

REPORT ON MACHINERY

No. 32693

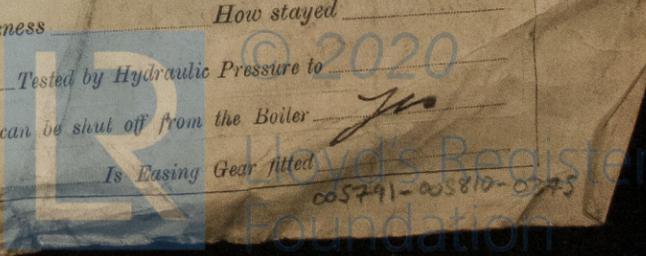
DATE: 28 JUN 1921

Received at London Office

Writing Report 19 When handed in at Local Office 27/6/21 Port of Hull
 Date, First Survey 27.5.21 Last Survey 23-6-1921
 (Number of Visits 13)
 Survey held at Hull
 Book. 3 on the S.S. "GERA" NOW NAMED "ORSINO"
 Built at Vejersack By whom built Bremner Vulkan Tons Gross 1915
 when made 1915
 Made at Vejersack By whom made Bremner Vulkan when made 1915
 Made at do By whom made do when made 1915
 Owners David SSC Ltd Port belonging to London
 Is Electric Light fitted Yes

Horse Power as per Section 28 819 Is Refrigerating Machinery fitted for cargo purposes no
 Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 of Cylinders 32 5/16 x 52 13/16 x 86 11/16 Length of Stroke 55.11 Revs. per minute 578
 as per rule 17.75 Material of screw shaft as fitted 18.25
 Is the after end of the liner made water tight yes
 screw shaft fitted with a continuous liner the whole length of the stern tube yes
 If the liner does not fit tightly at the part propeller boss yes
 If the liner is in more than one length are the joints burned yes
 on the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive yes
 If two shafts are fitted, is the shaft lapped or protected between the liners yes
 Length of stern bush 7-9
 Length 5-2 3/4; min. width 2-5 1/4 x
 Dia. of Crank webs 11 7/16 Dia. of thrust shaft under detachable
 as per rule 16.62 16.46
 Dia. of Crank shaft journals as per rule 17.43 17.3
 as fitted 16.375 17.81
 Dia. of Crank pin 18 5/16 Size of Crank webs 11 7/16
 No. of Blades 4 State whether moveable no Total surface ^
 Dia. of screw 19-0 Pitch of Screw 18.37
 No. of Feed pumps 2 Diameter of ditto 5 1/8 Stroke 27 5/32 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 5 1/2 Stroke 27 5/32 Can one be overhauled while the other is at work yes
 No. of Donkey Engines 1 Bilge + bilge + bilge 11 3/16 x 9 3/8 x 26 3/8; 11 3/8 x 8 3/4 x 20 1/4
 Sizes of Pumps 11 3/16 x 14 1/8 x 26 3/8; 7 3/8 x 10 1/4 x 20 1/2
 No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room five 3 1/2; 2 each wing + 1 thrust recess In Holds, &c. Two 3 1/2 in nos 1, 2, 3, 4, 5 + 6 holds
 Is a separate Donkey Suction fitted in Engine room & size yes, 6"
 of Bilge Injections 1 sizes 8" Connected to condenser, or to circulating pump yes
 Are the sluices on Engine room bulkheads always accessible none
 all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes
 all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both
 Are the Discharge Pipes above or below the deep water line above
 they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes
 Are the Blow Off Cocks fitted with a spigot and brass covering plate yes
 they each fitted with a Discharge Valve always accessible on the plating of the vessel yes
 How are they protected wood casings
 at pipes are carried through the bunkers forward hold suction
 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 yes Is it fitted with a watertight door yes worked from Engine room top grating

