

REPORT ON MACHINERY.

No. 32693
27 JAN 1921

Received at London Office

Date of writing Report 19 When handed in at Local Office 19 Port of Hull

No. in Survey held at Hull Date, First Survey Last Survey 19
Reg. Book. on the S.S. D.A.D.G 76 (Number of Visits)

Master Built at Hamburg By whom built Blohm & Voess
Engines made at Hamburg By whom made - do - when made 1919
Boilers made at - do - By whom made - do - when made 1919

Registered Horse Power 502 Owners David S.S. Co. Ltd. Port belonging to London.
Nom. Horse Power as per Section 28 834 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted *yes*

Tons { Gross 6038
Net 3576
When built 1919
when made 1919

ENGINES, &c.—Description of Engines *Quadruple expansion* No. of Cylinders 4 No. of Cranks 4
Dia. of Cylinders $28\frac{5}{16} \times 40\frac{1}{8} \times 57\frac{7}{16} \times 82\frac{5}{16}$ Length of Stroke $55\frac{1}{16}$ Revs. per minute 16.7 Dia. of Screw shaft as per rule 16.7 Material of screw shaft as fitted $16\frac{15}{16}$

Is the screw shaft fitted with a continuous liner the whole length of the stern tube *yes* 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 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

Dia. of Tunnel shaft as per rule 15.42 Dia. of Crank shaft journals as per rule 16.21 Length of stern bush 6'-0" as fitted 15.53 Dia. of Crank pin $16\frac{1}{2}$ Size of Crank webs $5-1 \times 29\frac{1}{2} \times 10\frac{5}{8}$ Dia. of thrust shaft under collars $16\frac{5}{8}$ Dia. of screw 19-6 Pitch of Screw 17-9 No. of Blades 4 State whether moveable *no* Total surface 124 sq ft

No. of Feed pumps 2 Diameter of ditto $4\frac{23}{32}$ Stroke 27-11 Can one be overhauled while the other is at work *yes*
No. of Bilge pumps 2 Diameter of ditto $4\frac{11}{16}$ Stroke 27-11 Can one be overhauled while the other is at work *yes*
No. of Donkey Engines 3 Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 2 P 4 2 S $3\frac{1}{2}$ dia. In Holds, &c. one $3\frac{1}{2}$ on port & starboard side of No. 1-2-3-4-5-6 holds & one $3\frac{1}{2}$ tunnel well.

No. of Bilge Injections 1 sizes 12 Connected to condenser, or to circulating pump *is a separate Donkey Suction fitted in Engine room & size being 6"*
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

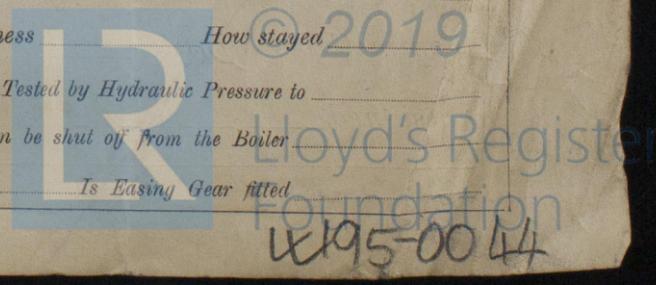
Are all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *yes both*
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *yes* Are the Discharge Pipes above or below the deep water line *above*
Are they each fitted with 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 *for suction* How are they protected *wood casing*
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 *engine room top platform*

BOILERS, &c.—(Letter for record S) Manufacturers of Steel
Each boiler 2990 sq m. = 3218.5 sq ft

Total Heating Surface of Boilers 12874.0 Is Forced Draft fitted *yes* No. and Description of Boilers 4 S.E.
Working Pressure 225 lbs. Tested by hydraulic pressure to - Date of test 6-21 0 m No. of Certificate -
Can each boiler be worked separately *yes* Area of fire grate in each boiler 66.85 sq ft No. and Description of Safety Valves to each boiler 2 spring loaded Area of each valve 13.36 Pressure to which they are adjusted - Are they fitted with easing gear *yes*

Smallest distance between boilers or uptakes and bunkers or woodwork 2'-0" INT 4840 mm 3730 mm Are they fitted with easing gear *yes*
Thickness 1.496 Range of tensile strength Furnace 41-47 Are the shell plates welded or flanged *no* Descrip. of riveting: cir. seams DR. long. seams A.R.D.B.S. Diameter of rivet holes in long. seams 16.14 Pitch of rivets 19.685 Lap of plates or width of butt straps 31.654
Per centages of strength of longitudinal joint rivets Working pressure of shell by rules 15.9 Size of manhole in shell 500 x 400 mm
Size of compensating ring 340 x 33 mm plate 85% for scalloped joint. Size of manhole in shell 19.68 x 15.75
Length of plain part top 17.5 mm bottom 5.689 Description of longitudinal joint *welded* No. of strengthening rings 18 mm 18 mm 18 mm 18 mm
Working pressure of furnace by the rules Combustion chamber plates: Material S Thickness: Sides .7087 Back .7087 Top .7087 Bottom .7087
Pitch of stays to ditto: Sides 7.87 Back 7.87 Top 7.87 If stays are fitted with nuts or riveted heads *other N&W* Working pressure by rules
Material of stays S Dia. on thread 1 5/8 1140 mm Area supported by each stay 200 mm² Working pressure by rules 18 End plates in steam space: Material S Thickness 1.1 Pitch of stays 15.75 x 14.96 How are stays secured *DN&W* Working pressure by rules 18.6 Material of stays S
Area at smallest part 4536 Area supported by each stay 400 x 380 Working pressure by rules 21.8 Material of Front plates at bottom S
Thickness 1.06 Material of Lower back plate S Thickness 1.06 Greatest pitch of stays 7.87 x 13.5 Working pressure of plate by rules 200 x 343 (no measurement) 27 mm 21 mm 218 x 218 mm
Diameter of tubes 3.126 Pitch of tubes 4.29 x 4.29 Material of tube plates S Thickness: Front 1.06 Back .826 Mean pitch of stays 8.58 x 8.58
Pitch across wide water spaces 360 mm Working pressures by rules Girders to Chamber tops: Material S Depth and thickness of girder at centre 10.63 x 1.417 Length as per rule 35.12 Distance apart 7.87 Number and pitch of stays in each " 7.87
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 rules Crown plates Thickness How stayed

UPERHEATER. 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 -



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

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

“ “ “ donkey “ “ “

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods Connecting rods Crank shaft 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 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 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

If so, state name of vessel

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

Certificate (if required) to be sent to

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

J. Colverson

P. Fitzgibbon

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE MAR 28 1922

Assigned



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