

REPORT ON MACHINERY.

No. 6655

MON. 6 JUN 1910

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Port of Rotterdam

Survey held at Rotterdam Date, First Survey 10 Nov 09 Last Survey 19 May 1910

on the Steel S.S. Moordrecht

T. Spanger Built at Rotterdam By whom built Rotterdamsche -

s made at Rotterdam By whom made Drogdijk - when made 1910

s made at Rotterdam By whom made Maatschappij. when made 1910

Horse Power Owners Port belonging to

Horse Power as per Section 28 115 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

MACHINERY, &c.—Description of Engines Inverted Triple No. of Cylinders three No. of Cranks three

of Cylinders 15", 25" & 41" Length of Stroke 33" Revs. per minute 90 Dia. of Screw shaft as per rule 9 1/2" Material of steel

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

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

in the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive a fit ✓ If two

are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 40" ✓

of Tunnel shaft as per rule 8 1/2" Dia. of Crank shaft journals as per rule 8 7/8" Dia. of Crank pin 9" Size of Crank webs 4 x 6 1/4" Dia. of thrust shaft under

s 8 3/4" Dia. of screw 11'-6" Pitch of Screw 12'-6" No. of Blades 4 State whether moveable no Total surface 420'

Feed pumps 2 ✓ Diameter of ditto 2 1/2" Stroke 14" Can one be overhauled while the other is at work Yes ✓

Bilge pumps 2 ✓ Diameter of ditto 2 1/2" Stroke 14" Can one be overhauled while the other is at work Yes ✓

Donkey Engines 1 Duplex ✓ Sizes of Pumps 6" x 4" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room One 2" port wing, Two 2" starboard wings, one 2" tunnel In Holds, &c. One 2" wing suction each side forehold,

2" wing suction in after hold. Centrifugal

Bilge Injections 1 sizes 4" ✓ Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size Yes 2 1/2"

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

All connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both ✓

Key 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 ✓

Key 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

pipes are carried through the bunkers none How are they protected ✓

All Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes ✓

The Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes ✓

of examination of completion of fitting of Sea Connections 20 April of Stern Tube 20 April Screw shaft and Propeller 20 April

Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from deck height

MACHINERY, &c.—(Letter for record 3) Manufacturers of Steel Schult Knecht, Frodingen & Sons Steel Works

Heating Surface of Boilers 1906 sq' Is Forced Draft fitted no No. and Description of Boilers One single ended Marine

Working Pressure 180 lbs Tested by hydraulic pressure to 270 lbs Date of test 9 March No. of Certificate 277.

Each boiler be worked separately ✓ Area of fire grate in each boiler 60 sq. ft. No. and Description of Safety Valves to

Boiler 2 Spring loaded Area of each valve 7.07 sq' Pressure to which they are adjusted 180 lbs Are they fitted with easing gear Yes ✓

Minimum distance between boilers or uptakes and bunkers or woodwork over 12" Mean dia. of boilers 14'-6" Length 10' Material of shell plates steel

Rivets 1 3/16" Range of tensile strength 28-32 T Are the shell plates welded or flanged no Descrip. of riveting: cir. seams lap, all

Rivets All butt 5 x Diameter of rivet holes in long. seams 1 7/16" Pitch of rivets 9 1/8" Lap of plates or width of butt straps 19 7/8"

Tensile strength of longitudinal joint rivets 92.6 Working pressure of shell by rules 184 lbs Size of manhole in shell none

Compensating ring ✓ No. and Description of Furnaces in each boiler 3 Morrison Material steel Outside diameter 3'-9 1/4"

of plain part top crown 5/8" Description of longitudinal joint welded No. of strengthening rings ✓

Working pressure of furnace by the rules 195 Combustion chamber plates: Material steel Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 3/4"

Stays to ditto: Sides 8 x 8" Back 7 1/4 x 7 1/4" Top 8 1/2 x 8" If stays are fitted with nuts or riveted heads riveted Working pressure by rules 214 lbs

Material of stays steel Diameter at smallest part 1.444 Area supported by each stay 56.3 Working pressure by rules 205 End plates in steam space:

Material steel Thickness 1 1/16" Pitch of stays 7 1/4 x 15 1/2" How are stays secured double nuts Working pressure by rules 191 Material of stays steel

Diameter at smallest part 5.34 Area supported by each stay 268.9 Working pressure by rules 206 Material of Front plates at bottom steel

