

REPORT ON MACHINERY.

No. 12476

Received at London Office

MON. JAN 8

Date of writing Report 30th Decr 1911

When handed in at Local Office

19

Port of

Hamburg

No. in Survey held at

Flensburg

Date, First Survey 3^d MarchLast Survey 31st Decr 1911

Reg. Book.

(Number of Visits 42)

867 on the *Steel Co. Lr.**"Melbourne"*

Gross 5926

Net 3715

Master *L. Maier*

Built at

Flensburg

By whom built

Flensburger Schiffbau Ges.

When built 1911. 12

Engines made at

Flensburg

By whom made

Flensburger Schiffbau Ges.

when made

1911

Boilers made at

Flensburg

By whom made

Flensburger Schiffbau Ges.

when made

1911

Registered Horse Power 751

Owners

Deutsch-Austral. Dampfschiff Ges

Port belonging to

Hamburg

Nom. Horse Power as per Section 28 751

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

30 1/16, 50 1/16, 8 1/4"

Length of Stroke

54"

Revs. per minute 78

Dia. of Screw shaft

as per rule 16.5"

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

—

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

If two

liners are fitted, is the shaft lapped or protected between the liners

—

Length of stern bush

5' 4 3/4"

Dia. of Tunnel shaft

as per rule 15 7/16"

Dia. of Crank shaft journals

as per rule 15 1/16"

Dia. of Crank pin

16 7/32"

Size of Crank webs

10 7/8" x 2 1/2"

Dia. of thrust shaft under

collars

16 7/32"

Dia. of screw

19 1/16"

Pitch of Screw

16" x 9"

No. of Blades

4

State whether movable

no

Total surface

90 sq. ft.

No. of Feed pumps

2

Diameter of ditto

4 1/8"

Stroke

3 1/2"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

4 1/16"

Stroke

3 1/2"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

6

Sizes of Pumps

see Specifications

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

In Engine Room

5 off 4" 1/2"

1 from Well 4" 1/2"

1 from Recess 2"

1 from Tunnel 2"

In Holds, &c.

13 off 4"

1 from Tank 16 off 4"

1 from

fore and aft Peak 2 off 3 1/4"

No. of Bilge Injections

1

sizes

12"

Connected to condenser, or to circulating pump

yes

Is a separate Donkey Suction fitted in Engine room & size

yes—4"

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

no

Are all connections with the sea direct on the skin of the ship

yes

Are they Valves or Cocks

Valves & cocks

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

none

How are they protected

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

21/11.11

of Stern Tube

22/12.11

Screw shaft and Propeller

25/12.11

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

cyl platform

BOILERS, &c.—(Letter for record B.)

Manufacturers of Steel

Phoenix A. G. H. H. Korder Verein, Korder.

Furnaces: Rheinische Stahlwerke A. G. Duisburger Eisen & Stahlwerk.

Total Heating Surface of Boilers

11219 sq. ft.

Is Forced Draft fitted

yes

No. and Description of Boilers

4 single end, multitubular

Working Pressure

185 lbs.

Tested by hydraulic pressure to

370 lbs.

Date of test

11/11, 21/11, 23/11

No. of Certificate 152, 153, 154, 155.

Can each boiler be worked separately

yes

Area of fire grate in each boiler

65.9 sq. ft.

No. and Description of Safety Valves to

each boiler

2 Spring loaded

Area of each valve

12.56 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

18"

Mean dia. of boilers

16" 3/4"

Length

13' 0 1/2"

Material of shell plates

Steel

Thickness

1.24

Range of tensile strength

29-33 Tons

Are the shell plates welded or flanged

—

Descrip. of riveting: cir. seams lap, all riv.

long. seams

all butt, gas riv.

Diameter of rivet holes in long. seams

1.5"

Pitch of rivets

20.5"

Lap of plates or width of butt straps

29.6 x 14"

Per centages of strength of longitudinal joint

rivets 115.1%

plate 92.7%

Working pressure of shell by rules

200.1 lbs.

Size of manhole in shell

16.5 x 12.5"

Size of compensating ring

8.6 x 1.24"

No. and Description of Furnaces in each boiler

3 horizons

Material

Steel

Outside diameter

4' 1 1/4"

Length of plain part

top 4' 2"

bottom 4' 2"

Thickness of plates

crown 1.65"

bottom 1.65"

Description of longitudinal joint

welded

No. of strengthening rings

none

Working pressure of furnace by the rules

212.5 lbs.

Combustion chamber plates: Material

Steel

Thickness: Sides

.625"

Back .625"

Top .625"

Bottom

1.2"

Pitch of stays to ditto: Sides

7.7 x 7.5"

Back

8.2 x 7.7"

Top

7.7 x 7.5"

If stays are fitted with nuts or riveted heads

nuts & heads

Working pressure by rules

228.9 lbs.

Material of stays

Steel

Diameter at smallest part

1.37"

Area supported by each stay

58.2 sq. in.

Working pressure by rules

228.9 lbs.

End plates in steam space:

Material

Steel

Thickness

1.1"

Pitch of stays

15 x 15"

How are stays secured

nuts & wash.

Working pressure by rules

227.5 lbs.

Material of stays

Steel

Diameter at smallest part

3"

Area supported by each stay

225.2 sq. in.

Working pressure by rules

226.8 lbs.

Material of Front plates at bottom

Steel

Thickness

1"

Material of Lower back plate

Steel

Thickness

.9"

Greatest pitch of stays

12.5"

Working pressure of plate by rules

180 lbs.

Diameter of tubes

2.75"

Pitch of tubes

3.87"

Material of tube plates

Steel

Thickness: Front

1"

Back

.9"

Mean pitch of stays

7.75"

Pitch across wide water spaces

13.75"

Working pressures by rules

185.3 lbs.

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

9.82 x 13.5"

Length as per rule

34"

Distance apart

7.5"

Number and pitch of stays in each

3-7.7"

Working pressure by rules

211.4 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

—

