

REPORT ON MACHINERY.

No. 44522.

Received at London Office

THU. 21 JUL. 1921

Date of writing Report 12 July 1921 When handed in at Local Office 20 July 1921 Port of NEWCASTLE ON TYNE

No. in Survey held at Reg. Book. on the steel screw steamer **LESTRIS** Date, First Survey 20th July 1920 Last Survey 19 July 1921

Master Built at Newcastle on Tyne By whom built Swan Hunter & Wigham Richardson Ltd. When built 1921

Engines made at Walker on Tyne. By whom made Swan Hunter & Wigham Richardson Ltd. when made 1921

Boilers made at Walker on Tyne By whom made Swan Hunter & Wigham Richardson Ltd. when made 1921

Registered Horse Power Owners Cork S.S. Co. Ltd. Port belonging to London.

Nom. Horse Power as per Section 28 318 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 20 1/2" - 34" - 56" Length of Stroke 42 Revs. per minute Dia. of Screw shaft 12 3/8" Material of 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 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 Length of stern bush 49 1/2"

Dia. of Tunnel shaft 10 3/4" Dia. of Crank shaft journals 11 1/4" Dia. of Crank pin 11 1/4" Size of Crank webs 16 1/2" x 7 3/8" Dia. of thrust shaft under

collars 11 1/4" Dia. of screw 14" - 6" Pitch of Screw 15" - 6" No. of Blades 4 State whether moveable No Total surface 20 sq

No. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 22" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 5 1/2" Stroke 22" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 3 Sizes of Pumps 6 x 5 x 8 + 8 x 9 x 8 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Three of 3" diameter In Holds, &c. No. 1. hold two of 2 3/4" dia - No. 2. hold two - 2 3/4" dia

No. 3. hold two of 2 3/4" dia - No. 4. hold two of 2 3/4" dia TUNNEL WELL one of 2 1/2" diameter

No. of Bilge Injections 1 sizes 4" Connected to condenser to circulating pump CP Is a separate Donkey Suction fitted in Engine room & size Yes 3"

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

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 both

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 How are they protected

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 top platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel J. Spencer & Sons. Ltd.

Total Heating Surface of Boilers 5000 Is Forced Draft fitted Yes No. and Description of Boilers 3-SE. Cyl. Multitubular

Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 18.12.20 No. of Certificate 9495

Can each boiler be worked separately Yes Area of fire grate in each boiler 42 sq. No. and Description of Safety Valves to

each boiler two, Direct Spring Area of each valve 7.06 sq. Pressure to which they are adjusted 185 lbs. Are they fitted with rising gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 12'-6" Length 18'-6" Material of shell plates Steel

Thickness 31/32" Range of tensile strength 297634 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DRLAP

long. seams DB Straps Diameter of rivet holes in long. seams 1" Pitch of rivets 7"-3 1/2" Lap of plates or width of butt straps 15"

Per centages of strength of longitudinal joint plate 85.7% Working pressure of shell by rules 182 lbs. Size of manhole in shell 16" x 18"

Size of compensating ring 30" x 30" No. and Description of Furnaces in each boiler two Deighton's Material Steel Outside diameter 47 1/8"

Length of plain part top 4' 10 1/2" Thickness of plates crown 9" bottom 7 1/6" Description of longitudinal joint weld. No. of strengthening rings

Working pressure of furnace by the rules 183 lbs. Combustion chamber plates: Material Steel Thickness: Sides 31/32" Back 31/32" Top 31/32" Bottom 31/32"

Pitch of stays to ditto: Sides 9" x 8 1/2" Back 8 3/4" x 8 3/4" Top 9" x 8 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 194 lbs

Material of stays Steel Area at smallest part 2.03 sq. Area supported by each stay 76.7 sq. Working pressure by rules 239 lbs. End plates in steam space:

Material Steel Thickness 1 1/2" Pitch of stays 18" x 14" How are stays secured D.N.W. Working pressure by rules 183 lbs. Material of stays Steel

