

REPORT ON OIL ENGINE MACHINERY.

No. 94702

17 FEB 1937

15/21, 37 Port of

Received at London Office
NEWCASTLE-ON-TYNE

Date of writing Report 19... When handed in at Local Office

No. in Survey held at **NEWCASTLE - ON - TYNE** Date, First Survey **28th. Oct. 36** Last Survey **9th. FEB. 1937**
Reg. Book. (5002) **88580** on the **Single** Screw vessel **HULLGATE** Number of Visits **20**

Built at **NEWCASTLE** By whom built **CLELAND'S (SUCCESSORS) LTD.** Yard No. **35** When built **1937.**
Engines made at **COLOGNE** By whom made **HUMBOLDT DEUTZ MOTOREN A.G.** Engine No. **382105/110** When made **1936**
Donkey Boilers made at By whom made Boiler No. When made
Brake Horse Power **350** Owners **HULL GATES SHIPPING CO.** Port belonging to **HULL.**
Nom. Horse Power as per Rule **70** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **YES.**
Trade for which vessel is intended **COASTING.**

OIL ENGINES, &c.—Type of Engines **HEAVY OIL ENGINE** 2 or 4 stroke cycle **4** Single or double acting **SINGLE**
Maximum pressure in cylinders **50 kg/cm²** Diameter of cylinders **280 mm** Length of stroke **450 mm** of cylinders **6** No. of cranks **6**
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge **307.5 mm** Is there a bearing between each crank **YES.**
Revolutions per minute **350** Flywheel dia. **1250 mm** Weight **2600 kg.** Means of ignition **SOLID INJ.** Kind of fuel used **DIESEL OIL**
Crank Shaft, dia. of journals as per Rule **190 mm** Crank pin dia. **170 mm** Crank Webs Mid. length breadth **325 mm** Thickness parallel to axis
Flywheel Shaft, diameter as per Rule **190 mm** Intermediate Shafts, diameter as per Rule **4 3/8"** Thrust Shaft, diameter at collars as per Rule **140 mm.**
Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule **5 3/8"** Is the tube shaft fitted with a continuous liner **No.**
Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per rule Is the after end of the liner made watertight in the propeller boss

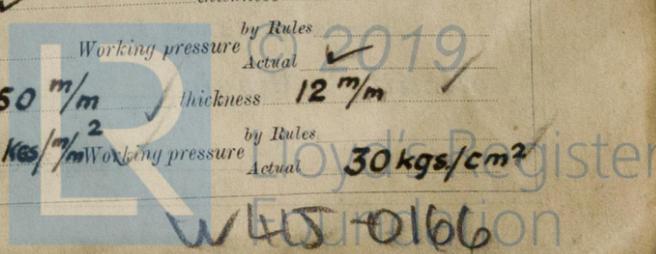
If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive
If two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft **YES** If so, state type **AS PER APPROVED PLAN.** Length of Bearing in Stern Bush next to and supporting propeller **21.5"**
Propeller, dia. **5'-9 3/16"** Pitch **3'-6 3/8"** No. of blades **4** Material **BRONZE** whether Moveable **FIXED** Total Developed Surface **11.85** sq. feet
Method of reversing Engines **DIRECT** Is a governor or other arrangement fitted to prevent racing of the engine when de-stroked **YES** Means of lubrication **FORCED.** Thickness of cylinder liners **25 mm** Are the cylinders fitted with safety valves **YES** Are the exhaust pipes and silencers water cooled or lagged with non-conducting material **LAGGED.** If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine
Cooling Water Pumps, No. **ONE** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **YES**

What special arrangements are made for dealing with cooling water if discharged into bilges **ALL COOLING WATER DISCHARGED OVERBOARD.**
Bilge Pumps worked from the Main Engines, No. **1** Diameter **100 mm** Stroke **85 mm** Can one be overhauled while the other is at work
Pumps connected to the Main Bilge Line No. and Size **ONE x 100 x 85 mm** How driven **MAIN ENGINE** **ONE 2 1/2" ROTARY BILGE PUMP** **ONE 3" ROTARY BALL VALVE**
Ballast Pumps, No. and size **ONE 3" ROTARY** Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size **1 GEAR PUMP. 1 SPARE.**
Are two independent means arranged for circulating water through the Oil Cooler **YES.** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces **2 x 2" DIA** **2 x 2 1/2" DIA. (DIRECT)** In Pump Room
In Holds, &c. **2 x 2 1/2" DIA.** Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **1 x 2 1/2" DIA. AFT.** **1 x 2 1/2" DIA. FORW.**

