

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 17/7/1945 When handed in at Local Office 18/7/1945 Port of WEST HARTLEPOOL  
No. in Survey held at WEST HARTLEPOOL Date, First Survey 18/10/44 Last Survey 7/7/1945  
Reg. Book (Number of Visits 49)  
on the STEEL SCREW STEAMER "EMPIRE ALDgate"  
Built at WEST HARTLEPOOL By whom built WM GRAY & CO LTD Yard No. 1180 When built 1945  
Engines made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENG WORKS Engine No. 1180 When made 1945  
Boilers made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENG WORKS Boiler No. 1180 When made 1945  
Registered Horse Power Owners MINISTRY OF WAR TRANSPORT Port belonging to WEST HARTLEPOOL  
Nom. Horse Power as per Rule 281 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES  
Trade for which vessel is intended OCEAN GOING

GINES, &c.—Description of Engines INVERTED TRIPLE EXPANSION. Revs. per minute 85.  
Dia. of Cylinders 20" x 31" x 55" Length of Stroke 39" No. of Cylinders 3 No. of Cranks 3  
as per Rule 11.0" Crank pin dia. 11 1/4" Mid. length breadth 16" Thickness parallel to axis 6 7/8"  
ank shaft, dia. of journals as fitted 11 1/4" Crank webs Mid. length thickness 6 7/8" shrunk Thickness around eye-hole 4 7/8"  
as per Rule Intermediate Shafts, diameter as fitted Thrust shaft, diameter at collars as per Rule 11.0"  
as fitted 11 1/4"  
as per Rule Main Shafts, diameter as fitted 11.74"  
as fitted 12 1/4" Is the {tube screw} shaft fitted with a continuous liner {yes  
as per Rule 6.51" Thickness between bushes as per Rule 4.92"  
as fitted 1 1/2" 1 3/4" Is the after end of the liner made watertight in the  
peller 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.  
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  
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  
at No. If so, state type Length of Bearing in Stern Bush next to and supporting propeller 4'-3 3/8"  
propeller, dia. 15'-3" Pitch 14'-6" No. of Blades 4 Material Cast Steel whether Moveable No Total Developed Surface 70 sq. feet  
and Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work  
ge 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  
ed {No. and size 2 @ 8" x 6" x 15" DUPLEX main pumps How driven INDEPENDENT STEAM  
Pumps connected to the {No. and size 2 @ 4 1/2" x 26" 1 @ 10" x 11" x 10" DUPLEX  
Main Bilge Line How driven MAIN ENGINE INDEPENDENT STEAM  
last Pumps, No. and size 1 @ 10" x 11" x 10" DUPLEX Lubricating Oil Pumps, including Spare Pump, No. and size  
two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary  
ge Pumps:—In Engine and Boiler Room 3 @ 3" 1 @ 4"  
Pump Room In Holds, &c. No. 1 Hold 2 @ 3" No. 2 Hold 2 @ 3 1/2" CROSSBONKER 2 @ 2"

in Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 6" Independent Power Pump Direct Suctions to the Engine Room Bilges,  
and size 1 @ 4" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes yes  
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  
all Sea Connections fitted direct on the skin of the ship On manholes Are they fitted with Valves or Cocks Both  
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  
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  
hat Pipes pass through the bunkers How are they protected  
hat pipes pass through the deep tanks None Have they been tested as per Rule  
all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes  
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  
partment to another yes Is the Shaft Tunnel watertight No Is it fitted with a watertight door worked from

IN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 4147 sq. ft.  
high Boilers are fitted with Forced Draft Both Which Boilers are fitted with Superheaters Both  
and Description of Boilers 2 Single ended multitubular Working Pressure 200 lbs. sq. in.  
A REPORT ON MAIN BOILERS NOW FORWARDED? yes  
A DONKEY BOILER FITTED? No If so, is a report now forwarded?  
on the donkey boiler be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting 16/21/9/43 Main Boilers 16/9/43 Auxiliary Boilers Donkey Boilers  
(If not state date of approval)  
uperheaters General Pumping Arrangements Oil fuel Burning Piping Arrangements

## SPARE GEAR.

as the spare gear required by the Rules been supplied yes  
ate the principal additional spare gear supplied

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

(Sd. J. H. Geames)

J. H. Geames  
GENERAL MANAGER

Manufacturer.



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Lloyd's Register  
Foundation

005167-005173-0079



1944. Oct 16. Nov 16. 18. 1945 January 10. 12. March 19. 22. 23. 28. 30. April 4. 5. 6. 9. 10. 11. 13. 18. 19. 23. 25. 26. 27. 30. May 2. 4. 7. 10. 11. 14. 17. 23. 24. 28. 30. June 16. 18. 20. 25. 1945. April 5. May 24. 28. June 8. 27. July 3. 4. 6. 7.

Dates of Survey while building

During erection on board vessel

Total No. of visits 49

Dates of Examination of principal parts—Cylinders 18-11-44 - 11-5-45. Slides 11-5-45. Covers 11-5-45

Pistons 11-5-45. Piston Rods 11-5-45. Connecting rods 11-5-45.

Crank shaft 9-4-45 - 27-4-45. Thrust shaft 22-3-45 - 27-4-45. Intermediate shafts 18-5-45 -

Tube shaft 19-3-45 - 25-4-45. Propeller 25-4-45

Stern tube 25-4-45. Engine and boiler seatings 10-5-45. Engines holding down bolts 8-6-45

Completion of fitting sea connections 5-4-45.

Completion of pumping arrangements 4-7-45. Boilers fixed 8-6-45. Engines tried under steam 8-7-45.

Main boiler safety valves adjusted 3-7-45. Thickness of adjusting washers 2 1/2" 3 1/2" 3 1/2" 3 1/2"

Crank shaft material Ingot steel Identification Mark M4385CP Thrust shaft material Ingot steel Identification Mark M4371C

Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark

Screw shaft, material Ingot steel Identification Mark M4372CP Steam Pipes, material SD steel Test pressure 600 lbs Date of Test 10-5-45

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 CAICOS RPT. NO. 18650.

General Remarks (State quality of workmanship, opinions as to class, &c. See main and auxiliary machinery 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 Book of L.M.C. 7-45 2SB (SH) F.D. CL.

The amount of Entry Fee	£ 4 : 0 :	When applied for,
Special	£ 67 : 3 :	18/7/1945
Donkey Boiler Fee	£ 16 : 16 :	When received,
Travelling Expenses (if any)	£ :	19

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

Committee's Minute  
Assigned + LMC 7.45 Sph.  
F.D. C.L. machy aft.