

## REPORT ON MACHINERY.

No. 59902

Received at London Office

THUR. 9 MAR 1911

Date of writing Report

19

When handed in at Local Office

MAR 8 1911

Port of

Newcastle on Tyne

No. in Survey held at  
Reg. Book.

Newcastle

Date, First Survey

28<sup>th</sup> July 1910

Last Survey

1<sup>st</sup> March 1911

on the

S. S. Arabien

(Number of Visits 54)

Gross 4734

Net 3019

When built 1911

Master

Built at

Walker

By whom built

Swan Hunter &amp; Wigham Richardson

Engines made at

Walker

By whom made

Ditto

when made

1911

Boilers made at

Walker

By whom made

Ditto

when made

1911

Registered Horse Power

Owners

Ostasiatische Kompagnie Aktiengesellschaft

Port belonging to

Kopenhagen

Nom. Horse Power as per Section 28

491

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

Yes

## ENGINES, &amp;c.—Description of Engines

Inverted triple expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

27" 44" 73"

Length of Stroke

48"

Revs. per minute

70

Dia. of Screw shaft

as per rule 14.5"

Material of

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' 11 1/2"

Dia. of Tunnel shaft

as per rule 13.3"

Dia. of Crank shaft journals

as per rule 13.9"

Dia. of Crank pin

14"

Size of Crank webs

9 1/2" x 22 1/2"

Collars

14 1/4"

Dia. of screw

18" 0"

Pitch of Screw

16" 9"

No. of Blades

4

State whether moveable

no

No. of Feed pumps

2

Diameter of ditto

4"

Stroke

26"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

4"

Stroke

26"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

3

Sizes of Pumps 9" x 11" 10" 8" x 6" 8" 7" x 4 1/2" 8"

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

In Engine Room

4 of 3 1/2"

In Holds, &amp;c.

2 of 3 1/2" to each &amp; 1 of 2 1/2"

No. of Bilge Injections

one size 8"

Connected to condenser, or to circulating pump

Centrifugal

Is a separate Donkey Suction fitted in Engine room &amp; 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

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

above

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

forward hold suction

How are they protected

strong 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

24.1.11

of Stern Tube

24.1.11

Screw shaft and Propeller

24.1.11

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

upper platform

## BOILERS, &amp;c.—(Letter for record)

Manufacturers of Steel

J. Spence &amp; Sons

Total Heating Surface of Boilers

8810 sq ft

Is Forced Draft fitted

no

No. and Description of Boilers

4 S. E. Cylindrical Mult

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

24.3.10

No. of Certificate

8059 &amp; 8062

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

60 sq ft

No. and Description of Safety Valves to

each boiler

2 Spring Patent

Area of each valve

7.06 sq in

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

28"

Mean dia. of boilers

15" 0 3/8"

Length

11" 0"

Material of shell plates

Steel

Thickness

1 3/16"

Range of tensile strength

28 3/4/32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

d. r. lap.

long. seams

L. r. d. 7.5

Diameter of rivet holes in long. seams

1 1/4"

Pitch of rivets

8 3/4"

Lap of plates or width of butt straps

18 1/2"

Per centages of strength of longitudinal joint

rivets 87

plate 85.7

Working pressure of shell by rules

183 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

9" x 1 3/16"

No. and Description of Furnaces in each boiler

3 Drighlon

Material

steel

Outside diameter

47 3/8"

Length of plain part

top 1

Thickness of plates

crown 9/16"

Description of longitudinal joint

weld

No. of strengthening rings

Working pressure of furnace by the rules

186 lbs

Combustion chamber plates: Material

steel

Thickness: Sides

1/16"

Back

1/16"

Top

1/16"

Bottom

7/8"

Pitch of stays to ditto: Sides

9 3/4" x 9 1/4"

Back

9 3/4" x 5 1/2"

Top

9 3/4" x 9 1/4"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

194 lbs

Material of stays

Iron

Diameter at smallest part

2.03"

Area supported by each stay

82.8 sq in

Working pressure by rules

183 lbs

End plates in steam space:

Material

steel

Thickness

1 1/4"

Pitch of stays

18" x 22"

How are stays secured

d. n. w.

Working pressure by rules

183 lbs

Material of stays

steel

Diameter at smallest part

7.24"

Area supported by each stay

396 sq in

Working pressure by rules

190 lbs

Material of Front plates at bottom

steel

Thickness

13/16"

Material of Lower back plate

steel

Diameter of tubes

3 1/2"

Pitch of tubes

4 1/2" x 4 3/8"

Material of tube plates

steel

Thickness: Front

13/16"

Back

3/4"

Mean pitch of stays

9" x 8 3/4"

Pitch across wide water spaces

14 1/4"

Working pressures by rules

223 lbs

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

9 1/2" x 13 1/8"

Length as per rule

33 1/2"

Working pressure by rules

184 lbs

Superheater or Steam chest; how connected to boiler

Yes

Can the superheater be shut off and the boiler worked

separately

Yes

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

If stiffened with rings

Yes

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Yes

Area of safety valves to superheater

Are they fitted with easing gear

Yes

Foundation

W 565-0038



Lloyd's Register  
Foundation