

Rpt. 4.

REPORT ON MACHINERY.

No. 6534
MAR 18 1910

Received at London Office

Date of writing Report 16 March 1910 When handed in at Local Office19 Port of RotterdamNo. in Survey held at Rotterdam
Reg. Book.Date, First Survey 30 July 09 Last Survey 25 February 1910? on the Steel tug "Stapagipe"(Number of Visits 13)Master M. BorgBuilt at Rotterdam

By whom built

Naamloose VennootschapTons { Gross 49.85
Net 0.12Engines made at Rotterdam

By whom made

Machinefabriek

when made

1910Boilers made at D

By whom made

Delftshaven.

when made

1910Registered Horse Power ✓Owners J. Constant, Kievits & Co. LtdPort belonging to DordrechtNom. Horse Power as per Section 28 27Is Refrigerating Machinery fitted for cargo purposes noIs Electric Light fitted noENGINES, &c.—Description of Engines Inverted Compound ✓ No. of Cylinders two No. of Cranks two ✓Dia. of Cylinders 11" & 22" ✓ Length of Stroke 12" ✓ Revs. per minute 170 ✓ Dia. of Screw shaft 123 1/2" ✓ Material of steel ✓
as per rule 123 1/2" as fitted 123 1/2" screw shaft)Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liner ✓ Is the after end of the liner made water tight in 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 twoliners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 24"Dia. of Tunnel shaft 110 1/2" ✓ Dia. of Crank shaft journals 115 1/2" ✓ Dia. of Crank pin 115 1/2" ✓ Size of Crank webs 136 x 73 ✓ Dia. of thrust shaft under collars 115 1/2" ✓ Dia. of screw 63" ✓ Pitch of Screw 69" ✓ No. of Blades 4 ✓ State whether moveable no ✓ Total surface 12.80 ft. ✓No. of Feed pumps 1 ✓ Diameter of ditto 1 3/4" ✓ Stroke 6" ✓ Can one be overhauled while the other is at work ✓No. of Bilge pumps 1 ✓ Diameter of ditto 1 3/4" ✓ Stroke 6" ✓ Can one be overhauled while the other is at work ✓No. of Donkey Engines one ✓ Sizes of Pumps 3 1/2" x 2 1/4" x 3 1/2" ✓ No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room one 2" ✓In Holds, &c. one 2" in fore cabin space, one 2" in after cabin space. ✓No. of Bilge Injections 1 ✓ sizes 2" ✓ Connected to condenser or to circulating pump ✓ Is a separate Donkey Suction fitted in Engine room & size yes, 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 none ✓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 ✓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. ✓Dates of examination of completion of fitting of Sea Connections 17 Jan. ✓ of Stern Tube 17 Jan. ✓ Screw shaft and Propeller 17 Jan. ✓Is the Screw Shaft Tunnel watertight no tunnel ✓ Is it fitted with a watertight door ✓ worked from ✓BOILERS, &c.—(Letter for record 3 ✓) Manufacturers of Steel Thyssen & Co. Eisen und Stahlwerk Gp. H. Hoffmann ✓Total Heating Surface of Boilers 589 ✓ Is Forced Draft fitted no ✓ No. and Description of Boilers one single ended marine ✓Working Pressure 146 lbs ✓ Tested by hydraulic pressure to 292 lbs ✓ Date of test 24 Dec 09 ✓ No. of Certificate 274 ✓Can each boiler be worked separately ✓ Area of fire grate in each boiler 27.5 sq. ft ✓ No. and Description of Safety Valves to each boiler 2 Spring loaded ✓ Area of each valve 3.14 ✓ Pressure to which they are adjusted 146 lbs ✓ Are they fitted with easing gear yes ✓Smallest distance between boilers or uptakes and bunkers or woodwork 6" ✓ Mean dia. of boilers 8'-2 1/6" ✓ Length 8'-10" ✓ Material of shell plates steel ✓Thickness 3/4" ✓ Range of tensile strength 24.6-29.2 T ✓ Are the shell plates welded or flanged no ✓ Descrip. of riveting: cir. seams lap. dbl. ✓long. seams dbl butt 4x2 ✓ Diameter of rivet holes in long. seams 1 1/16" ✓ Pitch of rivets 5 1/8" ✓ Lap of plates or width of butt straps 13 13/16" ✓Per centages of strength of longitudinal joint 79.2 ✓ Working pressure of shell by rules 193 lbs ✓ Size of manhole in shell 11 1/16" x 15 3/4" ✓Size of compensating ring 5 7/8" x 13 1/16" ✓ No. and Description of Furnaces in each boiler 2 Plain ✓ Material steel ✓ Outside diameter 31 1/2" ✓Length of plain part 6'-4" ✓ Thickness of plates 5/8" ✓ Description of longitudinal joint welded ✓ No. of strengthening rings 7 ✓Working pressure of furnace by the rules 162 ✓ Combustion chamber plates: Material steel ✓ Thickness: Sides 5/8" ✓ Back 5/8" ✓ Top 5/8" ✓ Bottom 5/8" ✓Pitch of stays to ditto: Sides 7 1/16" ✓ Back 6 7/8" x 7 1/8" ✓ Top 7 1/16" ✓ If stays are fitted with nuts or riveted heads riveted ✓ Working pressure by rules 200 lbs ✓Material of stays steel ✓ Diameter at smallest part 7/8" ✓ Area supported by each stay 49.88 ✓ Working pressure by rules 195 ✓ End plates in steam space: Material steel ✓ Thickness 27/32" ✓ Pitch of stays 15" x 14 1/16" ✓ How are stays secured by washers ✓ Working pressure by rules 158 ✓ Material of stays steel ✓Diameter at smallest part 2 1/2" ✓ Area supported by each stay 213.14 ✓ Working pressure by rules 227 ✓ Material of Front plates at bottom steel ✓Thickness 27/32" ✓ Material of Lower back plate steel ✓ Thickness 25/32" ✓ Greatest pitch of stays 11" ✓ Working pressure of plate by rules 166 ✓Diameter of tubes 3 1/4" ✓ Pitch of tubes 4 3/16" ✓ Material of tube plates steel ✓ Thickness: Front 27/32" ✓ Back 27/32" ✓ Mean pitch of stays approx ✓Pitch across wide water spaces 14 9/16" ✓ Working pressures by rules 213 lbs ✓ Girders to Chamber tops: Material steel ✓ Depth and thickness of girder at centre 7 7/8" x 13 1/16" ✓ Length as per rule 22" ✓ Distance apart 7 7/8" ✓ Number and pitch of stays in each 2-6 7/8" ✓Working pressure by rules 264 ✓ 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 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 ✓

