

# REPORT OF SURVEY FOR REPAIRS, &c., OF ENGINES AND BOILERS

(Received at London Office)

17 OCT 1951

Date of writing Report 27.9.51 When handed in at Local Office 2 OCT 1951 Port of LIVERPOOL  
 No in Reg. Book. Survey held at Birkenhead & Liverpool Date. First Survey 30 April Last Survey 21 Sept 1951  
 3126 on the Machinery of the Wood, Iron or Steel s.s. BENIN PALM (No. of Visits 74)

Gross tonnage 5424 Vessel built at Wesermund-G. By whom Deutsche Sch-u-Mschb. A.G. Year 1936 Month 3  
 Net tonnage 3203 Engines made at do. By whom do. Seebeck When 1936  
 Nominal Horse Power 350 Boilers, when made (Main) 1936 (Donkey) -  
 Owners Palm Line, Ltd. Owners' Address -  
 No. of Main Boilers 2 (Spt) Managers - Port Liverpool Voyage -  
 No. of Donkey Boilers - Team Pressure - in Main Boilers 220 Surveyed Afloat & in Dry Dock Cammell Laird & Co  
& Queens Dock (State name of Dock.)  
 in Donkey Boilers - Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

CHARACTER. * for Special Survey. Date of last Survey and of Periodical Surveys.	Years assigned now expired.	Machinery and Boiler Surveys (including date of N.B., if any)
*100A1 with fbd.		*LMC 9,46
9,50		BS 11,49
ssLth.-9,46		TS CL.(N)3,49
Carrying veg. oil etc. in deep tank		
Fitted for oil fuel 10,37 etc.		
FP above 150° F		h.p. Turbine

Particulars of Examination and Repairs (if any) New Boilers, LMC, Donkey, Repairs  
 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 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.

Where 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. None reported

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

Did the Surveyor personally go inside each Main Boiler separately and make a through examination at this time? New Boiler (see report 5a)

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

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? -

What is the latest date of internal examination of each boiler? - Present condition of funnel Good

Did the Surveyor examine the Safety Valves of the Main Boilers? - To what pressure were they afterwards adjusted under steam? 220 lb/sy -

Did the Surveyor examine the Safety Valves of the Donkey Boilers? - To what pressure were they afterwards adjusted under steam? -

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

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? - and of the Donkey Boilers? -

Has the screw shaft now been drawn and examined? No Has it a continuous liner? - Is an approved oil retaining appliance fitted at the after end? No

Has the shaft now been changed? No If so, state reasons - Has the shaft now fitted been previously used? - Has it a continuous liner? -

Is an approved oil retaining appliance fitted at the after end? - State date of examination of Screw Shaft 3/16 State the wear down in the stern bush -

Is electric light and/or power fitted? Yes If so, 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

Engine parts, when referred to by numbers, should be counted from foreward.

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

Vessel - Drydock: the propeller, sea cocks and valves examined. It is stated that the screw shaft will be drawn at next docking, in the Spring. Both old boilers removed ashore, pipes disconnected. Seatings renewed to suit the three new boilers. Three new boilers (see report 5a attached) now satisfactorily fitted on board in accordance with the rules and approved plans. Main & auxiliary steam pipes altered and renewed to suit; new & altered steam pipes and disconnected pipes tested hydraulically. Funnel removed, scaled, repaired as necessary, inner funnel renewed, & refitted. New F.D. fan and two engines fitted. The main engine, all cylinders, pistons, valves & chambers, crankshaft and bearings, thrust and intermediate shafting, main and

## 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, BS 9,11, B&MS 9,11, \*LMC 9,11 or CS 3,34)

The Machinery of this vessel is eligible in our opinion to remain as classed, with fresh record of \*LMC 9.51, +NB 9.51

Survey Fee (per Section 29) 32:0:0  
 Installation and Repair Fee (if any) 52:10:0  
 Electrical Equipment Survey 8:0:0  
 Travelling expenses (if chargeable) 13:4

Fees applied for 11 OCT 1951  
 Received by me, J.P.V. Little

Committee's Minute LIVERPOOL 16 OCT 1951  
+ LMC 9.51  
+ N.B. 9.51.

