

REPORT ON MACHINERY.

No. 5774⁶

Received at London Office

FRI. 7 AUG 1908

Date of writing Report 31 July 1908 When handed in at Local Office

19

Port of

Rotterdam

No. in Survey held at Rotterdam

Date, First Survey 15 Jan.

Last Survey 20 July 1908

Reg. Book.

757 on the

Steel Screw Tug "Seine"

(Number of Visits 25)

Gross 307.74

Net 1.16

When built 1908

Master W. Koen 08.08 Built at Rotterdam

By whom built Rotterd. Droogdok Maats.

Engines made at Rotterdam

By whom made

Same firm

when made

1908

Boilers made at

D

By whom made

Same firm

when made

1908

Registered Horse Power ✓

Owners Internationale Sleepdienst Maats.

Port belonging to

Rotterdam

Nom. Horse Power as per Section 28 111 ✓

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted yes ✓

ENGINES, &c.—Description of Engines

Inverted, triple Expansion

No. of Cylinders three

No. of Cranks three

Dia. of Cylinders 15", 25", 41"

Length of Stroke 30"

Revs. per minute 110

Dia. of Screw shaft

as per rule 8 7/32

Material of

steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes ✓

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 yes ✓

If two

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

Length of stern bush 40" ✓

Dia. of Tunnel shaft

as per rule 7 1/16

as fitted 8 3/8

Dia. of Crank shaft journals

as per rule 8 7/32

as fitted 8 5/8

Dia. of Crank pin 9"

Size of Crank webs 6 1/4" x 4"

Dia. of thrust shaft under

collars 8 3/4"

Dia. of screw 10 ft

Pitch of Screw 11" - 2"

No. of Blades 4

State whether moveable no

Total surface 37 sq. ft. ✓

No. of Feed pumps 2

Diameter of ditto 2 1/2"

Stroke 14"

Can one be overhauled while the other is at work yes ✓

No. of Bilge pumps 2

Diameter of ditto 2 1/2"

Stroke 14"

Can one be overhauled while the other is at work yes ✓

No. of Donkey Engines 1

Feed, 1 Ballast

Sizes of Pumps F 5 1/4 x 3 1/2 x 5", B 6 x 6 x 6"

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

In Engine Room One 2" in boiler room, one 2" in engine room

In Holds, &c. one 2" in hold

No. of Bilge Injections 1

sizes 3 1/2"

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 18 June

of Stern Tube 18 June

Screw shaft and Propeller 18 June

Is the Screw Shaft Tunnel watertight none ✓

Is it fitted with a watertight door ✓

worked from ✓

BOILERS, &c.—(Letter for record 5)

Manufacturers of Steel

Rheinisch Stahlwerke, Frodingen Iron, Steel Co.

Total Heating Surface of Boilers 1836 sq. ft.

Is Forced Draft fitted no ✓

No. and Description of Boilers 2 single ended marine

Working Pressure 185 lbs

Tested by hydraulic pressure to 370 lbs

Date of test 18 June 08

No. of Certificate 254.

Can each boiler be worked separately yes ✓

Area of fire grate in each boiler 28 sq. ft. ✓

No. and Description of Safety Valves to

each boiler 2 Spring loaded

Area of each valve 4.91

Pressure to which they are adjusted 185 lbs

Are they fitted with easing gear yes ✓

Smallest distance between boilers or uptakes and bunkers or woodwork 9" ✓

Mean dia. of boilers 11"

Length 10"

Material of shell plates steel ✓

Thickness 15/16"

Range of tensile strength 28-32 T

Are the shell plates welded or flanged no ✓

Descrip. of riveting: cir. seams lap, dbl.

long. seams all butt 5 x

Diameter of rivet holes in long. seams 1"

Pitch of rivets 7"

Lap of plates or width of butt straps 15"

Per centages of strength of longitudinal joint

rivets 88.4

plate 85.7

Working pressure of shell by rules 185.6

Size of manhole in shell 12 x 16"

Size of compensating ring 11" x 10 1/2"

No. and Description of Furnaces in each boiler 2 Morrison's

Material steel

Outside diameter 3' 5 3/8"

Length of plain part

top 19 1/32

bottom 19 1/32

Description of longitudinal joint welded

No. of strengthening rings ✓

Working pressure of furnace by the rules 201 lb

Combustion chamber plates: Material steel

Thickness: Sides 5/8"

Back 1 1/8"

Top 5/8"

Bottom 1 1/16"

Pitch of stays to ditto: Sides 8 x 8"

Back 8 x 8"

Top 8 x 8"

If stays are fitted with nuts or riveted heads nuts ✓

Working pressure by rules 210 lb

Material of stays steel

Diameter at smallest part 1.76"

Area supported by each stay 64"

Working pressure by rules 220 lb

End plates in steam space:

Material steel

Thickness 15/16"

Pitch of stays 16 x 15"

How are stays secured all n, r, w.

