

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

(Received at London Office 8 SEP 1943)

Date of writing Report 6th August 1943 When handed in at Local Office 6th August 1943 Port of MOBILE, ALABAMA  
 No. in Survey held at MOBILE Date, First Survey 5/11/42 Last Survey 1st April 1943  
 Book on the Machinery of the M.V. "SAN ELISEO" (No. of Visits 18)

Gross 8042 Vessel built at Port Glasgow By whom Lithgows, Ltd. When 1939 2  
 Net 4786 Engines made at Greenock By whom J.G. Kincaid & Co., Ltd. When -  
 Nominal 503 Boilers, when made (Main) (Donkey) -  
 of Main Boilers - Owners Eagle Oil & Shipping Co., Ltd. Owners' Address -  
 of Donkey Boilers 2 Managers - Port London Voyage -  
 Main Boilers - If Surveyed Afloat or in Dry Dock both  
 Donkey Boilers 180 lb. (State name of Dock.) Alabama D.D. & S.B. Co.

Particulars of Examination and Repairs (if any) DGE., LMC-CS, DBS, TS & RPRS.  
 Periodical Surveys, when held, must be reported in detail and serially in the terms of the Rules. State clearly the cause 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 besides 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 report attached  
 as a damage report made by anyone else? If so, by whom? Underwriters.  
 did the Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? -  
 " " Donkey " " yes  
 this was not done, state for what reasons? -  
 did what parts of the Boilers could not be thus thoroughly examined? -  
 so 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 15/3/43 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? 180 lbs.  
 did the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? - and of the Donkey Boilers? yes  
 did the Surveyor examine the drain plugs of the Main Boilers? - and of the Donkey Boilers? yes  
 did the Surveyor examine all the mountings of the Main Boilers? - and of the Donkey Boilers? yes  
 as screw shaft now been drawn and examined? yes Is it fitted with continuous liner? yes Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? L.V.  
 as shaft now been changed? no If so, state reasons -  
 as the shaft now fitted been previously used? - Has it a continuous liner? - 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 3/3/43 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  
 so, did the Surveyor examine the generators, motors, switchgear, cables and fuses? yes  
 as the insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? yes  
 the Survey is not complete, state what arrangements have been made for its completion and what remains to be done COMPLETE.

DAMAGE stated to have been sustained by vessel encountering enemy action 18th & 19th May 1942.  
 vessel placed on drydock, examined the propeller, stern bush and sea connections with their fastenings and found or placed in good order.

DAMAGE REPAIRS  
 Propeller shaft (continuous liner) drawn in, examined, found in good order and replaced, with stern and land repacked.  
 Stern Tube  
 Stern bushes drawn, tube blanked off and tested hydrostatically to 50 lbs. pressure per sq. inch and found sound and tight.  
 Sea Connections  
 All sea connections opened up, examined, valves ground in, reseated, rejointed, glands repacked and closed up.  
 (P.T.O.)

General Observations, Opinion, and Recommendation:— The machinery of this vessel is now in good (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.C.M.S. 9,11, L.M.C. 9,11, or L.M.C. 140 lb., F.D., &c.)  
 CS 3,34,  
 and safe working condition, eligible in our opinion to remain as classed in the Register Book with records of LMC-CS 3,43, D.B.S. 3,43 and TAIL SHAFT LAST SEEN 3,43.

Survey Fee (per Section 29) D.B.S. £ 30.00 C.S. £ 130.00  
 Special Damage or Repair Fee (if any) £ 250.00  
 (per Section 29.) Elec. Inst. 25.00  
 Travelling expenses (if chargeable) £ 18.00  
 Fees applied for Aug. 4, 1943  
 Received by me, 19  
 J. H. Wood J. C. Smith  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
 Assigned + LMC 4, 43 D.B.S. 4, 43  
 T.S. 3, 43.  
 NEW YORK AUG 18 1943  
 Lloyd's Register Foundation  
 004769-004777-0340 1/2

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

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



All strainer plates removed, sea chests cleaned, examined and recoated with an anti-corrosive solution and strainer plates secured to place.  
New cast steel sea chest fitted to place and riveted to shell, forward pumproom, starboard side. Before installation the casting was subjected to a hydrostatic test of 75 lbs. per square inch and found sound and tight. After installation pumproom was flooded sufficiently to make a further test which was satisfactory. Casting marked as follows:-  
"Tested to 75 lbs. Lloyd's J.C.S.McK. 19.2.43" A new 8" sea valve fitted to the sea chest for cargo pump. New strainer plate fitted. New spindle fitted to suction valve cargo pump, after pumproom starboard side.

#### Main Motor

All main bearing caps lifted and crank shafts examined.  
No.8 top half main bearing remetalled.  
After plummer block remetalled complete.  
All tie rods, main motor hardened up.  
All bottom ends opened up and crank pins examined complete.  
All top ends opened up and crossheads examined complete.  
All pistons drawn and removed to shop, inspection plates removed, cleaned, examined internally, rejointed, closed up and tested hydrostatically to 1200 lbs. pressure per square inch and found sound and tight except as noted.  
Spare piston tested and installed in No.1 cylinder.  
Piston removed had fractures welded and was placed on board as spare, to be replaced on vessel's return to a home port.  
No.8 cylinder, shoulders ground off.  
Piston water inlet connections Nos.1,2 and 7 pistons showed wastage of metal at insets. Insets bored out to a clear surface and new bushings fitted for telescopic piping connections.  
Nos.2,4 and 7 pistons. The second piston ring groove enlarged for 15 m/m piston rings with new piston rings fitted.  
No.8 piston fitted with new piston rings.  
Nos.3,5,6 and 8 pistons. Piston ring groove bottoms squared up as necessary.  
Chain sprocket gears, coupling bolts hardened up.  
All holding down bolts main motor, thrust and plummer blocks hardened up.

