

REPORT ON MACHINERY.

No. 32704
THU. 30 JUN. 1921

Received at London Office

Date of writing Report

19

When handed in at Local Office

29.6.21 Port of

Hull

No. in Survey held at
Reg. Book

Hull

Date, First Survey

9.6.21

Last Survey

28.6 1921

(Number of Visits

8)

5740 on the S.S. DADG. 76. now "CESARIO"

Gross
Tons
Net

When built 1919

Master Built at Hamburg

By whom built Blohm & Voss

when made 1919

Engines made at Hamburg

By whom made Blohm & Voss

when made 1919

Boilers made at

By whom made

Registered Horse Power 502

Owners David S.S. Co. Ltd.

Port belonging to London

Nom. Horse Power as per Section 28

856
582.5

Is Refrigerating Machinery fitted for cargo purposes

no.

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines Quadruple expansion

No. of Cylinders 4

No. of Cranks 4

Dia. of Cylinders $28\frac{5}{16} \times 40\frac{1}{8} \times 57\frac{7}{16} \times 82\frac{5}{16}$ Length of Stroke $55\frac{1}{16}$ Revs. per minute

Dia. of Screw shaft

as per rule $16\frac{5}{16}$ 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

Is 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

6-0

Dia. of Tunnel shaft

as per rule $15\frac{3}{16}$

Dia. of Crank shaft journals

as per rule $16\frac{1}{16}$

Dia. of Crank pin

 $16\frac{1}{2}$

Size of Crank webs

A

Dia. of thrust shaft under

Collars $16\frac{5}{8}$

Dia. of screw

Pitch of Screw

 $17\frac{9}{16}$

No. of Blades 4

State whether moveable

no

Total surface

124 sq ft

No. of Feed pumps 2

Diameter of ditto

 $4\frac{23}{32}$

Stroke 27.11

Can one be overhauled while the other is at work

yes

No. of Bilge pumps 2

Diameter of ditto

 $4\frac{11}{16}$

Stroke 27.11

Can one be overhauled while the other is at work

yes

No. of Donkey Engines 3

Sizes of Pumps

 $7\frac{1}{8} \times 4\frac{5}{16} \times 7\frac{1}{2}$ (Donkey feed) $11\frac{1}{8} \times 11\frac{1}{8} \times 10$ bilge & ballast $10\frac{1}{8} \times 6\frac{1}{2} \times 9$ gull service

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

In Engine Room 2 P & 2 S, $3\frac{1}{2}$ dia

✓

In Holds, &c.

one $3\frac{1}{2}$ m ports starboard side of No.1-2-3-4-5-6 holds, & one $3\frac{1}{2}$ tunnel well

No. of Bilge Injections 1

sizes 12"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

3-6

See Ham. 14902.

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

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

for suction

How are they protected

wood casing

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 engine room top platform

OILERS, &c.—(Letter for record)

Manufacturers of Steel

Each boiler 2940 sq ft = 3218.5 sq ft

✓

Total = 12874 sq ft

Total Heating Surface of Boilers 12874 sq ft

Is Forced Draft fitted

yes

No. and Description of Boilers

4 Single ended.

Working Pressure 225 lbs.

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

yes

Area of fire grate in each boiler

66.85 sq ft

No. and Description of Safety Valves to

each boiler 2 spring loaded

Area of each valve

13.36 sq ft

Pressure to which they are adjusted

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

2-0"

Mean dia. of boilers

190.55"

Length

144.85"

Material of shell plates

Thickens 1.496"

Range of tensile strength

29.21/34.19 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

DR

long. seams QRDBS

Diameter of rivet holes in long. seams

1.614"

Pitch of rivets

19.685"

Lap of plates or width of butt straps

804 mm

31.654"

Per centages of strength of longitudinal joint

rivets 112.7

Working pressure of shell by rules

225 lbs.

Size of manhole in shell

19.68 x 15.75"

1185 mm

46.65"

Size of compensating ring 13.38 x 1.299

No. and Description of Furnaces in each boiler

3 Corrugated

Material

S

Outside diameter

1185 mm

46.65"

Length of plain part

Thickens of plates

crown 17.5 mm

Description of longitudinal joint

welded

No. of strengthening rings

18 mm

18 mm

Working pressure of furnace by the rules

216.5

Combustion chamber plates: Material

S

Thickens: Sides

7.087"

Back

7.087"

Top

7.087"

Bottom

7.087"

Pitch of stays to ditto: Sides

7.87"

Back

7.87"

Top

7.87"

If stays are fitted with nuts or riveted heads

then N & W.

