

# REPORT ON MACHINERY.

No. 42,428.

TUE. 21 JUN. 1921

Received at London Office

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. on the Steel S.S. H.M.S. S. Nienburg now Jamora (Number of Visits 20)

er Built at Vegesack By whom built Bremer Vulkan Tons } Gross } Net } When built 1916

nes made at Vegesack By whom made Bremer Vulkan when made 1916

ers made at " By whom made " " when made 1916

stered Horse Power 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 1/2, 52 1/2, 86 1/2 Length of Stroke 55 1/2 Revs. per minute 70 Dia. of Screw shaft as per rule 17 1/2 as fitted 18 1/2

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

propeller boss Yes 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

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two

are fitted, is the shaft lapped or protected between the liners Length of stern bush 6'-2"

of Tunnel shaft as per rule 15 5/8 as fitted 16 3/8 Dia. of Crank shaft journals as per rule 16 3/4 as fitted 17 1/2 Dia. of Crank pin 18 5/16 Size of Crank webs 35 1/2 x 11 3/8

of Feeds 17" Dia. of screw 19'-0" Pitch of Screw 19'-0" No. of Blades 4 State whether moveable Yes Total surface 132 sq

of Bilge pumps 2 Diameter of ditto 5" Stroke 27.1 Can one be overhauled while the other is at work Yes

of Donkey Engines Five Sizes of Pumps 5 1/2, 4 3/4, 4 3/4, 14 3/4, 11 7/8, 26 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 7-3 1/2, also 1 to tunnel well. 14 1/2 - 10 - 25 1/2 In Holds, &c. Two in each, the Nos. 1, 2, 3, 4, 5, 6 all 3 1/2"

of Bilge Injections 1 sizes 7 1/2 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

PLERS, &c. (Letter for record &c.) Manufacturers of Steel Krupp Essen

al Heating Surface of Boilers 11840 sq Is Forced Draft fitted Yes No. and Description of Boilers Four Cyl. Multi Single Ended

orking 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 sq No. and Description of Safety Valves to

boiler Two Spring Area of each valve 12 sq 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% plate 91.6 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 Faces Material steel Outside diameter 48"

ngth of plain part top Thickness of plates crown } .65 Description of longitudinal joint Welded No. of strengthening rings

orking pressure of furnace by the rules 205 lbs Combustion chamber plates: Material steel Thickness: Sides .7087 Back .6693 Top .7087 Bottom .9055

ch of stays to ditto: Sides 7-87 x 6-49 Back 7-28 x 7-44 Top 7-87 x 7-27 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 sq Area supported by each stay 54-16 sq 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

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

iameter of tubes 3" Pitch of tubes 4 1/4" Material of tube plates steel Thickness: Front 1-063 Back .9055 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

ckness of girder at centre 9-45 x .7087 Length as per rule 33-4652 Distance apart 7-8742 Number and pitch of stays in each Three 7-8742

orking pressure by rules 221 lbs Steam dome: description of joint to shell None % of strength of joint

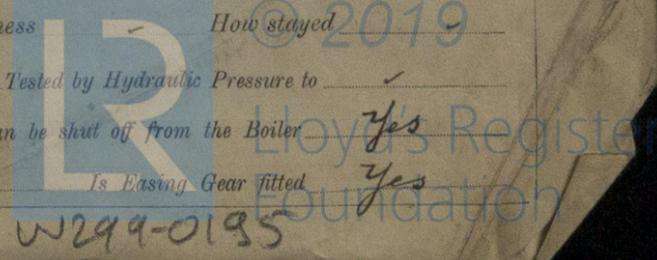
iameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

th of rivets Working pressure of shell by rules Crown plates Thickness How stayed

UPERHEATER. 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

iameter of Safety Valve 1 9/16 Pressure to which each is adjusted 208 lbs Is Easing Gear fitted Yes



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 rings & springs for H. I. & L. 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 condensers 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

20.

Is the approved plan of main boiler forwarded herewith *Yes*

Is the approved plan of main boiler forwarded herewith *Yes*

Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—Cylinders 2.6.21 Slides 2.7.6.21 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 for P.B. C.B. S.B. 1/16 5/8, 3/4 3/4 1/16 3/4 3/4 3/4 3/4  
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.  
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. —

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

Is this machinery duplicate of a previous case *See Secretary 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.*

CARDIFF

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

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

Committee's Minute

Assigned

See *See Secretary letter, S. 21.5.1921*  
FRI. 15 JUL. 1921

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

FRI. 15 MAY 1925



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