

REPORT ON MACHINERY.

No. 6240

TUES. JAN 8 1907

Port of

Belfast

Received at London Office

19

No. in Survey held at

Belfast

Date, first Survey

May 25, 1906

Last Survey

2 Jan, 1907

Reg. Book.

on the

S.S. "Aberdeen"

(Number of Visits)

46

Master

J. O. Brown

Built at

Belfast

By whom built

Harland & Wolff Ltd

Tons

Gross 3730

Net 2324

When built

1907

Engines made at

Belfast

By whom made

Harland & Wolff Ltd

when made

1907

Boilers made at

By whom made

when made

Registered Horse Power

Owners

African Steamship Coy Ltd

Port belonging to

London

Nom. Horse Power as per Section 28

528

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

26-44-74

Length of Stroke

48

Revs. per minute

76

Dia. of Screw shaft

as per rule 14.98

Material of

S. 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

63"

Dia. of Tunnel shaft

as per rule 13.7

Dia. of Crank shaft journals

as per rule 14.38

Dia. of Crank pin

as per rule 14.75

Dia. of Crank pin

15"

Size of Crank webs

21x10 3/4"

Dia. of thrust shaft under

collars

14 1/2"

Dia. of screw

17'-8"

Pitch of Screw

16'-0"

No. of Blades

4

State whether moveable

Yes

No. of Feed pumps

2

Diameter of ditto

4 1/2"

Stroke

28"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

4"

Stroke

28"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

4

Sizes of Pumps

1 1/2 x 5 x 12

1 1/2 x 5 x 12

1 1/2 x 5 x 12

1 1/2 x 5 x 12

1 1/2 x 5 x 12

1 1/2 x 5 x 12

1 1/2 x 5 x 12

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1 1/2 x 5 x 12

1 1/2 x 5 x 12

1 1/2 x 5 x 12

1 1/2 x 5 x 12

1 1/2 x 5 x 12

In Engine Room

3-3 1/2"

No. of Bilge Injections

1

sizes

8"

Connected to condenser, or to circulating pump

Pump

Is a separate Donkey Suction fitted in Engine room & size

Yes - 3 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

None

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

Below

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

Fore hold suction

How are they protected

Wood casing

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

12-10-06

of Stern Tube

12-10-06

Screw shaft and Propeller

12-10-06

Is the Screw Shaft Tunnel watertight

State

Yes

Is it fitted with a watertight door

Yes

worked from

Upper deck

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

R. Colville & Sons

Total Heating Surface of Boilers

7395 sq ft

Is forced draft fitted

Yes

No. and Description of Boilers

3

Single End Cylind

No.

1387

Working Pressure

205 lbs

Tested by hydraulic pressure to

410 lbs

Date of

19-10-06

No. of Certificate

1387

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

57 sq ft

No. and Description of Safety Valves to

each boiler

2

Direct Spring

Area of each valve

8' 2 1/2"

Pressure to which they are adjusted

205 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers

on uptakes

and bunkers

on woodwork

about 5 ft

Mean dia. of boilers

14'-5"

Length

11'-9"

Material of shell plates

Steel

Thickness

15/32"

Range of tensile strength

29-32 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

Lap

Butt

Seams

Lap

Seams

Lap

Seams

Lap

Seams

Lap

Seams

Lap

Seams

Lap

Seams

Lap

long. seams

Butt

Seams

Lap

Seams

Lap

Seams

Lap

Seams

Lap

Seams

Lap

Seams

Lap

Seams

Lap

Seams

Lap

Seams

Lap

Seams

Lap

Per centages of strength of longitudinal joint

rivets 94.4

plate 84.2

Working pressure of shell by rules

236 lbs

Size of manhole in shell

16" x 12"

No. and Description of Furnaces in each boiler

3

Browns Cambray Steel

Outside diameter

46 3/8"

Length of plain part

top 9"

Thickness of plates

crown 2 1/2"

bottom 3 1/2"

