

REPORT ON MACHINERY.

No. 6534
MAR 18 1910

Received at London Office

Date of writing Report 16 March 1910 When handed in at Local Office 19 Port of Rotterdam

No. in Survey held at Rotterdam Date, First Survey 30 July 09 Last Survey 25 February 1910

Reg. Book. ? on the Steel Tug "Stapagipe" (Number of Visits 13)

Master M. Borg Built at Rotterdam By whom built Naamloose Vennootschap Tons { Gross 49.85
Net 0.12

Engines made at Rotterdam By whom made Machinefabriek when made 1910

Boilers made at D By whom made Delfts-haven. when made 1910

Registered Horse Power ✓ Owners J. Constant, Kievits & Co. Ltd Port belonging to Dordrecht

Nom. Horse Power as per Section 28 27 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &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 12 3/4" Material of screw shaft steel

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 two liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 24"

Dia. of Tunnel shaft 11 1/2" Dia. of Crank shaft journals 11 5/8" Dia. of Crank pin 11 5/8" Size of Crank webs 136x73 Dia. of thrust shaft under collars 11 5/8" Dia. of screw 6 3/4" Pitch of Screw 69" No. of Blades 4 State whether moceable 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. Hoffmann Platte.

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 7/16" Length 8'-10" Material of shell plates steel

Thickness 3/4" Range of tensile strength 27.6-29.2 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 rivets 114 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 13/16" No. and Description of Furnaces in each boiler 2 Plain Material steel Outside diameter 3 1/2"

Length of plain part top 6.4" Thickness of plates crown 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 lb.

Material of stays steel Diameter at smallest part .781 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 3/16" How are stays secured washer 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", 3 Pitch of tubes 4 3/16" Material of tube plates steel Thickness: Front 27/32 Back 27/32 Mean pitch of stays approve

Pitch across wide water spaces 14 9/16" Working pressures by rules 213 lb Girders to Chamber tops: Material steel Depth and thickness of girder at centre 7 7/8" x 13/16" 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 Remschmidt 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, 25 ferrules; 3 thrust shoes; 6 gunnering bolts; one safety valve & spring; 6 boiler tubes.*
 The foregoing is a correct description, _____

MATHIAS A. AUBREK DELFOUWEN
U. de Strijde, 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 *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 *meny.* 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 *N^o 1 - 7 1/2 N^o 2 - 9 1/2 mfm*
 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. 19/3/10
J.P.R.

The amount of Entry Fee..	£ 120	When applied for,
Special	£ 84	17/3 1910
Donkey Boiler Fee	£	When received,
Travelling Expenses (if any) £	10.20	1910

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.



Certificate (if required) to be sent to the Surveyors Rotterdam.

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