

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

-4 MAY 1936

Date of writing Report 29. 4. 1936 When handed in at Local Office

Port of BREMEN

No. in Survey held at WESERMÜNDE

Date, First Survey 21. 2. 36 Last Survey 22. 4. 1936

Reg. Book.

(Number of Visits 11)

38932 on the STEEL SINGLE SC. STEAMER

LEONIAN

Tons { Gross 5424
Net 3202

Built at WESERMÜNDE

By whom built DEUTSCHE SCHIFF UND MASCHINENBAU AG.
WERK: SEEBECK

Yard No. 898

When built 1936

Owners UNITED AFRICA COMPANY

Port belonging to LIVERPOOL

Electric Light Installation fitted by WICHMANN & CO

Contract No. —

When fitted 1936

Is the Vessel fitted for carrying Petroleum in bulk no

System of Distribution Two wire system

Pressure of supply for Lighting 110 volts, Heating —, Power 110 volts.

Direct or Alternating Current, Lighting direct current Power direct current

If alternating current system, state frequency of periods per second —

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off yes

Generators, do they comply with the requirements regarding temperature rise yes, are they compound wound yes

are they over compounded 5 per cent. yes, if not compound wound state distance between each generator —

Where more than one generator is fitted are they arranged to run in parallel no, is an adjustable regulating resistance fitted in series with each shunt field yes

approved yes Have certificates of test results for machines under 100 kw. been submitted and

Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing —

Are all terminals accessible, clearly marked, and furnished with sockets yes, are they so spaced or shielded that they cannot be accidentally earthed,

short circuited, or touched yes Are the lubricating arrangements of the generators as per Rule yes

Position of Generators Engine room starboard side, is the ventilation

in way of the generators satisfactory yes, are they clear of all inflammable material yes if situated near unprotected

woodwork or other combustible material, state distance of same horizontally from or vertically above the generators — and —

are the generators protected from mechanical injury and damage from water, steam or oil yes, are their axes of rotation fore and aft yes

Earthing, are the bedplates and frames of the generating plant efficiently earthed yes, are the prime movers and their respective generators

in metallic contact yes Main Switch Boards, where placed Engine room starboard side

If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard —

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes yes, are they protected from mechanical

injury and damage from water, steam or oil yes, if situated near unprotected woodwork or other combustible material, state distance of same

horizontally from or vertically above the switchboards — and —, are they constructed wholly of durable, non-ignitable non-absorbent

materials yes, is all insulation of high dielectric strength and of permanently high insulation resistance yes

is it of an approved type yes, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other

non-hygroscopic insulating material, and the slab similarly insulated from its framework —, is the non-hygroscopic insulating material of an approved

type —, and is the frame effectively earthed yes Are the fittings as per Rule regarding: — spacing or shielding of live parts

yes, accessibility of all parts yes, absence of fuses on back of board yes, temperature rise of

omnibus bars yes, individual fuses to voltmeter, pilot or earth lamp yes, are moving parts of switches alive in the

"off" position no are all screws and nuts securing connections effectively locked yes are any fuses fitted on the live side of

switches no Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

For each generator and for each outgoing circuit a double pole linked switch and a fuse on each pole

Are turbine driven generators fitted with emergency trip switch as per rule — Are cupboards or compartments containing switchboards composed of

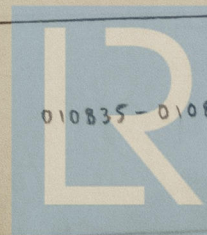
fire-resisting material or lined with approved material — Instruments on main switchboard 2 ammeters 2

voltage — synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection

yes Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

2 earth lamps Switches, Circuit Breakers and Fusible Cut-outs,

do these comply with the requirements of the Rules yes are the fusible cutouts of an approved type yes have the reversed



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Cables: Single, twin, concentric, or multicore single twin are the cables insulated and protected as per Tables IV, V, X or XI of the Rules German Standards.
If the cables are insulated otherwise than as per Rule, are they of an approved type — **Fall of Pressure**, state maximum between bus bars and
any point of the installation under maximum load 4-5 volts **Cable Sockets**, are the ends of all cables having a sectional

If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound _____, or waterproof insulating tape yes **Cable Runs**, are the cables fixed as far as possible in accessible positions

Support and Protection of Cables, state how the cables are supported and protected *cables on deck are led through gas tubes, otherwise on strong iron cable leads* ✓

Refrigerated Chambers, are the cables and fittings in accordance with the special requirements yes ✓