Thickness 1 3/16" Material of Lower back plate steel Thickness 1 1/16" Greatest pitch of stays 14 1/4 x 7 3/4 Working pressure of plate by rules 230

Diameter of tubes 3 1/2" Pitch of tubes 4 7/8 x 4 1/2" Material of tube plates steel Thickness: Front 1 3/16" Back 1 3/16" Mean pitch of stays 18" x 18 1/2"

Girders across wide water spaces 14 1/2" Working pressures by rules 203 lbs Girders to Chamber tops: Material steel Depth and

Thickness of girder at centre 8 1/4" x 1 1/2" Length as per rule 27 1/2" Distance apart 8 1/2" Number and pitch of stays in each 2-18"

Working pressure by rules 238 Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

separately Yes 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

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 3.14 sq' Are they fitted with easing gear Yes

Lloyd's Register
W/101-0099

VERTICAL DONKEY BOILER—

Manufacturers of Steel

Please see Continuation Sheet 5^e

No. _____ 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 conn. rod top & 2 for bottom ends; 2 main bearing bolts; one set of coupling bolts; 1 set of feed & bilge pump valves; 1 set of LP piston springs; a quantity of assorted bolts & nuts; Iron of various sizes; 1 propeller; 1 stern shaft; 1 set of HP piston springs; 10 condenser tubes & 20 ferrules; 1 set of air pump valves; 1 slide valve spindle; 1 set of crank pin & 1 of crosshead bearings; 1 set of feed check valves; 1 set of valve spring; 10 boiler tubes. For centrifugal engine: crank pin & crosshead bearings; one slide spindle; 1 set of piston springs.

The foregoing is a correct description,
 Manufacturer. *McAlister*

DE DIRECTEUR
 Dates of Survey while building { During progress of work in shops - - 10, 14/11; 28/12/09. 6, 13, 19, 22/1; 8, 15, 16, 18, 22/2; 9, 18, 19, 23/3; 4/4/10.
 During erection on board vessel - - 21, 22, 27/4; 4, 13, 19/5/10.
 Total No. of visits 23.

Is the approved plan of main boiler forwarded herewith ☒ Yes
 " " " donkey " " " ☒ Yes
 " " " " " " ☒ Yes
 Dates of Examination of principal parts—Cylinders 28/12-22/2 Slides 17/11-16/2 Covers 6/1-8/2 Pistons 28/12-16/2 Rods 17/11-15/2
 Connecting rods 17/11-18/2 Crank shaft 17/11-15/2 Thrust shaft *made* Tunnel shafts in *Ger.* Screw shaft *many.* Propeller 23/3-4/4.
 Stern tube 19/3-4/4 Steam pipes tested 13 May Engine and boiler seatings 22 April Engines holding down bolts 27 April
 Completion of pumping arrangements 4 May Boilers fixed 22 April Engines tried under steam 19 May
 Main boiler safety valves adjusted 19 May Thickness of adjusting washers *1st, 4th, 1st 2nd 9th.*
 Material of Crank shaft *steel* Identification Mark on Do. *J.M. 6441* Material of Thrust shaft *steel* Identification Mark on Do. *H.K. 1729*
 Material of Tunnel shafts *steel* Identification Marks on Do. *K.H. 5069, 1708* Material of Screw shafts *steel* Identification Marks on Do. *H.K. 1721 & 22*
 Material of Steam Pipes *all steel* Test pressure 360 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.)
 This vessel is fitted with Schmidt patent Superheater, the test certificate of the various parts is now forwarded with the plans and the apparatus when completed has been tested by hydraulic pressure to twice the working pressure and proved sound and tight in every respect. She is further fitted with a feed heater and an 8 Ton evaporator.
 The Machinery and boilers having been built in accordance with the approved plans and the Secretary's letters, materials tested as required, workmanship good and the whole having worked satisfactory during a trial trip at sea we are of opinion that this vessel is eligible to be recorded in the Society's Register Book with **L.M.C. 5.10.**

It is submitted that this vessel is eligible for THE RECORD. + LMC 5.10

The amount of Entry Fee... £ 24. : When applied for, 4/6
 Special ... £ 20 7. :
 Donkey Boiler Fee ... £ 25. 20 : When received, 11. 6 10/13/6
 Travelling Expenses (if any) £ 2. 50 :
 Committee's Minute TUES. 7 JUN 1910
 Assigned + LMC 5.10

W. F. D. de Ollifer
P. N. Bismarck
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.