

REPORT ON MACHINERY.

No. 7432

TUE OCT. 10 1911

Received at London Office

Date of writing Report 4 Oct 1911 When handed in at Local Office

Port of Rotterdam

No. in Survey held at Alblasferdam
Reg. Book.

Date, First Survey 6 May

Last Survey 2 Oct 1911

(Number of Visits 11)

on the Steel screw steamer "Tendaba"

Gross 143.6

Net 81.48

When built 1911

Master E. Honoré Built at Hendrik J. de Ambach By whom built Jonker & Stans

Engines made at Alblasferdam

By whom made Alblasferdamse Machinefabriek

when made 1911

Boilers made at Alblasferdam

By whom made

when made 1911

Registered Horse Power

Owners Abens Maurel frères

Port belonging to Dakar

Nom. Horse Power as per Section 28 39

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted No

ENGINES, &c.—Description of Engines

Vertical compound

No. of Cylinders 2

No. of Cranks 2

Dia. of Cylinders 12 1/16 x 25 7/8

Length of Stroke 13 1/16

Revs. per minute 185

Dia. of Screw shaft

Material of screw shaft 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 on length 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 1/4

Dia. of Tunnel shaft

Dia. of Crank shaft journals

Dia. of Crank pin

Size of Crank webs

Dia. of thrust shaft under

collars 5 1/8

Dia. of screw 5 3/8

Pitch of Screw 6 6/8

No. of Blades 4

State whether moveable No

Total surface 14.25

No. of Feed pumps One

Diameter of ditto 2 1/8

Stroke 5 1/8

Can one be overhauled while the other is at work

No. of Bilge pumps One

Diameter of ditto 2 1/8

Stroke 5 1/8

Can one be overhauled while the other is at work

No. of Donkey Engines One

Sizes of Pumps 4 1/2 x 2 1/4 x 4

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

In Engine Room 2 in 2" and 1 in 1 1/2" from ejector

In Holds, &c. One 2" in fore hold and one 2"

in afterhold, and 1 in 1 1/2" to fore hold to ejector

No. of Bilge Injections One

sizes 2 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 the Discharge Pipes above or below the deep water line

Above

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Yes

Are the Blow Off Cocks fitted with a spigot and brass covering plate

Yes

Are the Blow Off Cocks fitted with a spigot and brass covering plate

Yes

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Yes

How are they protected

Yes

How are they protected

Yes

What pipes are carried through the bunkers

None

How are they protected

Yes

How are they protected

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

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Yes

Dates of examination of completion of fitting of Sea Connections

15 Aug of Stern Tube

15 Aug of Screw shaft and Propeller

15 Aug

15 Aug

15 Aug

Is the Screw Shaft Tunnel watertight

None

Is it fitted with a watertight door

Yes

worked from

Yes

BOILERS, &c.—(Letter for record 3)

Manufacturers of Steel Abens Schulz, Knaut & AG. Essen.