Upon completion of all the above repairs, all working parts properly adjusted and closed up in good order ready for sea.

#### Cargo Pumps, Pipe Lines, etc.

All cargo pumps opened up and examined, overhauled, adjusted, closed up in good order with glands repacked ready for service.  
One 8" air chamber, main cargo pump renewed.

All cargo lines in way of damage, including valves, fittings, expansion joints, strums, etc., repaired or renewed as found necessary.  
Steam smothering lines, air and sounding pipes repaired or renewed as found necessary.  
Heating coils repaired or renewed as found necessary.

Upon completion of all repairs or renewals, all cargo suction and discharge lines were tested hydrostatically to 160 lbs. pressure per square inch and proven tight.  
All heating coils were tested to 270 lbs. per square inch and proven tight.

For full particulars see damage report attached.

#### DONKEY BOILER SURVEY

Donkey boilers (Scotch type) examined internally and externally with steam piping, mountings, valves and fittings and found or placed in good order.  
Safety valves adjusted under steam to the above pressure.

#### REPAIRS

##### Both Boilers

Hydrokineter valve discs renewed. Salinometer cocks - threaded connection in rear heads defective. New flanges fitted to rear heads, tapped to receive new salinometer cocks.  
Starboard Boiler  
Main stop valve, new disc fitted. Main feed stop and check valve, new disc fitted.  
Blow down valve, valve stem renewed. Cast steel tee for dynamo steam line found porous.  
New cast steel tee fitted. Before installation this fitting was tested hydrostatically to 500 lbs. pressure and found sound and tight.

All accessories (Circular 1748) tested under working conditions, valves and control gear satisfactory. Fuel oil pipes from pumps examined and found tight.

#### COMPLETION \* LMC-CS

The following parts of the main motor and auxiliaries were examined during the vessel's stay in Port undergoing extensive hull repairs and found or placed in good order:-

##### Main Motor Nos.1 to 8 cylinders.

All cylinders with liners, covers, pistons, piston rings and piston rods complete.  
Valve gear complete, inlet and exhaust, fuel and air starting valves with gears.  
Cam shaft and gears including chain drives.  
Crossheads and guides, including slippers, crosshead pins and brasses.  
Crank pins and crank pin brasses, with connecting rods.  
Crank shaft and main bearings with journals.  
Thrust shaft and block.  
Intermediate shaft with plummer blocks.  
Reversing gear and air starting gear.  
Air receiver (upper and lower).  
Engine driven pumps (Piston jacket cooling and fuel (fwd.), sanitary, bilge and lubricating oil (aft)).  
Oil fuel pumps.  
Oil fuel transfer pump.  
Ballast and bilge pump (general service pump).  
Air pump.

J.C.S.McK. (cont'd)

#### M.V. "SAN ELISEO"

Air compressors (with coolers) port and starboard - steam driven.  
Oil and fresh water coolers (vertical type)  
Stand-by jacket cooling pump, lubricating oil pump, piston cooling pump and fuel oil pump (electric).  
Dynamos (steam and diesel driven).  
Auxiliary condenser (tested).  
Feed water heater.  
Evaporator.  
Fan engine.  
Cargo pumps.  
Pumping arrangements.

#### REPAIRS - WEAR & TEAR

##### Reversing Engine

Main rod removed to shop, placed in lathe, skimmed, returned to vessel and assembled in good order.

##### Auxiliary Condenser

Examined, tested, proven tight and closed up in good order.

##### Evaporator

Opened up, examined, tested, placed in operation. Safety valves released freely at a steam pressure of 15 lbs. per. square inch.

##### Feed Water Heater

Opened up, examined and found in good order.

##### Air Receivers

Opened up, examined and found in good order.

##### Oil and Fresh Water Coolers (Vertical type)

Opened up, cleaned, examined, tested and found or placed in good order.

All pumps, air compressors, dynamo engines with armatures, commutators, etc., air pumps, fan engine opened up, examined and given a general overhauling.

##### Fuel Oil Pumps

Steam end - new piston rings fitted.

Liquid end - all valves ground in and resealed. New pins fitted, suction and delivery valves.

##### General Service Pump

Liquid end - new liners fitted and plungers turned to suit. Plunger ring grooves recut and woodite rings fitted. Suction and delivery valve ground in and re-sealed.

Steam end - valve gear overhauled, new pins and bushings made.

#### ELECTRICAL INSTALLATION

The electrical installation has been examined, tested out under full working conditions according to Rule requirements and found or placed in good order. All circuits have been megger tested and damaged wiring and fittings, etc. placed in good condition. Dynamos examined and tested out with satisfactory results.

Upon completion of all repairs engines and auxiliaries were given a dock trial. Minor adjustments were made and a further dock trial proved satisfactory.

J.C.S.McK.



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It is submitted that  
this record is eligible for  
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+ June 14.43

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S. 3.43

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