MANUFACTURERS OF STEEL (Letter for record)
 each boiler 2750 metres
 Heating Surface of Boilers 11840 sq ft Is Forced Draft fitted yes No. and Description of Boilers 4 Single ended
 Working Pressure 206 Tested by hydraulic pressure to 5.95 metres No. of Certificate
 each boiler be worked separately yes Area of fire grate in each boiler 635 sq ft No. and Description of Safety Valves to
 boiler 2 spring loaded Area of each valve 19.2 sq ft Pressure to which they are adjusted 4870 mm 3690 mm
 Are they fitted with easing gear yes
 smallest distance between boilers or uptakes and bunkers or woodwork 2-6 INT 4870 mm Material of shell plates S
 Thickness 1.397 Range of tensile strength 28.575/33.655 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR
 Diameter of rivet holes in long. seams 1.5 Pitch of rivets 17.95 Lap of plates or width of butt straps 29.9
 Working pressure of shell by rules 211.5 lbs Size of manhole in shell 17.32 x 21.26
 No. and Description of Furnaces in each boiler 3 Corrugated Material Steel Outside diameter 48.54
 Description of longitudinal joint Welded No. of strengthening rings 23 mm
 Thickness of plates 16.5 mm 18 mm 17 mm 18 mm 23 mm
 Thickness: Sides .708 Back .669 Top .708 Bottom .905
 Working pressure by rules 283.5 lbs
 Working pressure of furnace by the rules 195 Combustion chamber plates: Material S Thickness: Sides .708 Back .669 Top .708 Bottom .905
 Working pressure by rules 231.2 End plates in steam space:
 Material of stays S Area at smallest part 1.5 over thread Area supported by each stay 54.25 sq ft Working pressure by rules 228 Material of stays S
 Material S Thickness 1.1 Pitch of stays 16.14 x 15.75 How are stays secured DN4W Working pressure by rules 228 Material of stays S
 Area at smallest part 2.874 Area supported by each stay 254 sq ft Working pressure by rules 218 Material of Front plates at bottom S
 Thickness 1.063 Material of Lower back plate S Thickness 1 Greatest pitch of stays 16.16 x 7.28 Working pressure of plate by rules 263
 Diameter of tubes 2.992 Pitch of tubes 4.21 x 4.25 Material of tube plates S Thickness: Front 1.06 Back .905 Mean pitch of stays 9.425 x 7.57
 Working pressures by rules 213 lbs Girders to Chamber tops: Material S Depth and 200 mm
 Thickness of girder at centre 9.449 x 1.417 Length as per rule 33.465 Distance apart 7.874 Number and pitch of stays in each three 7.874
 Working pressure by rules 224 Steam dome: description of joint to shell
 Diameter ^ Thickness of shell plates ^ Material ^ Description of longitudinal joint ^ Diam. of rivet holes ^
 Thickness ^ How stayed ^
 Working pressure of shell by rules ^ Crown plates ^ Thickness ^
 Tested by Hydraulic Pressure to ^
 SUPERHEATER. Type Schmidt Patent Date of Approval of Plan ^
 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler yes
 Date of Test ^ Is Easing Gear fitted yes
 Diameter of Safety Valve 1 7/16 Pressure to which each is adjusted ^



IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two top end bolts & nuts, 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 set coupling bolts, 1 set feed & bilge pump valves, 1 set piston rings for HP & IP cylinders, 2 propeller blades, 1 pair connecting rod bottom end brasses, 1 set top end brasses, 1 set pump links with brasses, 1 air pump rod, 1 LP valve spindle, 1 set main & auxy check valves, 6 cyl. cover studs, 10 valve chest cover studs, 32 boiler tubes, 43 condenser tubes, 1 cyl. escape valve spring, 1 safety valve spring; a quantity of bolts & nuts & 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 no.

Is the approved plan of donkey boiler forwarded herewith none

Dates of Examination of principal parts—Cylinders 13-6-21 Slides 13-6-21 Covers 13-6-21 Pistons 13-6-21 Rods 13-6-21 Connecting rods 13-6-21 Crank shaft 13-6-21 Thrust shaft 13-6-21 Tunnel shafts 13-6-21 Screw shaft 27-5-21 Propeller 27-5-21 Stern tube 28-5-21 Steam pipes tested ✓ Engine and boiler seatings 3-6-21 Engines holding down bolts 13-6-21

Completion of pumping arrangements Boilers fixed — Engines tried under steam Examination of Completion of fitting sea connections 27-5-21 Stern tube 28-5-21 Screw shaft and propeller 27-5-21

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 Steel Test pressure . —

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 ✓ If so, state name of vessel ✓

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

The machinery of this Ex-German steamer was constructed under the

Germanischer Lloyd survey, and has now been submitted to the Survey of this Society. The boilers have been examined throughout. The cylinders, pistons, slides, crank shaft and intermediate shafting, all pumps and suction, condenser screw shaft and stern tube, propeller, sea connections and fastenings, have been examined. The dimensions of cylinders, shafting, etc. and scantlings of boilers have been verified, and found to be as stated on the report. The bilge arrangements have been examined, and found to be in accordance with the Society's requirements. The distance between the Lignum vitae of stern tube and top of after bearing of screw shaft is 1/8". The materials and workmanship are good. The boilers were found generally in good condition except that several furnaces were somewhat distorted, especially the starboard furnace of starboard boiler. This has now been jacked up and made circular, and the boilers are now in our opinion in safe condition for a working pressure of 206 lbs. The crank shaft was found to be down at Nos. 3 and 4 bearings about 3/16". It was recommended that the shaft be lifted and the main bearings re-metalled.

To Complete the Survey:— The Crank shaft-bearing to be re-metalled as above, and the safety valves to be adjusted to 206 lbs and tested for accumulation. The owner's representative states that this will be done at Rotterdam when the vessel is now going. The Rotterdam Surveyors have been notified. In our opinion this Dutch Machinery is eligible for the record of L.M.C. 6-21 Subject to the survey being completed as above.

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

See [Signature] John Polatzen & P. Fitzgerald. Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

L.M.C. 6-21

70 62

MACHINERY CERTIFICATE WRITTEN



© 2020

Lloyd's Register Foundation

Certificate (if required) to be sent to the Surveyors at Rotterdam not to write on this page