

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 15/5/43 19 When handed in at Local Office 15/5/43 19 Port of NEWCASTLE-ON-TYNE  
 No. in Survey held at Wallaseid Date, First Survey 28.5.1942 Last Survey 24-3-1943  
 Reg. Book (Number of Visits 51)  
 on the S.S. "EMPIRE FRIENDSHIP" Tons {Gross  
 Net  
 Built at Sunderland By whom built Short Bros Ltd. Yard No. 475 When built 1943  
 Engines made at Wallaseid By whom made N.E. Marine Engls (1938) Ltd Engine No. 3049 When made 1943  
 Boilers made at " By whom made " Boiler No. 3049 When made 1943  
 Registered Horse Power Owners Ministry of War Transport Port belonging to Sunderland  
 Nom. Horse Power as per Rule 510 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes  
 Trade for which vessel is intended becau going

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute  
 Dia. of Cylinders 24 1/2 - 39 - 70 Length of Stroke 48 No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule 13.98 Crank pin dia. 14 3/4 Mid. length breadth 22 Thickness parallel to axis 9  
 as fitted 14 1/4 Crank webs Mid. length thickness 9 shrunk Thickness around eye-hole 6 1/2  
 Intermediate Shafts, diameter as per Rule 13.32 Thrust shaft, diameter at collars as per Rule 13.98  
 as fitted 13 5/8 as fitted 14 1/4  
 Tube Shafts, diameter as per Rule 14.82 Screw Shaft, diameter as per Rule 15 1/4 Is the tube shaft fitted with a continuous liner {yes  
 as fitted ✓ as fitted ✓  
 Bronze Liners, thickness in way of bushes as per Rule .75 Thickness between bushes as per Rule .585 Is the after end of the liner made watertight in the  
 as fitted 13 1/16 as fitted 2 1/32 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  
 at no If so, state type ✓ Length of Bearing in Stern Bush next to and supporting propeller 5 1/2  
 Propeller, dia. 17.10 1/2 Pitch 15.6 No. of Blades 4 Material C.I. whether Moveable no Total Developed Surface 114 3/4 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 27" Can one be overhauled while the other is at work yes  
 Feed {No. and size 2 2 7 x 9 1/2 x 21 12 9 1/2 x 7 x 21 Pumps connected to the {No. and size 12 10 1/2 x 13 x 24 12 9 1/2 x 7 x 21 2 2 4 x 27"  
 Pumps {How driven Steam Main Bilge Line {How driven Steam M.F.P.  
 Ballast Pumps, No. and size 12 10 1/2 x 13 x 24 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 2 2 3" Eng Rm. 2 2 3" Stokehold  
 In Pump Room 3" P+S in each hold.  
2 1/2" tunnel well  
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 12 9" Independent Power Pump Direct Suctions to the Engine Room Bilges,  
 No. and size 12 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 yes 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 below  
 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 for Bilge Suctions How are they protected lumber boards  
 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 7248 sq. ft.  
 Which Boilers are fitted with Forced Draft yes Which Boilers are fitted with Superheaters all  
 No. and Description of Boilers 3SB. Working Pressure 220  
 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 Standard B Similar  
 PLANS. Are approved plans forwarded herewith for Shafting type Main Boilers 11.10.41 Auxiliary Boilers ✓ Donkey Boilers ✓  
 (If not state date of approval)  
 Superheaters Standard General Pumping Arrangements 1.10.42 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

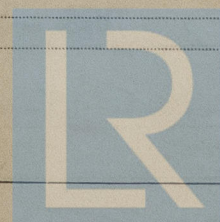
The foregoing is a correct description.

THE NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.

John Neill

DIRECTOR

Manufacturer.



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Dates of Examination of principal parts—Cylinders	27. 11. 42	Slides	26. 1. 43	Covers	27. 11. 42
Pistons	26. 1. 43	Piston Rods	26. 1. 43	Connecting rods	26. 1. 43
Crank shaft	9. 12. 42	Thrust shaft	9. 12. 42	Intermediate shafts	26. 11. 42. 9. 12. 42
Tube shaft	✓	Screw shaft	26. 1. 43	Propeller	26. 1. 43
Stern tube	8. 1. 43. 1. 2. 43	Engine and boiler seatings	10. 3. 43	Engines holding down bolts	10. 3. 43
Completion of fitting sea connections	18. 2. 43				

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 ☒ *no*

Is this machinery duplicate of a previous case ☒ *yes* If so, state name of vessel *"Empire Envoy."*

General Remarks (State quality of workmanship, opinions as to class, &c.. The machinery has been constructed & installed under Special Survey in accordance with the Requirements of the Rules, the Approved Plans & the Specification. The materials & workmanship are good & the machinery proved satisfactory under working conditions at the quay. The machinery is eligible in my opinion to have the Record + LMC. 5-43. 38B Spt FD CL

*R. C. Moffatt*  
Engineer Surveyor to Lloyd's Register of Shipping.

Assigned ..... + LMC 5.43

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NEWCASTLE-ON-TYNE

Certificate to be sent to

The Surveyors are requested not to write on or help on the notice for Committee's Meeting.

Form 439—Convexable Ink. (MADE AND PRINTED IN ENGLAND)