Area at smallest part 4.57 sq. Area supported by each stay 252 sq. Working pressure by rules 188 lbs. Material of Front plates at bottom Steel

Thickness 3/32" Material of Lower back plate Steel Thickness 1" Greatest pitch of stays 13 1/2" Working pressure of plate by rules 268 lbs



002798-002807-0054

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— *Two top end bolts and nuts, two bottom end bolts and nuts, two main bearing bolts and nuts, one set of coupling bolts and nuts. Spare feed & bilge pump valves, spare propeller, assorted iron, bolts and nuts about 56 main boiler, fore and aft, six junk pump bolts, one piston rod gland bush & neck ring. one slide rod gland and neck ring.*

The foregoing is a correct description,

FOR SWAN, HUNTER & WIGHAM RICHARDSON, LTD.

L. J. Duncanson Manufacturer.

Dates of Survey while building: During progress of work in shops -- *July 20, 22, 27, 1920. Aug. 1, 9, 11, 19, 23, 27, 31, 1920. Sept. 15, 17, 23, 1920. Oct. 28, 1920. Nov. 10, 17, 19, 30, 1920. Dec. 6, 8, 1920.* During erection on board vessel --- *22, Jan. 7, 10, 12, 14, 24, 31, 1921. Feb. 1, 3, 7, 8, 10, 15, 16, 24, 28, 1921. Mar. 3, 4, 14, 17, 18, 21, 1921. Apr. 1, 3, 12, 1921.* Total No. of visits *14, 26, May 23, June 3, 30, July 18, 19, 1921. - 58 visits.* Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts: Cylinders *28.10.20, 10.11.20* Slides *24.2.21* Covers *28.2.21* Pistons *24.2.21* Rods *24.2.21* Connecting rods *24.2.21* Crank shaft *24.1.21* Thrust shaft *31.8.20* Tunnel shafts *15.8.20* Screw shaft *31.8.20* Propeller *3/21* Stern tube *24.1.21* Steam pipes tested *18 May 20* Engine and boiler seatings *21.3.21* Engines holding down bolts *1.4.21, 26.4.21* Completion of pumping arrangements *5.7.21* Boilers fixed *24.3.21, 1.4.21* Engines tried under steam *5.7.21* Completion of fitting sea connections *4.3.21* Stern tube *4.3.21* Screw shaft and propeller *4.3.21* Main boiler safety valves adjusted *5.7.21* Thickness of adjusting washers *P.B. P 3/8 S 3/8 C.B. P 3/8 S 7/16 S.B. P 7/16 S 3/8*

Material of Crank shaft *Steel* Identification Mark on Do. *W.C. LLOYD'S REGISTER L.C.S. 3/21* Material of Thrust shaft *Steel* Identification Mark on Do. *81.8.20* Material of Tunnel shafts *Steel* Identification Marks on Do. *7-180 Lloyd's 5165 EEB/LCS. 31.8.20* Material of Screw shafts *Steel* Identification Marks on Do. *31.8.20* Material of Steam Pipes *Lap welded steel - 3 3/4" x 1/4"* Test pressure *600 lbs*

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 *Yes* If so, state name of vessel *Similar Engines & Boilers fitted on board the s/s Kittiwake / s/s Merganser.*

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

The machinery built under Special Survey, the material and workmanship found good and efficient. The Condenser, and feed heater, tested under hydraulic pressure & found sound. The Engines and Boilers, and auxiliary machinery fitted up on board, and found satisfactory. The machinery tested under steam (vessel at moorings) and found satisfactory. In my opinion this vessel is now eligible for the notification of LMC 7-21 to be made in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC. 7. 21. FI. CL.

Roll
28/7/21
J.R.S.

The amount of Entry Fee ... £ *5* : : : When applied for.
Special ... £ *72 14/* : : : *20/7/21*
Donkey Boiler Fee ... £ : : : When received.
Travelling Expenses (if any) £ : : : *6.9.21*

Leonard S. Shallcross.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned *+ LMC 7. 21*
70. CL

MACHINERY CERTIFICATE WRITER



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Newcastle

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