

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 23 MAY 1947

Date of writing Report 16.5.47 When handed in at Local Office 17.5.47 Port of TRIESTE
 No. in Survey held at Trieste Date, First Survey 1st Report 1st Survey 7 19
 Reg. Book. 77594 on the S.S. "LEE SANG" (Number of Visits)
 Built at Lubeck By whom built Henry Koch Yard No. - When built 1907
 Engines made at Altona By whom made J. J. Atkins Engine No. - when made 1907
 Boilers made at - By whom made - Boiler No. - when made 1907
 Registered Horse Power Owners E.M. Trattles Port belonging to Hong Kong
 Nom. Horse Power as per Rule 204 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which Vessel is intended General Cargo and Passengers.

ENGINES, &c.—Description of Engines, 3 CYL. TRIPLE EXP. Revs. per minute 70
 Dia. of Cylinders 21 7/16, 33 3/4, 53 1/4 Length of Stroke 33 1/2 No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 10 3/16 as fitted 10 3/16 Crank pin dia. 10 3/16 Crank webs Mid. length breadth 1.5" Thickness parallel to axis 6 1/8"
 Intermediate Shafts, diameter as per Rule SEE OVER as fitted 9.75" Thrust shaft, diameter at collars as per Rule SEE OVER as fitted 10.15"
 Tube Shafts, diameter as per Rule - as fitted - Screw Shaft, diameter as per Rule SEE OVER as fitted 10.86" Is the tube screw shaft fitted with a continuous liner No
 Bronze Liners, thickness in way of bushes as per Rule - as fitted - Thickness between bushes as per Rule - as fitted - Is the after end of the liner made watertight in the propeller boss - 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 Length of Bearing in Stern Bush next to and supporting propeller 4'-6"
 Propeller, dia. 13' Pitch 15' No. of Blades 4 Material C.I. whether Moveable SEPARATE Total Developed Surface - sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 2" Stroke 13" Can one be overhauled while the other is at work YES
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 2" Stroke 13" Can one be overhauled while the other is at work YES
 Feed Pumps No. and size DUPLEX AUXILIARY Pumps connected to the Main Bilge Line No. and size 2 AS ABOVE 1 @ 150T/HR
 How driven STEAM INJECTOR How driven MAIN ENG. INDEPENDENT
 Ballast Pumps, No. and size 1 @ 150T/HR 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 4 @ 2 1/2"
 In Holds, &c. 2 @ 2 1/2" IN ALL HOLDS

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 4 1/4" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 4 1/4"
 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 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 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 DECK LEVEL

MAIN BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers
 Is Forced Draft fitted NO No. and Description of Boilers 2 CYL. Working Pressure 180 LB/0"
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? YES
 IS A DONKEY BOILER FITTED? NO If so, is a report now forwarded? -
 PLANS. Are approved plans forwarded herewith for Shafting - Main Boilers YES Auxiliary Boilers - Donkey Boilers -
 Superheaters - General Pumping Arrangements YES Oil fuel Burning Piping Arrangements YES
 SPARE GEAR. State the articles supplied:— Rule requirements plus one screw shaft and one length of crankshaft.

The foregoing is a correct description.

Manufacturer.



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If not, state whether, and when, one will be sent. In a Report also sent on the Hull of the Ship. NOTE: The words which do not apply should be deleted.

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

Dec Rpt. 9

Dates of Examination of principal parts—Cylinders Slides Covers
 Pistons Piston Rods Connecting rods
 Crank shaft Thrust shaft Intermediate shafts
 Tube shaft Screw shaft Propeller
 Stern tube Engine and boiler seatings Engines holding down bolts
 Completion of fitting sea connections
 Completion of pumping arrangements Boilers fixed Engines tried under steam
 Main boiler safety valves adjusted Thickness of adjusting washers
 Crank shaft material Identification Mark Thrust shaft material Identification Mark
 Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark
 Screw shaft, material Identification Mark Steam Pipes, material Test pressure Date of Test
 Is an installation fitted for burning oil fuel *yes - now* Is the flash point of the oil to be used over 150°F. *yes*
 Have the requirements of the Rules for carrying and burning oil fuel been complied with *yes*
 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 examined throughout as detailed in Rpt 9 and the original workmanship found good. It is noted that the shaft diameter is acceptable when calculated on the original dimensions of the cylinders but is below Rule size on the present bored-out dimensions. As, however, the cut-off in the H.P. cylinder has been reduced to 50% it is submitted the shafting is acceptable.

The boilers have now been adapted for burning oil fuel in accordance with the approved plan.

In my opinion the machinery of this vessel is eligible to be classed L.M.C. 5,47 O.G. 2,47
 2 S.B. - 180 LB. FITTED FOR OIL FUEL 5,47 F.P. ABOVE 150

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 ... £	:	:	When applied for,
Special <i>Dec letter</i>	:	:	19
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	:	:	19

John McAfee
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 13 JUN 1947**

Assigned | LMC 5,47
S(O.G) 2,47

FITTED FOR OIL FUEL 5,47 FLASH POINT ABOVE 150°F.



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