

# Report of Survey for Repairs, &c., of Engines and Boilers.

(Received at London Office 2 - APR 1949)

Date of writing Report Feb. 28 19 49 When handed in at Local Office Mar. 1 19 49 Port of NEW YORK

No. in Survey held at New York Date, First Survey Oct. 11 Last Survey Feb. 26 19 49

Book on the Machinery of the ~~Wooden~~ Steel TW. SC. M. V. "LUCIA" (ex LST 319) (No. of Visits 24)

Year. Month. 1943 4

Gross Vessel built at Philadelphia By whom Philadelphia Navy Yard When 1943 4

Net Engines made at Cleveland By whom General Motors Corp. When

Boilers, when made (Main) (Donkey) 1942

Owners Shell Caribbean Petroleum Co. Owners' Address (if not already recorded in Appendix to Register Book.)

Managers Port Maracaibo Voyage

If Surveyed Afloat or in Dry Dock Both Particulars of Classification (which must be inserted precisely as in Register Book & Supplements.)

(State name of Dock.) Todd Shipyards Corp.

Port Brooklyn, N.Y.

## Particulars of Examination and Repairs (if any)

Periodical Surveys, when held, must be reported in detail and seriatim in the terms of the Rules. State clearly the use of Repairs, if any, and, in detail, the nature and extent of Examinations and subsequent Repairs. Repairs on account of Damage (the cause of which must be stated) should be separated from Repairs due to other causes; and sides being detailed in the body of the report, should be briefly summarised at the end of the report. State also the dates and initials of any letters respecting this case.

Damage cases where the Surveyor has not made a special damage report he is required to state whether he offered his services for this purpose, and why they were declined

Is a damage report made by anyone else? If so, by whom?

Did the Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? Yes

Did the Surveyor personally go inside each Donkey Boiler separately and make a thorough examination at this time? Yes

Was the examination of the Donkey Boilers not done, state for what reasons?

What parts of the Boilers could not be thus thoroughly examined?

What special means, in the absence of internal examination, were adopted by the Surveyor to assure himself of the thorough efficiency of those parts of each Boiler?

Latest date of internal examination of each boiler Jan. 11, 1949 Present condition of funnel(s) Good

Did the Surveyor examine the Safety Valves of the Main Boiler? To what pressure were they afterwards adjusted under steam?

Did the Surveyor examine the Safety Valves of Donkey Boiler? Yes To what pressure were they afterwards adjusted under steam? 50

Did the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? Yes and of the Donkey Boilers? Yes

Did the Surveyor examine the drain plugs of the Main Boilers? and of the Donkey Boilers?

Did the Surveyor examine all the mountings of the Main Boilers? Yes and of the Donkey Boilers? Yes

Has the screw shaft now been drawn and examined? Yes Is it fitted with continuous liner? No Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated?

Has the shaft now been changed? Yes If so, state reasons Shafts pitted in way of bushings.

Has the shaft now fitted been previously used? No Has it a continuous liner? No Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated?

Latest date of examination of Screw Shaft 1-17-49 State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft. Close

Engine parts, when referred to by numbers, should be counted from forward. Is electric light and/or power fitted? Yes

Did the Surveyor examine the generators, motors, switchgear, cables and fuses? Yes

Has the insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? Yes

If the Survey is not complete, state what arrangements have been made for its completion and what remains to be done. Complete.

**NOW DONE:** Vessel placed in dry dock, propellers, stern bushes, sea valves with their shell fastenings examined, found or now placed in good condition.

Tailshafts without liners renewed (p&s)

Marks: LLOYDS 3990-1, 39902- 12-2-48 M.S.K.

**Note:** The stern tubes contain an inner and outer bushing with white meta; bearings. the tubes are filled with semi-fluid grease with an inboard and outboard gland seal.

### Machinery Survey for Classification:

**Port and Starboard Main Engines:** Examined all cylinders, heads and valves, pistons, liners, connecting rods, wrist pins and bushings, crankshaft and bearings, reduction gear, clutches, intermediate shafting and bearings, attached lubricating oil, salt and fresh water cooling pumps, (P.T.O.)

**General Observations, Opinion, and Recommendation:**— State clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Register Book, consequent upon this survey, and also any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, &c.; thus, for example, B.S. 9,11, B.&M.S. 9,11, \*L.M.C. 9,11, or \*LMC 140 lb., F.D., &c.) CS 3,34,

The machinery of this vessel is in good condition and it is recommended for the favorable consideration of the Committee, that the records of L.M.C. 2-49, T.S.(p&s) new 1-49 and DBS 1-49 be assigned in the case of this vessel.

