

28 DEC 1943

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

RECEIVED  
20 DEC 1943

Date of writing Report 20 DEC 1943

When handed in at Local Office 20 DEC 1943

Received at London Office  
Port of NEWCASTLE-ON-TYNE

No. in Survey held at NEWCASTLE-ON-TYNE

Date, First Survey 18 June 1943 Last Survey 29 November 1943

on the SS "EMPIRE DUCHESS"

Tons { Gross  
Net

Built at Sunderland By whom built Short Bros. Ltd. Yard No. 478 When built 1943

Engines made at By whom made J. Dickinson & Sons Ltd Engine No. 2724 When made 1943

Boilers made at Wallsend By whom made N.E. Marine Eng Co (1938) Ltd Boiler No. 3061 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 beam going

## ENGINES, &c.—Description of Engines

See Sunderland. Revs. per minute

Dia. of Cylinders Length of Stroke No. of Cylinders No. of Cranks

Crank shaft, dia. of journals as per Rule as fitted Crank pin dia. Report No 23755

Intermediate Shafts, diameter as per Rule as fitted Thrust shaft, diameter at collars as per Rule as fitted

Tube Shafts, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 14.82 as fitted 15 1/4

Bronze Liners, thickness in way of bushes as per Rule 7.53 as fitted 13/16 Thickness between bushes as per Rule 5.65 as fitted 2 1/32

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. 2 Diameter 4" Stroke 27" Can one be overhauled while the other is at work yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 27" Can one be overhauled while the other is at work yes

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 Room 2 2 3" Blk Room

In Pump Room In Holds, &c. 3" PPS 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 forward bilges How are they protected timber 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 3) Total Heating Surface of Boilers 7248

Which Boilers are fitted with Forced Draft yes Which Boilers are fitted with Superheaters all

No. and Description of Boilers 3 SB 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

PLANS. Are approved plans forwarded herewith for Shafting Standard B Main Boilers Standard B Auxiliary Boilers Donkey Boilers

Superheaters Standard General Pumping Arrangements 9.10.41 Oil fuel Burning Piping Arrangements

## SPARE GEAR.

Has the spare gear required by the Rules been supplied yes

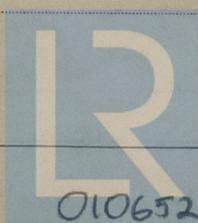
State the principal additional spare gear supplied

The foregoing is a correct description.

John Neill

Manufacturer.

DIRECTOR



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Lloyd's Register

Foundation

010652-010661-0031

During progress of work in shops {  
 1943  
 JUNE 18.21.28 JULY 19.23.26.30. AUG 7.5.12.17.18.19.23.26.27.30.31. SEPT 1.2.3.6.7.8.9.10.13.14.15.16.17.21.23.  
 During erection on board vessel - - - {  
 SEPT. 27.28. OCT. 4.18.27. NOV. 3.26.27.29.  
 Total No. of visits 43

Dates of Examination of principal parts—Cylinders ✓ Slides ✓ Covers ✓  
 Pistons ✓ Piston Rods ✓ Connecting rods ✓  
 Crank shaft ✓ Thrust shaft ✓ Intermediate shafts ✓  
 Tube shaft ✓ Screw shaft 18.8.43. Propeller 18.8.43.  
 Stern tube 9.8.43. Engine and boiler seatings 10.9.43. Engines holding down bolts 10.9.43.  
 Completion of fitting sea connections 6.8.43.  
 Completion of pumping arrangements 10.12.43. Boilers fixed 10.9.43. Engines tried under steam 23.9.43. 7.4.12.43.  
 Main boiler safety valves adjusted 10.9.43. Thickness of adjusting washers P S <sup>27/64</sup> Spt <sup>1/8</sup> C S <sup>13/32</sup> Spt <sup>7/32</sup> S S <sup>13/32</sup> Spt <sup>1/8</sup>  
 Crank shaft material ✓ Identification Mark ✓ Thrust shaft material ✓ Identification Mark ✓  
 Intermediate shafts, material ✓ Identification Marks ✓ Tube shaft, material ✓ Identification Mark ✓  
 Screw shaft, material Steel Identification Mark 1062 T.T. 18.8.43. Steam Pipes, material Steel Test pressure 660 Date of Test Various  
 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.

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been made & installed under Special Survey in accordance with the approved Plans, the Requirements of the Rules & the Specification

The materials & workmanship are good & the machinery proved satisfactory under working conditions at quay.

The machinery is eligible in my opinion to have the record  
 + LMC 12.43. 3SB Spt FD CL.

The amount of Entry Fee ... £ : :  
 3/5 Special +2.5% ... £ 75:7-6 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 21 DEC 1943  
 When received, 19

R. Moffitt.  
 Engineer Surveyor to Lloyd's Register of Shipping.

TUES. 4 JAN 1944

Committee's Minute  
 Assigned + LMC 12.43 30 CL



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