

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 27 APR 1936

Date of writing Report 20th April 1936 When handed in at Local Office 19 Port of Hamburg

No. in Survey held at Kiel and Hamburg Date, First Survey 3/5/1935 Last Survey 16th April 1936
Reg. Book on the Single Screw "Liberian" (Number of Visits 58.) Tons Gross 5205 Net 3068.37

Built at Hamburg By whom built Howaldtswerke A.G. Yard No. 739 When built 1936

Engines made at Kiel By whom made Howaldtswerke A.G. Engine No. 802 When made 1936

Boilers made at Kiel By whom made Howaldtswerke A.G. Boiler No. 1817/8 When made 1936

Registered Horse Power 1900 Owners The United Africa Co. Ltd. Port belonging to Liverpool

Nom. Horse Power as per Rule 372 Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted yes

Trade for which Vessel is intended West Africa Cargo Trade.

ENGINES, &c.—Description of Engines 1 Triple Expansion Revs. per minute 64.6

Dia. of Cylinders 620 x 980 x 1650 mm Length of Stroke 1150 mm No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 344.6 mm Crank pin dia. 360 mm Crank webs Mid. length breadth 670 mm Thickness parallel to axis 235 mm
as fitted 350 mm Mid. length thickness 235 mm Thickness around eye-hole 157.5-162.5 mm

Intermediate Shafts, diameter as per Rule 328.2 mm Thrust shaft, diameter at collars as per Rule 344.6 mm
as fitted 334 mm as fitted 350 mm

Tube Shafts, diameter as per Rule 366.4 mm Screw Shaft, diameter as per Rule 374 mm Is the tube shaft fitted with a continuous liner? yes
as fitted 366.4 mm as fitted 374 mm

Bronze Liners, thickness in way of bushes as per Rule 18.8 mm Thickness between bushes as per Rule 14.2 mm Is the after end of the liner made watertight in the propeller boss yes
as fitted 19-20 mm as fitted 14 mm

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? yes Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft? no

Propeller, dia. 5500 mm Pitch 3936-6030 mm No. of Blades 4 Material Bronze whether Moveable solid Total Developed Surface 10.24 sq. feet

Feed Pumps worked from the Main Engines, No. none Diameter Stroke Can one be overhauled while the other is at work? yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 115 mm Stroke 610 mm Can one be overhauled while the other is at work? yes

Feed Pumps { No. and size 2 simple 11.5 tons 250 x 195 mm, 1 dupl. 450 mm, 1 dupl. 450 mm } Pumps connected to the { No. and size 3; 1 of 200 mm; 2 attached each 115/610 mm = 60.5 }
{ How driven 2 x 165 mm 22.6 tons, 1 inject 12 tons } Main Bilge Line { How driven 1 by steam; 2 driven from main engine }

Ballast Pumps, No. and size 1, 200 tons; dupl. 2 x 200 tons Lubricating Oil Pumps, including Spare Pump, No. and size 450

Are two independent means arranged for circulating water through the Oil Cooler? yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room Eng. Room: 4; 1 of 125 mm φ; 2 of 70 mm φ; 1 of 210 mm φ [Tmo, p+s, drain slides space to Eng. R. In Tunnel: 1 of 82.5 mm φ. In Holds, &c. No. 1: port + starb each 80 mm φ; No. 2: -p+s, each 80 mm φ; [Cofferd. Frame 154/55, hand pump from deck 1 of 38 mm φ; No. 3 Hold: p+st. each 80 mm φ; No. 4: p+st. each 80 mm φ.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 of 125 mm φ. Ballast Pump. 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 by sea water chests? yes Are they fitted with Valves or Cocks? Valves on chests; cocks to skin of vessel

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? only air pipes How are they protected? by wooden casings.

What pipes pass through the deep tanks? only heating coils fitted into d.t. 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? yes Is it fitted with a watertight door? yes worked from Eng. Room Upper Floor.

MAIN BOILERS, &c.—(Letter for record 5) Total Heating Surface of Boilers 446 m² 4800 ft²

Is Forced Draft fitted? yes No. and Description of Boilers 2 much Scotch Marine Working Pressure 220 lb.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes

IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? no

Is the donkey boiler intended to be used for domestic purposes only? yes

PLANS. Are approved plans forwarded herewith for Shafting 14.5.35 Main Boilers 2.1.35 Auxiliary Boilers — Donkey Boilers —
(If not state date of approval)

Superheaters 15.3.35, 15.5.35 General Pumping Arrangements 16.4.35 Oil fuel Burning Piping Arrangements —

SPARE GEAR.

