

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report 29.8.1924 When handed in at Local Office 15.9.24 Port of GLASGOW

No. in Survey held at GRANGEMOUTH. Date, First Survey 23.11.23. Last Survey 3.9.1924
Reg. Book. (Number of Visits.....)

on the S.S. ALBATROSS Tons { Gross 1943
Net 1193

Built at GRANGEMOUTH. By whom built THE GRANGEMOUTH DS Yard No. 409 When built 1924

Owners GENERAL STEAM NAV. CO. LTD Port belonging to LONDON.

Electric Light Installation fitted by Messrs W. C. MARTIN & CO Contract No. 409 When fitted 1924.
Glasgow

System of Distribution Two 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 overload 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 yes

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

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

Position of Generators On the starting platform in 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 axis 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 near generator

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 in same compartment

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 4 ft and 4 ft

are they constructed wholly of durable, incombustible 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 connected to one pole

insulated from the slab with mica or micanite and the slab similarly insulated from its framework yes, and is the

frame effectively earthed yes Are the following fittings as per Rule, viz. :— 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 fuse for generator and double pole fuse & single pole

switch for each circuit

Instruments on main switchboard One ammeters One 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

Two earth lamps & switches provided

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

Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule yes

Insulation of Cables, state type of cables, single or twin V.I.R are the cables insulated and protected as per Tables III of the Rules yes

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 2.5 volts

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.007 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 _____

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 lead covered cables supported by brass clips & armoured cables supported by galvanised iron clips, protected by beams
 If cables are run in wood casings, are the casings and caps secured by screws No casings, are the cap screws of brass _____, are the cables run in separate grooves _____ If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VI yes

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

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

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 Positions, 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 None
 _____, 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 None

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, are separate screens provided for the use of oil and electric side lights yes
 are separate oil lanterns provided for the mast head lights and side lights Electric lanterns supplied by us

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 led _____

where are the controlling switches situated _____

Searchlight Lamps, No. of none, whether fixed or portable _____, are their fittings as per Rule _____

Arc Lamps, other than searchlight lamps, No. of None, are their live parts insulated from the frame or case _____, are their fittings as per Rule _____

Motors, are their working parts readily accessible None, are the coils self-contained and readily removable for replacement _____
 are the brushes, brush holders, terminals and lubricating arrangements as per Rule _____, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material _____
 are they protected from mechanical injury and damage from water, steam or oil _____ are their axis of rotation fore and aft _____
 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 _____, if not of this type, state distance of the combustible material horizontally or vertically above the motors _____ and _____

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed as per Rule yes

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule _____

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

PARTICULARS OF GENERATING PLANT.

| DESCRIPTION OF GENERATOR. | No. of | RATED AT | | | | DRIVEN BY. | WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE. | |
|---------------------------|--------|------------|--------|----------|----------------|-----------------------------------|--|----------------------|
| | | Kilowatts. | Volts. | Ampères. | Revs. per Min. | | Fuel Used. | Flash Point of Fuel. |
| MAIN | 1 | 8 | 110 | 72 | 350 | 6 1/2 x 6" Open Type Steam Engine | | |
| AUXILIARY | | | | | | | | |
| EMERGENCY | | | | | | | | |
| ROTARY TRANSFORMER | | | | | | | | |

LIGHTING AND HEATING CONDUCTORS.

