N.J. By whom made Babcock & Wilcox Co's when made 1918.

tered Horse Power 274.4 Owners Cunard Line Port belonging to London.

Horse Power as per Section 28 274.4 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

ENG. No. 191

INES, &c.—Description of Engines Triple Expansion Surface Condensing No. of Cylinders 3 No. of Cranks 3

of Cylinders 19"-31"-52" Length of Stroke 36" Revs. per minute 105 Dia. of Screw shaft as per rule 11.02 as fitted 11.75 Material of screw shaft Steel

screw shaft fitted with a continuous liner the whole length of the stern tube No. Is the after end of the liner made water tight

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

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

are fitted, is the shaft lapped or protected between the liners Lapped Length of stern bush 4'-6"

of Tunnel shaft as per rule 9.22" as fitted Dia. of Crank shaft journals as per rule 9.687 as fitted 10.5 Dia. of Crank pin 10½" Size of Crank webs 7½"×21" Dia. of thrust shaft under

s 10½" Dia. of screw 14'-6" Pitch of Screw 11'-10" No. of Blades 4 State whether moveable No Total surface 69 ☐ft

of Feed pumps 2 Diameter 10×6×12 Stroke Can one be overhauled while the other is at work Yes.

of Bilge pumps One Diameter of ditto 12×8½×12 Stroke Can one be overhauled while the other is at work

of Donkey Engines 2 Sizes of Pumps 4½×2¾×4 6"×5¾×6 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room Two- 2½" Stokehold two - 2½" In Holds, &c. Four - 2½" UDT 2795

of Bilge Injections One sizes 6" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size Yes 2½"

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

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

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 Below

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.

t pipes are carried through the bunkers Bilge & Tank suctions How are they protected Boxed in.

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

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

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

LERS, &c.—(Letter for record S) Manufacturers of Steel Wolth Bros. Coatesville, Pa.

l Heating Surface of Boilers 5800 ☐ft Is Forced Draft fitted No No. and Description of Boilers Two, Water tube

king Pressure 160 lbs. Tested by hydraulic pressure to 400 lbs. Date of test No. of Certificate

each boiler be worked separately Yes. Area of fire grate in each boiler 87 ☐ft No. and Description of Safety Valves to

boiler Ashcroft, Two Area of each valve 7.086" Pressure to which they are adjusted 160 Are they fitted with easing gear Yes.

llest distance between boilers or uptakes and bunkers or woodwork 6" Mean dia. of ~~boilers~~ Drum. 42" Length 14'-7⅜" Material of shell plates Steel

kness ½" Range of tensile strength 55/65000 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams S.R.LAP.

seams D.R.D.B.S. Diameter of rivet holes in long. seams 29/32" Pitch of rivets 2 29/32 4 9/16 ~~Lap of plates~~ or width of butt straps Outside 9¾" Inside 15"

centages of strength of longitudinal joint rivets 108. plate 80.4 Working pressure of shell by rules 243 lbs. Size of manhole in shell 15"×11"

of compensating ring Flange Ring No. and Description of Furnaces in each boiler Material Outside diameter

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

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

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

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

terial Steel Thickness 9/32" Pitch of stays ✓ How are stays secured Dished ends. 42 Rad Working pressure by rules 204 lbs Material of stays

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

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

meter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

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

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

orking pressure by rules Steam dome: description of joint to shell % of strength of joint

meter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

tch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

PERHEATER. Type Foster Date of Approval of Plan Tested by Hydraulic Pressure to

te of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

eter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

IS A DONKEY BOILER FITTED? No. *If so, is a report now forwarded?*

SPARE GEAR. *State the articles supplied:—* 1 Eccentric strap, 6 Tail end sleeve coupling bolts, 6 tap coupling bolts and 3 nuts, 2 Main bearing bolts & nuts, 2 Crank pin bolts & nuts, 2 Crosshead and nuts, 2 Valve spindle nuts, 12 Condenser tubes, 25 Ferrules, 6 Studs & nuts for cylinder 2 Sets of L. P. piston & Valve springs, 2 Sets of condenser packing tools, 100 Assorted bolts nuts, Winches:- 4 Eccentric rods & straps, 2 Valve spindles, 2 Pistons, rods & nuts complete. 1 Set feed pump valves, springs & studs, ½ Set air pump valves & springs, ½ Set of valves, spr & seats for sanitary pumps, 2 Crosshead brasses, Circulating pump, 1 Set bilge pump valves & s

The foregoing is a correct description,

VULCAN IRON WORKS, INC.

