

Rpt. 4.

REPORT ON MACHINERY.

No. 4888. 61.

Received at London Office

JUL 28 1911

Date of writing Report 25 July 1911. When handed in at Local Office

Port of Amsterdam.

No. in Survey held at Amsterdam

Date, First Survey 21 April 1910

Last Survey 22 July 1911.

Reg. Book.

(Number of Visits 40)

73 on the Steel Twin Screw Steamer Koningin der Nederlanden

Gross 8176.13

Master J. Nieuwehand

Built at Amsterdam

By whom built Ned Scheepsbouw Maats

When built 1911.

Engines made at Amsterdam

By whom made Ned fabriek van Weck & Spoon Maat

when made 1911.

Boilers made at Amsterdam

By whom made d d d d d d

when made 1911.

Registered Horse Power 1094

Owners Hoornvaart Maatschappij Nederland

Port belonging to Amsterdam

Nom. Horse Power as per Section 28 1093

Is Refrigerating Machinery fitted for cargo purposes Yes

Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Quadruple Expansion (2 sets)

No. of Cylinders four

No. of Cranks four

Dia. of Cylinders 24 1/2 x 34 1/2 x 47 1/4 x 70 1/2

Length of Stroke 47 1/4

Revs. per minute 80

Dia. of Screw shaft

as per rule 13 1/2

Material of screw shaft Nickel steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube None

Is the after end of the liner made water tight

the propeller boss

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

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

Length of stern bush 64"

Dia. of Tunnel shaft

as per rule 12 1/2

Dia. of Crank shaft journals

as per rule 13 1/2

Dia. of Crank pin

14.96

Size of Crank webs 9.44

Dia. of thrust shaft under

Diameters 15 1/4

Dia. of screw 16.0

Pitch of Screw 20.0

No. of Blades 3

State whether moveable Yes

Total surface 72 sq feet

No. of Feed pumps two

Diameter of ditto 6 1/2

Stroke 18 1/2

Can one be overhauled while the other is at work Yes

No. of Bilge pumps two

Diameter of ditto 6 1/2

Stroke 18 1/2

Can one be overhauled while the other is at work Yes

No. of Donkey Engines two

Diameter of ditto 6 1/2

Stroke 18 1/2

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

Engine Room 4. diam 5 1/2

In Holds, &c. 14. diam 5 1/2

No. of Bilge Injections one

size 13

Connected to condenser or to circulating pump Yes

Is a separate Donkey Suction fitted in Engine room & size 3 1/2

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 Yes

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

That 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

Dates of examination of completion of fitting of Sea Connections 6 & 12 March

Stern Tube 6 March

Screw shaft and Propeller 12 March 1911.

Is the Screw Shaft Tunnel watertight Yes

Is it fitted with a watertight door Yes

worked from

Pillins bridge & Engine room platform

MILERS, &c.—(Letter for record S)

Total Heating Surface of Boilers 4460

Is Forced Draft fitted Yes

No. and Description of Boilers 3 double and 2 single ended boilers

Working Pressure 210 lbs.

Tested by hydraulic pressure to 420 lbs

Date of test 13 February 1911

No. of Certificate No. 138/140

Can each boiler be worked separately Yes

Area of fire grate in each boiler 96.5

No. and Description of Safety Valves to

43.6 inch boiler Two direct spring

Area of each valve 11.2

Pressure to which they are adjusted 210 lbs

Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 18 1/4

Mean dia. of boilers 13-9"

Length 9-10 1/2

Material of shell plates S. M. Steel

Thickness 1 1/2

Range of tensile strength 26 to 30 tons

Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams treble

Diameter of rivet holes in long. seams 1 1/2

Pitch of rivets 10"

Lap of plates or width of butt straps 21 1/2

Centages of strength of longitudinal joint rivets 87%

Working pressure of shell by rules 249 lbs

Size of manhole in shell 12 1/4 x 16 1/4

No. and Description of Furnaces in each boiler 6. deep bulb form

Material S. M. Steel

Outside diameter 45 1/2

Length of plain part top 11 1/6

Description of longitudinal joint Welded

No. of strengthening rings

Working pressure of furnace by the rules 244

Combustion chamber plates: Material Steel

Thickness: Sides 3/4

Back 3/4

Top 3/4

Bottom 3/4

Working pressure by rules 244 lbs

Material of stays Steel

Diameter at smallest part 1 1/2

Area supported by each stay 58 1/2

Working pressure by rules 243 lbs

End plates in steam space:

Material Steel

Thickness 1 1/2

Pitch of stays 16 x 19

How are stays secured flange nuts

Working pressure by rules 234 lbs

Material of Front plates at bottom Steel

Thickness 1 1/2

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes 2 1/4

Pitch of tubes 3 1/2

Material of tube plates Steel

Thickness: Front 1 1/2

Back 3/4

Mean pitch of stays 4 1/4

Working pressures by rules 336

230 lbs

Girders to Chamber tops: Material Steel

Depth and

Thickness of girder at centre as per app. plan

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Superheater or Steam chest; how connected to boiler

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

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Water Capacity

Tons

Pitch of stays to ditto: Sides 6 1/4 x 8 1/2

Back

Top 7 1/2 x 8 1/2

If stays are fitted with nuts or riveted heads Riveted heads

Working pressure by rules 244 lbs

Material of stays Steel

Diameter at smallest part 1 1/2

Area supported by each stay 58 1/2

Working pressure by rules 243 lbs

End plates in steam space:

Material Steel

Thickness 1 1/2

Pitch of stays 16 x 19

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Material of Front plates at bottom Steel

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Working pressure by rules

Superheater or Steam chest; how connected to boiler

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

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

10, 13, 15

December

49.