Working pressure by rules

190.3

Top

Material of stays

S

Area at smallest part

1.78"

Area supported by each stay

61.8 sq ft

Working pressure by rules

246 lbs.

End plates in steam space:

Material

S

Thickens

1.1"

Pitch of stays

15.75 x 14.96"

How are stays secured

D. & W.

Working pressure by rules

238.2

Material of stays

S

Area at smallest part

3"

Area supported by each stay

235.6 sq ft

Working pressure by rules

285.5

Material of Front plates at bottom

S

Thickens

1.06"

Greatest pitch of stays

7.87 x 13.5"

Diameter of tubes

3.126"

Pitch of tubes

4.29 x 4.29"

Material of tube plates

S

Thickens: Front

1.06"

Back

.826"

Mean pitch of stays

8.58 x 8.58"

Pitch across wide water spaces

14.17"

Working pressures by rules

256.5 lbs.

Girders to Chamber tops: Material

S

Depth and

200 mm

thickens of girder at centre

10.63 x 1.417"

Length as per rule

35.12

Distance apart

7.87"

Working pressure by rules

269.5

Steam dome: description of joint to shell

✓

% of strength of joint

Diameter

Thickens of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickens

How stayed

SUPERHEATER. Type

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

Lloyd's Register

Foundation

4195-0043

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:

Two top end bolts and nuts. Two bottom end bolts and nuts. Two main bearing bolts and nuts. One set of coupling bolts. One pair of top end bars. One pair of bottom end bars. One HP Valve spindle. One set of piston rings each piston. 8 jink ring bolts. 8 cylinder cover studs. 6 valve cover studs. One set of pump link bars. One air pump rod. 18 Boiler tubes. 25 Tube stoppers. 4 auxy pump valves. 4 main feed pump valves and seats. 4 sanitary pump valves and seats. One set of Ballast pump valves. One safety valve spring. Two main check valves and seats. Two auxy check valves and seats. 30 Condenser tubes. 2 feed pump valves and seats. 6 Bilge pump valves and seats. A quantity of assorted bolts and nuts, and iron of various sizes, etc.

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 approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 15-6-21 Slides 15-6-21 Covers 15-6-21 Pistons 15-6-21 Rods 15-6-21

Connecting rods 15-6-21 Crank shaft 15-6-21 Thrust shaft 20-6-21 Tunnel shafts 20-6-21 Screw shaft 9-6-21 Propeller 9-6-21

Stern tube 9-6-21 Steam pipes tested Engine and boiler seatings 17-6-21 Engines holding down bolts 17-6-21

Completion of pumping arrangements

Boilers fixed

Engines tried under steam

Completion of fitting sea connections 9-6-21

Stern tube 9-6-21

Screw shaft and propeller 9-6-21

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

Steel

Test pressure

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 Ex-German vessel was constructed under Germanischer Lloyd Survey, and has now been submitted to the Survey of this Society. The 3 after trills have been examined throughout. The cylinders, pistons, slides, crank thrust, and intermediate shafts, all pumps and cuttings, condenser, screw shaft, stern tube, propeller, sea connections and fastenings have been examined. The dimensions of cylinders, shafts, and bearings, of boilers have been verified and found to be as stated in the report. The bilge arrangement has been examined and found to be in accordance with the Society's requirements, except that a separate suction in engine room is not yet fitted. The distance between the foreman vital of stern tube and top of after bearing of screw shaft is 18". The boiler examined were found in good condition, and in safe condition for a W.P. of 225 lbs per sq. in. The engines generally were found in good condition except crank bearings, which require remounting. To complete the survey, the forward trills and mounting, the crank shaft to be lifted and bearings. A separate bilge suction to be fitted in engine room from bilge and ballast pump. The main and auxiliary machinery and pump suction to be tried under working conditions, and safety valves of all boilers to be adjusted under steam to 225 lbs per sq. in. The owner's superintendent states that this will be done at Rotterdam when the vessel is now going. The Rotterdam surveyors have been notified. In our opinion this vessel will be eligible for the Record of LMC 6-21 on completion of the survey as above.

The amount of Entry Fee ... £

Special ... £

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

When applied for,

When received,

John Robertson, P. Fitzgerald.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

TUE MAR 28 1922



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