The Babcock & Wilc Mfgrs of Boilers

Manufacturer. per J. Stengg, Manag

Dates of Survey while building — *During progress of work in shops*	1917 Dec 9 1918 Jan 2 7 14 16 21 23 24 28 30 Feb 4 6 18 27 Mar 6
During erection on board vessel	
Total No. of visits	

Is the approved plan of main boiler forwarded herewith Not dup *" " donkey "*

Dates of Examination of principal parts—*Cylinders* 16/1/18 *Slides* 16/1/18 *Covers* 7/12/17 *Pistons* 2/1/18 *Rods* 2/1/18

Connecting rods 16/1/18 *Crank shaft* 23/1/18 *Thrust shaft* 27/11/17 *Tunnel shafts* *Screw shaft* 18/2/18 *Propeller* 23/1/18

Stern tube 23/11/17 *Steam pipes tested* 5/24/18 *Engine and boiler seatings* 2/22/18. *Engines holding down bolts* 2/22/1

Completion of pumping arrangements 5/29/18 *Boilers fixed* 6/10/18. *Engines tried under steam* 7/18/18

Completion of fitting sea connections 2/22/18 *Stern tube* 2/18/18 *Screw shaft and propeller* 2/21/18

Main boiler safety valves adjusted 6/17/18 *Thickness of adjusting washers* Screw Nuts.

Material of Crank shaft Steel *Identification Mark on Do.* 363 *Material of Thrust shaft* Steel *Identification Mark on Do.* 363

Material of Tunnel shafts *Identification Marks on Do.* *Material of Screw shafts* Steel *Identification Marks on Do.* 363

Material of Steam Pipes Copper *Test pressure* 320

Is an installation fitted for burning oil fuel No *Is the flash point of the oil to be used over 150°F.* ✓

Have the requirements of Section 49 of the Rules been complied with ✓

Is this machinery duplicate of a previous case Yes *If so, state name of vessel* See N.Y. Report No

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

The Boilers & Machinery of this Vessel have been constructed under Special Survey and in accordance with approved plans. The Materials and workmanship are both of good quality. The hydraulic test of steam drums and tube sections of boilers proved satisfactory. The case is respectfully submitted for the Notation ✠ L.M.C. with date upon completion of the Survey. The Water tube boilers to be surveyed annually.

The boilers and machinery of this vessel have been installed under Special Survey and in accordance with the approved plans. The safety valves were adjusted under steam to 160 lbs., main engines and all auxiliary machinery run for six consecutive hours and found to work very satisfactorily. The case is respectfully submitted for the Notation ✠ L.M.C. 7,18.

The Vessel is fitted with two 4½ K.W. direct driven Westinghouse Generators 110 volts D.C.; double wired system; wires running through iron conduits; all circuts and cut-outs controll from switchboard in the engine room.

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

The amount of Entry Fee ...	$10.00	*When applied for,* Aug-21-1918
Special ...	$160.00	
Donkey Boiler Fee ...	£	*When received,* 15/10/18
Travelling Expenses (if any)	£	

C. J. Hudson. J. E. Grant

Engineer Surveyor to Lloyd's Register of Shipping.

It is submitted that this vessel is eligible for THE RECORD. +LMC 7.18 WATER TUBE BOILERS SUBJECT TO ANNUAL SURVEY ELEC LIGHT 24-10-18

Committee's Minute New York SEP 24 1918

Assigned +LMC 7.18 FRI. 11 APR. 1919

WED. JUN. 11. 1919