

REPORT ON MACHINERY.

No. 31856.

Port of *Amsterdam*

MUN. 13 NOV 1905

Received at London Office 19

No. in Survey held at *Amsterdam* Date, first Survey *8 Sept 1904* Last Survey *2 Nov 1905*
 Reg. Book. (Number of Visits *35*)
 on the *Steel Tern Htge Mills in Prues.* Tons { Gross *222.*
 Net *64.*
 Master *A. van Praamling* Built at *Amsterdam* By whom built *Ned Scheepbouw Maats.* When built *1905*
 Engines made at *Amsterdam* By whom made *Ned Fab & Werk & Spoor Maats.* when made *1905*
 Boilers made at *Amsterdam* By whom made *Ned Fab & Werk & Spoor Maats.* when made *1905*
 Registered Horse Power *64.5* Owners *M. F. H. van Veenendaal & Co.* Port belonging to *Groningen*
 Nom. Horse Power as per Section 28 *64.5* Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *no*

ENGINES, &c.—Description of Engines *Triple Expansion* No. of Cylinders *three* No. of Cranks *three*
 Dia. of Cylinders *11.81" 18.89" 31.49"* Length of Stroke *23.62"* Revs. per minute *118* Dia. of Screw shaft *as per rule 16.6" 6.28"* Material of screw shaft *as fitted 18.8" 7.00"*
 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 *yes* 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 *yes* Length of stern bush *400 mm*
 Dia. of Tunnel shaft *as per rule 14.8" 5.82"* Dia. of Crank shaft journals *as per rule 16.5" 6.19"* Dia. of Crank pin *14.8" 7.00"* Size of Crank webs *4.35" 7.87"* Dia. of thrust shaft under
 collars *6.69"* Dia. of screw *2.44"* Pitch of screw *10.4"* No. of blades *four* State whether moveable *no* Total surface *2.52.66*
 No. of Feed pumps *one* Diameter of ditto *2.455"* Stroke *200* Can one be overhauled while the other is at work
 No. of Bilge pumps *one* Diameter of ditto *2.455"* Stroke *200* Can one be overhauled while the other is at work
 No. of Donkey Engines *two* Sizes of Pumps *5 1/2" x 3 1/2" x 5" and 5 1/2" x 4 1/2" x 5"* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *Two 3" and one 2 1/2"* In Holds, &c. *Three 2 1/4"*

No. of bilge injections *one* sizes *3 1/2"* Connected to *condenser, or to circulating pump* *yes* Is a separate donkey suction fitted in Engine room & size *yes 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 *no*
 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 *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*
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock *—* Is the screw shaft tunnel watertight *—*
 Is it fitted with a watertight door *—* worked from *—*

