

REPORT ON MACHINERY

No. 15240.

Received at London Office

MON OCT 22 1917.

Date of writing Report 19.10.1917. When handed in at Local Office 20.10.1917. Port of *Lith*No. in Survey held at *Lith*
Reg. Book.

Date, First Survey 18.11.14 Last Survey 10.10.1917.

(Number of Visits 36.

on the *S/S Darino*Master *C. A. Gove* Built at *Lith*By whom built *Kamase, Fynham & Co*Tons } Gross 1433.62.
Net 886.48.Engines made at *Lith*By whom made *Kamase, Fynham & Co*

When built 1917

Boilers made at *Lith*By whom made *Kamase, Fynham & Co*

when made 1917

Registered Horse Power

Owners *The Ellerman Wilson Line Ltd.*Port belonging to *Hull*

Nom. Horse Power as per Section 28 203

Is Refrigerating Machinery fitted for cargo purposes *No*Is Electric Light fitted *Yes*ENGINES, &c.—Description of Engines *Triple*

No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders $16\frac{1}{2}$, $28\frac{1}{4}$, $48\frac{1}{2}$ Length of Stroke 33" Revs. per minute 100 Dia. of Screw shaft as per rule $10\frac{1}{8}$ Material of screw shaft *Steel*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 tightin the propeller boss *Yes* If the liner is in more than one length are the joints burned *Yes* If the liner does not fit tightly at the partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *Yes* If twoliners are fitted, is the shaft lapped or protected between the liners *Yes* Length of stern bush $3-11\frac{1}{2}$ "Dia. of Tunnel shaft as per rule 9.04 Dia. of Crank shaft journals as per rule 9.45 Dia. of Crank pin $9\frac{5}{8}$ Size of Crank webs $4\frac{1}{2} \times 6\frac{1}{2}$ Dia. of thrust shaft undercollars $9\frac{5}{8}$ Dia. of screw $12-6$ Pitch of Screw $12-6$ No. of Blades 4 State whether moveable *No* Total surface $53\frac{5}{8}$ No. of Feed pumps 2 Diameter of ditto 3" Stroke $16\frac{1}{2}$ Can one be overhauled while the other is at work *Yes*No. of Bilge pumps 2 Diameter of ditto $3\frac{1}{2}$ Stroke $16\frac{1}{2}$ Can one be overhauled while the other is at work *Yes*No. of Donkey Engines 2 Sizes of Pumps $5 \times 3 \times 5$, $16 \times 6 \times 6$ No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room 3 $2\frac{1}{4}$ " In Holds, &c. *In No. 1 & 2 holds 2, $2\frac{1}{4}$ each. In No. 3 hold*No. of Bilge Injections 1 sizes $4\frac{3}{4}$ Connected to condenser, or to circulating pump *Yes* Is a separate Donkey Suction fitted in Engine room & size $4\frac{1}{2}$ "Are all the bilge suction pipes fitted with roses *Yes* Are the roses in Engine room always accessible *Yes* Are the sluices on Engine room bulkheads always accessible *No*Are all connections with the sea direct on the skin of the ship *Yes* Are they Valves or Cocks *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 *Below*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 *Bilge suction pipes* How are they protected *Strong wood casings*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*

Dates of examination of completion of fitting of Sea Connections 14/6/17 of Stern Tube 9/7/17 Screw shaft and Propeller 9/7/17

