

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

AUG 1942

Date of writing Report 22nd JULY 1942. When handed in at Local Office 24th JULY 1942. Port of GREENOCK

No. in Survey held at GREENOCK Date, First Survey 1st JULY 1941. Last Survey 14th JULY 1942.
Reg. Book. on the S/S "EMPIRE GALAHAD" (Number of Visits 42.)

Built at PORT GLASGOW By whom built LITHGOWS LTD Yard No. 970 When built 1942
Engines made at GREENOCK By whom made JOHN G. KINCAID & CO LTD Engine No. 733 When made 1942
Boilers made at GREENOCK By whom made JOHN G. KINCAID & CO LTD Boiler No. 733 When made 1942

Registered Horse Power Owners MINISTRY OF WAR TRANSPORT Port belonging to GREENOCK.
Nom. Horse Power as per Rule 549 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted YES

Trade for which Vessel is intended OPEN SEA SERVICE

ENGINES, &c.—Description of Engines Triple expansion Revs. per minute 68

Dia. of Cylinders 23 1/2" 37 1/2" 68" Length of Stroke 45" No. of Cylinders 3 No. of Cranks 3
Crank shaft, dia. of journals as per Rule 13.6395" Crank pin dia. 13 3/4" Crank webs Mid. length breadth 1.9" Thickness parallel to axis 8 3/4"
as fitted 13 3/4" Mid. length thickness 8 3/4" shrunk Thickness around eye-hole 6 3/4"

Intermediate Shafts, diameter as per Rule 12.99" Thrust shaft, diameter at collars as per Rule 13.6395"
as fitted 13" as fitted 13.75"

Tube Shafts, diameter as per Rule 14.511" Screw Shaft, diameter as per Rule 14.511" Is the shaft filled with a continuous liner? Yes
as fitted 14.75" as fitted 14.75" Is the after end of the liner made watertight in the propeller boss? Yes

Bronze Liners, thickness in way of bushes as per Rule .742" Thickness between bushes as per Rule .556"
as fitted .75" as fitted 1/16" 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? No

Propeller, dia. 18'-3" Pitch 17'-3" No. of Blades 4 Material C.I. whether Moveable No Total Developed Surface 109.25 sq. feet
Length of Bearing in Stern Bush next to and supporting propeller 4'-11 1/8"

Feed Pumps worked from the Main Engines, No. 1 Diameter 4" Stroke 24" Can one be overhauled while the other is at work? Yes
Bilge Pumps worked from the Main Engines, No. Two Diameter 4" Stroke 24" Can one be overhauled while the other is at work? Yes

Feed Pumps No. and size Two 10 1/2 x 8 22 How driven Steam Pumps connected to the Main Bilge Line No. and size Two—one 8 x 6 Duplex & one 9 x 11 Duplex
How driven Steam

Ballast Pumps, No. and size One Duplex 9 x 11 10 Lubricating Oil Pumps, including Spare Pump, No. and size
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 Four @ 3" Tunnel well 1 @ 2 1/2" Cofferdam 1 @ 2 1/2"

In Pump Room In Holds, &c. 6 @ 3" 2 @ 2 1/2" x bunker 2 @ 2 1/2"

Main Water Circulating Pump Direct Bilge Suctions, No. and size One @ 8" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One @ 5" One @ 3" Fleck hose 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? Yes

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? Two bilge suction How are they protected? Wood casings
What pipes pass through the deep tanks? 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 Access from upper deck

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 8348 sq. ft.

Which Boilers are fitted with Forced Draft All boiler Which Boilers are fitted with Superheaters. NONE.
No. and Description of Boilers Two four furnace & one three furnace SE Working Pressure 220 lbs.