BOILERS, &c.— (Letter for record *S*) Total Heating Surface of Boilers *1300 sq feet* Is forced draft fitted *—*
 No. and Description of Boilers *One Single Ended* Working Pressure *160 lbs* Tested by hydraulic pressure to *320 lbs*
 Date of test *27 Feb* Can each boiler be worked separately *—* Area of fire grate in each boiler *36 sq ft* No. and Description of safety valves to
 each boiler *two direct spring* Area of each valve *3.94 sq in* Pressure to which they are adjusted *160 lbs* Are they fitted with easing gear *yes*
 Smallest distance between boilers or uptakes and bunkers or woodwork *24"* Mean dia. of boilers *11.5 1/4"* Length *10' 5"* Material of shell plates *Steel*
 Thickness *1 1/2"* Range of tensile strength *16.6-30* Are they welded or flanged *—* Descrip. of riveting: cir. seams *double butt* long. seams *double butt*
 Diameter of rivet holes in long. seams *1"* Pitch of rivets *4 1/16"* Lap of plates or width of butt straps *14 1/2"*
 Per centages of strength of longitudinal joint *90%* Working pressure of shell by rules *166 lbs* Size of manhole in shell *12" x 16"*
 Size of compensating ring *24" x 31"* No. and Description of Furnaces in each boiler *two main* Material *Steel* Outside diameter *41 1/4"*
 Length of plain part *top 9' 11 1/2" bottom 9' 11 1/2"* Thickness of plates *9' 11 1/2"* Description of longitudinal joint *Welded* No. of strengthening rings *—*
 Working pressure of furnace by the rules *170 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *7/8"* Back *7/8"* Top *7/8"* Bottom *7/8"*
 Pitch of stays to ditto: Sides *6 1/2" x 9"* Back *7 1/2" x 7 1/2"* Top *6 1/2" x 8 1/4"* If stays are fitted with nuts or riveted heads *riveted heads* Working pressure by rules *168 lbs*
 Material of stays *Steel* Diameter at smallest part *1 1/8"* Area supported by each stay *60 sq in* Working pressure by rules *172 lbs* End plates in steam space:
 Material *Steel* Thickness *1 1/2"* Pitch of stays *14 1/2" x 7 1/2"* How are stays secured *Washer & nut* Working pressure by rules *160 lbs* Material of stays *Steel*
 Diameter at smallest part *2 1/32"* Area supported by each stay *306 sq in* Working pressure by rules *170 lbs* Material of Front plates at bottom *Steel*
 Thickness *1 1/2"* Material of Lower back plate *Steel* Thickness *1 1/2"* Greatest pitch of stays *18 1/2" x 11"* Working pressure of plate by rules *172 lbs*
 Diameter of tubes *3 1/4"* Pitch of tubes *4 1/4" x 4 1/2"* Material of tube plates *Steel* Thickness: Front *1 1/2"* Back *1 1/2"* Mean pitch of stays *11"*
 Pitch across wide water spaces *16"* Working pressures by rules *200 lbs* Girders to Chamber tops: Material *Steel* Depth and
 thickness of girder at centre *8" x 1 1/2"* Length as per rule *2' 5 1/2"* Distance apart *8 3/4"* Number and pitch of Stays in each *3 = 6 7/8"*
 Working pressure by rules *160 lbs* 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 *—*

W1257-0032

DONKEY BOILER— No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure _____ tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves _____

No. of safety valves _____ Area of each _____ Pressure to which they are adjusted _____ 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 _____ 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 _____

Thickness of furnace crown plates _____ Stayed by _____ Working pressure of shell by rules _____

Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied:— *Two Connecting rod top and bottom end bolts, two ditto main bearings, One set of Coupling bolts, One set of feed and bilge pump valves, One set of piston rings, One Pressure Complete with rod for ditto. Condenser & boiler tubes bolts and nuts assorted.*

The foregoing is a correct description,

NEDERLANDSCHE FABRIEK

Manufacturer.

VAN WERKTUIGEN EN SPOORWEG-MATERIEEL

Dates of Survey while building { During progress of work in shops - - } *Sept 8, Oct 23, Nov 23, Dec 3, 10, 13, 17, 21, 22 & 24, 1904, Jan 6, 9, 20, 22, 26, 28.*

{ During erection on board vessel - - } *Feb 2, 6, 8, 10, 20 & 27, March 2, 4, 7, 13, 15, 17, 22 & 27, April 5, 8, 13, May 11 and*

Total No. of visits *November 2, 1905* Is the approved plan of main boiler forwarded herewith *Yes*

→ 35. " " " donkey " " "

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

The machinery & boiler for this Vessel has been constructed according to the approved plan (now forwarded to London Office) and the Society's Rules. Materials used in the construction duly tested as required & workmanship throughout good.

All Castings after having been machined tested under hydraulic pressure found sound and tight.

Boiler tested to 320 lbs found tight in every respect and no settling whatever mainsteam & feedpipes ditto.

Safety Valves adjusted and set to working pressure by 160 lbs.

Examined Engines & boiler under steam during trial trip found same working satisfactory without heating or hitches, pumps working from all compartments of the vessel

I am of opinion that this vessel is eligible to be classed in the Society's Register Book with record of

LMC 11.1905

It is submitted that
this vessel is eligible for
THE RECORD

LMC. 11.05.

13.11.05

13.11.05

The amount of Entry Fee.. £ 1 : 0 : When applied for,
Special £ 10 : 4 : *1905*
Donkey Boiler Fee £ : : When received,
Travelling Expenses (if any) £ : 12 : 6 *1905*

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

Committee's Minute

TUES. 14 NOV 1905

Assigned

+ LMC 11.05

MACHINERY CERTIFICATE
WRITTEN.



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Foundation

Certificate (if required) to be sent to

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