Rpt. 4.

No. 18222

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 9 DEC 1941

Date of writing Report 8/12/1941 When handed in at Local Office 8/12/1941 Port of WEST HARTLEPOOL

No. in Reg. Book. Survey held at WEST HARTLEPOOL Date, First Survey 14th January Last Survey 2nd December 1941. (Number of Visits 56)

on the S.S. "EMPIRE MARLOWE"

Tons { Gross 6742·15 / Net 4841·71

Built at West Hartlepool By whom built Wm Gray & Co. Ltd. Yard No. 1122. When built 1941.

Engines made at West Hartlepool. By whom made Central Marine Eng Works Engine No. 1122 When made 1941.

Boilers made at West Hartlepool By whom made Central Marine Eng Works Boiler No. 1122 When made 1941

Registered Horse Power Owners Ministry of War Transport. Port belonging to West Hartlepool.

Nom. Horse Power as per Rule 505 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which Vessel is intended Ocean going.

ENGINES, &c.—Description of Engines Inverted triple expansion

Dia. of Cylinders 22½" - 36" - 65" Length of Stroke 48" No. of Cylinders 3. Revs. per minute 67.

Crank shaft, dia. of journals as per Rule 13·24" as fitted 13½" Crank pin dia. 13½" Crank webs Mid. length breadth 19¼" Mid. length thickness 8⅜" No. of Cranks 3. shrunk Thickness parallel to axis 8⅜" Thickness around eye-hole 6"

Intermediate Shafts, diameter as per Rule 12·61" as fitted 12¾"

Thrust shaft, diameter at collars as per Rule 13·24" as fitted 13½"

Tube Shafts, diameter as per Rule — as fitted — Screw Shaft, diameter as per Rule 14·15" as fitted 14½" Is the {tube / screw} shaft fitted with a continuous liner { yes.

Bronze Liners, thickness in way of bushes as per Rule ·73" as fitted ¾" Thickness between bushes as per Rule ·51" as fitted 9/16" 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 —

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 — Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft No. If so, state type — Length of Bearing in Stern Bush next to and supporting propeller 4'-11⅜"

Propeller, dia. 18'-6" Pitch 16'-9" No. of Blades 4 Material Bast'n. whether Moveable No. Total Developed Surface 110 sq. feet

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

Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 28" Can one be overhauled while the other is at work yes.

Feed Pumps { No. and size 2@9½"×7"×21" SINGLEX / How driven INDEPENDENT STEAM.

Pumps connected to the Main Bilge Line { No. and size 1@9"×10½"×10" & 1@7"×8"×8" / How driven INDEPENDENT STEAM. } 2@4"×28" STROKE MAIN ENGINE.

Ballast Pumps, No. and size 1@9"×10½"×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"

In Pump Room — In Holds, &c. N°1. 2@3" N°2 2@3½" N°3 2@2½" N°4 2@3" N°5 2@3" TUNNEL WELL 1@2½" TUNNEL DRAIN 1@2½"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1@8" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1@5"

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 RESERVOIRS. 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 AUX & MAIN BELOW. REST 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 —

What pipes pass through the deep tanks — Have they been tested as per Rule —

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 —

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 7706 ☐ft

Which Boilers are fitted with Forced Draft Nil. Which Boilers are fitted with Superheaters None.

No. and Description of Boilers 2 MAIN & 1 AUX SINGLE ENDED MULTITUBULAR. 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 —

PLANS. Are approved plans forwarded herewith for Shafting 2-8-40 Main Boilers 2-8-40 Auxiliary Boilers 18-3-41 Donkey Boilers — (If not state date of approval)

Superheaters — General Pumping Arrangements — Oil fuel Burning Piping Arrangements —

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes.

State the principal additional spare gear supplied

The foregoing is a correct description.

FOR THE CENTRAL MARINE ENGINE WORKS,

(W. Gray & Co. Ltd.)

J. H. Thomas

GENERAL MANAGER.

Manufacturer.

Dates of Survey while building

During progress of work in shops — 1941. Jan. 4. Feb. 4·22. March 26. June 16. July 11·22·23·31. Aug. 1·12·26. Sept. 1·5·6·10·11·12·15·18·22·24·25. 26·29. Oct. 2·14·15·16·17·20·21·25·28·29·31. Nov. 5·6.

During erection on board vessel — 1941. Aug. 15. Sept. 3·24. Oct. 2·14·15·16·20·29. Nov. 1·5·11·17·19·20·24·26. Dec. 2.

Total No. of visits 56

Dates of Examination of principal parts—Cylinders 23-7-41 – 4-10-41. *Slides* 18-9-41. *Covers* 18-9-41.

Pistons 22-9-41 *Piston Rods* 1-9-41 *Connecting rods* 1-9-41

Crank shaft 31-7-41 – 4-10-41. *Thrust shaft* 4-10-41. *Intermediate shafts* 4-10-41 – 10-10-41

Tube shaft ✓ *Screw shaft* 4-10-41 – 10-10-41 *Propeller* 10-10-41

Stern tube 6-10-41 *Engine and boiler seatings* 3-9-41. *Engines holding down bolts* 1-11-41

Completion of fitting sea connections 24-9-41

Completion of pumping arrangements 19-11-41 *Boilers fixed* 1-10-41 *Engines tried under steam* 20-11-41.

Main boiler safety valves adjusted 19-11-41. *Thickness of adjusting washers* P: P 5/16" S 5/16" P 11/32" S: S 5/16" P 11/32" AUX: S 5/16"

Crank shaft material INGOT STEEL *Identification Mark* Nº 5990 AEG. *Thrust shaft material* INGOT STEEL *Identification Mark* Nº 6046 AEG.

Intermediate shafts, material INGOT STEEL *Identification Marks* Nº 6048.9.50.1. 2.3.&4 AEG. *Tube shaft, material* — *Identification Mark* —

Screw shaft, material INGOT STEEL *Identification Mark* Nº 6047 AEG. *Steam Pipes, material* S.D. STEEL *Test pressure* 660 lbs □" *Date of Test* 25-10-41

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 PARSONS" RPT Nº 18204

General Remarks (*State quality of workmanship, opinions as to class, &c.*) The machinery of this vessel has 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 Book ✠ LMC 12.41 2SB 1AUX B. F.D. CL.

Certificate to be sent to ...

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

The amount of Entry Fee ...	£ 6 : 0 :	When applied for,	......19......
Special SUPERVISION ... (£11.18/- chgd at ncb. – see cases)	£ ~~100~~ 88 : ~~5~~ 7- :		
~~Donkey Boiler~~ Fee ...	£ 25 : 0 :	When received,	......19......
Travelling Expenses (if any)	£ : :		

Arthur W. Oxford.
Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 19 DEC 1941

Committee's Minute +Lmc. 12.41

Assigned F.D., CL.