

Rpt. 4.

REPORT ON MACHINERY.

No. 83492

Received at London Office 10 DEC 1920

Date of writing Report 10 DEC 1920

When handed in at Local Office 10 DEC 1920

Port of London

No. in Survey held at London

Reg. Book.

Date, First Survey Oct. 22nd 1920Last Survey 4th Dec. 1920

(Number of Visits 9)

Master

Built at Rostock

By whom built

Art. Soc. Neptune

Tons

Net

When built 1913

Engines made at Rostock

By whom made

Neptune Co

when made

1913

Boilers made at do

By whom made

do

when made

1913

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28 516

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 28¹/₁₆, 46⁵/₈, 76³/₄

Length of Stroke 48"

Revs. per minute

Dia. of Screw shaft

as per rule 15.3

Material of

screw shaft

Is 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

in the 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

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'-5¹/₄"

Dia. of Tunnel shaft

as per rule 3.61

Dia. of Crank shaft journals

as per rule 3.80

Dia. of Crank pin 37⁸/₃₂

Size of Crank webs

Dia. of thrust shaft under

collars 37⁸/₃₂

Dia. of screw 52.100

Pitch of Screw 4.995

No. of Blades 4

State whether moveable Yes

Total surface

No. of Feed pumps 2

Diameter of ditto 17.8

Stroke 26.0

Can one be overhauled while the other is at work

Wain's Type

No. of Bilge pumps 2

Diameter of ditto 12.5

Stroke 6.10

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines 4

Sizes of Pumps 2.50

16.5

2.50

2.60

3.10

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

In Engine Room 2

4"

In Holds, &c. 2

each hold - 4"

No. of Bilge Injections 1

sizes 7"

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size

Yes - 4"

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

Both

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

above

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

Yes

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

Top gratings

BOILERS, &c.—(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers 7025⁵/₈

Is Forced Draft fitted

Yes

No. and Description of Boilers

Three Single Ended

Working Pressure 190 lb

Tested by hydraulic pressure to

290 lb

Date of test 27/11/21

No. of Certificate

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

49.5⁵/₈

No. and Description of Safety Valves to

each boiler

Two Spring loaded

Area of each valve

8.92¹/₂

Pressure to which they are adjusted

190 lb

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

12"

Mean dia. of boilers

43.00

Length

37.10

Material of shell plates

slut

Range of tensile strength

43 K.S.

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

T.R.L.

Thickens 3.15

Diameter of rivet holes in long. seams

3.5

Pitch of rivets

4.52

Lap of plates or width of butt straps

Seated

Per centages of strength of longitudinal joint

rivets 100%

Working pressure of shell by rules

199 lb

Size of manhole in shell

400 x 300

Material

slut

Outside diameter

10.50

Size of compensating ring

200 x 31.5

No. and Description of Furnaces in each boiler

3 Morrison

Material

slut

Length of plain part

top 15.2

Description of longitudinal joint

weld

No. of strengthening rings

1

Working pressure of furnace by the rules

228

Combustion chamber plates: Material

slut

Thickness: Sides

16.5

Back

16.5

Top

16.5

Bottom

22.0

Pitch of stays to ditto: Sides

200 x 19.0

Back

200 x 20.0

Top

180 x 19.0

If stays are fitted with nuts or riveted heads

none

Working pressure by rules

250 lb

Material of stays

slut

Area at smallest part

3.8

Area supported by each stay

200 x 19.0

Working pressure by rules

271 lb

End plates in steam space:

Material

slut

Thickness

27.5

Pitch of stays

360 x 44.0

How are stays secured

D. 2.2

Area at smallest part

70

Area supported by each stay

360 x 44.0

Working pressure by rules

229 lb

Material of Front plates at bottom

slut

Thickness

26.5

Material of Lower back plate

slut

Thickness

24

Greatest pitch of stays

32.0

Working pressure of plate by rules

230

Diameter of tubes

3.2

Pitch of tubes

11.4

Material of tube plates

slut

Thickness: Front

26.5

Back

26

Mean pitch of stays

9"

Pitch across wide water spaces

36.0

Working pressures by rules

206 lb

Girders to Chamber tops: Material

slut

Depth and

thickness of girder at centre

220 x 19 x 2

Length as per rule

840

Distance apart

180

Number and pitch of stays in each

3 - 19.0

Working pressure by rules

196 lb

Steam dome: description of joint to shell

none

% of strength of joint

1

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

Tubes 1000 lb

Headings 5000 lb

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

Yes

Is Easing Gear fitted

Yes

Date of Test

Brand 7 Trade

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

Yes

Diameter of Safety Valve

2"

Pressure to which each is adjusted

190 lb

Is Easing Gear fitted

Yes

W 221-0109.3

Lloyd's Register

Foundation

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? *—*

SPARE GEAR. State the articles supplied:— *Two top end bolts, two bottom end bolts, 2 main bearing bolts, set of coupling bolts, tail shaft, $\frac{3}{4}$ crank shaft, propeller blade a set of studs & nuts, eccentric strap, valve spindle, air pump rod, air pump impeller, pt. top end brasses, pt. bottom end brasses, assorted iron, bolts etc. Also feed & bilge pump valves.*

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

Is the ^{plan} ~~approved plan~~ of main boiler forwarded herewith *Yes*

" " " donkey " " " *—*

Dates of Examination of principal parts—Cylinders *9/11/20* Slides *9/11/20* Covers *9/11/20* Pistons *9/11/20* Rods *9/11/20*
Connecting rods *9/11/20* Crank shaft *9/11/20* Thrust shaft *9/11/20* Tunnel shafts *9/11/20* Screw shaft *2/11/20* Propeller *2/11/20*
Stern tube *2/11/20* Steam pipes tested *B.H.T.* Engine and boiler seatings *9/11/20* Engines holding down bolts *9/11/20*
Completion of pumping arrangements *27/11/20* Boilers fixed *27/11/20* Engines tried under steam *4/12/20*
Completion of fitting sea connections *2/11/20* Stern tube *2/11/20* Screw shaft and propeller *2/11/20*
Main boiler safety valves adjusted *4/12/20* Thickness of adjusting washers

Material of Crank shaft *slut* Identification Mark on Do. *—* Material of Thrust shaft *slut* Identification Mark on Do. *—*

Material of Tunnel shafts *slut* Identification Marks on Do. *—* Material of Screw shafts *slut* Identification Marks on Do. *—*

Material of Steam Pipes *slut* Test pressure *500 lbs*

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 *—* If so, state name of vessel *—*

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

The machinery of this vessel was not constructed under this Society's survey but it has been opened up & carefully examined. The principal dimensions have been verified.

The machinery of this vessel is in good order & eligible in my opinion to have record L.M.C. 12, 20 in the Register Book. Tail shaft 12, 20.

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 ... £ : : When applied for,

Special, ... £ *30 : 0* } *13/12/20*

Donkey Boiler Fee ... £ : : When received,

Travelling Expenses (if any) £ : : *14.12.19 20 M.W.*

Committee's Minute

TUE. DEC. 14 1920

Assigned

MACHINERY DEPT.
WRITTEN

L.M.C. 12.20

L.D.

H. Bawden-Smith & Frederick Stephens
Engineer Surveyor to Lloyd's Register of Shipping.



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