

REPORT ON OIL ENGINE MACHINERY.

No. 24366

Received at London Office 12 APR 1951

Date of writing Report 26th MARCH 1951 When handed in at Local Office 27th MARCH 1951 Port of GREENOCK

No. in Reg. Book Survey held at GREENOCK Date, First Survey 29th AUGUST 1949 Last Survey 12th MARCH 1951 Number of Visits 96

Single on the Twin Triple Quadruple Screw vessel **BRITISH PREMIER TANKER** Tons Gross 7526.41 Net 4976.52

built at **PORT GLASGOW** By whom built **LITHGOWS L^o** Yard No. 1052 When built 1951

engines made at **GREENOCK** By whom made **JOHN G. KINCAID & CO L^o** Engine No. K211 When made 1951

Ranking Boilers made at **du** By whom made **du** Boiler No. K211 When made 1951

Indicated Horse Power **SERVICE 3200 & 1150 MAX 3520 & 1194** Owners **BRITISH TANKER CO L^o** Port belonging to

V. Power as per Rule **625** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **Yes**

Use for which vessel is intended **NHP = 489 OPEN SEA SERVICE**

ENGINES, &c. — Type of Engines **DIESEL (UNDERPISTON SUP^{er})** 2 or 4 stroke cycle **4** Single or double acting **S**

Maximum pressure in cylinders **650 lb/sq in** Diameter of cylinders **29 1/2** Length of stroke **15 1/2** No. of cylinders **6** No. of cranks **6**

Mean Indicated Pressure **115 lb/sq in** Ahead Firing Order in Cylinders **1.5.6.2.3.4** Span of bearings, adjacent to the crank, measured from inner edge to inner edge **985** Is there a bearing between each crank **Yes** Revolutions per minute **115**

Wheel dia. **2489** Weight **2499 Kgs** Moment of inertia of flywheel **23.33.10** Means of ignition **Compression** Kind of fuel used **DIESEL HEAVY**

Crank pin dia. **505** Crank webs Mid. length breadth **980** Thickness parallel to axis **310**

Intermediate Shafts, diameter **17** Thrust Shaft, diameter at collars **454.7**

Screw Shaft, diameter **16** Is the shaft fitted with a continuous liner **Yes**

Thickness of cylinder liners, thickness in way of bushes **13/16** Thickness between bushes **13/16** Is the after end of the liner made watertight in the guller 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 **One** Is an approved Oil Gland or other appliance fitted at the after end of tube shaft **No**

If so, state type **None** Length of bearing in Stern Bush next to and supporting propeller **5.4**

Propeller, dia. **16.0** Pitch **10.9** No. of blades **4** Material **Brass** whether moveable **No** Total developed surface **88** sq. feet

Moment of inertia of propeller **106.2** Kind of damper, if fitted **None**

Method of reversing Engines **Direct** Is a governor or other arrangement fitted to prevent racing of the engine when decelerated **Yes** Means of lubrication **Forced**

Thickness of cylinder liners **53/64** Are the cylinders fitted with safety valves **Yes** Are the exhaust pipes and silencers water cooled **Yes**

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned to the engine **Lagged**

Cooling Water Pumps, No. **2** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **Yes**

Pumps worked from the Main Engines, No. **None** Diameter **170** Stroke **100** Can one be overhauled while the other is at work **Yes**

Pumps connected to the Main Bilge Line (No. and size **One 170 lpm/hr Two 100 lpm/hr**) How driven **Steam**

Is cooling water led to the bilges **No** If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements

Oil Pumps, No. and size **One 170 lpm/hr** Power Driven Lubricating Oil Pumps, including spare pump, No. and size **2 170 lpm/hr 100 lpm/hr ea.**

Two independent means arranged for circulating water through the Oil Cooler **Yes** Suctions, connected to both main bilge pumps and auxiliary pumps, No. and size:—In machinery spaces **Three 3 1/2** In pump room **Two 2 1/2**

Oil Cooled, &c. **Two 2 1/2**

Independent Power Pump Direct Suctions to the engine room bilges, No. and size **Two 6**

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes **Yes** Are the bilge suction pipes 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 permanently 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 **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**

Are the pipes pass through the bunkers **Yes** How are they protected

Are the pipes pass through the deep tanks **Yes** Have they been tested as per Rule **Yes**

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 **None** Is it fitted with a watertight door **Yes** worked from

On 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. **1** No. of stages **1** diameters **10** stroke **10** driven by **Steam**

Auxiliary Air Compressors, No. **Two** No. of stages **Two** diameters **9 1/2 - 4** stroke **7 1/2** driven by **Steam Eng.**

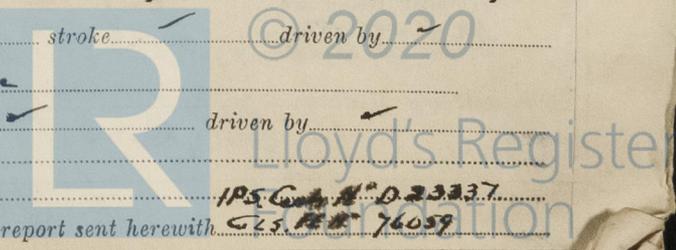
Small Auxiliary Air Compressors, No. **1** No. of stages **1** diameters **4** stroke **4** driven by **Steam**

What provision is made for first charging the air receivers **Steam compressor as above**

Scavenging Air Pumps, No. **None** diameter **10** stroke **10** driven by **Steam**

Auxiliary Engines crank shafts, diameter **10** as per Rule **10** as fitted **10** Position **195**