W1108-0172

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. *112* Description _____
 Made at _____ By whom made _____ When made _____ Where fixed _____
 Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____
 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 _____ Rivets _____ Plates _____
 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:— *one set of crankpin braces, bolts & nuts complete; 2 top end bolts & nuts; 1 set of main bearing braces, two bolts & nuts; 1 set of coupling bolts; 1 set of feed & 1 set of bilge valves; one Remsbottom spring for each piston; a quantity of assorted bolts & nuts; iron of various sizes; 3 propellers; 1 stern bush; 1 piston rod gland; 1 set of air pump & circulating pump valves; 8 condenser tubes, 15 ferrules; 3 thrust shoes; 6 punkening bolts; one safety valve & spring; 6 boiler tubes.*
 The foregoing is a correct description, _____

MACHINA FABRIEK DELFOVEN

De Dordrechtse Dijk

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 30/7; 20/9; 6, 14/10; 9/11; 15, 24/12/09. 5, 17/1/1910.
 { During erection on board vessel - - 9, 11, 22, 25/2/1910
 Total No. of visits 13

Is the approved plan of main boiler forwarded herewith *per C. p. post* *yes* ✓

Pumping plan & shafts *yes* ✓

" " " donkey " " " *yes* ✓

Dates of Examination of principal parts—Cylinders *22/9-9/11* Slides *14/10-15/12* Covers *20/9-9/11* Pistons *6/10-15/12* Rods *20/9-9/11*

Connecting rods *20/9-24/12* Crank shaft *made* Thrust shaft *in* Tunnel shafts *Ger-* Screw shaft *many.* Propeller *17/1/10*

Stern tube *5/1/10* Steam pipes tested *11/2/10* Engine and boiler seatings *9/2/10* Engines holding down bolts *9/2/10*

Completion of pumping arrangements *22/2/10* Boilers fixed *9/2/10* Engines tried under steam *25/2/10*

Main boiler safety valves adjusted *22/2/10* Thickness of adjusting washers *Nr 1-7 1/2 Nr 2-9 1/2 mm*

Material of Crank shaft *steel* Identification Mark on Do. *PA 3300* Material of Thrust shaft *steel* Identification Mark on Do. *HK 1541*

Material of Tunnel shafts *steel* Identification Marks on Do. *HK 1539* Material of Screw shafts *steel* Identification Marks on Do. *KH 4807*

Material of Steam Pipes *Solid drawn copper* Test pressure *320 lbs.*

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

The vessel is fitted with a duplex salvage pump 7 1/2" x 8" x 7"

*The machinery and boiler having been built in accordance with the approved plans and the Secretary's letters, materials tested as required, workmanship good, and the machinery having worked satisfactory under steam in the presence of Mr Bernski, I am of opinion that this vessel is eligible to be recorded in the Society's Register Book with **L.M.C. 2,10.***

It is submitted that
 this vessel is eligible for
 THE RECORD, + L.M.C. 2,10.

J.W.D. 18/3/10

J.P.R.

The amount of Entry Fee.. *£ 120* : When applied for, _____
 Special .. *£ 84.* : *17/3* 19*10*
 Donkey Boiler Fee .. *£* : When received, _____
 Travelling Expenses (if any) *£ 1.20* : _____

W. F. D. van Ollefen
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUES. 22 MAR 1910

Assigned

+ Lm 62 10

MACHINERY CERTIFICATE
 WRITTEN.



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Lloyd's Register
 Foundation

The Surveyors Rotterdam.

Certificate (if required) to be sent to the Surveyors not to write on or below the space for Committee's Minute.