Working pressure by rules 187

Material of stays steel

Diameter at smallest part 4.3

Area supported by each stay 240.5

Working pressure by rules 185

Material of Front plates at bottom steel

Thickness 13/16"

Material of Lower back plate steel

Thickness 1 1/16"

Greatest pitch of stays 13 3/4 x 8"

Working pressure of plate by rules 240

Diameter of tubes 3 1/4"

Pitch of tubes 4 1/2 x 4 3/8"

Material of tube plates steel

Thickness: Front 13/16"

Back 1 1/16"

Mean pitch of stays 8 3/4", 13 1/2"

Pitch across wide water spaces 15"

Working pressures by rules 212 lb

Girders to Chamber tops: Material steel

Depth and

thickness of girder at centre 8" x 1 1/4"

Length as per rule 23 9/16"

Distance apart 8"

Number and pitch of stays in each 2 - 8"

Working pressure by rules 242 lb

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 ✓

W290-0217

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. *he.* 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:— 2 bolts & nuts for connecting rods top end; 2 do for bottom ends; 2 main bearing bolts; 1 set of coupling bolts; 1 set of valves and seats for each pump; 2 set of springs for each piston; 2 quantities of assorted bolts & nuts; Iron of various sizes; 1 stern shaft, propeller & nut; 1 crankshaft; 1 piston rod; 1 slide valve spindle; 1 gland for piston rod & slide spindle; 1 eccentric rod, sheave & nut; 1 set of crankpin & crown head frame complete; 6 pumping bolts; 1 set of safety valve springs; one spring for each side escape valve; 24 boiler tubes; 6 condenser tubes & ferrules; 1 set of feed check valves; 4 are valves & seats for donkey pumps; furnace bars etc.

The foregoing is a correct description, *complete*
 ROTTERDAMSCH DROOGDOEK MAATSCHAPPIJ
 Manufacturer. *W. V. O. W.*

Dates of Survey while building { During progress of work in shops - 15, 31 Jan; 14, 18, 24 Feb; 4, 14, 26 March; 1, 8, 16, 18 April; 2, 7, 13, 21, 30 May; 16, 18 June -
 During erection on board vessel - 22, 30 June, 3, 11, 18 & 20 July
 Total No. of visits 25.

Is the approved plan of main boiler forwarded herewith *Yes*
 " " " " " " *Yes*
 " " " " " " *Yes*
 " " " " " " *Yes*

Dates of Examination of principal parts—Cylinders 24/2-2/5 Slides 8/4-21/5 Covers 24/2-8/4 Pistons 24/2-7/5 Rods 31/1-14/2
 Connecting rods 31/1-26/3 Crank shaft 15/1-14/3 Thrust shaft 2/5-30/5 Tunnel shafts 8/4-25/5 Screw shaft 21/5-30/5 Propeller 30/5-16/6
 Stern tube 8/4, 16/6 Steam pipes tested 3 July Engine and boiler seatings 22 June Engines holding down bolts 30 June
 Completion of pumping arrangements 14 July Boilers fixed 30 June Engines tried under steam 18 July.
 Main boiler safety valves adjusted 11 July Thickness of adjusting washers *For B W 3, 11 1/2, W 4, 13 1/2, A W 16 1/2, W 2-12 1/2*
 Material of Crank shaft *steel* Identification Mark on Do. *206, 4, 8* Material of Thrust shaft *steel* Identification Mark on Do. *WVO 211*
 Material of Tunnel shafts *steel* Identification Marks on Do. *WVO 210* Material of Screw shafts *steel* Identification Marks on Do. *2F69 A*
 Material of Steam Pipes *Solid drawn Copper* Test pressure *380 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery and boilers having been constructed in accordance with the approved plans and the Secretary's letters, and the requirements of the Rules; materials tested, workmanship good and all having worked satisfactory under full steam in the presence of Mr. Leeuwenburg, I am of opinion that this vessel is eligible to be recorded in the Society's Register Book with:

† I. M. C. 7. 08.

It is submitted that
 this vessel is eligible for
 THE RECORD + LMC. 7. 08.

Electric light.

The amount of Entry Fee. *£ 24.* : When applied for, _____
 Special *£ 199. 80* : _____
 Donkey Boiler Fee *£* : _____
 Travelling Expenses (if any) *£ 3:* : _____

Committee's Minute

1UES. 11 AUG 1908

Assigned

Thome 7. 08

MACHINERY CERTIFICATE
 WRITTEN.

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



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Lloyd's Register
 Foundation

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.)