

# REPORT ON MACHINERY.

Received at London Office

TUE. MAY. 15 1923

Date of writing Report 11<sup>th</sup> May 1923 When handed in at Local Office 11<sup>th</sup> May 1923 Port of Gothenburg  
 No. in Survey held at Gothenburg Date, First Survey 14<sup>th</sup> Oct. 1919 Last Survey 17<sup>th</sup> April 1923  
 Reg. Book. on the A/S. Nakskovs newbuilding No. 21. (Number of Visits 22)

Master \_\_\_\_\_ Built at \_\_\_\_\_ By whom built \_\_\_\_\_ Tons } Gross  
 } Net  
 Engines made at Gothenburg By whom made Eriksbergs M. V. Aktiel. when made 1923  
 Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ when made \_\_\_\_\_  
 Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_  
 Nom. Horse Power as per Section 28 274 Is Refrigerating Machinery fitted for cargo purposes \_\_\_\_\_ Is Electric Light fitted \_\_\_\_\_

# RETAIN

**ENGINES, &c.**—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 22 1/2" 35 1/2" 58 1/2" Length of Stroke 36" Revs. per minute \_\_\_\_\_ Dia. of Screw shaft as per rule Material of screw shaft Steel  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube \_\_\_\_\_ 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 \_\_\_\_\_  
 Dia. of Tunnel shaft as per rule 10 3/4" Dia. of Crank shaft journals as per rule 11 1/2" Dia. of Crank pin 11 3/8" Size of Crank webs 6 1/2" x 12 5/16" Dia. of thrust shaft under collars \_\_\_\_\_ Dia. of screw \_\_\_\_\_ Pitch of Screw \_\_\_\_\_ No. of Blades \_\_\_\_\_ State whether moveable \_\_\_\_\_ Total surface \_\_\_\_\_  
 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 \_\_\_\_\_ Sizes of Pumps \_\_\_\_\_ No. and size of Suctions connected to both Bilge and Donkey pumps \_\_\_\_\_  
 In Engine Room \_\_\_\_\_ In Holds, &c. \_\_\_\_\_

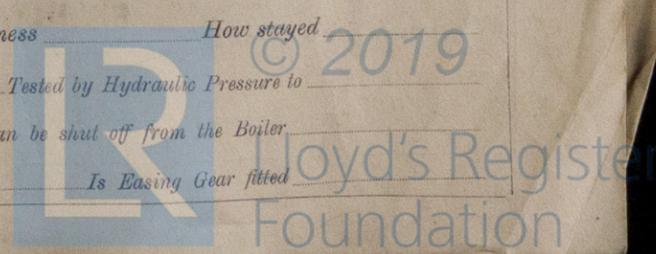
No. of Bilge Injections \_\_\_\_\_ sizes \_\_\_\_\_ Connected to condenser, or to circulating pump \_\_\_\_\_ Is a separate Donkey Suction fitted in Engine room & size \_\_\_\_\_  
 Are all the bilge suction pipes fitted with roses \_\_\_\_\_ Are the roses in Engine room always accessible \_\_\_\_\_ Are the sluices on Engine room bulkheads always accessible \_\_\_\_\_  
 Are all connections with the sea direct on the skin of the ship \_\_\_\_\_ Are they Valves or Cocks \_\_\_\_\_  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates \_\_\_\_\_ Are the Discharge Pipes above or below the deep water line \_\_\_\_\_  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel \_\_\_\_\_ Are the Blow Off Cocks fitted with a spigot and brass covering plate \_\_\_\_\_  
 What pipes are carried through the bunkers \_\_\_\_\_ How are they protected \_\_\_\_\_  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times \_\_\_\_\_  
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges \_\_\_\_\_  
 Is the Screw Shaft Tunnel watertight \_\_\_\_\_ Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

