

28 FEB. 1916

Received at London Office

Date of writing Report

14th Feb.

1916 When handed in at Local Office

19

Port of Copenhagen

No. in Survey held at

Malmo

Reg. Book.

Date, First Survey

20th April 1915

Last Survey

2nd February 1916

(Number of Visits)

69 in *apl.* on the *Steel* *Se. Sr* "*Bergvik*"Master *H. Sandin*

Built at

Malmo

By whom built

Rochums Mek. Verkst. Aktb.

When built

1915-16

Engines made at

Malmo

By whom made

Rochums Mek. Verkst. Aktb.

when made

1915-16

Boilers made at

Malmo

By whom made

Rochums Mek. Verkst. Aktb.

when made

1915-16

Registered Horse Power

157

Owners

Rederiaktiebolaget Sverige (Svea Främ)

Port belonging to

Stockholm

Nom. Horse Power as per Section 28

156, 66

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines *Inverted triple expansion* No. of Cylinders *3* No. of Cranks *3*
Dia. of Cylinders *18 1/2", 28 3/4" & 48 1/2"* Length of Stroke *3 1/2"* Revs. per minute *115* Dia. of Screw shaft *10 1/2"* Material of *S.M. & Steel*
Bedervall's packing ring fitted Is the screw shaft fitted with a continuous liner the whole length of the stern tube *No liner* 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 *45.27"*
Dia. of Tunnel shaft *8.7"* Dia. of Crank shaft journals *9.27"* Dia. of Crank pin *9.75"* Size of Crank webs *12.7" x 7.1"* Dia. of thrust shaft under
collars *9.75"* Dia. of screw *12-9 1/2"* Pitch of Screw *12-1 3/4"* No. of Blades *4* State whether moveable *No* Total surface *45 sq ft*
No. of Feed pumps *2* Diameter of ditto *3.94"* Stroke *14 1/8"* Can one be overhauled while the other is at work *Yes*
No. of Bilge pumps *2* Diameter of ditto *3.94"* Stroke *14 1/8"* Can one be overhauled while the other is at work *Yes*
No. of Donkey Engines *2 duplex* Sizes of Pumps *1 off 7 1/2" x 8" x 10"* No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room *4 off 2 1/2"* In Holds, &c. *Fore hold 2 off 3" After hold 2 off 2 1/2"*
Tunnel well *1 off 2 1/2"* Tank suction *5 1/2" - 2 1/2"* Fore peak tank *1 off 3"* After peak tank *1 off 3 1/2"*
No. of Bilge Injections *1 off sizes 6"* Connected to *circulating pump* *Yes* Is a separate Donkey Suction fitted in Engine room & size *Yes 2 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 *Valves and cocks for blow-off*
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 pipes to fore hold* How are they protected *Passing through the frame brackets*
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 *16/11. 15* of Stern Tube *16/11. 15* Screw shaft and Propeller *18/11. 15*
Is the Screw Shaft Tunnel watertight *Yes* Is it fitted with a watertight door *Yes* worked from *Upper deck*

BOILERS, &c.—(Letter for record *(8)*) Manufacturers of Steel *Rheinische Stahlwerke, Duisburg & Phoenix Aktien Gesellschaft*
Germany and Strömsnäs Jernverk Aktiebolag, Sweden
Total Heating Surface of Boilers *2576 sq ft* Is Forced Draft fitted *No* No. and Description of Boilers *Two single ended return tubular*
Working Pressure *185 lbs.* Tested by hydraulic pressure to *370 lbs.* Date of test *29/10 & 26/11. 1915* No. of Certificate *357 & 358*
Can each boiler be worked separately *Yes* Area of fire grate in each boiler *35.0 sq ft* No. and Description of Safety Valves to
each boiler *Two spring loaded* Area of each valve *6.9 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 *15"* Mean dia. of boilers *2'-0"* Length *10'-8"* Material of shell plates *S.M. Steel*
Thickness *1.02"* Range of tensile strength *28-32 t* Are the shell plates welded or flanged *No* Descrip. of riveting: cir. seams *double riveted*
long. seams *double riveted* Diameter of rivet holes in long. seams *1.06"* Pitch of rivets *7.22"* Lap of plates or width of butt straps *15.75"*
Per centages of strength of longitudinal joint *87.5* Working pressure of shell by rules *188.7* Size of manhole in shell *11.81" x 15.75"*
Size of compensating ring *28.35" x 32.28" x 1"* No. and Description of Furnaces in each boiler *2 off Morrison's* Material *S.M. Steel* Outside diameter *45.67"*
Length of plain part *top 1.16" bottom 1.16"* Thickness of plates *9/16"* Description of longitudinal joint *welded* No. of strengthening rings *1*
Working pressure of furnace by the rules *192.0 lbs.* Combustion chamber plates: Material *S.M. Steel* Thickness: Sides *9/16" + 1/32"* Back *9/16" + 1/32"* Top *9/16" + 1/32"* Bottom *5/8" + 1/32"*
Pitch of stays to ditto: Sides *7.68" x 8.35"* Back *7.68" x 8.35"* Top *7.87" x 8.19"* If stays are fitted with nuts or riveted heads *plan* Working pressure by rules *190 lbs.*
Material of stays *S.M. Steel* Diameter at smallest part *1.38"* Area supported by each stay *64 sq in* Working pressure by rules *87.5 lbs.* End plates in steam space:
Material *S.M. Steel* Thickness *.98"* Pitch of stays *6.4" x 14.9"* How are stays secured *double nuts & washers* Working pressure by rules *87.2 lbs.* Material of stays *S.M. Steel*
Diameter at smallest part *2.63"* Area supported by each stay *244.5 sq in* Working pressure by rules *231 lbs.* Material of Front plates at bottom *S.M. Steel*
Thickness *.984"* Material of Lower back plate *S.M. Steel* Thickness *.984"* Greatest pitch of stays *13.4" x 7.7"* Working pressure of plate by rules *281 lbs.*
Diameter of tubes *3 1/2"* Pitch of tubes *7.76" x 7.72"* Material of tube plates *S.M. Steel* Thickness: Front *.984"* Back *.787"* Mean pitch of stays *10.75"*
Pitch across wide water spaces *14.57"* Working pressures by rules *187 lbs.* Girders to Chamber tops: Material *S.M. Steel* Depth and
thickness of girder at centre *6.93" x 7.79" x 2* Length as per rule *27"* Distance apart *8.2"* Number and pitch of stays in each *2 off 7.9" pitch*
Working pressure by rules *199.5 lbs.* Superheater or Steam chest; how connected to boiler *None* Can the superheater be shut off and the boiler worked
separately *Yes* Diameter *14.57"* Length *26.18"* Thickness of shell plates *1.02"* Material *S.M. Steel* Description of longitudinal joint *2021* Diam. of rivet
holes *1.06"* Pitch of rivets *7.22"* Working pressure of shell by rules *187 lbs.* Diameter of flue *8.19"* Material of flue plates *S.M. Steel* Thickness *.984"*
stiffened with rings *Yes* Distance between rings *26.18"* Working pressure by rules *187 lbs.* End plates: Thickness *.984"* How stayed *By stays*
Working pressure of end plates *187 lbs.* Area of safety valves to superheater *1.16 sq in* Are they fitted with easing gear *Yes*

