

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

13 AUG 1928

Port of **NEWCASTLE-ON-TYNE**
 Date, First Survey **17 Feb** Last Survey **7 Aug 1928**
 (Number of Visits **50**)
 Survey held at **Walker on Tyne**
 Book No. **261** on the **S.S. "GRACEFIELD"**
 Tons { Gross **4700**
 Net **2860**
 When built **1928**
 By whom built **Swan Hunter & Wigham Richardson Ltd** Yard No. **1274**
 By whom made **S H W R Ltd** Engine No. **1274** when made **1928**
 By whom made **S. H W R Ltd** Boiler No. **1274** when made **1928**
 Owners **Compagnie Generale Transatlantique** Port belonging to **Newcastle**
 Is Refrigerating Machinery fitted for cargo purposes **No.** Is Electric Light fitted **Yes.**

ENGINES, &c.—Description of Engines **Triple Expansion Direct-acting Surface Condensing** Revs. per minute **3**
 No. of Cranks **3**
 Dia. of Cylinders **25 1/2 - 42.70** Length of Stroke **48** No. of Cylinders **3**
 Thickness parallel to axis **8 3/4"**
 Crank shaft, dia. of journals as per Rule **13.86"** as fitted **14 1/8"** Crank pin dia. **14 1/8"** Crank webs Mid. length breadth **2 1/4"** Thickness around eye-hole **6 1/4"**
 Mid. length thickness **8 3/4"**
 Intermediate Shafts, diameter as per Rule **13.19"** as fitted **13 1/4"** Thrust shaft, diameter at collars as per Rule **13.86"** as fitted **14 1/8"**
 Tube Shafts, diameter as per Rule **14.69"** as fitted **15 1/4"** Is the ^{tube} shaft fitted with a continuous liner **Yes**
 Screw Shaft, diameter as per Rule **14.69"** as fitted **15 1/4"** Is the after end of the liner made watertight in the propeller boss **Yes.**
 Bronze Liners, thickness in way of bushes as per Rule **4.48"** as fitted **25/32"** Thickness between bushes as per Rule **.561"** as fitted **23/32"**
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner **Yes.**
 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 **Yes.**
 If two liners are fitted, is the shaft lapped or protected between the liners **Yes.** Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft **Yes.**
 Length of Bearing in Stern Bush next to and supporting propeller **5'-0"**
 Propeller, dia. **18'-0"** Pitch **17'-6"** No. of Blades **4** Material **Cast Iron** whether Movable **No** Total Developed Surface **104** sq. feet
 Feed Pumps worked from the Main Engines, No. **2** Diameter **4 1/4"** Stroke **26"** Can one be overhauled while the other is at work **Yes**
 Bilge Pumps worked from the Main Engines, No. **2** Diameter **4 1/4"** Stroke **26"** Can one be overhauled while the other is at work **Yes**
 Feed Pumps { No. and size **(1) 8 x 5 1/2 x 8 (1) 6 x 4 1/2 x 6** Pumps connected to the Main Bilge Line { No. and size **(1) 10 x 11 x 12"**
 How driven **STEAM.** How driven **STEAM.**
 Ballast Pumps, No. and size **(1) 10 x 11 x 12"** Lubricating Oil Pumps, including Spare Pump, No. and size **None**
 Are two independent means arranged for circulating water through the Oil Cooler **Yes.** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room **4. 2 1/2"**
 In Holds, &c. **4. 3", 4. 3 1/2", 1. 2 1/2"**

Main Water Circulating Pump Direct Bilge Suctions, No. and size **(1) 8"** Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **(1) 5"**
 Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes **Yes.**
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges **Yes.**
 Are all Sea Connections fitted direct on the skin of the ship **Yes.** Are they fitted with 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 Overboard Discharges 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 pass through the bunkers **Bilge pipes.** How are they protected **None.**
 What pipes pass through the deep tanks **None.** Have they been tested as per Rule **Yes.**
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times **Yes.**
 Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another **Yes.** Is the Shaft Tunnel watertight **Yes.** Is it fitted with a watertight door **Yes.** worked from **Top platform.**

