

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

RECEIVED  
FEB 1944

Date of writing Report 28 JAN 1944 When handed in at Local Office 28 JAN 1944 Port of NEWCASTLE ON TYNE Received at London Office 28 FEB 1944

No. in Survey held at Newcastle on Tyne Date, First Survey 26<sup>th</sup> May 1942 Last Survey 24<sup>th</sup> January 1944  
Reg. Book. on the Jam. So. UMTATA. (Number of Visits 132)

Built at Newcastle By whom built Swan, Hunter & Wigham Richardson Yard No. 1740 Tons Gross 7288 Net 3799 When built 1944-1

Engines made at do. By whom made ditto Engine No. 1740 When made "

Boilers made at do By whom made ditto Boiler No. 1740 When made "

Registered Horse Power 1475 Owners Pullard, King & Co. Ltd. Port belonging to LONDON.

Nom. Horse Power as per Rule 1145 including 1161 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

Trade for which Vessel is intended Open seas.

## ENGINES, &c.—Description of Engines Triple Exp. Recip. with Exh. Stem Turbines

Dia. of Cylinders 23 1/2 + 38 + 64 Length of Stroke 39" No. of Cylinders 6 Revs. per minute 119  
Crank shaft, dia. of journals as per Rule 12.72 as fitted 13 1/8 Crank pin dia. 13 1/4 No. of Cranks 6 Mid. length breadth 8 1/2 Thickness parallel to axis 6 3/8 at journals  
Intermediate Shafts, diameter as per Rule 12.49 as fitted 12 15/16 Thrust shaft, diameter at collars as per Rule 12.72 as fitted 3 1/2 = 13.38 Mid. length thickness 5 1/2 at pins

Tube Shafts, diameter as per Rule 13.74 as fitted 14 1/4 Screw Shaft, diameter as per Rule 13.74 as fitted 14 1/4 Is the screw shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule 3/4 as fitted 3/4 Thickness between bushes as per Rule 19/32 min. Is the after end of the liner made watertight in the propeller boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner in one piece

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 a tight fit  
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 No Length of Bearing in Stern Bush next to and supporting propeller 4-9 1/2

Propeller, dia. 15-0 Pitch 15-0 No. of Blades 4 Material M. Bronze whether Moveable No Total Developed Surface 77 sq. feet

Feed Pumps worked from the Main Engines, No. Nil Diameter " Stroke " Can one be overhauled while the other is at work Yes  
Bilge Pumps worked from the Main Engines, No. Nil Diameter " Stroke " Can one be overhauled while the other is at work Yes

Feed Pumps { No. and size 3- 29 11 1/2 x 15 1/2 x 24 Pumps connected to the Main Bilge Line { No. and size 29 12 x 10 1/2 x 24 and 1 Ballast P. 14 x 12 1/2 x 24  
How driven Indep. Steam How driven Steam

Ballast Pumps, No. and size one 14 x 12 1/2 x 24 duplex Lubricating Oil Pumps, including Spare Pump, No. and size 39 9 x 8 x 18  
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 In E.R. 29 3 1/2, 29 2 1/2, 29 2 for DBtm Cofferdams; In Blk. Rm. 29 3 1/2, 29 2 for oily bilges  
In Pump Room In Journal Well 19 2 1/2 In Holds, &c. No. 1 Hold, 29 3; No. 2 Hold, 29 3 1/2; DT. op. 29 2 1/2; No. 3 Hold, 29 3 and 29 2; No. 4 Hold, 29 3

Main Water Circulating Pump Direct Bilge Suctions, No. and size 29 14 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 29 6 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 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 pass through the bunkers Nil How are they protected Yes  
What pipes pass through the deep tanks Nil 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 No worked from Yes

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 14,112 sq. ft.  
Is Forced Draft fitted Yes No. and Description of Boilers 4 Single Ended Working Pressure 225 lb.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes  
IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? Yes

Are approved plans forwarded herewith for Shafting 13-1-42 Main Boilers 21-1-42 Auxiliary Boilers Yes Donkey Boilers Yes  
(If not state date of approval) 18-6-42 General Pumping Arrangements 30-6-42 Oil fuel Burning Piping Arrangements 14-5-43  
Superheaters Pumping Arr. in E.R. 28-10-42 SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes  
State the principal additional spare gear supplied Propellers 1 RH + 1 L.H., 2 Sets of HP piston rings, 2 Sets MP piston rings

2 Sets of journal pads for Mitchell plummer blocks, 1 Impeller + 1 Impeller shaft for Circ. water pump,  
100 tubes for main Condenser, 25 tubes for Auxy Cond.; 50 gaskets + 200 Oran's install'n packing  
rings for main Condenser.

