

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

JAN 13 1941

Date of writing Report 31/12/1940 When handed in at Local Office 31/12/1940 Port of WEST HARTLEPOOL

No. in Survey held at WEST HARTLEPOOL. Date, First Survey 16th April Last Survey 27th December 1940
Reg. Book. (Number of Visits 77)

on the S.S. EMPIRE STRAIT

Tons { Gross 2824.07
Net 1574.73

Built at West Hartlepool By whom built W. M. Gray & Co. Ltd Yard No. 1112 When built 1940.

Engines made at West Hartlepool By whom made Central Marine Engine Works Engine No. 1112 When made 1940.

Boilers made at West Hartlepool By whom made Central Marine Engine Works Boiler No. 1112 When made 1940.

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

Nom. Horse Power as per Rule 255. 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 Revs. per minute 80
 Dia. of Cylinders 20" x 55" x 33" Length of Stroke 39" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 11" as fitted 11 1/4" Crank pin dia. 1 1/4" Crank webs Mid. length breadth 16" Mid. length thickness 6 3/8" Thickness parallel to axis 6 3/8" Thickness around eye-hole 4 3/8"
 Intermediate Shafts, diameter as per Rule None Thrust shaft, diameter at collars as per Rule 11" as fitted 11 1/4"
 Tube Shafts, diameter as per Rule None Screw Shaft, diameter as per Rule 11.75" as fitted 12" Is the tube shaft fitted with a continuous liner Yes
 Bronze Liners, thickness in way of bushes as per Rule .657" as fitted 1/16" Thickness between bushes as per Rule .492" as fitted 1/16" 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 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 — Length of Bearing in Stern Bush next to and supporting propeller 4'-0"
 Propeller, dia. 15'-6" Pitch 15'-6" No. of Blades 4 Material CAST IRON whether Moveable No Total Developed Surface 73 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 3 1/2" Stroke 26" Can one be overhauled while the other is at work Yes
 Feed Pumps { No. and size 2 @ 3" dia x 26" 1 @ 8" x 6" x 15" pumps connected to the { No. and size 1 @ 10" x 11" x 10" 1 @ 8" x 6" x 15"
 How driven MAIN ENGINE INDEPENDENT Main Bilge Line How driven INDEPENDENT INDEPENDENT
 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 3 @ 3" 1 @ 4" In Pump Room — In Holds, &c. No. 1 2 @ 3 1/2" No. 2 2 @ 3" BOILER RM 2 @ 3" ENGINE RM 1 @ 3"

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 MAIN ON RESERVOIR REST ON SHELL 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 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 Bilge suction pipes How are they protected Wood ceiling
 What pipes pass through the deep tanks No 1 Bilge suction pipes 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 None Is it fitted with a watertight door — worked from —

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 3530 sq ft
 Which Boilers are fitted with Forced Draft Both Which Boilers are fitted with Superheaters Neither
 No. and Description of Boilers 2 Single ended Multitubular Working Pressure 200 lbs
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? —
 Can the donkey boiler be used for domestic purposes only —
 PLANS. Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers — Donkey Boilers —
 Superheaters — General Pumping Arrangements Yes 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 Spare propeller stored at Central Marine Engine Works West Hartlepool see Lon 2nd E 31-5-40.

The foregoing is a correct description.
FOR THE CENTRAL MARINE ENGINE WORKS,

(W. Gray & Co. Ltd)

Manufacturer.

W. Gray
GENERAL MANAGER.



© 2020

Lloyd's Register Foundation

002743-002749-0202

Dates of Survey while building
 During progress of work in shops - - 1940. April 16. May 8-13. July 9-10-11-12-15-22-30-31. Aug. 2-6-7-12-14-20-22-23-30. Sept. 3-5-10-12-13-20.
 Oct. 1-2-4-8-9-11-16-17-18-21-23-28-29-30-31. Nov. 1-2-4-5-8-11-12-30. Dec. 3-5-9-10-11-12-13-16.
 During erection on board vessel - - - 1940. Oct. 8-14-17-18-25. Nov. 6-11-12-14-15-22-28. Dec. 2-7-11-18-20-21-24-27.
 Total No. of visits 77

Dates of Examination of principal parts—Cylinders 31/7/40, 28/10/40 Slides 30/8/40 Covers 30/8/40
 Pistons 5/9/40 Piston Rods 2/8/40, 2/11/40. Connecting rods 2/8/40, 2/11/40.
 Crank shaft 2/10/40, 1/11/40. Thrust shaft 12/8/40, 1/11/40. Intermediate shafts —
 Tube shaft ✓ Screw shaft 16/10/40, 1/11/40. Propeller 31/10/40.
 Stern tube 28/10/40, 4/11/40. Engine and boiler seatings 14/10/40. Engines holding down bolts 11/12/40.
 Completion of fitting sea connections 25/10/40.
 Completion of pumping arrangements 21/12/40. Boilers fixed 11/12/40. Engines tried under steam 20/12/40.
 Main boiler safety valves adjusted 20/12/40. Thickness of adjusting washers P 3/8 S 11/32 P 23/64 S 23/64
 Crank shaft material INGOT STEEL. Identification Mark N°3325 REG. Thrust shaft material INGOT STEEL. Identification Mark N°3343 REG.
 Intermediate shafts, material ✓ Identification Marks ✓ Tube shaft, material ✓ Identification Mark ✓
 Screw shaft, material INGOT STEEL. Identification Mark N°3342 REG. Steam Pipes, material SD STEEL. Test pressure 600 lbs. Date of Test 30/11/40.
 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 No. If so, state name of vessel ✓

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 workmanship and materials 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 2 1/2 H.M.C. 12.40 2 SB. F.D. C.L.

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 ...	£ 4 : 0 :	When applied for,
Special ...	£ 63 : 5 :	
Donkey Boiler Fee ...	£ 15 : 16 :	When received,
Travelling Expenses (if any) £	: :	

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

Committee's Minute TUE. 21 JAN 1941

Assigned J.D., C.L.

