

Rpt. 4.

## REPORT ON MACHINERY.

No. 9/8883

Date of writing Report

19

When handed in at Local Office

19

Port of

Received at London Office

No. in Survey held at  
Reg. Book.

New York

Date, First Survey

11 Nov/19

Last Survey

23 Apr 1920

26272 on the Steel screw steamer "MANOA" ex "SHOSHONE"

(Number of Visits)

Master

Built at

Vegesack

By whom built

Bremer Vulkan

Engines made at

Vegesack

By whom made

Bremer Vulkan

when made

1912

Boilers made at

Vegesack

By whom made

Bremer Vulkan

when made

1912

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

604

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

ENGINES, &amp;c.—Description of Engines

Quadruple Expansion

No. of Cylinders

4

No. of Cranks

4

Dia. of Cylinders

24, 34.7, 50.4, 74

Length of Stroke

4.52

Revs. per minute

85

Dia. of Screw shaft

as per rule 15.85

Material of

steel

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

in the propeller boss oil glands 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 5.3

Dia. of Tunnel shaft

as per rule 13.64

Dia. of Crank shaft journals

as per rule 14.33

Dia. of Crank pin

14.7

Size of Crank webs

9.8

Dia. of thrust shaft under

collars

14.8

Dia. of screw

17.9

Pitch of Screw

17.0 3/4

No. of Blades

4

State whether moveable

yes

Total surface

99 sq. feet.

No. of Feed pumps

2 main

Diameter of ditto

7.8

Stroke

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2 also ballast pump

Diameter of ditto

9.8 x 5.2

Stroke

8.8 x 9.8

No. of Donkey Engines

SIZES OF PUMPS

10 x 14 x 16

vertical duplex

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

In Engine Room

one 8" and four 5"

In Holds, &amp;c.

9 - 3 1/2

No. of Bilge Injections

1 sizes

8"

Connected to condenser, or to circulating pump

Air pump

Is a separate Donkey Suction fitted in Engine room &amp; size

four 5"

Are 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

yes

Are all connections with the sea direct on the skin of the ship

yes

Are they Valves or Cocks

valves

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

below

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 and all boiler mountings accessible at all times

yes

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

yes

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

tween deck level.

BOILERS, &amp;c.—(Letter for record

S)

Manufacturers of Steel

Total Heating Surface of Boilers

each

2878

Is Forced Draft fitted

yes

No. and Description of Boilers

3. S. E. Scott Marine

Working Pressure

220 lbs

Tested by hydraulic pressure to

330 lbs

Date of test

6 Dec. 1919

No. of Certificate

Can each boiler be worked separately

yes

Area of fire grate in each boiler

66.2

No. and Description of Safety Valves to

each boiler

Two 4"

Area of each valve

12.57

Pressure to which they are adjusted

220 lbs

Smallest distance between boilers or uptakes and bunkers or woodwork

15"

Mean dia. of boilers

15.3

Length

12.1

Material of shell plates

Steel

Thickness

1.7

Range of tensile strength

64/72500

Are the shell plates welded or flanged

-

Descrip. of riveting: cir. seams

D.R. Lap

long. seams

Q.R. D.B.S.

Diameter of rivet holes in long. seams

1.7

Pitch of rivets

38.8

Lap of plates or width of butt straps

32.76

Per centages of strength of longitudinal joint

rivets

86% allowed

Working pressure of shell by rules

232 lbs

Size of manhole in shell

11.3 x 15.3

Size of compensating ring

37.4 x 41.4 x 1.7

No. and Description of Furnaces in each boiler

3

Material

Steel

Outside diameter

49.4

Length of plain part

top

Thickness of plates

crown

Description of longitudinal joint

welded

No. of strengthening rings

Cott.

Working pressure of furnace by the rules

224 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

4.5

Back

4.5

Top

4.5

Bottom

5.5

Pitch of stays to ditto: Sides

6.11 x 7.7

Back

6.8 x 7.16

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

263 lbs

Material of stays

Steel

Area at smallest part

1.45

Area supported by each stay

53

Working pressure by rules

220 lbs

End plates in steam space:

Material

Steel

Thickness

1.76

Area at smallest part

5.65

Area supported by each stay

2.10

Working pressure by rules

280 lbs

Material of Front plates at bottom

Steel

Thickness

1.32

Greatest pitch of stays

11.4 x 13.3

Working pressure of plate by rules

242 lbs

Diameter of tubes

2.7

Pitch of tubes

3.15

Material of tube plates

Steel

Thickness: Front

1.32

Back

29.32

Mean pitch of stays

7.7

Pitch across wide water spaces

13.3

Working pressures by rules

226 lbs

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

9.5 x 2.5

Length as per rule

33

Distance apart

8.4

Number and pitch of stays in each

3 - 7.8

Working pressure by rules

220 lbs

Steam dome: description of joint to shell

%

of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

SUPERHEATER. Type

None

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

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

Pressure to which each is adjusted

Is Easing Gear fitted

Diameter of Safety Valve

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IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

100 boiler tubes and 100 boiler tubes

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building

During progress of work in shops --  
During erection on board vessel --  
Total No. of visits

19/9/1921 Nov 11 25 26 Dec 2 8 10 1921 Jan 21 Mar 4 5 9 Apr 20 23

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

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

Completion of fitting sea connections

Stern tube

Screw shaft and propeller

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

Is an installation fitted for burning oil fuel

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

If so, state name of vessel

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

The amount of Entry Fee ... £ : : When applied for,  
Special ... £ : : 19  
Donkey Boiler Fee ... £ : : When received,  
Travelling Expenses (if any) £ : : 19

Committee's Minute

Assigned

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 29 SEP. 1922

FRI. DEC. 8 1922

Lloyd's Register Foundation