

REPORT ON MACHINERY

No. 32693

Received at London Office

JUNE 28 JUN 1921

Writing Report

When handed in at Local Office

27/6/1921 Port of Hull

Date, First Survey 27.5.21

Last Survey

23-6-1921

Survey held at

Book.

3 on the

S.S. "GERA" NOW NAMED "ORSINO"

Gross

Tons

Net

When built

1915

when made

1915

es made at

s made at

ered Horse Power

Horse Power as per Section 28

819.

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

LINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

of Cylinders $32\frac{5}{16} \times 52\frac{13}{16} \times 86\frac{11}{16}$

Length of Stroke

55.11

Revs. per minute

Dia. of Screw shaft

as per rule 17.75

as fitted 18.25

Material of

screw shaft

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

If the liner does not fit tightly at the part

propeller boss

yes

If the liner is in more than one length are the joints burned

yes

If two

on the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

yes

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

of Tunnel shaft

as per rule 16.62

as fitted 16.375

Dia. of Crank shaft journals

as per rule 17.43

as fitted 17.81

Dia. of Crank pin

18.5

Size of Crank webs

11.7

Dia. of thrust shaft under

detachable

rs

17.16

Dia. of screw

19-0

Pitch of Screw

18.37

No. of Blades

4

State whether moveable

yes

of Feed pumps

2

Diameter of ditto

5.8

Stroke

27.5

Can one be overhauled while the other is at work

yes

of Bilge pumps

2

Diameter of ditto

5.2

Stroke

27.5

Can one be overhauled while the other is at work

yes

of Donkey Engines

1

Diameter of ditto

5.2

Stroke

27.5

Can one be overhauled while the other is at work

yes

Engine Room

1

Diameter of ditto

5.2

Stroke

27.5

Can one be overhauled while the other is at work

yes

ne 3.2" tunnel well

1

Diameter of ditto

5.2

Stroke

27.5

Can one be overhauled while the other is at work

yes

of Bilge Injections

1

Diameter of ditto

5.2

Stroke

27.5

Can one be overhauled while the other is at work

yes

all the bilge suction pipes fitted with roses

yes

Are the roses in Engine room always accessible

yes

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

at pipes are carried through the bunkers

forward hold suction

How are they protected

wood casings

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

yes

Are the sluices on Engine room bulkheads always accessible

none

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

yes

Is it fitted with a watertight door

yes

he Screw Shaft Tunnel watertight

yes

worked from

Engine room top grating.

LERS, &c.—(Letter for record

each boiler

al Heating Surface of Boilers

Working Pressure

each boiler be worked separately

boiler

allest distance between boilers or uptakes and bunkers or woodwork

Thickness

g. seams

r centages of strength of longitudinal joint

e of compensating ring

ngth of plain part

orking pressure of furnace by the rules

itch of stays to ditto: Sides

aterial of stays

aterial

rea at smallest part

Thickness

iameter of tubes

itch across wide water spaces

ickness of girder at centre

orking pressure by rules

iameter

itch of rivets

PERHEATER. Type

Date of Test

Diameter of Safety Valve

Manufacturers of Steel

Is Forced Draft fitted

No. and Description of Boilers

Date of test

No. of Certificate

No. and Description of Safety Valves to

Are they fitted with easing gear

Area of fire grate in each boiler

Pressure to which they are adjusted

INT.

Mean dia. of boilers

Length

Material of shell plates

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

Pitch of rivets

Lap of plates or width of butt straps

Size of manhole in shell

Working pressure of shell by rules

No. of strengthening rings

Description of longitudinal joint

Thickness: Sides

Back

Top

Bottom

Working pressure by rules

End plates in steam space:

Working pressure by rules

Material of stays

Working pressure by rules

Material of Front plates at bottom

Working pressure of plate by rules

Greatest pitch of stays

Mean pitch of stays

Material of tube plates

Thickness: Front

Back

Girders to Chamber tops: Material

Depth and

Working pressures by rules

Distance apart

Number and pitch of stays in each

% of strength of joint

Diam. of rivet holes

How stayed

Tested by Hydraulic Pressure to

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

Is Easing Gear fitted

Pressure to which each is adjusted

Date of Approval of Plan

Is it fitted with a watertight door

worked from

Engine room top grating.

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IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two top end bolts & nuts, 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 set coupling bolts, 1 set feed & bilge pump valves, 1 set piston rings for HP & LP cylinders, 2 propeller blades, 1 pair connecting rod bottom end brasses, 1 set top end brasses, 1 set pump links with brasses, 1 air pump rod, 1 LP valve spindle, 1 set main & auxy check valves, 6 cyl. cover studs, 10 valve chest cover studs, 32 boiler tubes, 43 condenser tubes, 1 cyl. escape valve spring, 1 safety valve spring; a quantity of bolts & nuts & iron of various sizes.

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

no.

" " " donkey " " "

none

Dates of Examination of principal parts—Cylinders 13-6-21 Slides 13-6-21 Covers 13-6-21 Pistons 13-6-21 Rods 13-6-21
Connecting rods 13-6-21 Crank shaft 13-6-21 Thrust shaft 13-6-21 Tunnel shafts 13-6-21 Screw shaft 27-5-21 Propeller 27-5-21
Stern tube 28-5-21 Steam pipes tested ✓ Engine and boiler seatings 3-6-21 Engines holding down bolts 13-6-21

Completion of pumping arrangements Boilers fixed — Engines tried under steam
Examination of Completion of fitting sea connections 27-5-21 Stern tube 28-5-21 Screw shaft and propeller 27-5-21

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 steamer was constructed under the

Germanischer Lloyd Survey, and has now been submitted to the Survey of this Society. The boilers have been examined throughout. The cylinders, pistons, slides, crank shaft and intermediate shafting, all pumps and suction, condenser, screw shaft and stern tube, propeller, sea connections and fastenings, have been examined. The dimensions of cylinders, shafting, etc., and scantlings of boilers have been verified, and found to be as stated on the report. The bilge arrangements have been examined, and found to be in accordance with the Society's requirements. The distance between the Lignum vitae of stern tube and top of after bearing of screw shaft is $\frac{1}{8}$ ". The materials and workmanship are good. The boilers were found generally in good condition except that several furnaces were somewhat distorted, especially the starboard furnace of starboard boiler. This has now been jacked up and made circular, and the tubes are now in our opinion in safe condition for a working pressure of 206 lbs. The crank shaft was found to be down at Nos. 3 and 4 bearings about $\frac{3}{16}$ ". It was recommended that the shaft be lifted and the main bearings re-metalled.

To Complete the Survey:— The Crank shaft-bearing to be re-metalled as above, and the safety valves to be adjusted to 206 lbs and tested for accumulation. The owners representative states that this will be done at Rotterdam when the vessel is now going. The Rotterdam Surveyors have been notified. In our opinion this Dutch Machinery is eligible for the record of LMC 6-21 Subject to the survey being completed as above.

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

See Report of John Polak and P. Fitzgerald.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

LMC 6-21

70 CL

MACHINERY CERT
WRITTEN



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Foundation