2320-560800-60800

IS A DONKEY BOILER FITTED? No ✓

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— 2 piston rod top end bolts and nuts. 2 connecting rod bottom end bolts and nuts. 2 main bearing bolts and nuts. 1 set of coupling bolts. 1 set of feed and bilge pump valves. 1 set of piston springs. A quantity of assorted bolts and nuts. Iron of various sizes. 2 feed check valves. 1 air pump rod. 10 junk ring bolts. 6 cylinder cover bolts. 6 valve chest cover bolts. 3 stay and 4 plain boiler tubes. 10 condenser tubes and 20 ferrules. 1 set of safety valve springs. 1 propeller and 1 propeller shaft.

The foregoing is a correct description,

KOCKUMS M. KANICKA VERKSTADS
AKTIE-BOLAG

Manufacturer.

Dates of Survey while building
During progress of work in shops -- 20/1, 4/5, 18/5, 23/5, 7/6, 9/6, 5/7, 27/7, 25/8, 2/8, 4/8, 9/8, 10/8, 14/8, 16/8, 30/8, 1/9, 4/9, 24/9, 5/10, 29/10, 26/10, 12/10, 15/10, 19/10, 25/10, 19/11
During erection on board vessel --- 2/11, 6/11, 18/11, 30/11, 6/12, 17/12, 29/12, 19/1, 12/1, 7/1, 10/1, 19/1, 24/1, 26/1, 28/1, 12/2, 9/2, 14/6
Total No. of visits 43

Is the approved plan of main boiler forwarded herewith

yes RETURNED TO COPENHAGEN S.S. N° 130.

Dates of Examination of principal parts—Cylinders 8/8, 10/8, 12/8, 15/8 Slides 15/10. 15 Covers 15/10. 15 Pistons 24/9. 15 Rods 24/9. 15
Connecting rods 24/9. 15 Crank shaft 23/8, 23/9, 15 Thrust shaft 23/8, 23/9, 15 Tunnel shafts 23/8, 23/9, 15 Screw shafts 23/8, 23/9, 15 Propeller 15/10. 15
Stern tube 26/10. 15 Steam pipes tested 17/12. 15 Engine and boiler seatings 7/1. 16 Engines holding down bolts 10/1. 16
Completion of pumping arrangements 19/1. 16 Boilers fixed 10/1. 16 Engines tried under steam 10/1 & 9/2. 16
Main boiler safety valves adjusted 28/1. 16 Thickness of adjusting washers—Starboard boiler {A = 7/16" Port boiler {A = 7/16"
Material of Crank shaft L.M. Steel Identification Mark on Do. N° 4562 8.15. A.F. Material of Thrust shaft L.M. Steel Identification Mark on Do. N° 4591 8.15. C.K.
Material of Tunnel shafts L.M. Steel Identification Marks on Do. N° 4592, 23424 Material of Screw shafts L.M. Steel Identification Marks on Do. N° 4608 9.15. C.K.
Material of Steam Pipes Steel Test pressure 555 lbs. Mark on spare propeller shaft N° 4239 11.15. C.K.

Is an installation fitted for burning oil fuel No ✓

Is the flash point of the oil to be used over 150°F. ✓

Have the requirements of Section 49 of the Rules been complied with ✓

Is this machinery duplicate of a previous case Yes ✓ If so, state name of vessel, Kai, Arista, Nautic, & Johan Lanne.

General Remarks (State quality of workmanship, opinions as to class, &c. In accordance with the rules for special survey we have examined the material and workmanship from the commencement until the final trial under steam and found it good in every respect.

The dimensions are as specified and in accordance with the rules and the approved plans.

Recommend the vessel's machinery to have notation of LMC-2.16.

It is submitted that this vessel is eligible for THE RECORD + LMC 2.16.

The amount of Entry Fee ... Kr 33.80 : When applied for,
Special ... Kr 398.00 : 18. 2. 1916.
Donkey Boiler Fee ... £ : When received.
Travelling Expenses (if any) Kr 162.25 : April Return 1916

Committee's Minute TUE 29 FEB. 1916

Assigned

+ L.M.C. 2.16

MACHINERY CERTIFICATE
WRITTEN.



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Foundation