

REPORT ON MACHINERY.

Port of Sunderland

Received at London Office **MON. FEB 25, 1901**

Survey held at Sunderland

Date, first Survey 20th April 1900 Last Survey 11th Feb 1901

Ship on the S S Pille de Majunga

(Number of Visits 30)

Builder J. E. Boston Built at Sunderland By whom built Sir J. Laing & Sons Ltd

Tons { Gross 3676
Net 2374

Machinery made at Sunderland By whom made George Clark Ltd when made 1901

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Owners Cie Havraise pen de Nav a Vap Port belonging to Havre

Horse Power as per Section 28 316 Is Refrigerating Machinery fitted No Is Electric Light fitted Yes

Engines, &c. — Description of Engines Triple - expansion No. of Cylinders 3 No. of Cranks 3

Length of Stroke 45" Revs. per minute 70 Dia. of Screw shaft as per rule 12.8" as fitted 13.316" Lgth. of stern bush 4'-4 1/2"

Dia. of Crank shaft journals as per rule 12.21" as fitted 12.58" Dia. of Crank pin 12 5/8" Size of Crank webs 18 1/2 x 8 1/2" Dia. of thrust shaft under

Feed pumps 2 Diameter of ditto 3 1/4" Stroke 26" Can one be overhauled while the other is at work Yes

Bilge pumps 2 Diameter of ditto 4 1/4" Stroke 26" Can one be overhauled while the other is at work Yes

Donkey Engines 2 Sizes of Pumps 7" dia x 10" + 4 1/2" dia x 6" No. and size of Suctions connected to both Bilge and Donkey pumps

In Holds, &c. Two in each hold of 3 1/2" dia

Bilge injections 1 size 6" Connected to condenser, or to circulating pump 6" Is a separate donkey suction fitted in Engine room & size Yes 4"

Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible None

Are they Valves or Cocks both

Are the discharge pipes above or below the deep water line above

Are the blow off cocks fitted with a spigot and brass covering plate Yes

How are they protected ✓

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges Yes

Are the stern tube, propeller, screw shaft, and all connections examined in dry dock New vessels Is the screw shaft tunnel watertight Yes

Is the screw shaft tunnel watertight Yes

Boilers, &c. — (Letter for record S) Total Heating Surface of Boilers 3908.1 sq ft Is forced draft fitted Yes

Description of Boilers 3 Single Ended Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs

Can each boiler be worked separately Yes Area of fire grate in each boiler 34 sq ft No. and Description of safety valves to

Area of each valve 9.62 sq ft Pressure to which they are adjusted 180 lbs Are they fitted with easing gear Yes

Mean dia. of boilers 11'-6" Length 11'-0" Material of shell plates S

Range of tensile strength 29-32 Are they welded or flanged flanged Descrip. of riveting: cir. seams dbl riv lap long. seams Arb riv. butt

Pitch of rivets 7 1/2" Lap of plates or width of butt straps 17 1/8" butt strap

Working pressure of shell by rules 194 lbs Size of manhole in shell 16" x 13"

No. and Description of Furnaces in each boiler 2 Adamson Material S Outside diameter 3'-6"

Thickness of plates 19/32 Description of longitudinal joint Weld No. of strengthening rings 3

Combustion chamber plates: Material S Thickness: Sides 21/32" Back 21/32" Top 21/32" Bottom 29/32"

If stays are fitted with nuts or riveted heads nuts Working pressure by rules 183 lbs

Area supported by each stay 81 sq ft Working pressure by rules 221 lbs End plates in steam space:

Working pressure by rules 183 lbs Material of stays S

Material of Front plates at bottom S

Greatest pitch of stays 9" Working pressure of plate by rules 180 lbs

Material of tube plates S Thickness: Front 1 1/64" Back 1/16" Mean pitch of stays 7 1/2"

Working pressures by rules 180 lbs Girders to Chamber tops: Material S Depth and

Distance apart 9" Number and pitch of Stays in 2 of 9" pitch

Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked



W650-0127

DONKEY BOILER— No. 1 Description *Ordinary, byl. Multist 2 plain furn*
 Made at *Stockton* By whom made *Sudron & Co Ltd* When made *29.10.00* Where fixed *on deck*
 Working pressure *100 lbs* tested by hydraulic pressure to *200 lbs* No. of Certificate *2329* Fire grate area *23 sq ft* Description of safety valves *direct*
 No. of safety valves *2* Area of each *4.9 sq ft* Pressure to which they are adjusted *100 lbs* If fitted with casing gear *Yes* If steam from main boiler
 enter the donkey boiler *No* Dia. of donkey boiler *8'-0"* Length *9'-0"* Material of shell plates *S* Thickness *9/16"* Range of
 strength *27-32* Descrip. of riveting long. seams *treb. riv. lap* Dia. of rivet holes *7/8"* Whether punched or drilled *drilled* Pitch of rivets
 Lap of plating *6 3/8"* Per centage of strength of joint Rivets *7.8* Thickness of shell *end* plates *3/8"* Radius of do. *Pitch* No. of Stays to do. *10*
 Dia. of stays *1 3/4"* Diameter of furnace Top *27 7/8"* Bottom *27"* Length of furnace *6'-2"* Thickness of furnace plates *7/16"* Descrip.
 joint *welded* Thickness of furnace *end* plates *7/16"* Stays by *1 3/8"* iff *8"* to *8 1/2"* Working pressure of shell by rules *105 lbs*
 Working pressure of furnace by rules *105 lbs* Diameter of *uptake* tubes *3"* Thickness of *uptake* plates *1/16"* Thickness of *stay* tubes *7/16"*

SPARE GEAR. State the articles supplied:— *Top and bottom end connecting rod, bolt and nuts, two main bearing bolts and nuts, one set of coupling bolts, feed and bilge pump valves, bolts, nuts, and iron assortment propeller etc*

The foregoing is a correct description,
 for *George Clark, Ltd.* Manufacturer. of *Main Engine & Boiler*

Dates of Survey while building
 During progress of work in shops— *1900: April 20. 23. 25. May 2. 7. 9. 11. 14. 18. 22. 25. 28. Oct. 25. Nov. 1. 6.*
 During erection on board vessel— *14. 19. 21. 22. 26. Dec. 3. 12. 18. 1901: Jan. 16. 18. 21. 30. Feb. 7. 11.*
 Total No. of visits *30.*

Is the approved plan of main boiler forwarded herewith *Y*
 " " " donkey " " " *Y*

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

The machinery of this vessel has been constructed under special survey, the material and workmanship being good efficient, and the engines when tried under steam worked satisfactorily.

The pumps, watertight doors, and steam steering gear in good working order, and the main steam pipes have been tested by hydraulic pressure to 400 lbs per square inch.

In my opinion this vessel is eligible for the notification in the Register Book of *L.M.C. 2-1901

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 2-1901
 Elec. Light.

S. R. Salmon
 Engineer Surveyor to Lloyd's Register of British & Foreign Ships

The amount of Entry Fee. £ 3: : :
 Special .. £ 35 16: : :
 Donkey Boiler Fee .. £ : : :
 Travelling Expenses (if any) £ : : :
 When applied for, *23.2.01*
 When received, *27.2.01*

Committee's Minute **TUES. 26 FEB 1901**

Assigned *+ L.M.C. 2, 01 7D*

MACHINERY CERTIFICATE WRITTEN.



Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minutes.