Total Heating Surface of Boilers 9250

Is Forced Draft fitted

No

No. and Description of Boilers One single ended marine

No. and Description of Boilers One single ended marine

No. and Description of Boilers One single ended marine

Working Pressure 120 lbs

Tested by hydraulic pressure to

240 lbs

Date of test 24-8-11

No. of Certificate 809

No. of Certificate 809

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

30 sq ft

No. and Description of Safety Valves to

No. and Description of Safety Valves to

each boiler 2 spring loaded

Area of each valve

4.45 sq in

Pressure to which they are adjusted

125 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

11 in

Mean dia. of boilers

9 1/4 in

Length

9 9/16 in

Material of shell plates

Steel

Thickness 1 1/16 in

Range of tensile strength

28-30 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

Lap 2 x riv

Lap 2 x riv

long. seams double butt 3 x riv

Diameter of rivet holes in long. seams

1 1/16 in

Pitch of rivets

4 1/2 in

Lap of plates or width of butt straps

10 3/8 in

10 3/8 in

Per centages of strength of longitudinal joint

rivets 110%

plate 100%

Working pressure of shell by rules

142 lbs

Size of manhole in shell

11 1/16 x 15 1/4 in

11 1/16 x 15 1/4 in

Size of compensating ring

6 x 7/8 in

No. and Description of Furnaces in each boiler

3 Johnson's

Material

Steel

Outside diameter

35 1/16 in

Length of plain part

top 6 in

bottom 6 in

Thickness of plates

crown 1 1/16 in

Description of longitudinal joint

Welded

No. of strengthening rings

Working pressure of furnace by the rules

192 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

9/16 in

Back

9/16 in

Pitch of stays to ditto: Sides

1 1/2 x 6 7/16 in

Back

1 1/2 x 1 1/2 in

Top

6 1/2 x 8 1/4 in

If stays are fitted with nuts or riveted heads

riveted

Material of stays

Steel

Area at smallest part

1.48 sq in

Area supported by each stay

59 sq in

Working pressure by rules

200 lbs

Material of stays

Steel

Thickness

2 1/16 in

Pitch of stays

1 1/4 x 1 3/4 in

How are stays secured

Double nuts and riveted washers

Area at smallest part

3.91 sq in

Area supported by each stay

2.37 sq in

Working pressure by rules

174 lbs

Material of Front plates at bottom

Steel

Thickness

3/4 in

Material of Lower back plate

Steel

Thickness

2 1/16 in

Greatest pitch of stays

1 3/4 x 1 1/2 in

Diameter of tubes

3 1/4 in

Pitch of tubes

4 1/4 x 4 1/4 in

Material of tube plates

Steel

Thickness: Front

3/4 in

Pitch across wide water spaces

13 x 5 1/2 in

Working pressures by rules

276 lbs

Girders to Chamber tops: Material

Steel

Depth and

Depth and

thickness of girder at centre

5 7/8 x 1 1/4 in

Length as per rule

24 7/8 in

Distance apart

8 1/4 in

Number and pitch of stays in each

2 stays 6 7/16 in

Working pressure by rules

134 lbs

Superheater or Steam chest; how connected to boiler

Riveted

Can the superheater be shut off and the boiler worked

separately

separately

separately

Diameter

12 1/4 in

Length

15 1/4 in

Thickness of shell plates

3/4 in

Material of longitudinal joint

Description of longitudinal joint

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

End plates: Thickness

How stayed

How stayed

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

How stayed

How stayed

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Are they fitted with easing gear

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Working pressure of end plates

Area of safety valves to superheater

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VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. *None* 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:—*Two bolts & nuts for connecting rod top and 2 for bottom ends, two main bearing bolts, 1 set of coupling bolts, 1 set of feed and bilge pump valves, one spring for each piston, one propeller shaft mouh, One feed pump plunger, One set bearing, bottom and top end transfer One eccentric strap, rod & transfer. One piston, air pump and slide valve rod, a quantity assorted bolts and iron of various sizes*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building *-* During progress of work in shops *-* *6-22/5 4/7 8-15-24/8-1911*

- During erection on board vessel *-* *1-6-25/9 2/10 1911*

Total No. of visits *11*

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

also pumping arrangements

Dates of Examination of principal parts—Cylinders *8/8-24/8* Slides *4/4-8/8* Covers *4/4-8/8* Pistons *8/8-24/8* Rods *8/8-24/8*

Connecting rods *8/8-24/8* Crank shaft *8/8-24/8* Thrust shaft *24/8-2/9* Tunnel shafts *24/8-2/9* Screw shaft *24/8-2/9* Propeller *2/9*

Stern tube *8/8* Steam pipes tested *2/9* Engine and boiler seatings *2/9* Engines holding down bolts *2/9*

Completion of pumping arrangements *25/9* Boilers fixed *6/9* Engines tried under steam *2/10*

Main boiler safety valves adjusted *2/9* Thickness of adjusting washers *1/8 3/4" P 1/16"*

Material of Crank shaft *Steel* Identification Mark on Do. *Lloyds 1401 115-8-11* Material of Thrust shaft *Steel* Identification Mark on Do. *Lloyds 1401 115-8-11*

Material of Tunnel shafts *Steel* Identification Marks on Do. *Lloyds 1403 115-8-11* Material of Screw shafts *Steel* Identification Marks on Do. *Lloyds 1403 115-8-11*

Material of Steam Pipes *Copper* Test pressure *240 lbs*

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

The machinery and boiler having been fitted in accordance with the approved plans and the Secretary's letters, material tested as required, workmanship good, and the machinery having worked satisfactorily, during a full speed trial. I am of opinion that this vessel is eligible to be recorded in the Society's Register book with

*** L.M.C. 10.11.**

A salvage pump is fitted on deck 10" x 9" x 10"

It is submitted that this vessel is eligible for THE RECORD + LMC 10.11.

J.W.D. 10/10/11

The amount of Entry Fee *£ 12.50* When applied for, *4/10 1911*

Special *£ 84.00*

Donkey Boiler Fee *£ :* When received, *6/10 1911*

Travelling Expenses (if any) *£ 8.00*

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

Committee's Minute

FRI OCT 13 1911

Assigned

+ L.M.C. 10.11



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