Is the Screw Shaft Tunnel watertight *Yes* Is it fitted with a watertight door *Yes* worked from *Upper platform*BOILERS, &c.—(Letter for record *S*)Manufacturers of Steel *Dunlop & Co. Ltd. of Scotland*Total Heating Surface of Boilers 2976 sq. ft. Is Forced Draft fitted *Yes* No. and Description of Boilers 2 *Single ended*Working Pressure 210 lb. Tested by hydraulic pressure to 420 lb. Date of test 11.8.15 No. of Certificate 731Can each boiler be worked separately *Yes* Area of fire grate in each boiler 37 sq. ft. No. and Description of Safety Valves toeach boiler 2 *Spring valves* Area of each valve 5.9 Pressure to which they are adjusted 215 lb. Are they fitted with easing gear *Yes*Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 11-9 Length 11-6 Material of shell plates *S*Thickness $1\frac{1}{8}$ Range of tensile strength 25-32 Are the shell plates welded or flanged *No* Descrip. of riveting: cir. seams *Lap & butt*long. seams *Lap & butt* Diameter of rivet holes in long. seams $1\frac{3}{16}$ Pitch of rivets $8\frac{7}{16}$ Lap of plates or width of butt straps $17\frac{5}{8}$ Per centages of strength of longitudinal joint rivets 85 Working pressure of shell by rules 212 Size of manhole in shell 16×12 Size of compensating ring $6 \times 1\frac{1}{8}$ No. and Description of Furnaces in each boiler 2 *Mormium* Material *S* Outside diameter $44\frac{1}{4}$ Length of plain part top 19 bottom 32 Thickness of plates crown 19 bottom 32 Description of longitudinal joint *Weld* No. of strengthening ringsWorking pressure of furnace by the rules 214 Combustion chamber plates: Material *S* Thickness: Sides $\frac{5}{8}$ Back $\frac{5}{8}$ Top $\frac{5}{8}$ Bottom $\frac{3}{4}$ Pitch of stays to ditto: Sides $7\frac{1}{4} \times 7\frac{1}{4}$ Back $8 \times 7\frac{3}{4}$ Top $7\frac{1}{4} \times 8\frac{1}{2}$ If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules 217Material of stays *S* Diameter at smallest part $1\frac{1}{8}$ Area supported by each stay 62 Working pressure by rules 223 End plates in steam space:Material *S* Thickness $1\frac{1}{8}$ Pitch of stays $16 \times 13\frac{3}{4}$ How are stays secured *By nuts & washers* Working pressure by rules 210 Material of stays *S*Diameter at smallest part 4.57 Area supported by each stay 223 Working pressure by rules 213 Material of Front plates at bottom *S*Thickness $3\frac{1}{2}$ Material of Lower back plate *S* Thickness $\frac{7}{8}$ Greatest pitch of stays $13\frac{1}{2}$ Working pressure of plate by rules 215Diameter of tubes $2\frac{1}{2}$ Pitch of tubes $3\frac{3}{4} \times 3\frac{3}{4}$ Material of tube plates *S* Thickness: Front $\frac{27}{32}$ Back $\frac{13}{16}$ Mean pitch of stays $7\frac{1}{2} \times 4\frac{1}{4}$ Pitch across wide water spaces 14×14 Working pressures by rules 261 Girders to Chamber tops: Material *S* Depth andthickness of girder at centre $9\frac{3}{8} \times 1\frac{3}{4}$ Length as per rule 2, 9" Distance apart $8\frac{1}{2}$ Number and pitch of stays in each 3, $7\frac{1}{4}$ Working pressure by rules 212 Superheater or Steam chest; how connected to boiler *Can the superheater be shut off and the boiler worked*separately *Yes* Diameter *Yes* Length *Yes* Thickness of shell plates *Yes* Material *Yes* Description of longitudinal joint *Yes* Diam. of rivetholes *Yes* Pitch of rivets *Yes* Working pressure of shell by rules *Yes* Diameter of flue *Yes* Material of flue plates *Yes* Thickness *Yes*If stiffened with rings *Yes* Distance between rings *Yes* Working pressure by rules *Yes* End plates: Thickness *Yes* How stayed *Yes*Working pressure of end plates *Yes* Area of safety valves to superheater *Yes* Are they fitted with easing gear *Yes*

N 452-0135

IS A DONKEY BOILER FITTED?

yes ✓

If so, is a report now forwarded?

yes ✓

SPARE GEAR. State the articles supplied:—

Two top end, two bottom end connecting rod bolts and nuts, two main bearing bolts, one set coupling bolts one set fuel 1 little pumps valves, assorted bolts and nuts. Load of various sizes.

The foregoing is a correct description,

RAMAGE & FERGUSON, Limited.

Wm. J. Ramsay
Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1914. For. 18. Dec. 2, 18. 1915. Jan. 9, 22. Feb. 5, 15, 22. Mar. 5, 16, 25. Apr. 5, 21. May 13, 25. June 4, 19. July 12. Aug. 4, 11. Sept. 16. Oct. 26. 1916. Jan. 7, 1917. Jan. 25, Feb. 13, Apr. 19, June 14, 28. July 9, 10.
During erection on board vessel - - - 1917. July 19, Aug. 6, Sept. 4, 25, Oct. 10.
Total No. of visits 36

Is the approved plan of main boiler forwarded herewith 4/15

" " " donkey " " " 4/10

Dates of Examination of principal parts—Cylinders 25/5/15 Slides 16/3/15 Covers 16/3/15 Pistons 21/4/15 Rods 25/3/15

Connecting rods 25/3/15 Crank shaft 12/5/15 Thrust shaft 25/3/15 Tunnel shafts 12/5/15 Screw shaft 25/1/17 Propeller 4/8/15

Stern tube 28/6/17 Steam pipes tested 23/8/17 Engine and boiler seatings 4/9/17 Engines holding down bolts 4/9/17

Completion of pumping arrangements 25/9/17 Boilers fixed 25/9/17 Engines tried under steam 25/9/17

Main boiler safety valves adjusted 25/9/17 Thickness of adjusting washers St. Boiler P. 3/8 S. 3/8 P. 5/8 S. 5/8

Material of Crank shaft S Identification Mark on Do. 337GAH Material of Thrust shaft S Identification Mark on Do. 337GAH

Material of Tunnel shafts S Identification Marks on Do. 337GAH Material of Screw shafts S Identification Marks on Do. 337GAH

Material of Steam Pipes Steel ✓ Test pressure 630 lbs. sq. ✓

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 No ✓ If so, state name of vessel

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

The machinery of this vessel has been built under special survey. The materials and workmanship are sound and good and under the vessel clipp in my opinion to have record of L.M.C. 10.17

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 10.17.

H.W.D.
23/10/17

The amount of Entry Fee ... £ 2 : : When applied for,
Special ... £ 30 : 3 : 20.10.1917
Donkey Boiler Fee ... £ : : When received, 25.10.1917
Travelling Expenses (if any) £ : : 26.10.17

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUE. OCT. 23 1917

Assigned

+ L.M.C. 10.17

MAINTENANCE
FUEL



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Foundation