

Rpt. 4.

## REPORT ON MACHINERY

No. 4634  
REC'D OCT 20 1920

Received at London Office

Date of writing Report

19

When handed in at Local Office

19

Port of

Gothenburg

No. in Survey held at  
Reg. Book.

Gothenburg

Date, First Survey

Dec. 1918

Last Survey 9th October 1920

on the

Steel S/S "KNÄPPINGSBORG"

(Number of Visits 39)

Master J. W. Wicklund

Built at Gothenburg

By whom built Aktiebol. Lindholmen-Motala

Tons { Gross  
Net

When built 1920

Engines made at Gothenburg

By whom made Aktiebol. Lindholmen-Motala

when made 1920

Boilers made at Gothenburg

By whom made Aktiebol. Lindholmen-Motala

when made 1920

Registered Horse Power

Owners H. Uner Aktiebolag

Port belonging to Norrköping

Nom. Horse Power as per Section 28

216

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

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

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 21 1/8" x 33" x 55"

Length of Stroke 30 3/4"

Revs. per minute 96

Dia. of Screw shaft

as per rule 12 1/2"

Material of Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner fitted Is the after end of the liner made water-tight in the propeller boss

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 50"

Dia. of Tunnel shaft

as per rule 10 5/8" 10-15

Dia. of Crank shaft journals

as per rule 10 5/8" 10-6 5/8"

Dia. of Crank pin 11"

Size of Crank webs 6 3/8" x 12"

Dia. of thrust shaft under

collars 10 7/8" Dia. of screw 14-6" Pitch of Screw 14-0"

No. of Blades 4

State whether moveable

No

Total surface 59.94 feet

No. of Feed pumps 2

Diameter of ditto 3"

Stroke 18"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps 2

Diameter of ditto 3"

Stroke 18"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines 2

Sizes of Pumps

190, 112 1/2, 178 1/2

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

In Engine Room Two 2 3/4" In Tunnel well one 2 1/2"

In Holds, &amp;c. Four 2 3/4"

No. of Bilge Injections 1 sizes 5 1/8" Connected to condenser, or to circulating pump

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

Yes 3"

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

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 Bilge suction pipes for fore hold

How are they protected

Covered with wood

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

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from upper engine room platform

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

Manufacturers of Steel William Beardmore &amp; Co. Ltd.

Total Heating Surface of Boilers 28500

Is Forced Draft fitted

Yes

No. and Description of Boilers Two cylindrical, multilubular

Working Pressure 185 lbs per sq. in. Tested by hydraulic pressure to 327.5 lbs per sq. in. Date of test 18th Sept. 1920 No. of Certificate 163, 164

Can each boiler be worked separately

Yes

Area of fire grate in each boiler 33 sq. ft.

No. and Description of Safety Valves to

each boiler Two spring loaded

Area of each valve 12.5 sq. in.

Pressure to which they are adjusted 190 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 4"

Mean dia. of boilers 12-0 3/4"

Length 11-3"

Material of shell plates Steel

Thickness 1 3/32" Range of tensile strength

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

None

long. seams of unequal width Diameter of rivet holes in long. seams 1 7/16"

Pitch of rivets 9 1/4"

Lap of plates or width of butt straps 20 1/4" x 12 1/2"

Per centages of strength of longitudinal joint

rivets 84.7

plate 84.5

Working pressure of shell by rules 192 lbs

Size of manhole in shell 12" x 16"

Size of compensating ring 30" x 1"

No. and Description of Furnaces in each boiler Two corrugated Material Steel Outside diameter 42"

Length of plain part

top

bottom

Thickness of plates

crown 33 3/4"

bottom 33 3/4"

Description of longitudinal joint welded

No. of strengthening rings

Working pressure of furnace by the rules 187 lbs

Combustion chamber plates: Material Steel

Thickness: Sides 1 1/8"

Back 1 1/8"

Top 1 1/8"

Bottom 7/8"

Pitch of stays to ditto: Sides 8 1/4" x 7 1/8"

Back 8 3/8" x 7 1/8"

Top 8 3/4" x 8 1/4"

If stays are fitted with nuts or riveted heads

on margin stays

Working pressure by rules 194 lbs

Material of stays Steel

Area at smallest part 1,478 sq. in.

Area supported by each stay 61,870 sq. in.

Working pressure by rules 194 lbs

End plates in steam space:

Material Steel

Thickness 1 1/8"

Pitch of stays 17 1/2" x 17"

How are stays secured

All nuts and washers

Working pressure by rules 194 lbs

Material of stays Steel

Area at smallest part 6,100 sq. in.

Area supported by each stay 297,500 sq. in.

Working pressure by rules 212 lbs

Material of Front plates at bottom Steel

Thickness 7/8"

Material of Lower back plate Steel

Thickness 2 5/8"

Greatest pitch of stays 12 1/8" x 7 1/8"

Working pressure of plate by rules 194 lbs

Diameter of tubes 3 1/4"

Pitch of tubes 4 1/2" x 4 3/8"

Material of tube plates Steel

Thickness: Front 7/8"

Back 7/8"

Mean pitch of stays 11 1/8"

Pitch across wide water spaces 14"

Working pressures by rules 256 lbs

Girders to Chamber tops: Material Steel

8 1/4"

Depth and

thickness of girder at centre 2 1/2" x 6 1/8" x 1"

Length as per rule 27"

Distance apart 8 3/4"

Number and pitch of stays in each Two 8 1/4"

Working pressure by rules 193 lbs

Steam dome: description of joint to shell

%

of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

How stayed

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

SUPERHEATER. Type Schmidt's

Date of Approval of Plan

No plan submitted

Tested by Hydraulic Pressure

50 atm.

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Yes

Diameter of Safety Valve 1 1/2"

Pressure to which each is adjusted 190 lbs

Is Easing Gear fitted

Yes

Visits 37.



