

REPORT ON MACHINERY.

No. 14327

MON. MAR. 29 1920

Received at London Office

Port of

HAMBURG

Date of writing Report

19

When handed in at Local Office

19

No. in Survey held at
Reg. Book.

Rostock

Date, First Survey 26th May 1914 Last Survey 2nd January 1915

(Number of Visits)

Gross 4208

Net 3032

When built 1915

Master

Built at Rostock

By whom built H. G. NEPTUN

when made 1913

Engines made at

Rostock

By whom made H. G. NEPTUN

when made 1913

Boilers made at

Rostock

By whom made H. G. NEPTUN

Registered Horse Power

684

Owners The Shipping Controller of the Port

Port belonging to London

Nom. Horse Power as per Section 28

684

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 29³/₁₆, 48³/₁₆, 80³/₁₆Length of Stroke 55¹/₂

Revs. per minute 75

Dia. of Screw shaft

as per rule 16³/₁₆

Material of screw shaft

Steel

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

no

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 54¹/₂

Dia. of Tunnel shaft

as per rule 15³/₁₆

Dia. of Crank shaft journals

as per rule 16³/₁₆Dia. of Crank pin 16³/₁₆Size of Crank webs 18³/₁₆ x 3³/₁₆

Dia. of thrust shaft under

collars 10³/₁₆Dia. of screw 14³/₁₆Pitch of Screw 9¹/₂

No. of Blades 4

State whether moveable

yes

Total surface 444 sq. ft.

No. of Feed pumps 4

Diameter of ditto 4³/₄Stroke 27³/₄

Can one be overhauled while the other is at work

yes

No. of Bilge pumps 4

Diameter of ditto 4³/₄Stroke 27³/₄

Can one be overhauled while the other is at work

yes

No. of Donkey Engines 6

Sizes of Pumps

See perforation

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

In Engine Room 6 off 4" 1 off 4" from tunnel peak 1 off 2¹/₂"In Engine Room 6 off 4" 1 off 4" from tunnel peak 1 off 2¹/₂"6 off 5" 10 off 4" 1 off 3¹/₂" from aft peak 1 off 2¹/₂" from fore peak

In Holds, &c.

Is a separate Donkey Suction fitted in Engine room & size

yes 6"

No. of Bilge Injections 1

sizes 10³/₁₆

Connected to condenser

to circulating pump

yes

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

no

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

yes

Are they Valves or Cocks

Valves & Cocks

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 floor

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

Stokehold suction

How are they protected

wood boss

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

Dates of examination of completion of fitting of Sea Connections

of Stern Tube

Screw shaft and Propeller

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from Cylinder platform.

BOILERS, &c.—(Letter for record 5)

Manufacturers of Steel

Thiesse & Stahlwerke

Suerburg.

Total Heating Surface of Boilers 11650 sq. ft.

Is Forced Draft fitted

no

No. and Description of Boilers 4 single end multi-tubular

Working Pressure 120 lb.

Tested by hydraulic pressure to 426 lb.

Date of test 22nd 8/20

No. of Certificate

Can each boiler be worked separately

yes

Area of fire grate in each boiler

76 sq. ft.

No. and Description of Safety Valves to

each boiler 2 spring loaded

Area of each valve 9.62 sq. in.

Pressure to which they are adjusted 213 lb.

Are they fitted with easing gear

yes

Smallest distance between boilers

compartments and bunkers

20"

Mean dia. of boilers 16⁵/₁₆Length 11¹⁰/₁₆

Material of shell plates

Steel

Thickness 1.5"

Range of tensile strength 28-32 Ton

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams 4. d. 11/16"

long. seams 4. d. 11/16"

Diameter of rivet holes in long. seams 1.613

Pitch of rivets 20.0"

Lap of plates or width of butt straps 3 1/2 x 1.5"

Working pressure of shell by rules 227 lb.

Size of manhole in shell 11.8 x 15.75"

Material Steel

Outside diameter 53.25"

Per centages of strength of longitudinal joint

rivets 102.5%

plate 92.2%

No. and Description of Furnaces in each boiler 3 Morrison

Material Steel

Outside diameter 53.25"

Size of compensating ring 27.61 x 31.5 x 1.5"

No. and Description of Furnaces in each boiler 3 Morrison

Material Steel

Outside diameter 53.25"

Length of plain part

top 4.7"

Thickness of plates

crown 1.72"

Description of longitudinal joint welded

No. of strengthening rings

none

Working pressure of furnace by the rules 225 lb.