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

G. J. Steed Director Manufacturer.



1942  
 During progress of work in shops -- MAY 26 28. OCT 7. NOV. 13 21. DEC. 24 11 16 23. 1943  
 MAY 3 4 7 11 18 20. JUNE 1 2 4 10 16 17 18 22 23 24 25 29. JULY 1 2 12 14 16 20 21 22 23 26 27 30. AUG. 4 6 11 12 16 24 27 30.  
 1944  
 APR 31. SEPT. 1 2 6 7 9 10 13 17 22. OCT. 6 11 12 14 21 22 26 27 28 29. NOV. 1 2 3 5 9 10 12 15 16 18 18 19 22 23 24 29 30.  
 DEC. 6 8 9 10 13 15 17 20 21 24 28 30. 1944 JAN. 3 4 5 11 12 14 20 24.

Dates of Examination of principal parts—Cylinders P. 29-10-43 S. 5-11-43 Slides 15-11-43 Covers as Cyls  
 Pistons 15-11-43. Piston Rods 10<sup>th</sup> & 15<sup>th</sup>-11-43. Connecting rods 10<sup>th</sup> & 15<sup>th</sup>-11-43.  
 Crank shafts P. 12/7/43; S. 22/9/43 Thrust shafts P. 27-8-43; S. 2-9-43 Intermediate shafts 27/7/43.  
 Tube shaft ✓ Screw shafts 22/7/43. Propellers 4/8/43.  
 Stern tubes 20<sup>th</sup> & 22<sup>nd</sup>/7/43. Engine and boiler seatings 20/7/43. Engines holding down bolts P. 18-11-43 S. 23-11-43.  
 Completion of fitting sea connections 1-9-43.  
 Completion of pumping arrangements 20-12-43. Boilers fixed 6-10-43 Engines tried under steam 21-12-43  
 Main boiler safety valves adjusted 20-12-43. Thickness of adjusting washers For<sup>d</sup> BLR A 1/32; F 5/16; SPT 3/8; PORT BLR A 7/16; F 1/2; SPT 15/32  
 Crank shaft material 7. Stl Identification Mark 11702.HAI. Thrust shaft material 7. Stl Identification Mark 11702.HAI.  
 Intermediate shafts, material 7 Stl Identification Marks 11702.HAI. Tube shaft, material ✓ Identification Mark -  
 Screw shaft, material 7 Stl Identification Mark 11702.HAI. Steam Pipes, material SD(O.H)Stl Test pressure 675 lb Date of Test 18-6-43  
 Is an installation fitted for burning oil fuel Yes Is the flash point of the oil to be used over 150°F. Yes  
 Have the requirements of the Rules for the use of oil as fuel been complied with Yes  
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo In D.T. Yes If so, have the requirements of the Rules been complied with Yes  
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with not desired  
 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 has been built under Special Survey in accordance with the Society's Rules and approved plans, and the materials and workmanship are good. The machinery has been satisfactorily fitted on board the vessel and tried under steam under working conditions, and is eligible in my opinion, to be classed with this Society, and to have record + LMC. 1-44, and the notations 4.SB.(SPT) 225 lbs.WP, TS. CL.  
 Fitted for oil fuel 1-44. Flash point above 150°F.

According to advice given the secondary steam pipes are made of Bessemer Steel S.G.

The amount of Entry Fee ... £ 6 : - :  
 Special ... £ 128 : 12/6 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :

When applied for, 2 FEB 1944  
 When received, 19

A. Watt  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute THURS 9 MAR 1944  
 Assigned + LMC 1-44



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