Joints in Cables, state if any, and how made, insulated, and protected *in watertight joint boxes* ✓

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands

yes ✓ Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed yes ✓ state the material of which the bushes are made lead ✓

Earthing Connections, state what earthing connections are fitted and their respective sectional areas —

....., are their connections made as per Rule

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule yes ✓. **Emergency Supply**, state position and method of control of the emergency supply and how the generator is driven ✓

Navigation Lamps, are these separately wired yes ✓, controlled by separate switch and separate fuses yes ✓, are the fuses double pole yes ✓
are the switches and fuses grouped in a position accessible only to the officers on watch yes ✓

has each navigation lamp an automatic indicator as per Rule yes ✓ **Secondary Batteries**, are they constructed and fitted as per Rule none

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight yes ✓

are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected none

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected none how are the cables

are any fittings placed in spaces where they are not required, how are the cables

are all fittings suitably ventilated yes ✓, are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials yes ✓

Heating and Cooking Appliances, are they constructed and fitted as per Rule none, are air heaters constructed and fitted as per Rule none

Searchlight Lamps, No. of 1 ☒, whether fixed or portable portable ☒, are their fittings as per Rule yes ☒

Searchlight Lamps, No. 51 _____

Arc Lamps, other than searchlight lamps, No. of _____, **are their live parts insulated from the frame or case** _____, **are their fittings as per Rule** _____ ✓

Motors, are their working parts readily accessible yes ✓, are the coils self-contained and readily removable for replacement yes ✓

Motors, are their working parts readily accessible yes, are the brushes, brush holders, terminals and lubricating arrangements as per Rule yes, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material yes, are they protected from mechanical injury and damage from

water, steam or oil yes are their axes of rotation fore and aft yes, if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type —

material, are the motors of the totally enclosed, pipe ventilated, forced draught, and of the type of the _____, if not of this type, state distance of the combustible material horizontally or vertically above the motors _____ and _____ have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing _____ **Control Gear and Resistances, are the general**

field and motor speed regulators, starters and controllers constructed and fitted as per Rule yes ☒ **Lightning Conductors**, where lightning conductors are required, are these fitted as per Rule yes ☒ **Ships carrying Oil having a Flash Point less than 150° F.** Have the special requirements

are required, are these fitted as per Rule yes ☒ **ships carrying on during**
the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights
fittings ✓ are all fuses of the fitted cartridge type — are they of an approved type —

If portable lamps for use in dangerous spaces are supplied, are they of a self-contained, battery-fed type approved by the Home Office. ✓

Spare Gear, if the vessel is for open sea service have spares been supplied as per Table *for*

TRANSFORMER	GENERATOR, LIGHTING AND HEATING CONDUCTORS.									
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HEATERS ...

All Conductors are of annealed copper conforming to British Standard Specification No. 7 (or International Electro-technical Commission Publication No. 28).

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

Biehnemann & Co

Electrical Engineers.

Date

Bremen

25 April 1936

COMPASSES.

Distance between electric generators or motors and standard compass *16 feet*

Distance between electric generators or motors and steering compass *18 "*

The nearest cables to the compasses are as follows:—

A cable carrying *5* Ampères *10* feet from standard compass *16* feet from steering compass.

A cable carrying *0.2* Ampères *10* feet from standard compass *10* feet from steering compass.

A cable carrying *—* Ampères *—* feet from standard compass *—* feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power *yes*

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted *yes*

The maximum deviation due to electric currents was found to be *nil* degrees on *all* course in the case of the standard compass, and *nil* degrees on *all* course in the case of the steering compass.

Deutsche Schiff- und Maschinenbau Aktiengesellschaft

H. J. Hoff

H. J. Hoff

Builder's Signature.

Date

24 4 36

Is this installation a duplicate of a previous case *yes* If so, state name of vessel *NIGERIAN & ETHIOPIAN*

General Remarks (State quality of workmanship, opinions as to class, &c. *This Electric Installation*)

has been fitted in accordance with the approved plans, the Rules, the letters and in conformity with the requirements of the Rules. The materials used in the construction and the workmanship are of good quality. Regarding conductors, the German Standards have been applied generally. The whole installation has been tested under full working condition and found in order.

Noted

Run

6.5.35

Total Capacity of Generators *30* Kilowatts.

The amount of Fee ... *RM 450.-*

When applied for,

19

When received.

Travelling Expenses (if any) £

20-5-36

20/5

A. Carstensen
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 15 MAY 1936

Assigned

See other J.E.

Brem. 1787



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