

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 19 When handed in at Local Office 16 APR 1937 Port of SUNDERLAND

No. in Survey held at SUNDERLAND. Date, First Survey 28 Jan 36 Last Survey 13 Apr 1937  
Reg. Book on the FULHAM III Tons Gross Net

Built at Burntisland By whom built Burntisland S.B. Co. Yard No. 195 When built 1937

Engines made at Sunderland By whom made N. S. Marine Eng. Co. Ltd Engine No. 2831 When made 1937

Boilers made at Sunderland By whom made N. S. Marine Eng. Co. Ltd Boiler No. 2831 When made 1937

Registered Horse Power Owners Fulham Borough Council Port belonging to

Nom. Horse Power as per Rule 185 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 *82*

Dia. of Cylinders *16 1/2", 27 1/2", 46"* Length of Stroke *33"* No. of Cylinders *3* No. of Cranks *3*

Crank shaft, dia. of journals as per Rule *apptd.* Crank pin dia. *9 1/2"* Crank webs Mid. length breadth *5 1/2"* Thickness parallel to axis *5 3/4"*

Intermediate Shafts, diameter as per Rule *apptd.* Thrust shaft, diameter at collars as per Rule *apptd.* Thickness around eye-hole *5" journal*

Tube Shafts, diameter as per Rule *apptd.* Screw Shaft, diameter as per Rule *10 3/4"* Is the *tube* shaft fitted with a continuous liner *no*

Bronze Liners, thickness in way of bushes as per Rule *apptd.* Thickness between bushes as per Rule *apptd.* Is the after end of the liner made watertight in the 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 *yes*

Propeller, dia. *13'-6"* Pitch *variable* No. of Blades *4* Material *Bronze* whether Moveable *not* Total Developed Surface *58* sq. feet

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

Feed Pumps { No. and size *one, 4" x 2 3/4" x 5"* Pumps connected to the { No. and size *Two, 9" x 10" x 10"*  
How driven *one, steam* Main Bilge Line How driven *Steam*

Ballast Pumps, No. and size *Two, 9" x 10" x 10"* Lubricating Oil Pumps, including Spare Pump, No. and size *yes*

Are two independent means arranged for circulating water through the Oil Cooler *yes* Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room *one, 2 1/2" dia Engine Room, one, 2 1/2" dia Boiler Room*

In Pump Room *yes* In Holds, &c. *one, 3 1/2" dia. no. 1; Two, 3" no. 2.*

Main Water Circulating Pump Direct Bilge Suctions, No. and size *one, 7" dia.* Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *one, 4" dia.* 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 (see apptd. plan)* 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 *above*

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 *yes* Is it fitted with a watertight door *yes* worked from *yes*

MAIN BOILERS, &c. — (Letter for record *yes*) Total Heating Surface of Boilers *2750 sq ft*

Is Forced Draft fitted *yes* No. and Description of Boilers *one, cylindrical multibled* Working 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 *15/6/35* Main Boilers *1/8/35* Auxiliary Boilers *yes* Donkey Boilers *yes*

(If not state date of approval)

Superheaters *yes* General Pumping Arrangements *See survey report* Oil fuel Burning Piping Arrangements *yes*

### SPARE GEAR.

Has the spare gear required by the Rules been supplied *yes*

State the principal additional spare gear supplied *one cast iron propeller to serve for contract nos 2829, 2830 & 2831. one set air pump valves. 12 plain boiler tubes. 24 condenser tubes. one set feed donkey valves. one set exhaust donkey valves. one pair bottom ends. 2 valve lids for main and auxiliary valves.*

The foregoing is a correct description FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD

Archd. J. Berry. MANAGER

Manufacturer.



Dates of Survey while building  
 During progress of work in shops -- 1936 Jan. 28, 29, Feb. 5, 28, Mch. 2, Sep. 22, 23, 24, 29, Oct. 2, 13, 15, 29, Nov. 27, 30.  
 Dec. 2, 7, 9, 10, 14, 17, 18, 29, 30, 31, 1937, Jan. 4, 5, 8, 11, 14, 15, 18, 21, 25, 27, 29, Feb. 1, 2, 3, 4, 8, 12, 14, 17, 18, 19, 25, 26, Mch. 1, 12, 17, 24, 25, 31, Apl. 2, 6, 13  
 Total No. of visits 57

Dates of Examination of principal parts—Cylinders 8/11/37 Slides 4/2/37 Covers 12/2/37  
 Pistons 5/1/37 Piston Rods 1/2/37 Connecting rods 1/2/37  
 Crank shaft 15/1/37 Thrust shaft 15/1/37 Intermediate shafts ✓  
 Tube shaft ✓ Screw shaft 26/2/37 Propeller 26/2/37  
 Stern tube 29 26/2/37 Engine and boiler seatings Engines holding down bolts 2/4/37  
 Completion of fitting sea connections *plans in Surveyor's Report*  
 Completion of pumping arrangements 6/4/37 Boilers fixed 3/3/37 Engines tried under steam 6/4/37  
 Main boiler safety valves adjusted 6/4/37 Thickness of adjusting washers 7/16" Port, 13/32" Starboard  
 Crank shaft material *stul* Identification Mark 8306. Thrust shaft material *stul* Identification Mark 8609  
 Intermediate shafts, material — Identification Marks — Tube shaft, material — Identification Mark —  
 Screw shaft, material *stul* Identification Mark 8609 Steam Pipes, material *stul* Test pressure 600lbs Date of Test 24/3/37  
 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 "FULHAM II" & "FULHAM"  
 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. The machinery has been efficiently fitted on board and tried under working conditions with satisfactory results and is, in my opinion, eligible for the

NOTATION + L.M.C. 4.37. O.G.

*L.R. Home*

SUNDERLAND.

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

The amount of Entry Fee ... £ 3 : : When applied for,  
 Special ... £ 46 : 5 : 16 APR 1937  
 Donkey Boiler Fee ... £ : : When received,  
 Travelling Expenses (if any) £ : : 20.4.37 21/4

Engineer Surveyor to Lloyd's Register of Shipping.

FRI 30 APR 1937

Committee's Minute  
 Assigned *+ d.m.b. 4.37*  
*22, 109.*

