

# REPORT ON MACHINERY.

No. 2009

MON. MAY 5-1913

Port of

PHILADELPHIA.

Received at London Office

19

Survey held at

PHILADELPHIA.

Date, first Survey 26. 12. 12

Last Survey April 9- 1913

Book.

on the

S.S. VESTA

(Number of Visits 55)

Gross 3663.7

Net 2223.0

ter J. Fenton

Built at Camden N.J. By whom built New York CB Co

When built 1913.4

nes made at Camden

By whom made New York CB Co

when made 1913.4

ers made at

Al

By whom made

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when made 1913.4

stered Horse Power 318

Owners Standard Oil Co

Port belonging to New York

Horse Power as per Section 28 318

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted yes

INES, &c.—Description of Engines

Triple

No. of Cylinders 3

No. of Cranks 3

of Cylinders 21. 35. 58

Length of Stroke 42

Revs. per minute 80

Dia. of Screw shaft

Material of shaft steel

the screw shaft fitted with a continuous liner the whole length of the stern tube yes

Is the after end of the liner made water tight

the propeller boss yes If the liner is in more than one length are the joints burned soldered 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 fitted close If two

are fitted, is the shaft lapped or protected between the liners

Length of stern bush 5.1

of Tunnel shaft as per rule 11.22

Dia. of Crank shaft journals as per rule 11.8

Dia. of Crank pin 12

Size of Crank webs 25.8.4 Dia. of thrust shaft under

ers 12 Dia. of screw 15.0

Pitch of Screw 15.0

No. of Blades 4

State whether moveable yes Total surface 60.4

of Feed pumps 2

Diameter of ditto 4.2

Stroke 20 Can one be overhauled while the other is at work yes

of Bilge pumps 2

Diameter of ditto 4.2

Stroke 20 Can one be overhauled while the other is at work yes

of Donkey Engines 5

Sizes of Pumps 2 duplex 6.4.4.6.7.2.5.10.16.10 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 6.3.2

In Holds, &c. A peak 1-3. F peak 1-4. Ford

old 2-6. pump room 2-3.2

of Bilge Injections 1 sizes 8 Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes 3.2

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 none

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

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

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 none How are they protected

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

is of examination of completion of fitting of Sea Connections 16.1.13 of Stern Tube 16.1.13 Screw shaft and Propeller 16.1.13

the Screw Shaft Tunnel watertight no tunnel Is it fitted with a watertight door worked from

ERS, &c.—(Letter for record T) Manufacturers of Steel Work New Louisville

d Heating Surface of Boilers 5762.4 Is Forced Draft fitted no No. and Description of Boilers 2 Mult. Single ended

king Pressure 200 lbs Tested by hydraulic pressure to 300 lbs Date of test 14.12.12 No. of Certificate 41

each boiler be worked separately yes Area of fire grate in each boiler 80.4 No. and Description of Safety Valves to

boiler 2 Direct Spring Area of each valve 8.29.7 Pressure to which they are adjusted 200 lbs Are they fitted with easing gear yes

least distance between boilers or uptakes and bunkers 4.0 Mean dia. of boilers 16.1.2 Length 11.6 Material of shell plates steel

thickness 1.2 Range of tensile strength 29.32 lbs Are the shell plates welded or flanged no Descrip. of riveting: cir. seams lap. d. 7

seams D.B.S.T.R Diameter of rivet holes in long. seams 1.9 Pitch of rivets 9.4 Lap of plates or width of butt straps 22.4

centages of strength of longitudinal joint rivets 89.8 Working pressure of shell by rules 209 lbs Size of manhole in shell 16.1.2

of compensating ring 36.2.3.2.1.2 No. and Description of Furnaces in each boiler 4 Morrison Material steel Outside diameter 44.7.6

th of plain part top 4.2 Thickness of plates crown 19.7 Description of longitudinal joint welded No. of strengthening rings 2

working pressure of furnace by the rules 218 lbs Combustion chamber plates: Material steel Thickness: Sides 5.8 Back 5.8 Top 5.8 Bottom 5.8

h of stays to ditto: Sides 7.6.2 Back 7.4.6.2 Top 7.4.7.4 If stays are fitted with nuts or riveted heads none Working pressure by rules 247 lbs

erial of stays 1.0 Diameter at smallest part 1.8 Area supported by each stay 54.25 Working pressure by rules 257 lbs End plates in steam space:

erial steel Thickness 1.8 Pitch of stays 16.2.15.2 How are stays secured D.N.W Working pressure by rules 231 lbs Material of stays steel

meter at smallest part 2.8 Area supported by each stay 2.51 Working pressure by rules 259 lbs Material of Front plates at bottom steel

thickness 3.4 Material of Lower back plate steel Thickness 5.4 Greatest pitch of stays 14.4 Working pressure of plate by rules 364 lbs

meter of tubes 3 Pitch of tubes 4.4.4.4 Material of tube plates steel Thickness: Front 3.4 Back 3.4 Mean pitch of stays 8.8.2

h across wide water spaces 14.4 Working pressures by rules 231 lbs Girders to Chamber tops: Material steel Depth and

ness of girder at centre 9.2 Length as per rule 35 Distance apart 7.4 Number and pitch of stays in each 4-7

working pressure by rules 252 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked

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

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

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

king pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

W206-0233

Lloyd's Register Foundation



VERTICAL DONKEY BOILER—

Manufacturers of Steel

See New York report. No 9370

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  
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:— 1 tail shaft, 1 section crank shaft, 1 propeller  
two blades, 4 main bearing, 2 crank pin & 2 crosshead bars  
1 set coupling bolts, 2 crosshead, 2 crank pin & 2 main bearing bolts  
1 piston rod, 1 valve spindle & a complete set main & aux feed valves  
The foregoing is a correct description,

Main engines boiler

Manufacturers

H. C. Magowan Vice Pres. N. Y. S. I.

Dates During progress of work in shops:— Feb. 26, Mar. 14, 20, 28, April 3, 16, 23, 29, May 13, 17, 22, Jun. 6, 10, 14, 19, 20, 25, 27, July 2, 10, 18, 24, 29, Aug. 2, 12, 23, 26, 29, 31  
During erection on board vessel:— Feb. 1, 10, 17, 26, Mar. 11, 14, 17, 18, 28, Apr. 5, 9, 1913  
Total No. of visits 55

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 6-10-12 Slides 6-10-12 Covers 6-10-12 Pistons 25-9-12 Rods 25-9-12  
Connecting rods 25-9-12 Crank shaft 25-9-12 Thrust shaft 25-9-12 Tunnel shafts ——— Screw shaft 29-11-12 Propeller 29-11-12  
Stern tube 29-11-12 Steam pipes tested 16-1-13 Engine and boiler seatings 9-12-12 Engines holding down bolts 29-1-12  
Completion of pumping arrangements 5-4-13 Boilers fixed 28-1-13 Engines tried under steam 5-4-13  
Main boiler safety valves adjusted 5-4-13 Thickness of adjusting washers P. Boile F 7/8 A 1/16 S. Boile F 7/8 A 1/16  
Material of Crank shaft Steel Identification Mark on Do. 799 Material of Thrust shaft Steel Identification Mark on Do. 799  
Material of Tunnel shafts ——— Identification Marks on Do. ——— Material of Screw shafts Steel Identification Marks on Do. 799  
Material of Steam Pipes Steel Test pressure 300 lbs

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

Main feed pumps, two Alberger patent four stage clean turbine pumps, duplicates as fitted in S. S. Rango & El Segundo Phil report 1943.

The machinery of this vessel has been constructed & fitted on board under special survey. The workmanship is found to be good throughout. The main boilers are donkey boilers have been fitted to burn liquid fuel.

The White system of mechanical atomization has been installed & found to work well. Section No. 49 of the Rules regarding oil fuel has been complied with.

The machinery has been tried under steam & found to work well which in my opinion renders the vessel eligible for the record of + L.M.C. 4.13, fitted for liquid fuel in the Register Book.

Duplicate of S. S. Rango Phil report No 1943, except oil fuel.

The amount of Entry Fee. \$150.00 When applied for, 12-4-1913  
Special \$180.00 When received, 9-5-1913  
Donkey Boiler Fee £ - - -  
Travelling Expenses (if any) \$4.00

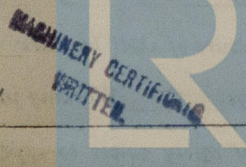
Robert H. Wig  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute

Assigned

+ L.M.C. 4.13 Subject

FRI. SEP. 12 1913



Lloyd's Register Foundation

PHILADELPHIA

Certificate (if required) to be sent to

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