

REPORT ON MACHINERY

No. 10871

WED. 16 JUL. 1919

Date of writing Report 5 July 1919 When handed in at Local Office

Port of Rotterdam

No. in Survey held at Papendrecht

Date, First Survey 6 July 1917 Last Survey 28 June 1919

Reg. Book.

on the Heel Screw Steamer **DUIVENDRECHT**

(Number of Visits 12)

Master B Kuiper Built at Heddicht

By whom built Wef Baanhoek

Gross 1303 Tons Net 1210

Engines made at Papendrecht

By whom made Machfab. Scheepman & W. La Schuit when made 1919

Boilers made at Rooking

By whom made Von Mey de Schelde when made 1918

Registered Horse Power

Owners

Port belonging to Rotterdam

Nom. Horse Power as per Section 28 125

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines

Vertical triple expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 11 1/4 x 29 x 47

Length of Stroke 36

Revs. per minute 95

Dia. of Screw shaft as fitted 10 1/8 Material of screw shaft SM steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No

Is the after end of the liner made water tight

in the propeller boss ^{Redwells} gland? 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 44"

Dia. of Tunnel shaft as fitted 9 1/8

Dia. of Crank shaft journals as fitted 9 1/2

Dia. of Crank pin 9 1/2

Size of Crank webs 6 1/2 x 4 1/2 Dia. of thrust shaft under collars

Dia. of screw 12 1/8 Pitch of Screw 12 1/8

No. of Blades 4

State whether moveable No Total surface 52 sq ft

No. of Feed pumps 2 Diameter of ditto 4 1/2" Stroke 18"

Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 5 1/4" Stroke 18"

Can one be overhauled while the other is at work Yes

No. of Donkey Engines 1 Sizes of Pumps 8 x 8 x 10"

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

In Engine Room 4 à 3" In tunnel well one à 2 1/2"

In Holds, &c. In forehold 2 à 2 1/2" In afterhold 3 à 2 1/2" One in dry tank à 2 1/2"

No. of Bilge Injections 1 sizes 5" Connected to condenser to circulating pump

Is a separate Donkey Suction fitted in Engine room & size Yes à 3"

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 Yes ✓

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 ✓

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 Upper platform

OILERS, &c.—(Letter for record)

Manufacturers of Steel

See separate report on Boilers

Total Heating Surface of Boilers 3130

Is Forced Draft fitted NO No. and Description of Boilers 2 SB

Working Pressure 180

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Area of fire grate in each boiler

No. and Description of Safety Valves to each boiler

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

Length

Material of shell plates

Thickness Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

Thickness of plates

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

Thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Steam dome: description of joint to shell

% of strength of joint

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Working pressure of shell by rules

Crown plates

Thickness

How stayed

Material of Safety Valve

Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

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

IS A DONKEY BOILER FITTED? *No*

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 set of feed and bilge pump valves, one set of piston springs, a quantity of assorted bolts and nuts, iron of various sizes, one bilge pump plunger, one feed pump plunger, one exerture strap, one screw shaft.*

The foregoing is a correct description,

voor de Scheepswerf en Machinefabriek
J. & A. VAN DER SCHUYT, PAPENDRECHT.

Stroomweg

Manufacturer.

Dates of Survey while building: During progress of work in shops -- *1917 July 6-7-14-20 Aug 4-20 Sept 11 Oct 4 1918 Jan 23 1919 March 14*
During erection on board vessel -- *1919 May 12-28 June 6-16-26-28*
Total No. of visits *16*

Is the approved plan of main boiler forwarded herewith *Yes*
Also pumping arrangement
" " " donkey " " "

Dates of Examination of principal parts—Cylinders *7-7-17* Slides *6-7-17* Covers *6-7-17* Pistons *10-7-17* Rods *6-7-17*
Connecting rods *6-7-17* Crank shaft *10-7-17* Thrust shaft *14-5-19* Tunnel shafts *12-5-19* Screw shaft *14-5-19* Propeller *14-5-19*
Stern tube *14-5-19* Steam pipes tested *28-5-19* Engine and boiler seatings *12-5-19* Engines holding down bolts *12-5-19*
Completion of pumping arrangements *6-6-19* Boilers fixed *12-5-19* Engines tried under steam *16-6-19*
Completion of fitting sea connections *12-5-19* Stern tube *12-5-19* Screw shaft and propeller *12-5-19*
Main boiler safety valves adjusted *16-6-19* Thickness of adjusting washers *SB 9 mill and 8 mill*
Material of Crank shaft *SM Steel* Identification Mark on Do. *JS* Material of Thrust shaft *SM Steel* Identification Mark on Do. *JS*
Material of Tunnel shafts *SM Steel* Identification Marks on Do. *JS* Material of Screw shafts *SM Steel* Identification Marks on Do. *JS*
Material of Steam Pipes *Steel* Test pressure *540 lbs per sq"*
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 *No* If so, state name of vessel *✓*

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

*The condenser has been fitted with steel tubes, except the upper portion (about 300) which are of brass, it is the owners intention, to fit brass tubes upon the first convenient opportunity. The machinery being made in accordance with the Society's Rules, approved plans, and Secretary's letters, material tested as required and workmanship good, and being found in a good working order during a trial on the River Maas, I am of opinion that this vessel is eligible to be recorded in the Society's Register Book with **LMC 6-19** subject to the steel tubes in the condenser being examined within ten months.*

It is submitted that this vessel is eligible for THE RECORD, + LMC 6-19 subject to the steel Condenser Tubes being replaced by brass tubes at first convenient opportunity

Certificate (if required) to be sent to *Lunenburg Rotterdam.*

The amount of Entry Fee ...	£ 24.00	When applied for,	
<i>exclusive bank</i>			
Special ...	£ 190.00	19...	
Donkey Boiler Fee ...	£ :	When received,	
Travelling Expenses (if any) ...	£ 48.00	16/7/19	

Committee's Minute
Assigned

FRI. 25 JUL. 1919

+ LMC 6-19

Engineer *J. J. Ochoo* 18/7/19
Inspector to Lloyd's Register of Shipping

MACHINERY CERTIFICATE WRITTEN

