

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 13 AUG 1942

Date of writing Report 1st AUG. 1942. When handed in at Local Office 7th AUG. 1942 Port of GREENOCK

No. in Survey held at GREENOCK Date, First Survey 18th JUNE. 1941. Last Survey 6th AUGUST 1942

Reg. Book. on the TWIN S/S EMPIRE MIGHT (Number of Visits 81.) Tons } Gross 9205.67 Net 4921.63

Built at GREENOCK By whom built GREENOCK DOCKYARD CO^{LD} Yard No. 450 When built 1942

Engines made at GREENOCK By whom made JOHN G. KINCAID, CO^{LD} Engine No. 734 When made 1942

Boilers made at GREENOCK By whom made JOHN G. KINCAID, CO^{LD} Boiler No. 734 When made 1942

Registered Horse Power Owners MINISTRY OF WAR TRANSPORT Port belonging to GREENOCK

Nom. Horse Power as per Rule 1562 1372 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

Trade for which Vessel is intended OCEAN GOING

ENGINES, &c.—Description of Engines Triple expansion in conjunction with Bauer Wack Turbines Revs. per minute 92

Dia. of Cylinders 26-42-68" Length of Stroke 48" No. of Cylinders 6 No. of Cranks 6

Crank shaft, dia. of journals as per Rule 14.4" as fitted 15" Crank pin dia. 15" Crank webs Mid. length breadth 1-11/8" Mid. length thickness 9/8" Thickness parallel to axis 9/8" Thickness around eye-hole 6/8"

Intermediate Shafts, diameter as per Rule 13.71" as fitted 14.375" Thrust shaft, diameter at collars as per Rule 14.4" as fitted 381/2" = 15"

Tube Shafts, diameter as per Rule 15.13" as fitted 16.375" Is the tube screw shaft fitted with a continuous liner? Yes

Bronze Liners, thickness in way of bushes as per Rule .762" as fitted .875" Thickness between bushes as per Rule .572" as fitted .718" 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? 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. 17-0" Pitch 18-6" No. of Blades 4 Material C.I. Boss, whether Moveable Yes Total Developed Surface 100 sq. feet

Feed Pumps worked from the Main Engines, No. NONE Diameter Stroke Can one be overhauled while the other is at work? Yes

Bilge Pumps worked from the Main Engines, No. NONE Diameter Stroke Can one be overhauled while the other is at work? Yes

Feed Pumps No. and size 2 @ 15 1/2 x 11 1/2, 2 @ 12 1/2 x 9 1/2 How driven STEAM Main Bilge Line No. and size 4 @ 10 1/2 x 12 1/2, 1 @ 9 1/2 x 11, 2 @ 7 1/2 x 9

Ballast Pumps, No. and size 1 @ 10 1/2 x 12 1/2 Lubricating Oil Pumps, including Spare Pump, No. and size 2 @ 9 1/2 x 10 1/2

Are two independent means arranged for circulating water through the Oil Cooler? No

Bilge Pumps;—In Engine and Boiler Room 4 @ 3 1/2", 1 @ 3", 2 @ 2 1/2", 1 @ 2" Coff. Tunnel well 102" Side Chy 2 @ 3"

In Pump Room Coff. 4 @ 2" x bunker 2 @ 2 1/2"

In Holds, &c. N1-2 @ 3", N2-2 @ 3 1/2", N3-2 @ 2 1/2", N4-2 @ 3", N5-1 @ 3"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 2 @ 13"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 5 1/2"

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 filled 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? Main below others above

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? None How are they protected? Yes

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? No worked from Access from UD Deck

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 17780 sq. ft.

Which Boilers are fitted with Forced Draft All boilers Which Boilers are fitted with Superheaters All boilers

No. and Description of Boilers 5 SE. multitubular Working Pressure 220 lbs/sq. in.

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 27-1-41 Main Boilers 27-1-41 Auxiliary Boilers Donkey Boilers

(If not state date of approval) Superheaters See New cert attached General Pumping Arrangements 24-12-41 Oil fuel Burning Piping Arrangements 8-4-41

SPARE GEAR.

Has the spare gear required by the Rules been supplied? Yes

State the principal additional spare gear supplied.

See separate list.

The foregoing is a correct description. For JOHN G. KINCAID & CO. LIMITED.

Director.

Manufacturer.



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Lloyd's Register Foundation

(1941) JUNE 18-19 AUG 6 OCT 15-30-31 NOV 7-10-12-24-26 DEC 26-31 (1942) JAN 6-8-12-14-20

Dates of Survey while building
 During progress of work in shops - - 21-23-28 FEB 2-3-12-13-16-17-23-25-26 MAR 2-4-5-9-10-11-12-13-16-18-20-24-26-27 APR 2-3-6-7-8-10-20-24-27-28
 During erection on board vessel - - - 30 MAY 4-6-9-12-13-15-18-19-20-25-27-29-30 JUNE 1-2-4-5-8-10-15-19-23 JULY 20-27-28 AUG 6
 Total No. of visits 81

Dates of Examination of principal parts—Cylinders 7-11-41 - 26-11-41 Slides 7-11-41 - 26-11-41 Covers 7-11-41 - 26-11-41
 Pistons 7-11-41 - 26-11-41 Piston Rods 10-3-42 Connecting rods 10-3-42
 Crank shaft 10-3-42 Thrust shaft *See 96 of 65121 (on Turbine)* Intermediate shafts 23-2-42
 Tube shaft ✓ Screw shaft 6-7-4/42 Propeller 6-7-4/42
 Stern tube 26-11-41 Engine and boiler seatings 27-4-42 Engines holding down bolts 19th-29th May 42
 Completion of fitting sea connections 8-2-42
 Completion of pumping arrangements 28-7-42 Boilers fixed 13-5-42 Engines tried under steam *AFT*
 Main boiler safety valves adjusted 23-6-42 Thickness of adjusting washers *P 1/4 9/32 1 1/2 1/32 5/16 1/4 5/16 9/32 3/8 9/32 10726 DB 240*
 Crank shaft material S Identification Mark 10849 CHH Thrust shaft material S Identification Mark 20-1-42 TPC
 Intermediate shafts, material S Identification Marks *P 10849 CHH* Tube shaft material *BESSEMER* Identification Mark ✓
 Screw shaft, material S Identification Mark 10849 CHH Steam Pipes, material SDS Test pressure 660 lb Date of Test 2-3-42
 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 boiler have been built under special survey in accordance with approved plans. The materials & workmanship are sound & good. They have been efficiently installed in the vessel & tried out under full working conditions on a short sea trial with satisfactory results. The boiler & superheater safety valves have been adjusted under steam.
 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 8-42 TS, CL & the notation 55B Suppl. 220 lbs / ° F D.

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

The amount of Entry Fee ... £ 6 : : When applied for, *8th AUG 19 42*
151-11-0 *123-7-11*
 Special ... £ 128 13/- : :
 Donkey Boiler Fee ... £ : : When received, : :
 25% Specification ... £ 37 18 : :
 Travelling Expenses (if any) £ 42 11/- : : 19.....

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

Committee's Minute GLASGOW 11 AUG 1942 *LM*
 Assigned *1-1 Aug 8.42*
JD