Combustion chamber plates: Material Steel

Thickness: Sides .69"

Back .67"

Top .67"

Bottom .69"

Working pressure by rules 275 lb.

Pitch of stays to ditto: Sides 7.5 x 7.5"

Back 7.5 x 7.5"

Top 7.5 x 6.7"

If stays are fitted with nuts or riveted heads

yes

Working pressure by rules 260 lb.

End plates in steam space:

Material of stays Steel

Diameter at smallest part 1.53"

Area supported by each stay 59 sq. in.

Working pressure by rules 260 lb.

Material of stays Steel

Thickness 1.08"

Pitch of stays 6.1 x 19.3"

How are stays secured

See note p. 10

Materials Steel

Diameter at smallest part 3.55"

Area supported by each stay 311 sq. in.

Working pressure by rules 225 lb.

Material of Front plates at bottom Steel

Thickness 1.08"

Greatest pitch of stays 20.5"

Working pressure of plate by rules 220 lb.

Thickness 1.08"

Material of Lower back plate Steel

Thickness 1.08"

Material of tube plates Steel

Thickness: Front 1.08"

Back 1.02"

Mean pitch of stays 9.7"

Diameter of tubes 3.5"

Pitch of tubes 4.85"

Pitch across wide water spaces 14.95"

Working pressures by rules 220 lb.

Girders to Chamber tops: Material Steel

Depth and

Thickness of girder at centre 9.25 x 1.5"

Length as per rule 31.5"

Distance apart 8.07"

Number and pitch of stays in each 3 - 75"

Working pressure by rules 225 lb.

Superheater or Steam chest; how connected to boiler

no

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

008784-008745-644444

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IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied:—

1 Crank shaft, 1 Propeller shaft, 2 bronze Propeller blades, with one set of studs and nuts for both 1 set connecting rod top end and bottom and Crank, 4 connecting rod top and 2 bottom end bolts with nuts, 2 pump Links, one for each side, 2 bolts for main bearings, 1 slide valve, 1 set of coupling bolts, 1 set of piston rings for each cylinder, 1 set of rings for HP & IP, 1 slide valve, 1 rod for air pump, 1 rod for circulating pump, 50 condenser tubes with ferrules, 15 tubes for main boilers, 1 set of valves for air pump, circulating pump and each auxiliary steam pump, 1 set of valves for feed & bilge pumps, 1 electric strap complete, 1 valve with seat for main stop valves, 1 valve with seat for auxiliary stop valves, 1 spring for main boiler safety valve, 1 set of fire bars, a large number of studs, nuts, bolts, rivets, plates bar iron articles.

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

26/5, 25/6, 4/7, 18/7, 25/7, 1/9, 23/9, 16/10, 24/10, 12/12, 14-5/11,

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			
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.)

Specification of Pumps

- 1 Super double acting 9 x 6 x 12" for feed boilers.
- 1 " " 12 1/4 x 11 x 11 3/4" " Gallard & Filge service.
- 1 " " 7 1/2 x 5 x 6" " auxiliary feed & Deck work
- 1 " " 7 1/2 x 9 x 6" " auxiliary condenser
- 1 " " 4 1/2 x 2 3/4 x 4" " Fresh water service.
- 1 Injector, 125 tons per hour for boilers.

This report has been prepared from the data given in the First Entry Report made up by Mr. Köhler for the sister vessel named 'Guben' (but later on the name changed to 'Greif', which was fitted out as a pirate ship and sank in 1916 off the Norwegian Coast).

It would appear from the entries in Mr. Köhler's journal that he inspected the erection of the Engine & Boilers of the S.S. LERNER on different occasions during their preparation in the workshops. He neither saw the Engine or Boilers fitted on board nor the Boilers tested under water or steam pressure; Verifications will follow.

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

Friedrich Köhler
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Assigned

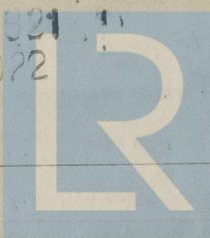
FRI. 24 JUN. 1921

Lab. 521

FRI. 14 OCT. 1921

TUE. 3 JAN. 1922

FRI. JAN. 27 1922



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