Fee (per Section 29) L.M.C. & £ : : Fees applied for

Damage or Repair Fee (if any) T.S. \$100.00 by 9, 1949

(per Section 29.) Late \$20.00 Received by me,

Printing expenses (if chargeable) £10.00 22, 1949

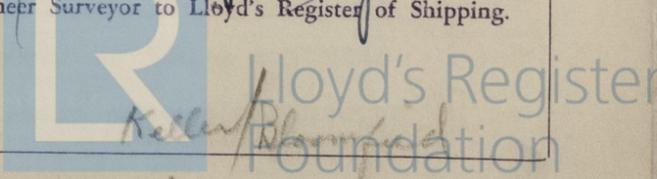
M. S. Keller & Bloomfield  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute / NEW YORK MAR 16 1949

Assigned L.M.C.-2,49  
D.B.S. 2,49. T.S.N. 1-49.

Insert Character of Ship and Machinery precisely as in the Register Book

Is a Certificate required? If so, to be sent to



003838-003845-02391

TW. SC. M.V. "LUCIA" (ex LST 319)

fuel pumps, scavenge blowers, electric starters and governors.

Main engine lubricating oil and fresh water coolers.

Generator Engines (2)

The two (2) generator engines were examined over all parts with heads and valves, pistons, liners, connecting rods, wrist pins and bushings, crankshaft and bearings, attached lubricating oil, salt and fresh water cooling pumps, fuel pumps, electric starters, intercoolers, oil filters and governors.

Pumps:

Examined 2 ballast, 2 fire and bilge, lubricating oil transfer and standby, 2 lubricating oil and 2 cooling water pumps for reduction gears, standby for reduction gear, 2 fresh water, hot water circulating, boiler feed, fuel oil burner and independent bilge pump for pumproom.

Two (2) stage compressors and 2 air receivers for infalting tires to main engine clutches, examined and tested.

Pumping arrangements with valves, pipes and strainers, examined, tested and proven in good working condition.

Spare parts of machinery placed on board to Rule requirements.

Electrical:

All generators and motors removed to shop, armatures removed and baked, commutators skimmed and mica undercut, insulation coated, brushes and holders overhauled, bearings examined and parts renewed as original.

Fittings on switchboards and panels examined and placed in order, insulation resistance on all circuits megger tested.

The 2 generators operated in parallel and separately to Rule requirements, reverse current relays and circuit breakers checked and operated.

Spare equipment supplied to comply with the Rules.

Donkey Boiler:

The donkey boiler was examined over all parts with mountings, safety valves, fresh water feed pump and oil burning equipment.

Safety valves adjusted under steam to 50 lbs.

NOTE: This boiler used for domestic purposes only.

CONVERSION:

Two generator engines, Donkey Boiler and switchboard relocated in the auxiliary engine room on the 3rd deck as shown on plans.

New exhaust lines from all engines extend to stack properly secured, lagged for entire length and equipped with silencers.

The 2 ballast pumps relocated as follows:

One installed in the starboard shaft alley complete with foundation, wiring and piping. Pump connected to sea, engine room, shaft alley bilges and ballast tank.

One pump installed in the foward pumproom connected to sea, fore peak, pumproom bilges, forward cofferdam and ballast tanks Nos. 6 and 7.

Cargo Pump and Engines:

Two new cargo pumps installed in the main pumproom (p&s) driven by two 6 cylinder diesel engines located in the auxiliary engine room, drive shaft extending through

(.P. .T. O.)

the pumproom bulkhead and clutch connected.

Pumps and Engines: Fairbanks Morse Co.

Type 31A 6 1/4 - H.P. 175 R.P.M. 720- 6 1/4" x 9".

Cargo pumps 6 stages centrifugal.

Gear Drive, J

Starting air tanks for Pumping Engines (for four vessels), Pressed Steel Tank Co.,

Milwaukee, Wis. LLOYD'S No. 3192 2196 3197 3199 G.N.

Test 500 lbs. W.P. 250 lbs. 11-16-48.

Repairs Main Engines (2).

8 crank pin bearings renewed.

All valve seats machined and valves ground in.

Governors, electric starters, attached lubricating oil pumps, salt water and fresh water cooling pumps removed to shop and overhauled, renewing worn or defective parts.

Scavenge blowers removed to shop, cleaned and end seals renewed.

Clutch assemblies and reduction gears opened, checked and tested.

Engines run for dock and sea trial and proven in good working condition.

Generator Engines (2):

12 wrist pin bushings renewed.

Engines removed to shop and completely overhauled.

Crankshafts checked in lathe and pins polished.

Intercoolers, water jackets, heads and exhaust manifolds chemically cleaned.

Bosch fuel pumps overhauled by the Makers.

Attached pumps overhauled and parts renewed as required. All valves reseated.

Engine run in shop, after installing and tests carried out to Rule requirements.

Pumps: Motor driven fire and bilge (2), reduction gear lubricating oil (2) and salt water cooling (2) standby for reduction gears, ballast (2), fresh water (2) fuel oil transfer and boiler feed pump removed to shop and overhauled renewing defective parts.

All pumps tested under working conditions.

Outer bushings in stern tubes renewed with bronze bushings lined with white metal.

10 line shaft coupling bolts renewed.

Reduction gear housing fitted with a new sleeve in way of after bearing on the ahead pinion and a new roller bearing fitted.

The vessel is equipped with 2 spare bronze propellers. Original Navy equipment.

M. S. X. V.B.



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