Cur. Reed. H. Rogers  
 Engineer Surveyor to Lloyd's Register of Shipping.  
 Lloyd's Register Foundation

CERTIFICATE WRITTEN (6.12.51)

002543-002549-0214 '13

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

BENIN PALM(LMC Continued) Examined

auxiliary condensers (tested), the engine-driven pumps, air + circulating pumps, G.S., ballast + bilge pumps, circulating pump engine, both feed pumps, O.F. transfer pump, O.F. units heaters + pumps, both lub. oil pumps, evaporator, steering engine and windlass examined.

The Bauer-wach turbine and bearings, pinions and gearing, and cone coupling opened out and examined.

The tanks, valves, pipes and control gear of the oil fuel + steam smothering installations overhauled and examined.

The exhaust turbine blading somewhat pitted:- it was intended that the blading be renewed at this time, but it was stated that no firm would undertake this in reasonable time. Meanwhile considered efficient.

Both dynamo engines examined.

Pumping arrangements, valves, strainers + pipes overhauled, examined, and afterwards tested.

New fan and two engines fitted.

The oil-fuel unit now placed in stockhold; suitable drip-trays, and oily bilge suction arranged.

Electric installation (see below).

Repairs: New boilers fitted as above.

A number of steam pipes renewed; gauge bosses on others re-reinforced, tested.

Eccentrics examined. Main bearings + bottom ends drawn up

Exhaust turbine bearings drawn up and aligned.

Cone coupling (previously shrunk on), drawn off, examined, key secured, + refitted renewed.

A number of cast steel valves + branch pieces (main and aux. steam) tested. Some found porous, cut out and welded + retested.

Number of valves, pipes + fittings (new) tested.

Upon completion of repairs the three boilers examined under steam, all safety valves adjusted, and a satisfactory accumulation test carried out.

The main engines, auxiliaries, etc examined working, oil burning, steam smothering, trip-gear, deck controls examined under working conditions.

CONTINUED

BENIN PALMRepairs continued.

HP + MP piston rods drawn, and ground true.  
 Dynamo engine LP cylinder bored, piston + valve renewed.  
 The hand lighting-up set renewed.  
 SDNR valves (additional) fitted to the ER bilge  
 suction (previously direct to pump chest).  
 Circul pump + engine: impeller + crank shafts skinned  
 GS pump: suction + delivery valve chest renewed.  
 Chambers bored. (Water end tested  
 before fitting).  
 Engine drive pumps, crosshead removed, link pins  
 built up, machined, brasses renewed, lined up.  
 7:1 generator engine, HP piston valve spindle renewed.  
 Ballast pump overhauled, valve gear renewed as necessary.  
 Lub oil pumps link gear renewed as necessary.  
 Suction valves renewed.  
 One rod renewed complete.

LP eccentric straps re-metalled  
 Main condenser: all tubes + ferrules renewed  
 Aux condenser water box renewed.  
 Sterning engine: piston rods machined, spindles renewed.  
 Sea valves overhauled + part renewed as necessary.  
 Evaporator coils annealed + tested.  
 New impeller shaft supplied for main circul<sup>n</sup> pump.  
 Aux. condenser repaired where wasted.  
 Number of bilge + ballast lines renewed.  
 Number of deck steam lines renewed.  
 Minor repairs effected

Ch Reed

Electrical Equipment.

Installation examined started under working condition. Generator,  
 switchboard, fittings, fuses, cables etc examined, insulation test  
 carried out. All found as placed in satisfactory condition.  
 Repair, Generator overhauled, wiring + fittings in engine accommodation  
 + part of saloon accommodation, stripped out and renewed, fuse boxes made  
 good. Engine room + boiler room wiring partly renewed. Remains of installation  
 overhauled, faults removed + made good. Low insulation faults located  
 + removed.

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