

Rpt. 4.

REPORT ON MACHINERY.

No. 5059.

Received at London Office

FRI. DEC. 29. 1911

Date of writing Report 26 Dec 1911 When handed in at Local Office

Port of Amsterdam.

No. in Survey held at
Reg. Bbk.

Date, First Survey 24 June Last Survey 16 Dec 1911

(Number of Visits 10)

on the S.S. Combe.

Tons { Gross 170.34
Net 89.08
When built 1911

Master E. Marie Built at Delft By whom built Joh. Berg.

Engines made at Delft By whom made Joh. Berg when made 1911

Boilers made at Delft By whom made Joh. Berg when made 1911

Registered Horse Power Owners Maarel, H. A. Port belonging to Dakar.

Nom. Horse Power as per Section 28 40.59 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Description of Engines Compound, vertical. No. of Cylinders two No. of Cranks two.
Dia. of Cylinders 12 1/2" x 16" Length of Stroke 14 3/4" Revs. per minute 100 Dia. of Screw shaft as per rule 5 9/16" Material of screw shaft S.H. steel
Is the screw shaft fitted with a continuous liner the whole length of the stern tube 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 24"
Dia. of Tunnel shaft as per rule 5 3/4" 5.28 Dia. of Crank shaft journals as per rule 5 5/16" 5.54 Dia. of Crank pin 5 1/2" Size of Crank webs 7 3/4" x 3" Dia. of thrust shaft under
collars 5 9/16" Dia. of screw 22" Pitch of Screw 0.4" No. of Blades 4 State whether moveable no Total surface 10.5 sq. ft.
No. of Feed pumps One Diameter of ditto 2" Stroke 8" Can one be overhauled while the other is at work
No. of Bilge pumps One Diameter of ditto 2" Stroke 8" Can one be overhauled while the other is at work
No. of Donkey Engines One Sizes of Pumps duplex 4 1/2" x 2 1/4" x 4 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room two 2" In Holds, &c. three 2"

No. of Bilge Injections one sizes 2 1/2" Connected to condenser, or to circulating pump yes 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 valves & cocks
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 14 Oct. of Stern Tube 3 Oct. Screw shaft and Propeller 14 Oct. 1911.

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door no worked from

BOILERS, &c.—(Letter for record 8) Manufacturers of Steel David Colville & Son, Schalk & Renaud.

Total Heating Surface of Boilers 10384 sq. ft. Is Forced Draft fitted no No. and Description of Boilers One single ended, Marine type

Working Pressure 100 lb. Tested by hydraulic pressure to 260 lb. Date of test 14 Oct. No. of Certificate 141.

Can each boiler be worked separately Area of fire grate in each boiler 34 sq. ft. No. and Description of Safety Valves to each boiler two direct spring. Area of each valve 4 1/2" sq. in. Pressure to which they are adjusted 105 lb. Are they fitted with easing gear yes.

Smallest distance between boilers or uptakes and bunkers or woodwork 9" Mean dia. of boilers 9'-6" Length 10'-2 1/2" Material of shell plates steel.

Thickness 7/16" Range of tensile strength 20 to 32 tons Are the shell plates welded or flanged plain Descrip. of riveting: cir. seams double riv.

long. seams double staggered. Diameter of rivet holes in long. seams 1" Pitch of rivets 6 1/4" Lap of plates or width of butt straps 14" as per rule

Per centages of strength of longitudinal joint rivets 92% Working pressure of shell by rules 194 lb. Size of manhole in shell 15 1/4" diam.

Size of compensating ring 4' 0" No. and Description of Furnaces in each boiler two vertical. Material steel Outside diameter 37 3/8"

Length of plain part top 7'-7" Thickness of plates crown 7/16" Description of longitudinal joint welded. No. of strengthening rings

Working pressure of furnace by the rules 196 lb. Combustion chamber plates: Material steel Thickness: Sides 4 3/4" Back 4 3/4" Top 4 3/4" Bottom 4 3/4"

Pitch of stays to ditto: Sides 7 1/2" x 8" Back 8" x 8" Top 8 1/4" x 8" If stays are fitted with nuts or riveted heads riveted. Working pressure by rules 102 lb.

Material of stays steel Diameter at smallest part 1 1/2" Area supported by each stay 14 sq. in. Working pressure by rules 195 lb. End plates in steam space:

Material steel Thickness 1" Pitch of stays 17 3/8" How are stays secured secured by nuts. Working pressure by rules 204 lb. Material of stays steel.

Diameter at smallest part 3 3/8" Area supported by each stay 17 3/8" Working pressure by rules 200 lb. Material of Front plates at bottom steel

Thickness 1" Material of Lower back plate steel Thickness 1 1/2" Greatest pitch of stays 16" x 8" Working pressure of plate by rules

Diameter of tubes 3 1/4" Pitch of tubes 4 1/4" Material of tube plates steel Thickness: Front 1" Back 2 5/8" Mean pitch of stays 8 1/2"

Pitch across wide water spaces 14 3/4" Working pressures by rules 496-302 lb. Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 6" x 1 1/2" Length as per rule 23 3/8" Distance apart 8 1/4" Number and pitch of stays in each two 8"

Working pressure by rules 109 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

VERTICAL DONKEY BOILER—

Manufacturers of Steel

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 casing 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	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— *propeller, screw shaft, necking, one piston rod & valve spindle, complete set of brass bottom rings, one set of valves for all pumps, one set of bolts for all joints. Bolts and nuts assorted. 15 Condenser and 6 boiler tubes.*

The foregoing is a correct description,

Manufacturer.

Was Signed Joh Berg.

Dates of Survey while building	During progress of work in shops - - -	27 June, 27 July, 25 August, 14 Sept. 3, 14, and 31 Oct. 6 and 2, 8 Nov. and 16 Dec. 1911.
	During erection on board vessel - - -	
	Total No. of visits	10.

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts	Cylinders 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
Connecting rods	25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
Stern tube	28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
Completion of pumping arrangements	16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
Main boiler safety valves adjusted	16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
Material of Crank shaft	Self, iron
Material of Tunnel shafts	Self, iron
Material of Steam Pipes	Copper

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

This vessel's machinery and boiler have been constructed according to the Society's Rules and approved plans, now returned to London Office. Material and Workmanship throughout good. Cylinders, Condenser and boiler tested under hydraulic pressure with satisfactory results. Engine boiler upon trial trip in good working condition no kitcher or heating whatever, pumps drawing from all Compartments. I am of opinion that this vessel is Eligible to be recorded in the Society's Register Book.

LMC

- 12. 1911.

It is submitted that this vessel is eligible for THE RECORD + LMC 12.11.

The amount of Entry Fee	£ 11, -	When applied for,
Special	£ 26, -	When received,
Donkey Boiler Fee	£	
Travelling Expenses (if any)	£ 23, 55	

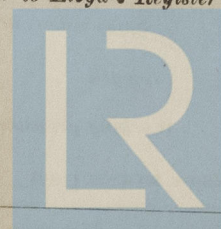
Committee's Minute

TUE. JAN. 2 - 1912

Assigned

thme 12.11

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



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