

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. 1517/8 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 × 980 × 1650 mm Length of Stroke 1150 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 Is the tube shaft fitted with a continuous liner yes
as fitted 374 mm as fitted 374 mm
 Screw Shaft, diameter as per Rule 18.8 mm Thickness between bushes as per Rule 14.2 mm
as fitted 19-20 mm as fitted 14 mm Is the after end of the liner made watertight in the
 propeller boss yes 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 If so, state type yes Length of Bearing in Stern Bush next to and supporting propeller 1675 mm
 Propeller, dia. 5500 mm Pitch 3936-6030 mm No. of Blades 4 Material Bronze whether Movable solid Total Developed Surface 10.24 sq. feet
 Feed Pumps worked from the Main Engines, No. none Diameter 115 mm Stroke 610 mm 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 175 450, 1 dupl. 250 x 175 450 Pumps connected to the { No. and size 3; 1 of 200% 2 attached each 115/610 n = 60.5
 How driven 2 x 165 x 110 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 450 dupl. 2 x 200 x 260 450 Lubricating Oil Pumps, including Spare Pump, No. and size 1 of 2102 φ
 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 φ; 2 of 70 φ; 1 of 2102 φ Two, p+s, drain slides from Boiler
In Tunnel: 1 of 82.5 φ In Holds, &c. Nº 1: port + starb each 80 φ; Nº 2: -p+s, each 80 φ; Nº 3: -p+s, each 80 φ; Nº 4: -p+s, each 80 φ
[Coffered Frame 154/55, hand pump from deck 1 of 38 φ]
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 of 125 φ Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size 1 of 125 φ 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 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 main disch. below
 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 22.6.35 Main Boilers 2.1.35 Auxiliary Boilers — Donkey Boilers —
 (If not state date of approval)
 Superheaters 25.3.35, 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 circ. pump, 6 thrust block pads, 1 cast iron propeller, 1 boiler tubes.

The foregoing is a correct description,

Manufacturer.

Howaldtswerke A.G.
 24/4/36
 Lloyd's Register
 Foundation
 003065-003074-0290

1935
 During progress of work in shops -- May: 3, 14, 17, 24, 28, 31; June: 2, 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
 Dates of Survey while building -- During erection on board vessel -- April: 2, 8, 9, 16.
 and engine parts in shop.
 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 102 Aft 152; Port: for 1152 Aft 182
 Main boiler safety valves adjusted 2-4-1936 Identification Mark 1719 H. 16-12-35 Thrust shaft material O.H. Steel Identification Mark 4834
 Crank shaft material O.H. Steel Identification Mark 16043 H. 29-10-35 Spare Tube shaft, material Identification Mark
 Intermediate shafts, material O.H. Steel Identification Mark 16043 H. 29-10-35 Spare Test pressure 45 kg/cm² Date of Test 11/3/36, 14/3/36, 21/3/36, 23/3/36
 Screw shaft, material O.H. Steel Identification Mark 16043 H. 29-10-35 Spare Steam Pipes, material O.H. Steel
 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

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

Committee's Minute

Assigned

FRI. 1 MAY 1936

+ L.M.C. 4.36 20 CL

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



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Lloyd's Register
 Foundation

Hamburg Office.

Dr J.S.O.F. Ham 21844
 GUINIAN