Have the auxiliary engines been constructed under special survey **Yes** Is a report sent herewith **Yes**



004230-004237-0192

AIR RECEIVERS:—Have they been made under survey Yes State No. of report or certificate C 3587 A 2 B
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule Relief valve in supply line
 Can the internal surfaces of the receivers be examined and cleaned Yes Is a drain fitted at the lowest part of each receiver Yes
 Injection Air Receivers, No. None Cubic capacity of each ✓ Internal diameter ✓ thickness ✓
 Seamless, welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules
 Starting Air Receivers, No. Two Total cubic capacity 900 cu ft Internal diameter 6'-0 1/8" - 5'-10 1/4" thickness 3/32 - 15/16"
 Seamless, welded or riveted longitudinal joint riveted Material SMS Range of tensile strength 29/33 tons Working pressure by Rules 357
 Actual 356

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 20/8/48 Receivers 9/3/48 Separate fuel tanks 2/1/48
 (If not, state date of approval)
 Donkey boilers 26/2/48 General pumping arrangements 7/2/50 Pumping arrangements in machinery space 1/9/49
 Oil fuel burning arrangements 11/8/49
 Have Torsional Vibration characteristics been approved Yes for 115 rpm Date of approval 20/5/48

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes
 State the principal additional spare gear supplied
Screw Shaft 110405 19209 F16328 CHH 27/11/50
C. I. propeller

For **JOHN G. KINCAID & COY., LIMITED.**

The foregoing is a correct description,
J. G. Kincaid Manufacturer.
 Chief Draughtsman.

Dates of Survey while building
 During progress of work in shops - (1949) AUG. 29. OCT. 12. NOV. 30. DEC. 22. (1950) FEB. 15. MAR. 1. 3. 16. 21. APR. 4. MAY 1. 19. 24. 25. 26. 31. JUNE 4. 9. 16. 19. 21. 22. 23. 26. 30. JULY 17. 21. 28. 31. AUG. 1. 3. 8. 15. 16. 17. 21. SEPT. 7. 15. 19. 21. 25. 27. 29. OCT. 3. 6. 9. 12. 20. 30. 31. NOV. 3. 7. 9. 10. 13. 20. 21. 23. 27. 28. DEC. 1. 4. 7. 8. 11. 19. 20. 26. 28. 29. (1951) JAN. 2. 8. 15. 17. 23. 25. 29. FEB. 2. 5. 6. 7. 8. 9. 12. 13. 14. 15. 16. 26. MAR. 1. 7. 10. 12.
 Total No. of visits 96

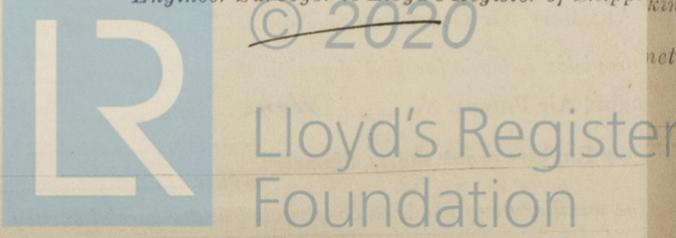
Dates of examination of principal parts—Cylinders 21/7/50 Covers 21/7/50 Pistons 7-12-50 Rods 4-12-50 Connecting rods 4-12-50
 Crank shaft 4-12-50 Flywheel shaft ✓ Thrust shaft 4-12-50 Intermediate shafts 1-12-50 Tube shaft ✓
 Screw shaft 13-11-50 Propeller 13-11-50 Stern tube 31-7-50 Engine seatings 4-12-50 Engine holding down bolts 9-2-50
 Completion of fitting sea connections 7-3-51 Completion of pumping arrangements 12-3-51 Engines tried under working conditions 12-3-51
 Crank shaft, material SMS Identification mark 19204 CHH 1/2 Flywheel shaft, material ✓ Identification mark 110405
 Thrust shaft, material SMS Identification mark 19204 CHH 1/2 Intermediate shafts, material SMS Identification marks 19204 CHH 1/2
 Tube shaft, material ✓ Identification mark ✓ Screw shaft, material SMS Identification mark 19204 CHH 1/2
 Identification marks on air receivers N° C 3587 A 2 B
584 44 TP CHH. 23/7/50
356 44 TP

Welded receivers, state Makers' Name ✓
 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
 Description of fire extinguishing apparatus fitted Steam under boiler, of Furness & Co. 10-2 gal portable & 1-10 gal with hose
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo Oil Tanker 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 BRITISH PEER GRF FN 24192

General Remarks (State quality of workmanship, opinions as to class, &c.)
This machinery has been constructed under special survey in accordance with the Rules and approved plans. The materials & workmanship are sound & good.
The engine & boiler have been efficiently installed in the vessel & tested on a sea trial under full working conditions with satisfactory results. The installation is eligible in my opinion to be classed in the Society's Register books with Record + LMC 3-51 & Notation Screw shaft (CL. 2 DBs 150 lbs) "FD fitted for oil fuel FP above 150°F.
Certificates & forging reports common to this engine, K208 & K209 already reported and K213 to follow will be forwarded on completion of the contract.

The amount of Entry Fee ... £ 200 : ✓
 Special ... £ :
 Donkey Boiler Fee... £ 59 : 10
 Air Reservoirs 16 : 0
 Travelling Expenses (if any) £ :
 When applied for 27th MARCH 1951.
 When received 19

Charles J. Hunter
 Engineer Surveyor to Lloyd's Register of Shipping



Committee's Minute
 Assigned -1- June 3.51 Oil Eng.
2 DB 150 lb

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