

## REPORT ON MACHINERY.

No. 42,428.

Received at London Office

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Writing Report 20<sup>th</sup> June 1921. When handed in at Local Office 20<sup>th</sup> June 1921 Port of Cardiff  
 Survey held at Cardiff Date, First Survey 24<sup>th</sup> May Last Survey 18<sup>th</sup> June 1921  
 Book. (Number of Visits 20)  
 on the Steel S.S. H.M.S. Sr. Nienburg now Jamora  
 Built at Vegesack By whom built Bremer Vulkan  
 When built 1916  
 Tons { Gross  
 Net  
 when made 1916  
 By whom made Bremer Vulkan  
 when made 1916  
 Owners David Steamship Co. Ltd. Port belonging to London  
 Horse Power as per Section 28 819  
 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

INES, &c. Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3  
 of Cylinders 28<sup>1</sup>/<sub>2</sub> 52<sup>1</sup>/<sub>4</sub> 86<sup>1</sup>/<sub>4</sub> Length of Stroke 55<sup>1</sup>/<sub>8</sub> Revs. per minute 70 Dia. of Screw shaft as per rule 17<sup>1</sup>/<sub>8</sub> as fitted 18<sup>1</sup>/<sub>4</sub> Dia. of Crank pin 18<sup>5</sup>/<sub>16</sub> Size of Crank webs 35<sup>1</sup>/<sub>2</sub> x 11<sup>3</sup>/<sub>8</sub> Dia. of thrust shaft under  
 Is the after end of the liner made water tight  
 If the liner is in more than one length are the joints burned No liners If the liner does not fit tightly at the part  
 Is the space charged with a plastic material insoluble in water and non-corrosive If two  
 Length of stern bush 6'-2"  
 Dia. of Crank shaft journals as per rule 16<sup>3</sup>/<sub>8</sub> as fitted 17<sup>1</sup>/<sub>8</sub> Dia. of Crank pin 18<sup>5</sup>/<sub>16</sub> Size of Crank webs 35<sup>1</sup>/<sub>2</sub> x 11<sup>3</sup>/<sub>8</sub> Dia. of thrust shaft under  
 No. of Blades 4 State whether moveable Yes Total surface 132 ft<sup>2</sup>  
 of Feed pumps 2 Diameter of ditto 5" Stroke 24.1 Can one be overhauled while the other is at work Yes  
 of Bilge pumps 2 Diameter of ditto 5<sup>1</sup>/<sub>2</sub>" Stroke 24.1 Can one be overhauled while the other is at work Yes  
 of Donkey Engines Five Sizes of Pumps 4<sup>5</sup>/<sub>8</sub> - 2<sup>3</sup>/<sub>4</sub> - 4<sup>3</sup>/<sub>4</sub> 14<sup>3</sup>/<sub>8</sub> - 11<sup>1</sup>/<sub>4</sub> - 16<sup>1</sup>/<sub>2</sub> No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room 7-3<sup>1</sup>/<sub>2</sub>, also 1 to tunnel well. 14<sup>1</sup>/<sub>4</sub> - 10 - 25<sup>1</sup>/<sub>2</sub> In Holds, &c. Two in each, the No. 1, 2, 3, 4, 5, 6 all 3<sup>1</sup>/<sub>2</sub>"  
 of Bilge Injections 1 sizes 7<sup>1</sup>/<sub>8</sub> Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 6"  
 all the bilge suction pipes fitted with roses No Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible None  
 all connections with the sea direct on the skin of the ship No Are they Valves or Cocks Both  
 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 below  
 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  
 at pipes are carried through the bunkers None How are they protected  
 all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes  
 the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes  
 the Screw Shaft Tunnel watertight Is it fitted with a watertight door Yes worked from Top platform  
 LERS, &c. (Letter for record &c.) Manufacturers of Steel Krupp Essen

