

REPORT ON MACHINERY.

No. 6445

Port of

Belfast

Received at London Office THUR. 26 MAR 1908

No. in Survey held at

Belfast

Date, first Survey 19 June 1907 Last Survey 23 March 1908

Reg. Book.

on the

S.S. Marouffe

(Number of Visits 51)

Master J. W. Duffen

Built at

Belfast

By whom built

Waukman Clark & Co. Ltd.

Tons Gross 3191 Net 2027

Engines made at

Belfast

By whom made

when made

1908

Boilers made at

By whom made

when made

Registered Horse Power

Owners

Stoomvaart Maatschappij Marouffe

Belonging to

Paramaribo

Nom. Horse Power as per Section 28

486

Is Refrigerating Machinery fitted for cargo purposes

Yes

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

20" - 41" - 69"

Length of Stroke

48"

Revs. per minute

80

Dia. of Screw shaft

as per rule 13.9

Material of

I. 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

Yes

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

Yes

Length of stern bush

4'-9"

Dia. of Tunnel shaft

as per rule 12.92

Dia. of Crank shaft journals

as per rule 13.56

Dia. of Crank pin

13 1/2"

Size of Crank web

25 1/2" x 9"

Dia. of thrust shaft under

collars

13 1/2"

No. of Feed pumps

Two

Diameter of ditto

4 1/2"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

Two

Diameter of ditto

4 1/2"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

7

Sizes of Pumps

8 x 5 1/2 x 8"

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

In Engine Room

8-3" x 2-3 1/2"

In Holds, &c.

5-3 1/2" x 1-2 1/2"

No. of Bilge Injections

one

sizes

8"

Connected to condenser, or to circulating pump

Yes

Panicle

separate Donkey Suction fitted in Engine room & size

Yes - 2 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

Same

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

Both

Both

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

Yes

What pipes are carried through the bunkers

True lock suction

How are they protected

Wood casings

Yes

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

13-1-08

of Stern Tube

13-1-08

Screw shaft and Propeller

25-1-08

Is the Screw Shaft Tunnel watertight

Stated to be

Is it fitted with a watertight door

Yes

worked from

Upper back

Yes

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

Sweet's

Kerr

Nottel

Ld.

Total Heating Surface of Boilers

7419 sq ft

Forced Draft fitted

Yes

No. and Description of Boilers

3-Cylind

Single End

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

28-1-08

No. of Certificate

411

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

592 sq ft

No. and Description of Safety Valves to

each boiler

Two - Conical Spring

Area of each valve

11' 0 1/2 sq ft

Pressure to which they are adjusted

180 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

About 2 ft

Mean dia. of boilers

15'-0"

Length

11'-6"

Material of shell plates

Steel

Thickness

1 1/2"

Range of tensile strength

28-32 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

Lap Rivet

long. seams

Butt Rivet

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

8 1/2"

Lap of plates or width of butt straps

18 1/2"

Per centages of strength of longitudinal joint

rivets 91.6

plate 85.3

Working pressure of shell by rules

182 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

McNeill

No. and Description of Furnaces in each boiler

3 - Brighton

Material

Steel

Outside diameter

47 1/4"

Length of plain part

top 3

Thickness of plates

crown 3 1/2

Description of longitudinal joint

Butt

No. of strengthening rings

20-21

Working pressure of furnace by the rules

193 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

3/2"

Back

20-21

Pitch of stays to ditto: Sides

8 1/2" x 8 1/2"

Back

9 1/4" x 8"

Top

8 1/2" x 7 1/2"

stays are fitted with nuts or riveted heads

Nuts made

Material of stay

Steel

Diameter at smallest part

1 1/2"

Area supported by each stay

87 sq in

Working pressure by rules

219 lbs

Material

Steel

Thickness

1 1/2"

Pitch of stays

22 x 18 1/2"

How are stays secured

Nuts made

Diameter at smallest part

2 1/2"

Area supported by each stay

385 sq in

Working pressure by rules

180 lbs

Material of Front plates at bottom

Steel

Thickness

1"

Material of Lower back plate

Steel

Thickness

3/8"

Greatest pitch of stays

13 1/2"

Diameter of tubes

2 1/2"

Pitch of tubes

3 1/4" x 3 1/8"

Material of tube plates

Steel

Thickness: Front

15/16"

Pitch across wide water spaces

13 1/2"

Working pressures by rules

186 lbs

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

8 1/2" x (3/4" x 2)

Length as per rule

32 5/8"

Distance apart

8 1/4"

Number and pitch of stays in each

3 - 4 1/2"

Working pressure by rules

181 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

Yes

W838-0025

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 _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:—Set piston rings & pump each cyl; 1 eccentric & handle and strap; 1 eccentric rod, air pump bucket rod, piston rod, 2 cross head guide shoes, 2 slide valve spindles, pair crank pin bushes, 2 pair cross head bushes, 1 pair main bearing bushes, fan spindle for centrifugal pump, 2 pump links complete. Set. & all gear to Lloyd's Rules Extra.

The foregoing is a correct description,
 FOR WORKMAN, CLARK & CO., LIMITED
 M. H. Bell, Manufacturer.

Dates of Survey while building { During progress of work in shops - 7.9.07 - June 19. 24. July 9. 24. 31. Sept. 4. 9. 12. 26. Oct. 4. 8. 14. 18. 21. 25.
 { During erection on board vessel - 31 Nov. 4. 8. 15. 18. 20. Dec. 2. 3. 5. 10. 12. 17. 23 up till 23 March 1908
 Total No. of visits 51

Is the approved plan of main boiler forwarded _____
 (with Report on S. S. Coppename)


Dates of Examination of principal parts—Cylinders 19.10.07 Slides 6.11.07 Covers _____ Pistons _____ Rods _____
 Connecting rods 29.1.08 Crank shaft 9.2.08 Thrust shaft _____ Tunnel shafts _____ Screw shaft 6.1.08 Propeller 9.1.08
 Stern tube 9.1.08 Steam pipes tested 5.2.08 Engine and boiler seatings 1.3.08 Engines holding down bolts 6.3.08
 Completion of pumping arrangements 16.3.08 Boilers fixed 6.3.08 Engines tried under steam 12.3.08
 Main boiler safety valves adjusted 12.3.08 Thickness of adjusting washers 11.16.07
 Material of Crank shaft I. Steel Identification Mark on Do. 44.10.08 Material of Thrust shaft do Identification Mark on Do. do
 Material of Tunnel shafts do Identification Marks on Do. 6.1.08 Material of Screw shafts do Identification Marks on Do. do
 Material of Steam Pipes M. Iron Test pressure 600 lbs

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

The machinery of this vessel has been constructed under Special License, and in accordance with the Rules. The workmanship and the materials are of good description, and in trial in Belfast Lough the machinery worked satisfactorily.

In my opinion, it is eligible for record + L.M.C. 3-08, with notation Forced Draft Electric Light & Refrigerating Machinery

The machinery of this vessel is a duplicate of that fitted in the sister vessel S.S. Coppename

It is submitted that
 this vessel is eligible for
 THE RECORD  L.M.C. 3.08.

ELEC. LIGHT. - REF. MCHY. - F.D.

JWD 26/3/08.

The amount of Entry Fee. £ 3 : 0 :
 Special £ 44. 6 :
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 24.3.08
 When received, 24/3/08

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

Committee's Minute FRI. 27 MAR 1908

Assigned

+ L.M.C. 3.08
 F.D. Ref. Mch
 ELEC. LIGHT

MACHINERY CERTIFICATE
 WRITTEN.



Lloyd's Register
 Foundation

Certificate (if required) to be sent to Lloyd's Register