

REPORT ON MACHINERY.

No. 5059. 6

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

Received at London Office FRI. DEC. 29. 1911

Port of Amsterdam

No. in Survey held at Delfzijl
Reg. Book. 19 in Sup on the H. S. ComboDate, First Survey 27 June Last Survey 16 Dec 1911.
(Number of Visits 10)

Master E. Marie Built at Delfzijl

By whom built Joh Berg

Tons } Gross 170.54.
Net 89.08.
When built 1911.

Engines made at Delfzijl

By whom made Joh Berg.

when made 1911.

Boilers made at Delfzijl

By whom made Joh Berg.

when made 1911.

Registered Horse Power

Owners Maurel & H. Prom

Port belonging to Dakar

Nom. Horse Power as per Section 28 48.59

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c.—Description of Engines

Compound inverted

No. of Cylinders two No. of Cranks two

Dia. of Cylinders 12 1/2" x 26" Length of Stroke 14 1/16" Revs. per minute 180

Dia. of Screw shaft as per rule 5.95" Material of screw shaft S. 16 mm

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

Length of stern bush 24"

Dia. of Tunnel shaft as per rule 5.3" Dia. of Crank shaft journals as per rule 5.565"

Dia. of Crank pin 5 9/16" Size of Crank webs 1 1/2" x 3" Dia. of thrust shaft under

collars 5 9/16" Dia. of screw 7 1/2" Pitch of Screw 84"

No. of Blades 4 State whether moveable No Total surface 18 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 and 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

Are the sluices on Engine room bulkheads always accessible none

Are all connections with the sea direct on the skin of the ship

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

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

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 S) Manufacturers of Steel David Colville & Sons, Schulz Knauff.

Total Heating Surface of Boilers 10384 sq ft Forced Draft fitted

No

No. and Description of Boilers One Single Ended Marine type

Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs.

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 7/8 sq in

Pressure to which they are adjusted 185 lbs.

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork 7"

Mean dia. of boilers 9' 6" Length 10' 2 1/2"

Material of shell plates Steel

Thickness 7/8" Range of tensile strength 20 to 22 tons

Are the shell plates welded or flanged plain

Descrip. of riveting: cir. seams double lap

long. seams double lap

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 plan

Per centages of strength of longitudinal joint

rivets 95%

Working pressure of shell by rules 194 lbs

Size of manhole in shell 15 1/4" diam

Size of compensating ring 4' 8"

No. and Description of Furnaces in each boiler two Morrison

Material Steel Outside diameter 37 3/8"

Length of furnace top 7' 7"

Thickness of plates

crown 1/2"

bottom 1/2"

Description of longitudinal joint Welded

No. of strengthening rings

Working pressure of furnace by the rules 196 lbs

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 8" Back 8" Top 8 1/4"

If stays are fitted with nuts or riveted heads riveted heads Working pressure by rules 182 lbs

Material of stays Steel Diameter at smallest part 1 1/2"

Area supported by each stay 64 sq in

Working pressure by rules 195 lbs End plates in steam space:

Material Steel Thickness 1 and 15/16" Pitch of stays 17 1/8"

How are stays secured

riveted double nuts

Working pressure by rules 204 lbs Material of stays Steel

Diameter at smallest part 3 3/8"

Area supported by each stay 17 1/8"

Working pressure by rules 308 lbs

Material of Front plates at bottom Steel

Thickness 1" Material of Lower back plate Steel

Thickness 15/16"

Greatest pitch of stays

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 25/32"

Mean pitch of stays 8 1/2"

Pitch across wide water spaces 14 1/4"

Working pressures by rules 496-502-556 lbs

Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 6" x 1 1/2"

Length as per rule 235"

Distance apart 8 1/4"

Number and pitch of stays in each two 8"

Working pressure by rules 189 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

How stayed

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 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 _____ 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, screwshaft, neckring, One piston rod & valve spindle, complete set of Hamsholton rings, One set of valves for all pumps, One set of bolts for all parts, Bolts and nuts assorted, 15 Condenser and 6 boiler tubes.*

The foregoing is a correct description,

Manufacturer. *J. H. & Co. Ltd.*

Dates of Survey while building { During progress of work in shops -- 27 June, 27 July, 25 August, 14 Sept., 5, 14 and 31 October, 6 and 2 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*

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 27-6, 27-7, 14-9 Slides 14-9, 14-10 Covers 14-10 Pistons 14-9, 14-10 Rods 14-9, 14-10 Connecting rods 14-9, 14-10 Crank shaft 14-9, 14-10 Thrust shaft 14-9, 14-10 Tunnel shafts 14-9, 14-10 Screw shafts 14-9, 14-10 Propeller 14-9, 14-10 Stern tube 14-10 Steam pipes tested 14-11 Engine and boiler seatings 14-10, 14-11 Engines holding down bolts 14-11 Completion of pumping arrangements 14-12 Boilers fixed 14-10, 14-11 Engines tried under steam 14-12 Main boiler safety valves adjusted 14-12 Thickness of adjusting washers SB 2 1/2 BB 1/4

Material of Crank shaft *L. M. Ing.* Identification Mark on Do. 4077 IM. Material of Thrust shaft *389 MB* Identification Mark on Do. *L. M. Ing.* Material of Tunnel shafts *L. M. Ing.* Identification Marks on Do. 390, 391 MB Material of Screw shafts *L. M. Ing.* Identification Marks on Do. 392 MB Material of Steam Pipes *Copper* Test pressure 360 lbs.

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. Engines & 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.

The amount of Entry Fee .. £ 12- : When applied for, *Dec. 1911*
Special .. £ 96 :
Donkey Boiler Fee .. £ : When received, *Dec. 1911*
Travelling Expenses (if any) £ 73.35 :

Committee's Minute TUE. JAN. 2-1912

Assigned *See Minute on ans. Rpt*

5059 a Vacked

J. H. & Co. Ltd.

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



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