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 9-12-40 Main Boilers 25-10-40 Auxiliary Boilers 63-64L Donkey Boilers
(If not state date of approval)

Superheaters General Pumping Arrangements 21-11-41 Oil fuel Burning Piping Arrangements

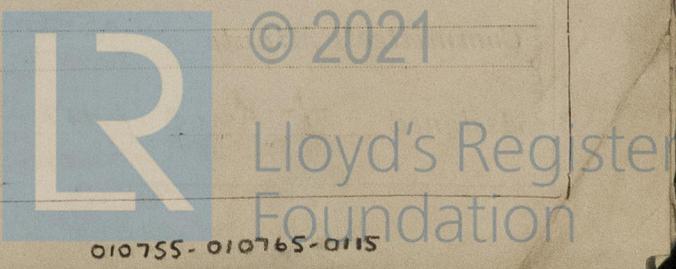
SPARE GEAR.

Has the spare gear required by the Rules been supplied?
State the principal additional spare gear supplied.

See separate list

The foregoing is a correct description.

W. Kincaid Director. Manufacturer.



(1941) JULY 1. 18. AUG. 1. 18. SEPT. 1. 22. OCT. 6. 10. 28. 30. 31. NOV. 6. 10. 17. 24. 26. 27. DEC. 10. 17. 29. 31.
 (1942) JAN. 5. 9. 12. 20. 23. 26. 28. FEB. 5. 6. 23. 25. MARCH 2. 4. 9. 12. 24. 24. APRIL 10. 14. 20. 24. 27. 29. MAY 1. 4. 6. 9.
 12. 18. 20. 24. 29. JUNE 2. 10. 16. 17. 18. 19. 22. 24. 26. 29. 30. JULY 2. 3. 13. 15. 16. 17.

Dates of Survey while building
 During progress of work in shops ---
 During erection on board vessel ---
 Total No. of visits 42

Dates of Examination of principal parts—Cylinders 9-1-42 Slides 9-1-42 Covers 9-1-42
 Pistons 9-1-42 Piston Rods 24-3-42 Connecting rods 24-3-42
 Crank shaft 24-3-42 Thrust shaft 29-12-41 Intermediate shafts 29-12-41
 Tube shaft ✓ Screw shaft 1-5-42 Propeller 1-5-42
 Stern tube 26-11-41 Engine and boiler seatings 20-5-42 Engines holding down bolts 10-6-42
 Completion of fitting sea connections 4-5-42
 Completion of pumping arrangements 2-7-42 Boilers fixed 27-5-42 Engines tried under steam 29-6-42
 Main boiler safety valves adjusted $S \left\{ \begin{matrix} P \frac{3}{4} \\ C \frac{3}{4} \end{matrix} \right. 24/4/42 \text{ Con. } 29/8/42$ Thickness of adjusting washers $\frac{3}{16}$ $\frac{3}{16}$ $\frac{1}{4}$ $\frac{3}{5}$ $\frac{3}{16}$ $\frac{3}{5}$
 Crank shaft material S Identification Mark 9508 CNH Thrust shaft material S Identification Mark 10574 CNH
 Intermediate shafts, material S Identification Marks 10574 CNH Tube shaft, material ✓ Identification Mark ✓
 Screw shaft, material S Identification Mark 10574 CNH Steam Pipes, material S.D.S ✓ Test pressure 660 lbs Date of Test 1-5-42
 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 the use of oil as fuel been complied with ✓
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo ✓ 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 & boilers have been built under special survey in accordance with the Rules & approved plans. The materials & workmanship are sound & good. They have been effectually installed in the vessel & tried out under full working conditions on a short sea trial with satisfactory results. The boiler safety valves have been adjusted under steam, accumulation nil.
 The plans & specifications have been supervised, a copy of certificate issued is enclosed herewith.
 This machinery is eligible in my opinion to be Classed in the Society's Register Book with Record
 + LMC 7-42 & the Notation T S C L. 2 SB & 1 Over SB. 220 lbs / " FD.

The amount of Entry Fee ... £ 6 : 0 :
 102-9. Lon 1/6-2. Over 100 gls ... £ 86 : 7 :
 Special ... £ : :
 Donkey Boiler Fee ... £ 21 : 12 :
 Travelling Expenses (if any) £ : :
 When applied for, 24th JULY 1942.
 When received, 19...

Charles G. Hunter
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 4 AUG 1942
 Assigned -1- Aug 7. 42 JD



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