

Received at London Office 23 JAN 1942

No. in Survey held at WEST HARTLEPOOL. Date, First Survey 7th July, 1941, Last Survey 15th January 1942
Reg. Book. (Number of Visits 55)

Engines, &c.—Description of Engines *Inverted triple expansion.* **Revs. per minute** *80*
Dia. of Cylinders *20"-31"-55"* **Length of Stroke** *39"* **No. of Cylinders** *3.* **No. of Cranks** *3.*
Crank shaft, dia. of journals *as per Rule 11.0"* **Crank pin dia.** *11 1/4"* **Crank webs** *Mid. length breadth 16"* **Thickness parallel to axis** *6 3/8"*
as fitted 11 1/4" **Mid. length thickness** *6 3/8"* **Shrunk** **Thickness around eye-hole** *4 3/8"*
Intermediate Shafts, diameter *as per Rule 10.47"* **Thrust shaft, diameter at collars** *as per Rule 11.0"*
as fitted 10 3/4" **as fitted** *11 1/4"*
Tube Shafts, diameter *as per Rule -* **Screw Shaft, diameter** *as per Rule 11.78"* **Is the** *{ tube }* **shaft fitted with a continuous liner** *{ screw } Yes*
as fitted - **as fitted** *12 1/4"* **Is the** *{ tube }* **shaft fitted with a continuous liner** *{ screw } Yes*
Bronze Liners, thickness in way of bushes *as per Rule 6.57"* **Thickness between bushes** *as per Rule 4.92"* **Is the after end of the liner made watertight in the**
as fitted 11" **as fitted** *16"* **as fitted** *17 1/2"* **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** *One length*
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
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* **If so, state type** *Yes* **Length of Bearing in Stern Bush next to and supporting propeller** *4'-3 3/8"*
Propeller, dia. *15'-9"* **Pitch** *14'-9"* **No. of Blades** *4* **Material** *Cast iron* **whether Moveable** *No* **Total Developed Surface** *75* **sq. feet**
Feed Pumps worked from the Main Engines, No. *2* **Diameter** *3"* **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** *2 @ 3" x 26" | 1 @ 8" x 6" x 15" SINGLE* **Pumps connected to the** **No. and size** *2 @ 4 1/4" x 26" | 1 @ 10" x 11" x 10"*
How driven **MAIN ENGINE, INDEPENDENT STEAM, Main Bilge Line** **How driven** **MAIN ENGINE | INDEPENDENT STEAM.**
Ballast Pumps, No. and size *1 @ 10" x 11" x 10"* **Lubricating Oil Pumps, including Spare Pump, No. and size** *-*
Are two independent means arranged for circulating water through the Oil Cooler *-* **Suctions, connected to both Main Bilge Pumps and Auxiliary**
Bilge Pumps;—In Engine and Boiler Room *4 @ 3" | 1 @ 4"* **In Holds, &c.** *N°1. 2 @ 3" N°2. 2 @ 3" BOILER RM. 2 @ 3"*
**ENG RM 2 @ 3" N°3. 4 @ 2 1/2" TUNNEL WELL 1 @ 2 1/2"
Main Water Circulating Pump Direct Bilge Suctions, No. and size *1 @ 6"* **Independent Power Pump Direct Suctions to the Engine Room Bilges,**
No. and size *1 @ 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 *On reservoir* **Are they fitted with Valves or Cocks** *Both* **Are the Overboard Discharges above or below the deep water line** *MAINT+ AUX BELOW REST ABOVE*
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *Yes* **Are the Blow Off Cocks fitted with a spigot and brass covering plate** *Yes*
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel *Yes* **How are they protected** *Wood ceiling*
What Pipes pass through the bunkers *Bilge pipes* **Have they been tested as per Rule** *-*
What pipes pass through the deep tanks *-* **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** *-***

SPARE GEAR.

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

(13. Sep 4 (A. 312)

Manufacturer.



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1941. July 7. Aug. 27. Sept. 16. 23. Oct. 1. 10. 15. 16. 17. 18. 20. 21. 22. 23. 24. 25. 27. 28. 29. 30. Nov. 3. 8. 10. 1
During progress of work in shops - -
13. 14. 18. 19. 20. 21. 24. 25. 26. 28. 29. Dec. 3. 4. 9. 15. 16. 18. 24.
Dates of Survey while building
During erection on board vessel - - -
1941. Nov. 21. 27. Dec. 9. 12. 29. 1942. Jan. 5. 6. 7. 8. 11. 12. 14. 15.
Total No. of visits 55

Dates of Examination of principal parts—Cylinders 16-10-41 - 18-10-41 Slides 27-10-41 Covers 27-10-41
Pistons 27-10-41. Piston Rods 27-10-41. Connecting rods 27-10-41 - 8-11-41.
Crank shaft 24-10-41 - 13-11-41 Thrust shaft 22-10-41 - 13-11-41. Intermediate shafts 20-11-41 - 26-11-41
Tube shaft - Screw shaft 11-11-41 - 26-11-41. Propeller 26-11-41.
Stern tube 14-11-41 Engine and boiler seatings 14-11-41. Engines holding down bolts 16-12-41.
Completion of fitting sea connections 14-11-41

Completion of pumping arrangements 6-1-42. Boilers fixed 6-1-42 Engines tried under steam 7-1-42.
Main boiler safety valves adjusted 6-1-42. Thickness of adjusting washers $\frac{21}{64}$ $\frac{11}{32}$ $\frac{2}{8}$ $\frac{3}{16}$

Crank shaft material *Singot Steel* Identification Mark 6250 AEG. Thrust shaft material *Singot Steel* Identification Mark 6254 AEG.

Intermediate shafts, material *Singot Steel* Identification Marks 6256, 78, 9, 60 AEG. Tube shaft, material Identification Mark -

Screw shaft, material *Singot Steel* Identification Mark 6255 AEG. Steam Pipes, material *SP Steel* Test pressure 600 lbs. Date of Test 24-12-41

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 *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 *Yes*. If so, state name of vessel *S.S. EMPIRE CAREY RPTH^o 18223*

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines and boilers of this vessel have been constructed under special survey and in accordance with the approved plans and specification.*

The materials and workmanship have been found good. Upon completion they were examined under full working conditions and found satisfactory.

It is recommended that the machinery of this vessel be classed in the Register Books $\frac{1}{2}$ LMC, 1.42, 2SB, F.D. CL.

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

| | |
|--|-------------------|
| The amount of Entry Fee ... £ 4 : 0 : | When applied for, |
| Special ... £ 65 : 7 : | 19 |
| SUPERVISION.
Donkey Boiler Fee ... £ 16 : 7 : | When received, |
| Travelling Expenses (if any) £ : : | 19 |

Committee's Minute

FRI. 30 JAN 1942

Assigned

+ LMC 1.42

FD. CL.

Arthur W. Oxford.

Engineer Surveyor to Lloyd's Register of Shipping.



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