Description of longitudinal joint

Weld

No. of strengthening rings

0

Working pressure of furnace by the rules

211 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

19-21/32"

Back

19-21/32"

Top

19-21/32"

Bottom

7/8"

Working pressure by rules

209 lbs

Pitch of stays to ditto: Sides

7 1/4" x 7 1/8"

Back

7 1/4" x 7 1/8"

Top

8 1/4" x 7 1/8"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

232 lbs

Material of stay

Steel

Diameter at smallest part

15 1/8"

Area supported by each stay

5 7/8"

Working pressure by rules

232 lbs

End plates in steam space:

Material of stays

Steel

Material

Steel

Thickness

15"

Pitch of stays

18 1/2" x 15 1/4"

How are stays secured

Nuts

Working pressure by rules

238 lbs

Material of Front plates at bottom

Steel

Thickness

15/16"

Material of Lower back plate

Steel

Thickness

15/16"

Greatest pitch of stays

12 3/4"

Working pressure of plate by rules

413 lbs

Diameter of tube

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

SPARE GEAR. State the articles supplied:— 1 Propeller Shaft: set piston rings & springs for each cylr: H.P. & L.P. slide valve & spindles: pair crank pin bushes
Impeller for Cent. Air Pump: air pump rod & bucket: 20 Condenser tubes: escape valve & springs set: 2: call gear to Lloyd's Rules entire.

The foregoing is a correct description,

Manufacturer.

Harland & Wolff Ltd

Dates of Survey while building: During progress of work in shops: 1906. May 21, 29, 31, June 8, 11, 14, 19, 25, July 6, Aug 3, 9, 14, 24, 30, Sept 7, 14, 19, 26, Oct 4, 8, 9, 10, 11, Nov 5, 12, Jan 2, 1907
During erection on board vessel: 4/6
Total No. of visits: 4/6

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 11-6-06 Slides Covers 10-8-06 Pistons Rods
Connecting rods 13-11-06 Crank shaft 6-7-06 Rust shaft Tunnel shaft 10-10-06 Screw shaft 10-10-06 Propeller 30-8-06
Stern tube 30-8-06 Steam pipes tested 22-11-06 Engines and boiler seatings 28-11-06 Engines holding down bolts 28-11-06
Completion of pumping arrangements 6-12-06 Boilers fixed 28-11-06 Engines tried under steam 6-12-06
Main boiler safety valves adjusted 6-12-06 Thickness of adjusting washers 7/16 to 3/16
Material of Crank shaft Solid Identification Mark on Do. 28-11-06 Material of Thrust shaft do Identification Mark on Do. do
Material of Tunnel shafts do Identification Marks on Do. do Material of Screw shafts do Identification Marks on Do. do
Material of Steam Pipes Solid drawn steel Test pressure 620 lbs.

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

The machinery of this vessel, has been constructed under Special Survey, and in accordance with the Rules. The materials and the workmanship are of good description, and on trial under steam in Belfast Lough, the machinery worked satisfactorily. In my opinion, it is eligible for record H.L.M.C. 1-07, with notification Forced Draft & Electric Light.

It is submitted that this vessel is eligible for THE RECORD

H.L.M.C. 1-07. F.D. ELEC. LIGHT.

8.1.07

8.1.07

The amount of Entry Fee. £ 3 : 0 :
Special .. £ 46 : 8 :
Donkey Boiler Fee .. £ : :
Travelling Expenses (if any) £ : :
When applied for, 5-1-07
When received, 11/1/07

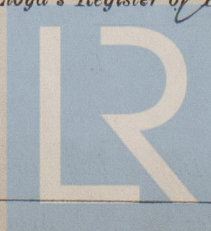
Committee's Minute

Assigned

FRI. JAN 11 1907

+ L.M.C. 1. 07
F.D. Elec. Light

R. J. Pennington
Engineer/Surveyor to Lloyd's Register of British & Foreign Shipping.



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MACHINERY CERTIFICATE
WRITTEN.