Has the spare gear required by the Rules been supplied? yes

State the principal additional spare gear supplied:
1 slide valve rod, 1 set of air pump valves, 1 TS compl. with liner, 6 junk ring bolts, 6 valve chests cover bolts, 6 cylinder cover bolts, a set of condenser tubes, 36 ferrules, 1 set of cylinder safety valve springs, 1 impeller shaft for main circul. pump, 6 thrust block pads, 1 cast iron propeller, 16 boiler tubes.

The foregoing is a correct description,

Manufacturer.



1935
 Dates of Survey while building
 During progress of work in shops -- May: 3, 14, 17, 24, 28, 31; June: 21, 25, 28; July: 12, 23, 26; August: 2, 5, 16; Sept: 2, 24; Oct: 4, 5, 15, 18, 30; Oct: 4, 5, 15, 18, 30
 During erection on board vessel and eng parts in ship. April: 2, 8, 9, 16.
 Total No. of visits 58.

Dates of Examination of principal parts
 Cylinders 18.10.35 Slides 17.12.35 Covers 18.10.35
 Pistons 17.12.35 Piston Rods 17.12.35 Connecting rods 17.12.35
 Crank shaft 30.10.35, 1.11.35 Thrust shaft 23/11/35, 18/12/35 Intermediate shafts 23/11/35, 9/12/35, 18/12/35
 Tube shaft ✓ Screw shaft 6-12-35 spare: 17-12-35 Propeller 10/1/36 - 30/3/36
 Stern tube 9/11/35; 28/1/36 Engine and boiler seatings 14/3/36 Engines holding down bolts 16/3/36

Completion of fitting sea connections 30/3/36 Boilers fixed 14-3-36 Engines tried under steam 2-4-1936.
 Completion of pumping arrangements 8-4-36 Thickness of adjusting washers Start: for 10Z aft 15Z; Port: for 11.5Z aft 18Z
 Main boiler safety valves adjusted 2-4-1936 Identification Mark 1719 Pk. 16/12/35 Thrust shaft material O.H. Steel Identification Mark 4834
 Crank shaft material O.H. Steel Identification Mark 16043 K.H. 29/10.35. Spare
 Intermediate shafts, material O.H. Steel Identification Marks Please see below. Tube shaft, material O.H. Steel Identification Mark
 Screw shaft, material O.H. Steel Identification Mark 16041 Steam Pipes, material O.H. Steel Test pressure 45 kg/cm² Date of Test 11/3/36, 16/3/36, 21/3/36, 23/3/36

Is an installation fitted for burning oil fuel no ✓ Is the flash point of the oil to be used over 150°F. ✓
 Have the requirements of the Rules for the use of oil as fuel been complied with ✓
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo yes ✓ If so, have the requirements of the Rules been complied with yes ✓
 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 401 If so, state name of vessel Single Screw "Guinian" ✓

General Remarks (State quality of workmanship, opinions as to class, &c. This Steam Engine and its accessories have been constructed under special survey in accordance with the Society's Rules, the approved plans and the Secretary's instructions thereto. The materials used in the construction are made at works recognized by the Committee. They are of good quality and the workmanship is satisfactory. The outfit is ample. The machinery has given satisfaction under working and manoeuvring conditions during the trial trip. In my opinion it is eligible for notation of: -
 + L.M.C.:-4,36 and T.S. (C.L.).

Identification marks on Intermediate shafts.

1. Lloyd's J.O. 4874 - 26-11-35
2. " M.B. 11573 - 13-11-35
3. " M.B. 11571 - 13-11-35
4. " M.B. 11579 - 19-11-35.
5. " M.B. 11577 - 19-11-35
6. " M.B. 11578 - 19-11-35

Hamburg Office.

The amount of Entry Fee ... £ 100.00: When applied for, 29/4 1936
 Special ... £ 16.00:
 Donkey Boiler Fee ... £ - : - :
 Travelling Expenses (if any) ... £ 250.00: When received, 22.5 1936

J.A. Wigglesworth
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 1 MAY 1936
 Assigned + LMC 4.36 J.D. Cl

Mr J.S.O.F. Ham 21844
 GUINEAN



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