

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 13 APR 1942 - 3 JUN 1942

Date of writing Report 19 8/4/1942 When handed in at Local Office Port of NEWCASTLE-ON-TYNE,
 No. in Survey held at Wallsend, NEWCASTLE-ON-TYNE, Date, First Survey 20 Aug. 1941 Last Survey 16 March 1942
 Reg. Book. 16463 on the S/S "Empire Prince" (Number of Visits 11)
 Built at Dundee By whom built Caledon SB & Eng Co Ltd. Yard No. 394 Tons { Gross 4020 Net 4927
 Engines made at Wallsend. By whom made N.E. Marine Eng Co (1938) Ltd. Engine No. 3017 When built 1942
 Boilers made at Dundee By whom made Caledon SB & Eng Co Ltd Boiler No. 593 When made 1942
 Registered Horse Power _____ Owners The Ministry of War Transport Port belonging to Dundee
 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 Ocean-going.

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 76
 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 Crank webs Mid. length breadth 22 Thickness parallel to axis 9
 as fitted 14 1/4 Mid. length thickness 9 shrunk Thickness around eye-hole 6 3/8
 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 _____ Screw Shaft, diameter as per Rule 14.84 Is the tubo shaft fitted with a continuous liner { yes
 as fitted _____ as fitted 16 1/4 screw }
 Bronze Liners, thickness in way of bushes as per Rule .753 Thickness between bushes as per Rule .565 Is the after end of the liner made watertight in the
 as fitted .81 as fitted .65 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 yes
 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 yes
 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 5'-1"
 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. 1 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 _____
 Feed Pumps { No. and size _____ Pumps connected to the { No. and size _____
 { How driven _____ Main Bilge Line { How driven _____
 Ballast Pumps, No. and size _____ 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 _____
 In Pump Room _____ In Holds, &c. _____

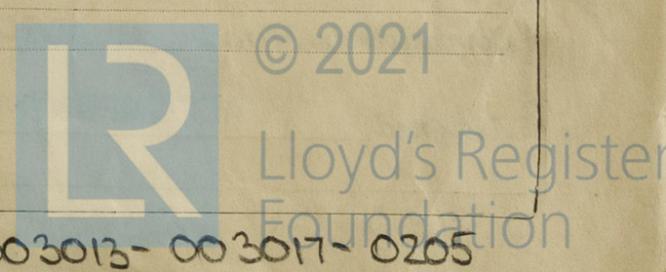
Main Water Circulating Pump Direct Bilge Suctions, No. and size _____ Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size _____ Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes _____
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges _____
 Are all Sea Connections fitted direct on the skin of the ship _____ Are they fitted with Valves or Cocks _____
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates _____ Are the Overboard Discharges above or below the deep water line _____
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel _____ Are the Blow Off Cocks fitted with a spigot and brass covering plate _____
 What Pipes pass through the bunkers _____ 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 _____
 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 _____ Is the Shaft Tunnel watertight _____ Is it fitted with a watertight door _____ worked from _____

MAIN BOILERS, &c.—(Letter for record _____) Total Heating Surface of Boilers _____
 Is Forced Draft fitted _____ No. and Description of Boilers _____ Working Pressure _____
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? _____
 IS A DONKEY BOILER FITTED? _____ If so, is a report now forwarded? _____
 Is the donkey boiler intended to be used for domestic purposes only _____
 PLANS. Are approved plans forwarded herewith for Shafting B Class vessels. Main Boilers _____ Auxiliary Boilers _____ 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 for main engines. ✓
 State the principal additional spare gear supplied _____

The foregoing is a correct description.
 THE NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.
John Nall
 DIRECTOR

Manufacturer.



1941 Aug. 20. Oct 9. 20. Nov. 14. 21. 25. 28. Dec. 23. 1942 Mar. 2. 9. 16.

Dates of Survey while building
 During progress of work in shops --
 During erection on board vessel ---
 Total No. of visits 11.

Dates of Examination of principal parts—Cylinders 25-11-41 Slides 23-12-41 Covers 25-11-41
 Pistons 23-12-41 Piston Rods 23-12-41 Connecting rods 23-12-41
 Crank shaft 3-11-41 Thrust shaft 14-11-41 Intermediate shafts 23-12-41
 Tube shaft ✓ Screw shaft 16-3-42 Propeller 28-11-41
 Stern tube 9-3-42 Engine and boiler seatings Engines holding down bolts

Completion of fitting sea connections
 Completion of pumping arrangements Boilers fixed Engines tried under steam
 Main boiler safety valves adjusted Thickness of adjusting washers
 Crank shaft material Steel Identification Mark F. 1471/2. 394. HAI. Thrust shaft material Steel Identification Mark R.M. 14-11-41
 Intermediate shafts, material Steel Identification Marks 1480/1. 2. 3. 4 & 5 HAI. Tube shaft, material ✓ Identification Mark R.M. 14-11-41
 Screw shaft, material Steel Identification Mark 1478 HAI. Steam Pipes, material Test pressure Date of Test
 Is an installation fitted for burning oil fuel 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 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 *Empire Story. NWC 100255.*

General Remarks (State quality of workmanship, opinions as to class, &c. *This engine has been made under Special Survey in accordance with the approved Plan, the Requirements of the Rules & the Specification. The Materials & Workmanship are good.*

The Engine has been forwarded to Dundee to be fitted on board Caledon S.B. & C. Co's S.S. No 394

NEWCASTLE-ON-TYNE

Certificate to be sent to

The amount of Entry Fee ... £ 6 : 0 : 0
 2/5 of Special +25% ... £ 50 : 5 : 0
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 10 APR 1942
 When received, 19

Robert J. Bell
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 2 JUN 1942

Assigned SEE ACCOMPANYING MACHINERY REPORT.