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes **YES.** Are the Bilge Suctions in the Machinery Spaces 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 platform 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
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 **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
If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork
Main Air Compressors, No. **ONE** No. of stages **TWO** Diameters **145 & 60 mm** Stroke **85 mm** Driven by **MAIN ENGINE**
Auxiliary Air Compressors, No. **ONE** No. of stages **ONE** Diameters **3 1/4"** Stroke **3 1/4"** Driven by **STAR² AUX. ENG.**
Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by
Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule **3 CYL. 2 3/8" DIA.** **1 CYL. 2 3/8" DIA** Position **3 CYL.: PORT. 1 CYL.: STARBOARD.**
AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Is a drain fitted at the lowest part of each receiver
Can the internal surfaces of the receivers be examined and cleaned
High Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness
Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules Actual
Starting Air Receivers, No. **TWO** Total cubic capacity **1000 LITRES** Internal diameter **450 mm** thickness **12 mm**
Seamless, lap welded or riveted longitudinal joint **LAP WELDED** Material **S.M. ST.** Range of tensile strength **38.4 kg/cm²** Working pressure by Rules Actual



IS A DONKEY BOILER FITTED? **No.** ✓

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 **7-9-36**
(If not, state date of approval)

Receivers **DÜSSELDORF CERT. HEREWITH.** Separate Tanks **9-12-36.**

Donkey Boilers ✓ General Pumping Arrangements **2-9-36** Oil Fuel Burning 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.

FOR AND ON BEHALF OF
CLELANDS (SUCCESSORS) LIMITED
David J. as

Manufacturer.

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

✓ 1936. Oct. 28, 29, Nov. 12, 16, 18, 19, 23, 28, Dec. 1, 2, 4, 11, 18, 1937 Jan. 8, 20, 25, 27, 29, Feb. 9.
20.

Dates of Examination of principal parts—Cylinders ✓ Covers ✓ Pistons ✓ Rods ✓ Connecting rods ✓

Crank shaft ✓ Flywheel shaft **4-12-36** Thrust shaft **4-12-36** Intermediate shafts **4-12-36** Tube shaft ✓

Screw shaft **29-10-36** Propeller **2-12-36** Stern tube **19-11-36** Engine seatings **4-12-36** Engines holding down bolts **26-1-37**

Completion of fitting sea connections **4-12-36** Completion of pumping arrangements **27-1-37** Engines tried under working conditions **31-1-37**

Crank shaft, Material **S.M. ST.** Identification Mark **K.H. 14-5-36** Flywheel shaft, Material **S.M. ST.** Identification Mark **K.H. 16-4-36**

Thrust shaft, Material **S.M. ST.** Identification Mark **Nº 181 H.R. 16-5-36** Intermediate shafts, Material **S.M. ST.** Identification Marks **Nº 709 WK. 17 G.D. 4-12-36**

Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material **S.M. ST.** Identification Mark **Nº 709 WK. 17 L.P. 29-10-36**

Is the flash point of the oil to be used over 150° F. **YES.** ✓

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with **YES.** ✓

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 **MY "CONIDA" (GOOLE YARD Nº 311)**

General Remarks (State quality of workmanship, opinions as to class, &c. **THE MACHINERY OF THIS VESSEL HAS BEEN BUILT UNDER SPECIAL SURVEY - SEE DÜSSELDORF REPORT Nº 136 RETURNED HEREWITH. - AND HAS NOW BEEN INSTALLED ON BOARD IN ACCORDANCE WITH THE SOCIETY'S RULES AND THE APPROVED PLANS. THE WORKMANSHIP AND MATERIALS ARE GOOD. THE MACHINERY HAS BEEN SATISFACTORILY TESTED UNDER WORKING CONDITIONS.**

THE MACHINERY OF THIS VESSEL IS ELIGIBLE IN OUR OPINION TO BE CLASSED AND TO HAVE THE RECORD *LMC 2-37 AND TS. [OG.] 2-37 IN THE REGISTER BOOK.

The amount of Entry Fee } £ : :
Special ... } £ **3 18** : :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for **15 FEB 1937**
When received **7-5 37 8/5**

Grinnon FOR **H.R. RIDDELL, L. PESKETT & SELF.**
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI 12 MAR 1937**

Assigned **+ Linc 2-37 oil in OG.**