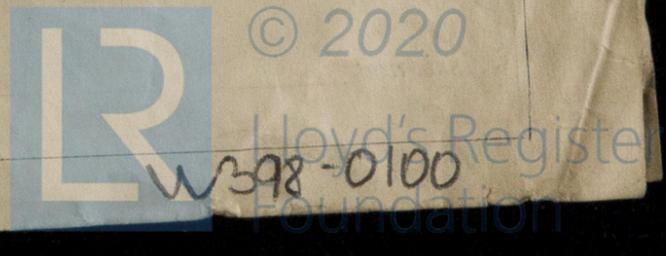
MAIN BOILERS, &c.—(Letter for record **S**) Total Heating Surface of Boilers **6830.**
 Is Forced Draft fitted **No.** No. and Description of Boilers **3. SE. CYL MULTI. B.** Working Pressure **200 lbs a-.**
IS A REPORT ON MAIN BOILERS NOW FORWARDED? **Yes.**
IS A DONKEY BOILER FITTED? **No.** If so, is a report now forwarded? **No.**
PLANS. Are approved plans forwarded herewith for Shafting **No.** Main Boilers **Yes.** Auxiliary Boilers **Yes.** Donkey Boilers **Yes.**
 Superheaters **fitted.** General Pumping Arrangements **Yes.** Oil fuel Burning Piping Arrangements **Yes.**

SPARE GEAR. State the articles supplied:— **Two top and bottom end nuts, 2 bottom end bolts and nuts, 2 main bearing bolts and nuts, 1 set of coupling bolts and nuts, 1 set of feed pump valves and seats, 1 set of bilge pump valves and seats, 1 set of pintle pins, 100 bolts and nuts and washers mixed. 1 Bar each of 1/2", 3/4", 7/8", 1" round iron etc.**

RETAIN

The foregoing is a correct description,
SWAN, HUNTER & WIGHAM RICHARDSON, LTD.

G. J. Sweeney
DIRECTOR. Manufacturer.



NOTE.—The records which do not apply should be marked.

1928
 FEB. 17. 27. 29. MAR. 2. 9. 13. 16. 20. 27. APR. 3. 4. 11. 13. 17. 19. 20. 26. 27. 30. MAY 1. 7. 8. 10. 15.
 17. 21. 23. 24. 25. 31. JUNE. 1. 4. 7. 19. 21. 23. JULY 2. 3. 4. 6. 9. 12. 17. 18. 20. 23. 24.
 28. 30. AUG. 7.
 Total No. of visits 50

40 Cylinder Tated 250hp W.P. 19.6.28
 Dates of Examination of principal parts—Cylinders 23.5.28 7.6.28 Slides June 28. Covers 19.4.28 20.4.28
 Pistons June 1928. Piston Rods 23.4.28 June 1928 Connecting rods 19.4.28 June 1928
 Crank shaft 20.4.28 Thrust shaft 17.5.28 Intermediate shafts 10 June 28. 20.3.28. 1.3.28
 Tube shaft Screw shaft 20.3.28 20.4.28 15.5.28 15.3.28 Propeller 26.4.28
 Stern tube 20.3.28 7.5.28 Engine and boiler seatings 9.7.28 Engines holding down bolts 28.7.28
 Completion of fitting sea connections 2.6.28
 Completion of pumping arrangements 30.7.28. Boilers fixed 17.7.28. Engines tried under steam 1.8.28.
 Main boiler safety valves adjusted 1.8.28. Thickness of adjusting washers P.T. 1/32 S. 7. 1/32 P.T. 5/16 S.T. 3/8 P.T. 5/16 S.T. 3/8
 Crank shaft material *Steel* Identification Mark LGS. Thrust shaft material *Steel* Identification Mark LGS. 17.5.28
 Intermediate shafts, material *Steel* Identification Marks LR 3871 MR Tube shaft, material Identification Mark
 Screw shaft, material *Steel* Identification Mark LR 3871 MR Steam Pipes, material *Steel* Test pressure 600 lb Date of Test 23.7.28
 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 the Rules for carrying and burning oil fuel 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.)
 These Engines built under Special Survey the material and workmanship found good and efficient. The machinery has been securely fixed and as it was found satisfactory under working conditions.
 In our opinion this vessel is eligible for records of + LMC. 8.28. T.S.C.L. 8.28.

It is submitted that this vessel is eligible for THE RECORD. + LMC 8.28 CL

J. J.
 21/8/28

L. G. Challers
 L. G. Challers
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 0 : 0 :
 Special ... £ 87 : 14 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 17 AUG 1928
 When received, 20.8.28

Committee's Minute FRI. 24 AUG 1928 FRI. 14 DEC 1928
 Assigned Thine 8.28 CL

NEWCASTLE-ON-TYNE

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