al Heating Surface of Boilers 11840 ft<sup>2</sup> Is Forced Draft fitted Yes No. and Description of Boilers Four cyl. Multi Single Ended  
 Working Pressure 205 lbs Tested by hydraulic pressure to Date of test No. of Certificate  
 each boiler be worked separately Yes Area of fire grate in each boiler 63.5 ft<sup>2</sup> No. and Description of Safety Valves to  
 boiler Two Spring Area of each valve 12 in<sup>2</sup> Pressure to which they are adjusted 205 lbs Are they fitted with easing gear Yes  
 allest distance between boilers or uptakes and bunkers or woodwork 2'-9" Mean dia. of boilers 191.736 Length 145.278 Material of shell plates steel  
 ckness 1.3976 Range of tensile strength 30-48 tons Are the shell plates welded or flanged Neither Descrip. of riveting: cir. seams L.D.  
 . seams D.B.S. 2 R. Diameter of rivet holes in long. seams 1.496 Pitch of rivets 17.9531 Lap of plates or width of butt straps 29.992  
 centages of strength of longitudinal joint rivets 108% Scalloped 85% Working pressure of shell by rules 225 lbs Size of manhole in shell 11.8" x 15.748  
 of compensating ring flanged 37.496 x 41.733 No. and Description of Furnaces in each boiler Three Tubes Material steel Outside diameter 48"  
 gth of plain part top Thickness of plates crown 1.65 Description of longitudinal joint welded No. of strengthening rings  
 bottom Thickness of plates bottom 1.65 Working pressure of furnace by the rules 205 lbs Combustion chamber plates: Material steel Thickness: Sides 7.087 Back 6.693 Top 7.087 Bottom 9.055  
 ch of stays to ditto: Sides 7.87 x 6.89 Back 7.28 x 7.44 Top 7.87 x 7.87 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 276 lbs  
 aterial of stays Area at smallest part 1.48 in<sup>2</sup> Area supported by each stay 54.16 in<sup>2</sup> Working pressure by rules 231 lbs End plates in steam space:  
 aterial Thickness 1.1024 Pitch of stays 15.748 x 15.35 How are stays secured D.N.W. Working pressure by rules 229 lbs Material of stays steel  
 a at smallest part 7.07 in<sup>2</sup> Area supported by each stay 241.8 in<sup>2</sup> Working pressure by rules 324 lbs Material of Front plates at bottom steel  
 ckness 1.063 Material of Lower back plate steel Thickness 1.6039 Greatest pitch of stays 26" Working pressure of plate by rules 220 lbs  
 eter of tubes 3" Pitch of tubes 4<sup>1</sup>/<sub>4</sub>" Material of tube plates steel Thickness: Front 1.063 Back 9.055 Mean pitch of stays 8.5 + 8.425  
 ch across wide water spaces 13.9766 Working pressures by rules 212 lbs Girders to Chamber tops: Material steel Depth and  
 kness of girder at centre 9.45 x 7.087 Length as per rule 33.4652 Distance apart 7.8742 Number and pitch of stays in each Three 7.8742  
 rking pressure by rules 221 lbs Steam dome: description of joint to shell None % of strength of joint  
 eter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes  
 ch of rivets Working pressure of shell by rules Crown plates Thickness How stayed  
 ERHEATER. Type Schmidt Date of Approval of Plan Tested by Hydraulic Pressure to  
 of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes  
 eter of Safety Valve 19<sup>1</sup>/<sub>2</sub>" Pressure to which each is adjusted 208 lbs Is Easing Gear fitted Yes

W299-0195



IS A DONKEY BOILER FITTED? No

*If so, is a report now forwarded?*

SPARE GEAR. State the articles supplied:— One slide valve spindle, one set screws & springs for H. I. & P. pistons. Escape valve domes. Two bottom end (connecting rod) bolts and nuts. Four top end (connecting rod) bolts & nuts, two main bearing bolts and nuts, one set coupling bolts and nuts, one pair bottom end, and two pair top end brasses, one each front and back end pump brasses, one air pump rod, also spare parts for main circulating (centrifugal) pump, 40 Condenser tubes, Superheater elements, feed and bilge pump valves, Iron of various sizes.

*The foregoing is a correct description,*

*Manufacturer.*

Dates of Survey while building	{	During progress of work in shops - -
		During erection on board vessel - - -
		Total No. of visits

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 2.6.21 Slides 2.4.6.21 Covers 8.6.21 Pistons 2.6.21 Rods 9.6.21  
Connecting rods 9.6.21 Crank shaft 3.6.21 Thrust shaft 3.6.21 Tunnel shafts 3.6.21 Screw shaft 30.5.21 Propeller 3.6.21  
Stern tube 30.5.21 Steam pipes tested 18.6.21 Engine and boiler seatings 9.6.21 Engines holding down bolts 9.6.21  
Completion of pumping arrangements 9.6.21 Boilers fixed 11.6.21 Engines tried under steam 18.6.21  
Completion of fitting sea connections 30.5.21 Stern tube 30.5.21 Screw shaft and propeller 30.5.21  
Main boiler safety valves adjusted 18.6.21 Thickness of adjusting washers  $\frac{1}{16}$  5. 9. B. C. B. S. A. 1.  $\frac{3}{4}$   $\frac{3}{4}$   $\frac{1}{16}$   $\frac{3}{16}$   $\frac{3}{16}$   $\frac{3}{16}$  6.

Material of Crank shaft ✓ Identification Mark on Do. ✓ Material of Thrust shaft ✓ Identification Mark on Do. ✓

Material of Tunnel shafts	Identification Marks on Do.	Material of Screw shafts	Identification Marks on Do.
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Material of Steam Pipes *Steel* Test pressure *208 lbs steam*

Is an installation fitted for burning oil fuel No Is the flash point of the oil to be used over 150°F. -

Is this machinery duplicate of a previous case <sup>see serial</sup> letter, S. 21.5.1921 If so, state name of vessel Porta

*General Remarks* (State quality of workmanship, opinions as to class, &c.)

The engines, boilers and auxiliary machinery have been thoroughly examined (the workmanship is good) and found or put in good and safe working condition. The engines and boilers now tested under steam and found satisfactory.

They are now submitted as being eligible in my opinion to be  
 classed in the Register Book with the notations of **L. H. C. 6. 21.**  
 and **J. S. 6. 21.**

The amount of Entry Fee	...	£	:	:	When applied for,
Special	...	£	:	:	19
Donkey Boiler Fee	...	£	:	:	When received,
Travelling Expenses (if any)	£	:	:	:	19

Committee's Minute

*Assigned*

James Barclay.  
Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 15 MAY 1925



Lloyd's Register  
Foundation