Are they fitted with easing gear

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VERTICAL DONKEY BOILER—Manufacturers of Steel

No.	Description		When made	Where fixed
Made at	By whom made			
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment
If fitted with easing gear	If steam from main boilers can enter the donkey boiler		Dia. of donkey boiler	Length
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams	
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating	Per centage of strength of joint
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint
Working pressure of furnace by rules	Thickness of furnace crown plates	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey	

SPARE GEAR. State the articles supplied:— 1 Screw $\frac{1}{4}$ Crankshaft, 6 prop blades, 2 piston rods, 10 & 12 piston, 2 crossheads, 44 Spindles, link block, 2 Eccentric Compt., 4 bearings, 3 sets crankpin brasses, 2 thrust shaft bearings, crankpin & crosshead bolts, 24 Coupling bolts, Air pump bucket, Rod and Valve Compt., 2 feed & 1 high pump plungers, 150 Condenser tubes, 100 boiler tubes, Spare gear for auxiliary machinery, bolts and nuts assorted, etc. etc.

The foregoing is a correct description,

Manufacturer, **NEDERLANDSCHE FABRIEK VAN WERKTUIGEN EN STOMERIJMATERIE**

M. C. Kloos

Dates of Survey while building	During progress of work in shops—	21 April, 17, 23 & 25 June, 1, 6 & 13 July, 3, 19 & 23 August, 3 & 15 Sept, 11, 15, 21, 25 & 27 Oct
	During erection on board vessel—	23 & 28 Dec 1910, Jan 7, 11, 13 & 20, February 1, 6 & 13
		6, 12, 15 & 21 of March, 8, 20 & 29 April, 16, 26 & 29 May, 23 June, 1, 7, 12 and 22 July
Total No. of visits		40

Is the approved plan of main boilers forwarded herewith ☒ Yes

Dates of Examination of principal parts—	Cylinders from 23 Jan	Slides 1910	Covers 6 of February	Pistons 1911	Rods 11 Oct 1910
Connecting rods	Feb 6 th	Crank shaft 20 April	Thrust shaft	Tunnel shafts 24	Screw shaft
Stern tube	11 Jan - 6 March	Steam pipes tested 29 May	Engine and boiler seatings 26 June	Engines holding down bolts 23 June	
Completion of pumping arrangements	29 May	Boilers fixed 16 June	Engines tried under steam 12 July		
Main boiler safety valves adjusted	11 July	Thickness of adjusting washers 3 double ended boilers 12 1/2 & 14 1/2 in. Two single do 11 1/2 & 13 1/2 in.			
Material of Crank shaft	S. M. an - Identification Mark on Do. 2835 and 29	Material of Thrust shaft	S. M. an - Identification Mark on Do. 2834 - 3		
Material of Tunnel shafts	S. M. an - Identification Marks on Do. 2955-57, 58 & 59	Material of Screw shafts	S. M. an - Identification Marks on Do. 136 MB, 4		
Material of Steam Pipes	Steel	Test pressure	420 lbs.		

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

This vessel, sister ship to the S.S. Prinses Juliana, No. 1041 in Key Book; had her machinery constructed according to the Society's rules and approved plans which are herewith forwarded to London Office. Material duly tested as required found of good quality & workmanship throughout. Cylinders, valve casings, columns, stern tubes, Condenser, pump barrels tested under hydraulic pressure & found to be sound. Main boilers 5 in number, boiler mountings and all steam pipes tested under hydraulic pressure to 420 lbs per square inch with satisfactory results. Examined engines & boilers & auxiliary machinery under steam whilst on trial & found same working satisfactorily without hitches or heating. Pumps drawn from all the compartments of the vessel. I am of opinion that this vessel is eligible to be classed in the Society's Key Book with Record.

☒ LMC 7. 1911.

It is submitted that this vessel is eligible for THE RECORD + LMC

The amount of Entry Fee	£ 3 : 0 :	When applied for,
Special	£ 72 : 7 :	July 1911.
Donkey Boiler Fee	£ 2 : 18 : 0	When received,
Travelling Expenses (if any)	£ :	July 1911.

Committee's Minute TUE. AUG. 1-1911

Assigned

+ L.M.C. 7. 11

J. H. M. M.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping



Lloyd's Register Foundation

Certificate (if required) to be sent to J. H. M. M. Amsterdam

(The Surveyors are requested not to write on or below the space for Committee's Minute.)