

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 29.1.1930 When handed in at Local Office 17.2.1930 Port of GLASSGOW Received at London Office 19 FEB 1930

No. in Survey held at GREENOCK Date, First Survey 24.12.29 Last Survey 28.1.1930  
Reg. Book.

39310 on the S.S. ANTIOPA (Number of Visits 7)  
Tons { Gross 1545  
Net

Built at GLASSGOW By whom built NAPIER & MILLER LTD Yard No. 371 When built 1930

Owners NEW EGYPT & LEVANT S.S. CO LTD Port belonging to LONDON.

Electric Light Installation fitted by THE SUNDERLAND FORGE & ENG CO Contract No. 371 When fitted 1930

Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution Double Wire

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

Direct or Alternating Current, Lighting Direct Power —

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 rating 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 —, is an adjustable regulating resistance fitted in series with each shunt field —

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 In Main Engine Room

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 In Main Engine Room beside Main Generators.

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.

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 Yes.

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, proportion of omnibus bars Yes

individual fuses to voltmeter, pilot or earth lamp Yes, connections of switches Yes

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches.  
Double Pole Switch + Fuses on Main Generator  
Single Pole Switch + D.P. Fuses on each outgoing circuit.

Instruments on main switchboard 1 ammeters 1 voltmeters — synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system  
Lamp, Switch and Fuse.

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules Yes.

Joint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule Yes.



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W3-0061

Cables: Single, twin, concentric, or multicore Single & Twin are the cables insulated and protected as per Tables IV or V of the Rules Yes

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 4.5

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Yes

Paper Insulated Cables, If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound Yes

Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage Yes

Support and Protection of Cables, state how the cables are supported and protected L.C.A.B. in Machinery Spaces and Tween Decks, L.C. in Accommodation.

If cables are run in wood casings, are the casings and caps secured by screws Yes, are the cap screws of brass Yes, are the cables run in separate grooves Yes. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII Yes

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements Yes

Joints in Cables, state if any, and how made, insulated, and protected None made.

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 Libit.

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

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 Yes

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 Yes

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 Yes

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected Yes

where are the controlling switches situated Yes

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

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

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

if not of this type, state distance of the combustible material horizontally or vertically above the motors Yes and Yes

Control Gear and Resistances, are the generator 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 of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings Yes

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office Yes

PARTICULARS OF GENERATING PLANT.

Table with columns: DESCRIPTION OF GENERATOR, No. of, RATED AT (Kilowatts, Volts, Amperes, Revs. per Min.), DRIVEN BY, WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE (Fuel Used, Flash Point of Fuel).

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

Table with columns: DESCRIPTION, CONDUCTORS (No. per Pole, Total Effective Area per Pole Sq. Ins.), COMPOSITION OF STRAND (No., Diameter), TOTAL MAXIMUM CURRENT AMPERES (In Circuit, Rate), Approximate Length (Lead and Return) Feet, Insulated with, HOW PROTECTED.

MOTOR CONDUCTORS

Table with columns: DESCRIPTION, No. of Motors, CONDUCTORS (No. Per Pole, Total Effective Area per Pole Sq. Ins.), COMPOSITION OF STRAND (No., Diameter), TOTAL MAXIMUM CURRENT AMPERES (In Circuit, Rate), Approximate Length (Lead and Return) Feet, Insulated with, HOW PROTECTED.

All Conductors are of annealed copper conforming to British Standard Specification No. 7.  
 The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.  
 The foregoing is a correct description.

*The Sanduland Forge & Eng. Co Ltd* Electrical Engineers. Date *7<sup>th</sup> Feb. 1930.*

COMPASSES.

Distance between electric generators ~~or motors~~ and standard compass *150 FEET.*  
 Distance between electric generators ~~or motors~~ and steering compass *126 FEET.*  
 The nearest cables to the compasses are as follows:—  
 A cable carrying *3.2* Ampères *6* feet from standard compass *6* feet from steering compass.  
 A cable carrying *.48* Ampères *2* feet from standard compass *2* feet from steering compass.  
 A cable carrying *.18* Ampères *2* feet from standard compass *2* feet from steering compass.  
 Have the compasses been adjusted with and without the electric installation at work at full power. *Yea.*  
 Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted. *Yea.*  
 The maximum deviation due to electric currents was found to be *Nil* degrees on *any* course in the case of the standard compass, and *Nil* degrees on *any* course in the case of the steering compass.

For **NAYLOR & MILLER, LIMITED.**

*John Hooding* Builder's Signature. Date *11<sup>th</sup> Feb '30*  
 DIRECTOR.

Is this installation a duplicate of a previous case *No.* If so, state name of vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, &c.) *This installation has been fitted on board under special survey. Tested under full working conditions and found satisfactory. The materials and workmanship were found to be good and sound.*

*It is submitted that this vessel is eligible for THE RECORD. Elec Light.*

*[Signature]*  
*5/3/30*

Total Capacity of Generators *10* Kilowatts.

The amount of Fee ... £ *10.00.0* : *3* FEB 1929  
 Travelling Expenses (if any) £ : : *5* FEB 1929

*J. S. Rankin*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW** **18 FEB 1930**

Assigned *Elec Light*

Im. 12.28.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)