**BOILERS, &c.**—(Letter for record \_\_\_\_\_) Manufacturers of Steel \_\_\_\_\_  
 Total Heating Surface of Boilers \_\_\_\_\_ Is Forced Draft fitted \_\_\_\_\_ No. and Description of Boilers \_\_\_\_\_  
 Working Pressure \_\_\_\_\_ Tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_ No. of Certificate \_\_\_\_\_  
 Can each boiler be worked separately \_\_\_\_\_ Area of fire grate in each boiler \_\_\_\_\_ No. and Description of Safety Valves to each boiler \_\_\_\_\_  
 Area of each valve \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ Are they fitted with easing gear \_\_\_\_\_  
 Smallest distance between boilers or uptakes and bunkers or woodwork \_\_\_\_\_ Mean dia. of boilers \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_  
 Thickness \_\_\_\_\_ Range of tensile strength \_\_\_\_\_ Are the shell plates welded or flanged \_\_\_\_\_ Descrip. of riveting: cir. seams \_\_\_\_\_  
 long. seams \_\_\_\_\_ Diameter of rivet holes in long. seams \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Lap of plates or width of butt straps \_\_\_\_\_  
 Per centages of strength of longitudinal joint \_\_\_\_\_ rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Size of manhole in shell \_\_\_\_\_  
 Size of compensating ring \_\_\_\_\_ No. and Description of Furnaces in each boiler \_\_\_\_\_ Material \_\_\_\_\_ Outside diameter \_\_\_\_\_  
 Length of plain part \_\_\_\_\_ top \_\_\_\_\_ Thickness of plates \_\_\_\_\_ crown \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ No. of strengthening rings \_\_\_\_\_  
 bottom \_\_\_\_\_ Working pressure of furnace by the rules \_\_\_\_\_ Combustion chamber plates: Material \_\_\_\_\_ Thickness: Sides \_\_\_\_\_ Back \_\_\_\_\_ Top \_\_\_\_\_ Bottom \_\_\_\_\_  
 Pitch of stays to ditto: Sides \_\_\_\_\_ Back \_\_\_\_\_ Top \_\_\_\_\_ If stays are fitted with nuts or riveted heads \_\_\_\_\_ Working pressure by rules \_\_\_\_\_  
 Material of stays \_\_\_\_\_ Area at smallest part \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ End plates in steam space: \_\_\_\_\_  
 Material \_\_\_\_\_ Thickness \_\_\_\_\_ Pitch of stays \_\_\_\_\_ How are stays secured \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Material of stays \_\_\_\_\_  
 Area at smallest part \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Material of Front plates at bottom \_\_\_\_\_  
 Thickness \_\_\_\_\_ Material of Lower back plate \_\_\_\_\_ Thickness \_\_\_\_\_ Greatest pitch of stays \_\_\_\_\_ Working pressure of plate by rules \_\_\_\_\_  
 Diameter of tubes \_\_\_\_\_ Pitch of tubes \_\_\_\_\_ Material of tube plates \_\_\_\_\_ Thickness: Front \_\_\_\_\_ Back \_\_\_\_\_ Mean pitch of stays \_\_\_\_\_  
 Pitch across wide water spaces \_\_\_\_\_ Working pressures by rules \_\_\_\_\_ Girders to Chamber tops: Material \_\_\_\_\_ Depth and thickness of girder at centre \_\_\_\_\_ Length as per rule \_\_\_\_\_ Distance apart \_\_\_\_\_ Number and pitch of stays in each \_\_\_\_\_  
 Working pressure by rules \_\_\_\_\_ 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 \_\_\_\_\_  
 Pitch of rivets \_\_\_\_\_ Working pressure of shell by \_\_\_\_\_ Crown plates \_\_\_\_\_ Thickness \_\_\_\_\_ How stayed \_\_\_\_\_

# RETAIN

**SUPERHEATER.** Type \_\_\_\_\_ Date of Approval of Plan \_\_\_\_\_ Tested by Hydraulic Pressure to \_\_\_\_\_  
 Date of Test \_\_\_\_\_ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler \_\_\_\_\_  
 Diameter of Safety Valve \_\_\_\_\_ Pressure to which each is adjusted \_\_\_\_\_ Is Easing Gear fitted \_\_\_\_\_

W397-0089



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— As required by the Rules and in addition 1/3 crank shaft and 1 rough turned propeller shaft. To be checked onboard.

The foregoing is a correct description,

Kriksbærgs Mek. Verkstads Aktiebolag

Linnæus Kriksbærg

Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1919-14/10 1920-30/7, 31/8, 17, 28/9, 19/10, 22/11, 8, 9, 27/12, 1921-14, 18, 24/1, 2, 10, 22/2, 15/3, 3/10, 1923-5/3, 4, 10, 17/4. During erection on board vessel --- Total No. of visits

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 19/10 20 5/3 23 Slides 14, 15/1 21 Covers 10/2 21 Pistons 3/10 21 Rods 9, 27/2 20

Connecting rods 9, 27/2 20 Crank shaft 9, 27/2 20 14/21 Thrust shaft Tunnel shafts Screw shaft Propeller

Stern tube Steam pipes tested Engine and boiler seatings Engines holding down bolts

Completion of pumping arrangements Boilers fixed Engines tried under steam

Completion of fitting sea connections Stern tube Screw shaft and propeller

Main boiler safety valves adjusted Thickness of adjusting washers R No 3244, 3321, 5213 Spent 5219, AS 14, 1, 21

Material of Crank shaft Steel Identification Mark on Do. AS 27, 12, 20 Material of Thrust shaft Steel Identification Mark on Do.

Material of Tunnel shafts Steel Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do.

Material of Steam Pipes Test pressure

Is an installation fitted for burning oil fuel 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 5/5 "Italia" and 5/5 "Hibernia"

General Remarks (State quality of workmanship, opinions as to class, &c. This main engine has been built under Special Survey, and all the requirements of the Rules have been complied with

The crank shafting as per forging report attached.

(The thrust, tunnel and screw shafts sent rough turned)

The workmanship is good

This machinery is worthy in my opinion to be classed in the Register Book of this Society with the notation of \*LMC with date, when it has been fitted in the vessel to the satisfaction of the Society's Surveyors at Copenhagen. Working pressure of boilers 185 lbs per sq inch.

The amount of Entry Fee ... £ : : When applied for, 11th May 1923

Special ... ..kr 481 : 20 : : When received, 26.5.23

Donkey Boiler Fee ... £ : : Travelling Expenses (if any) £ : : Committee's Minute

Assigned \* Lmb. 324 F. D. C. L.

FRI. MAY. 9 1924 TUES. 22 JUL 1924



Rpt. 5a. Date of writing No. in Reg. Book. Master Engines ma Boilers ma Registered MULTIT (Letter for Boilers 2 No. of Cen safety valv Are they fi Smallest d Material q Descrip. o Cap of pl rules 186 boiler 3 Descriptio plates: M Top 8 1/4 x smallest Pitch of Area sup Lower bo Pitch of water sp girder at Working Diamete Pitch of UPER Date of Diameter Dates of Surve while buildin GEN bo un has the St Tr Com Assig

Certificate (if required) to be sent to The Surveyors are requested not to write on or below the space for Committee's Minute.