

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

23 JUN 1941

Date of writing Report 19 When handed in at Local Office 16 June 1941 Port of **SUNDERLAND.**

No. in Survey held at **SUNDERLAND.** Date, First Survey 15<sup>th</sup> Jan. Last Survey 11<sup>th</sup> June 1941  
 Reg. Book. on the **S/S "CAPITOL"** (Number of Visits 58) Tons { Gross 1558  
 Net 885

Built at **Sunderland** By whom built **A.P. Austin & Son, Ltd** Yard No. **355** When built **1941**

Engines made at **do.** By whom made **H. E. Mannes Eng. Co. (1938) Ltd.** Engine No. **2997** When made **do.**

Boilers made at **do.** By whom made **do.** Boiler No. **do.** When made **do.**

Registered Horse Power Owners **Gas Light & Coke Co** Port belonging to **London**

Nom. Horse Power as per Rule **196** Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **yes**

Trade for which Vessel is intended **Coal**

**ENGINES, &c.**—Description of Engines **Triple Expansion** Revs. per minute

Dia. of Cylinders **16 1/2", 27 1/2", 47"** Length of Stroke **33"** No. of Cylinders **3** No. of Cranks **3**

Crank shaft, dia. of journals as per Rule **9.85"** Crank pin dia. **9 1/2"** Crank webs Mid. length breadth **5 3/4"** Thickness parallel to axis **4 3/4", 5"**  
 as fitted **9 1/2"** Mid. length thickness **shrunk** Thickness around eye-hole **4 3/4", 5"**

Intermediate Shafts, diameter as per Rule **8.75"** Thrust shaft, diameter at collars as per Rule **9.19"**  
 as fitted **8.75"** as fitted **9 1/2"**

Tube Shafts, diameter as per Rule **9.85"** Screw Shaft, diameter as per Rule **10 1/4"** Is the tube shaft fitted with a continuous liner { screw } **yes**  
 as fitted **9.85"** as fitted **10 1/4"**

Bronze Liners, thickness in way of bushes as per Rule **19/32"** Thickness between bushes as per Rule **11/32"** Is the after end of the liner made watertight in the propeller boss **yes** as fitted **5/8"** as fitted **9/16"**

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 shaft **yes** If so, state type **rubber ring** Length of Bearing in Stern Bush next to and supporting propeller **3'-5"**

Propeller, dia. **13'-2"** Pitch **13'-3"** No. of Blades **4** Material **C.I.** whether Moveable **not** Total Developed Surface **61** sq. feet

Feed Pumps worked from the Main Engines, No. **2** Diameter **2 3/4"** Stroke **16 1/2"** Can one be overhauled while the other is at work **yes**

Bilge Pumps worked from the Main Engines, No. **2** Diameter **2 3/4"** Stroke **16 1/2"** Can one be overhauled while the other is at work **yes**

Feed Pumps { No. and size **1, 6" x 4 1/4" x 6"** Pumps connected to the Main Bilge Line { No. and size **1, 9" x 11" x 10"; 1, 6" x 4 1/4" x 6"**  
 How driven **Steam** How driven **Steam** Reg. by Rules 42 Com/41

Ballast Pumps, No. and size **1, 9" 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 **Eng. Rm. 1 @ 2 1/2" dia. Boiler Rm. 1 @ 2 1/2" dia.**  
 In Pump Room **no!** In Holds, &c. **No. 1 @ 3 1/2" dia. No. 2 @ 3" dia.**

Main Water Circulating Pump Direct Bilge Suctions, No. and size **1 @ 5" dia.** Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **1 @ 4" dia. & 3" dia. Portable** Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-bozes **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 **yes**

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 **both**

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 **none** How are they protected **—**

What pipes pass through the deep tanks **none** 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 **—** Is it fitted with a watertight door **—** worked from **—**

**MAIN BOILERS, &c.**—(Letter for record **5**) Total Heating Surface of Boilers **2952** **3952** **4**

Is Forced Draft fitted **yes** No. and Description of Boilers **2 @ Cylindrical & 1 Vertical Standing** Pressure **200 lbs**

**IS A REPORT ON MAIN BOILERS NOW FORWARDED?** **yes**

**IS A DONKEY BOILER FITTED?** **yes** If so, is a report now forwarded? **yes**

Is the donkey boiler intended to be used for domestic purposes only **no**

**PLANS.** Are approved plans forwarded herewith for Shafting **—** Main Boilers **yes** Auxiliary Boilers **—** Donkey Boilers **yes**  
 (If not state date of approval)

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 **—**

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

*Bill Sambost*  
 RESIDENT MANAGER.

Manufacturer.



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Lloyd's Register  
 Foundation

003191-003199-0157

Dates of Survey while building  
 During progress of work in shops - - 1941: Jan 15, 21, 23, 24, 25, 27, 28, 31, Feb. 1, 2, 4, 11, 18, 19, 20, 24, 25, 26, 28, Mar. 3, 5, 6, 7, 8, 10, 12, 15, 17, 18, 20, 24, 25, 26, 28, Apr. 1, 4, 7, 11, 15, 16, 18, 22, 24, 29, 30, May 1, 2, 3, 8, 10, 14, 15, 21, 22, 27, 30, June 11  
 During erection on board vessel - - -  
 Total No. of visits 58

Dates of Examination of principal parts—Cylinders 8, 18, 24 / 3 / 41 Slides 15 / 4 / 41 Covers 8, 18, 24 / 3 / 41  
 Pistons 26 / 3 / 41 Piston Rods 26 / 3 / 41 Connecting rods 17 / 3 / 41  
 Crank shaft 20 / 3 / 41 Thrust shaft 1 / 4 / 41 Intermediate shafts —  
 Tube shaft — Screw shaft 16 / 4 / 41 Propeller 16 / 4 / 41  
 Stern tube 22 / 4 / 41 Engine and boiler seatings 11 / 4 / 41 Engines holding down bolts 21 / 5 / 41  
 Completion of fitting sea connections 22 / 4 / 41  
 Completion of pumping arrangements 30 / 5 / 41 Boilers fixed 2 / 5 / 41 Engines tried under steam 22 / 5 / 41  
 Main boiler safety valves adjusted 22 / 5 / 41 Thickness of adjusting washers 15 / 32 "  
 Crank shaft material *Steel* Identification Mark 4205 Thrust shaft material *Steel* Identification Mark 4627  
 Intermediate shafts, material — Identification Marks — Tube shaft, material — Identification Mark —  
 Screw shaft, material *Steel* Identification Mark 4628 Steam Pipes, material *Steel* Test pressure 600 lb Date of Test 24 / 3 / 41  
 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 *not required*  
 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 machinery of this vessel has been constructed under special survey in accordance with the approved plans, Secretary's letters and the requirements of the Rules. Workmanship and materials are good. The machinery has been efficiently fitted in brass and tried under working conditions with satisfactory results and is eligible, in my opinion, for the*

NOTATION + L.M.C. 6.41, C.L., I.S.B. 200 lb, D.B. 100 lb.

*L.R. Home*

The amount of Entry Fee ... £ 3 : - : When applied for,  
 Special ... £ 49 : - : 16 JUN 1941  
 Donkey Boiler Fee ... £ : : When received,  
 Travelling Expenses (if any) £ : : 19

FRI, 4 JUL 1941

Committee's Minute  
 Assigned *+ d.m.b. 6.41*  
*32, Cd.*

Engineer Surveyor to Lloyd's Register of Shipping.



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