

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

JUL - 3 1940

Date of writing Report 25 / 6 / 1940 when reported in at Local Office 25 / 6 / 1940 Port of Greenock

No. in Survey held at Greenock Date, First Survey 20<sup>th</sup> July 1939 Last Survey 21<sup>st</sup> June 1940  
Reg. Book. (Number of Visits 74)

on the CAPE WRATH Tons { Gross 4512 Net 2672  
Built at Port Glasgow By whom built Messrs Lithgows Ltd Yard No. 934 When built 1940  
Engines made at Greenock By whom made Messrs Rankin & Blackmore Ltd Engine No. 464 When made 1940  
Boilers made at Greenock By whom made Messrs Rankin & Blackmore Ltd Boiler No. 464 When made 1940  
Registered Horse Power Owners LYLE SHIPPING CO. LD. Port belonging to GLASGOW.  
Nom. Horse Power as per Rule 448 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes  
Trade for which Vessel is intended Foreign

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 70  
Dia. of Cylinders 22-36-65 Length of Stroke 45 No. of Cylinders 3 No. of Cranks 3  
Crank shaft, dia. of journals as per Rule 12.81" Crank pin dia. 13" Crank webs Mid. length breadth shrunk Thickness parallel to axis 8 1/4"  
as fitted 13" Mid. length thickness shrunk Thickness around eye-hole 5 5/8"  
Intermediate Shafts, diameter as per Rule 12.2" Thrust shaft, diameter at collars as per Rule 12.81"  
as fitted 12.25" as fitted 13"

Tube Shafts, diameter as per Rule 13.67" Screw Shaft, diameter as per Rule 14" Is the tube shaft fitted with a continuous liner Yes  
as fitted 13" as fitted 14" Is the screw shaft fitted with a continuous liner Yes  
Bronze Liners, thickness in way of bushes as per Rule 3/4" Thickness between bushes as per Rule 5/8" Is the after end of the liner made watertight in the  
as fitted 3/4" as fitted 5/8" 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 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 No Is an approved Oil Gland or other appliance fitted at the after end of the tube Yes  
shaft No If so, state type Oil gland Length of Bearing in Stern Bush next to and supporting propeller 56.5"

Propeller, dia. 17-9" Pitch 17-6 (mean) No. of Blades 4 Material Burns whether Moveable No. Total Developed Surface 101 sq. feet  
Feed Pumps worked from the Main Engines, No. Two Diameter 4" Stroke 21" Can one be overhauled while the other is at work Yes  
Bilge Pumps worked from the Main Engines, No. Two Diameter 4" Stroke 21" Can one be overhauled while the other is at work Yes

Feed Pumps { No. and size One 9 1/2-7 x 21 (Twin) One 8 1/2-6 x 18 (Simplex) Pumps connected to the { No. and size One 10 1/2-12 x 24 One 7-8 x 18  
How driven Steam Main Bilge Line How driven Steam  
Ballast Pumps, No. and size One 10 1/2-12 x 24 Lubricating Oil Pumps, including Spare Pump, No. and size One 10 1/2-12 x 24  
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 3-2 3/4" In Holds, &c. No. 1. 2-3" No. 2. 2-3 1/2" Coffendam 1-2"  
In Pump Room No. 3. 2-3" No. 4. 2-3" Tunnel Well 1-2 1/2" Tunnel (Fore-end) 1-2"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-7 1/2" Independent Power Pump Direct Suctions to the Engine Room Bilges,  
No. and size 1-4 3/4" 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 Other 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 (Oil bunkers). Hold bilge suction How are they protected Tested as per rule - Wood casing provided for use when coal bunking  
What pipes pass through the deep tanks Oil bunkers 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 E.R. platform.

MAIN BOILERS, &c.—(Letter for record 5) Total Heating Surface of Boilers 2 Main 4976 sq ft One Auxly 1576 sq ft = 6552  
Which Boilers are fitted with Forced Draft Main and Auxiliary Which Boilers are fitted with Superheaters Main  
No. and Description of Boilers 2 Main One Auxiliary Cylindrical Working Pressure 220 lbs sq

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes  
IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? Yes  
Can the donkey boiler be used for domestic purposes only Yes

PLANS. Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers Yes Donkey Boilers Yes  
(If not state date of approval)  
Superheaters Yes General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements Yes

SPARE GEAR.  
Has the spare gear required by the Rules been supplied Yes  
State the principal additional spare gear supplied One propeller shaft with continuous liner and C.I. propeller  
Mark. No 8854  
M.C. 24/4/40

The foregoing is a correct description.  
RANKIN & BLACKMORE LTD.

*A. K. Rankin* Manufacturer.  
Managing Director.



004887-004892-0280

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

5c.11.37. T. (MADE IN ENGLAND.)

(1939) JULY 20-24 AUG. 29-31 SEPT. 5-8 12-13 21-28 OCT. 4-6 10-12 17-27 31 NOV. 9-10 16-21 22-24 28  
 DURING PROGRESS OF WORK IN SHOPS - - - DEC. 6-11 14-19 20-21 26-28 (1940) JAN. 5-8 10-12 22-30 FEB. 2-8 12-20 23 MAR. 8-18 20-26 28  
 DATES OF SURVEY WHILE BUILDING DURING ERECTION ON BOARD VESSEL - - - APR. 3-9 11-19 22-24 26-30 MAY 1-7 13-15 17-21 22-24 29-31 JUNE 1-7 9-12 17-19 21-24  
 Total No. of visits HOP 74

Dates of Examination of principal parts—Cylinders 6/12/39 Slides 23/2/40 Covers 8/2/40  
 Pistons 12/1/40 Piston Rods 28/12/39 Connecting rods 28/12/39  
 Crank shaft 14/12/39 Thrust shaft 14/12/39 Intermediate shafts 8/3/40  
 Tube shaft — Screw shaft 24/4/40 Propeller 24/4/40  
 Stern tube 22/4/40 Engine and boiler seatings 30/4/40 Engines holding down bolts 15/5/40  
 Completion of fitting sea connections 19/4/40  
 Completion of pumping arrangements 24/6/40 Boilers fixed 7/5/40 Engines tried under steam 24/6/40  
 Main boiler safety valves adjusted 8/6/40 Thickness of adjusting washers P 5/8" CANTON (Auxly) 5/8" STARO 5/8"  
 Crank shaft material S.M. Identification Mark M.C. 14/12/39 Thrust shaft material S.M. S.M. Identification Mark M.C. 14/12/39  
 Intermediate shafts, material S.M. S.M. Identification Marks M.C. 18/3/40 Tube shaft, material — Identification Mark —  
 Screw shaft, material S.M. S.M. Identification Mark M.C. 24/4/40 Steam Pipes, material S.D. Steel Test pressure 660 lbs Date of Test 7/6/40  
 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 No. If so, have the requirements of the Rules been complied with —  
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have 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. These engines and boilers have been built under Special Survey in accordance with the approved plans. The materials and workmanship are good. They have been securely fitted in the vessel, tried under steam and found satisfactory. The machinery is eligible, in my opinion, for the Record of:- LMC. G-40 TS.-CL. and the Notation 2.S.B. (Sp) and one Auxiliary.

The amount of Entry Fee ... £ 5 : 0 :  
 Special ... £ 92 : 4 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 28<sup>th</sup> JUNE 1940  
 When received, 3/7/40

M Caldwell  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 2 JUL 1940  
 Assigned - LMC 6.40 20. S.C.



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