

## REPORT ON MACHINERY.

No. 11354/20  
MON. AUG. 19 1920

Received at London Office

Date of writing Report 4 Aug 1920. When handed in at Local Office

10 Port of Rotterdam.

Survey held at Rotterdam.

Date, First Survey 11<sup>th</sup> of June. Last Survey 28<sup>th</sup> of June 1920.

eg. Book.

(Number of Visits 9.)

on the Steel Screw Steamer "Hoerdijk" ex Denderah.

Gross

Tons

Net

When built 1914

aster

Built at Gostemünde

By whom built

Tecklenborg A.G.

Engines made at

Gostemünde

By whom made

Tecklenborg A.G.

when made

1914

Milers made at

Gostemünde

By whom made

Tecklenborg A.G.

when made

1914

Registered Horse Power

Owners Holland Amerika Lijn.

Port belonging to

Rotterdam.

Horse Power as per Section 28

744.

Is Refrigerating Machinery fitted for cargo purposes

Yes.

Is Electric Light fitted

Yes

GINES, &amp;c.—Description of Engines

Vertical Triple expansion.

No. of Cylinders

3.

No. of Cranks

3.

Dia. of Cylinders

29 1/8" x 48 1/8" x 80 1/8"

Length of Stroke

55"

Revs. per minute

46

Dia. of Screw shaft

14 1/2"

Material of

S.S. Steel

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

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

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

Length of stern bush

Dia. of Tunnel shaft

as per rule 15 1/8"

Dia. of Crank shaft journals

as per rule 16 1/8"

Dia. of Crank pin

16 1/4"

Size of Crank webs

8 1/8" x 10 1/8"

Dia. of thrust shaft under

Bars

16 1/8"

Dia. of screw

19 1/8"

Pitch of Screw

10 1/8"

No. of Blades

4

State whether moveable

Yes.

Total surface

No. of Feed pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Bilge pumps

2.

Diameter of ditto

5 1/4"

Stroke

17 1/2"

Can one be overhauled while the other is at work

No. of Donkey Engines

2.

Mills

Duplex

Sizes of Pumps

310 x 230 x 610

230 x 152 x 350

190 x 124 x 150

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

Engine Room

4. 2 4" and 1 independent

In Holds, &amp;c.

Hold I. 2 4" hold II. 2 4" hold III. 2 4"

No. of Bilge Injections

1

Size

Connected to condenser

to circulating pump

Is a separate Donkey Suction fitted in Engine room

of size

Yes.

2 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

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

Yes.

Are they Valves or Cocks

Both.

Are they high or low

ade to be seen without lifting the stokehold plates

Yes.

Are the Discharge Pipes above or below the deep water line

both.

Are the Discharge Pipes always accessible on the plating of the vessel

Yes.

Are the Blow Off Cocks fitted with a spigot and brass covering plate

Yes.

How are they protected

Are they in connection with the machinery and all boiler mountings accessible at all times

Yes.

Are the valves arranged so as to prevent any communication between the sea and the bilges

Yes.

Is it fitted with a watertight door

Yes.

worked from

Top platform.

Manufacturers of Steel

Friedrich Krupp

Evan. Rhar.

Total Heating Surface of Boilers

11800 sq ft

Is Forced Draft fitted

Yes.

No. and Description of Boilers

4. single ended Boilers.

Working Pressure

206 lbs.

Tested by hydraulic pressure to

212 lbs.

Date of test

22-6-20.

No. of Certificate

Can each boiler be worked separately

Yes.

Area of fire grate in each boiler

70 sq ft

No. and Description of Safety Valves to

each boiler

2. Spring loaded.

Area of each valve

12.5 sq in

Pressure to which they are adjusted

Smallest distance between boilers or uptakes and bunkers or woodwork

over 18 inches

Mean dia. of boilers

15 1/8"

Length

12 1/8"

Material of shell plates

Steel

Thickness

1 1/32"

Range of tensile strength

20/32 tons

Are the shell plates welded or flanged

No.

Descrip. of riveting: cir. seams

lap 2 x riv.

Long. seams

Double butt

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

19 1/8"

Lap of plates or width of butt straps

29 1/8"

Percentage of strength of longitudinal joint

rivets 100%

plate 92.5%

Working pressure of shell by rules

219 lbs.

Size of manhole in shell

19 1/8" x 15 1/4"

Area of compensating ring

15 1/4" x 1 1/32"

No. and Description of Furnaces in each boiler

3 Morisons

Material

Steel

Outside diameter

40 3/8"

Length of plain part

top 1 1/2"

Thickness of plates

crown 3/16"

Description of longitudinal joint

welded.

No. of strengthening rings

1

Working pressure of furnace by the rules

255 lbs.

Combustion chamber plates: Material

steel

Thickness: Sides

1/16"

Back

3/32"

Top

1/16"

Pitch of stays to ditto: Sides

8 1/8" x 7/8"

Back

7/4" x 6/8"

Top

7/8" x 7/8"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

257 lbs.

Material of stays

steel

Area at smallest part

1.47 sq in

Area supported by each stay

56.6 sq in

Working pressure by rules

255 lbs.

End plates in steam space:

Material

Steel

Thickness

1 1/16"

Pitch of stays

15 1/8" x 14"

How are stays secured

secured and nutted

Working pressure by rules

240 lbs.

Area at smallest part

6.49 sq in

Area supported by each stay

215 sq in

Working pressure by rules

270 lbs.

Material of Front plates at bottom

steel.

Thickness

1 1/32"

Material of Lower back plate

steel

Thickness

1"

Greatest pitch of stays

13 1/8"

Working pressure of plate by rules

240 lbs.

Diameter of tubes

3"

Pitch of tubes

4 3/8" x 4 1/2"

Material of tube plates

steel

Thickness: Front

1 1/32"

Back

1/16"

Pitch across wide water spaces

14"

Working pressures by rules

249 lbs.

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

2 x 10 1/4" x 1/16"

Length as per rule

Working pressure by rules

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

Schmidt

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

Yes.

Is Easing Gear fitted

Yes.

Diameter of Safety Valve

1 1/16"

Pressure to which each is adjusted

215 lbs.

Is Easing Gear fitted

Yes.

Lloyds Register

Foundation

W547-0186



IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— *2 top end bolts and nuts, 2 bottom end bolts and nuts, 2 main bearing bolts, one set of coupling bolts, one set of bilge pump valves, one set of valves for independent feed pumps. A quantity assorted bolts and nuts and iron 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 *9.*

Is the approved plan of main boiler forwarded here? *✓*  
also shafting and pumping arrangements *✓*  
" " " donkey " " " " " " " " " " " "

Dates of Examination of principal parts—Cylinders *17-6-20* Slides *17-6-20* Covers *17-6-20* Pistons *17-6-20* Rods *17-6-20*  
Connecting rods *17-6-20* Crank shaft *17-6-20* Thrust shaft *12-6-20* Tunnel shafts *12-6-20* Screw shaft *12-6-20* Propeller *12-6-20*  
Stern tube *12-6-20* Steam pipes tested *12-6-20* Engine and boiler seatings *✓* Engines holding down bolts *✓*  
Completion of pumping arrangements *✓* Boilers fixed *✓* Engines tried under steam *✓*  
Completion of fitting sea connections *12-6-20* Stern tube *12-6-20* Screw shaft and propeller *12-6-20*  
Main boiler safety valves adjusted *20-6-20* Thickness of adjusting washers *1 1/2 in - 1 1/4 in - 1 1/2 in - 1 1/4 in*

Material of Crank shaft *S. & H. Steel* Identification Mark on Do. *G L* Material of Thrust shaft *S. & H. Steel* Identification Mark on Do. *G L*  
Material of Tunnel shafts *S. & H. Steel* Identification Marks on Do. *G L* Material of Screw shaft *S. & H. Steel* Identification Mark on Do. *G L*  
Material of Steam Pipes *Steel* Test pressure *100 lbs*

Is an installation fitted for burning oil fuel *No.* Is the flash point of the *oil* *100° F*  
Have the requirements of Section 49 of the Rules been complied with *✓*  
Is this machinery duplicate of a previous case *No* If so, state name of vessel *None*

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

*The vessels Machinery has been examined as required by the Rules, verified with approved plans, boilers tested as required, and all found in order, the found in a good working condition when tried under steam and we are of opinion that this vessel is eligible to be recorded in the Society's Register. For with L. M. C. 6-20. subject to the clause valve on the forepeak bulkhead to dispensed with and an efficient hand pump or engine suction be fitted to the forepeak.* Ship Surveyors

The amount of Entry Fee ... £ : : When applied for, 19.  
Special ... £ : :  
Donkey Boiler Fee ... £ : : When received, 18/11/20  
Travelling Expenses (if any) £ *4.50* : : 18/11/20

Committee's Minute

Assigned

FRI NOV. 15 1920

*L.M.C. 6.20*

FRI. MAY. 12 1922

*J. J. Clew* Surveyor to Lloyd's Register of Shipping

TUE JUL 18 1922

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WED AUG 2 1922

FRI. 2 SEP. 1921

Lloyd's Register Foundation