| Ref. No. | DESCRIPTION. | No. of Conductors. | Effective Area of each Conductor. Sq. Ins. | COMPOSITION OF STRAND. | | Total Maximum Current. Ampères. | Approximate Length. (Lead and Return.) Feet. | Insulated with | HOW PROTECTED. |
|----------|------------------------|--------------------|--|------------------------|-----------|---------------------------------|--|----------------|----------------|
| | | | | No. | Diameter. | | | | |
| | MAIN GENERATOR... | 2 | .0750 | 19 | .072 | 72 | 30 | V. I. R. | Armour |
| | AUXILIARY GENERATOR | | | | | | | | |
| | EMERGENCY GENERATOR | | | | | | | | |
| | ROTARY TRANSFORMER... | | | | | | | | |
| | AUXILIARY SWITCHBOARDS | | | | | | | | |
| | ENGINE ROOM | 2 | .01046 | 7 | .052 | 9.5 | 10 | " | Lead covered |
| | BOILER ROOM | 2 | .003 | 1 | .064 | 2.3 | 120 | " | " |
| | Middleport Ford. | 2 | .0225 | 7 | .064 | 14.3 | 160 | " | Demolished. |
| | Navigation | 2 | .01046 | 7 | .052 | 7.8 | 30 | " | Lead covered |
| | Middleport aft | 2 | .0225 | 7 | .064 | 14.0 | 65 | " | " |
| | WIRELESS | 2 | .01046 | 7 | .052 | 4.5 | 360 | " | " |
| | SEARCHLIGHT | | | | | | | | |
| | MASTHEAD LIGHT... | 2 | .003 | 1 | .064 | 1.12 | 250 | " | " |
| | SIDE LIGHTS | 2 | .003 | 1 | .064 | 1.12 | 50 | " | Lead |
| | COMPASS LIGHTS | 2 | .003 | 1 | .064 | .56 | 35 | " | " |
| | POOP LIGHTS | 2 | .01046 | 7 | .052 | 4.5 | 250 | " | Armour |
| | CARGO LIGHTS | 2 | .0225 | 7 | .064 | 12.0 | 70 | " | " |
| | ARC LAMPS | | | | | | | | |
| | HEATERS | | | | | | | | |

MOTOR CONDUCTORS.

| Ref. No. | DESCRIPTION. | No. of Motors. | Effective Area of each Conductor. Sq. Ins. | COMPOSITION OF STRAND. | | Total Maximum Current. Ampères. | Approximate Length. (Lead and Return.) Feet. | Insulated with | HOW PROTECTED. |
|----------|-------------------------|----------------|--|------------------------|-----------|---------------------------------|--|----------------|----------------|
| | | | | No. | Diameter. | | | | |
| | BALLAST PUMP | | | | | | | | |
| | MAIN BILGE LINE PUMPS | | | | | | | | |
| | GENERAL SERVICE PUMP | | | | | | | | |
| | EMERGENCY BILGE PUMP | | | | | | | | |
| | SANITARY PUMP | | | | | | | | |
| | CIRC. SEA WATER PUMPS | | | | | | | | |
| | CIRC. FRESH WATER PUMPS | | | | | | | | |
| | AIR COMPRESSOR | | | | | | | | |
| | FRESH WATER PUMP | | | | | | | | |
| | ENGINE TURNING GEAR | | | | | | | | |
| | ENGINE REVERSING GEAR | | | | | | | | |
| | LUBRICATING OIL PUMPS | | | | | | | | |
| | OIL FUEL TRANSFER PUMP | | | | | | | | |
| | WINDLASS | | | | | | | | |
| | WINCHES, FORWARD | | | | | | | | |
| | WINCHES, AFT | | | | | | | | |
| | STEERING GEAR | | | | | | | | |
| | WORKSHOP MOTOR | | | | | | | | |
| | VENTILATING FANS | | | | | | | | |

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.

W.C. Martin & Co

Electrical Engineers.

Date *17th Sept 1924*

COMPASSES.

Distance between electric generators or motors and standard compass *60 ft from generator.*

Distance between electric generators or motors and steering compass *56 ft from generator.*

The nearest cables to the compasses are as follows:—

A cable carrying *.28* Ampères *6* feet from standard compass *1* feet from steering compass.

A cable carrying *.28* Ampères *1* feet from standard compass *6* 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 *a certain* course in the case of the standard compass, and *Nil* degrees on *the same* course in the case of the steering compass.

FOR THE BRANDBOURGH DOCKYARD CO., LTD.

Alfred Miller

Builder's Signature.

Date *9th Sept 1924*

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 workmanship was found to be good and sound.*)

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

W.C. Martin 18/9/24

Total Capacity of Generators *8* Kilowatts

The amount of Fee ... £ *8-0-0* : { When applied for, 16 SEP 1924

Travelling Expenses (if any) £ *9/8* : { When received, See debit book.

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

Committee's Minute *GLASGOW 16 SEP 1924*

Assigned *Elec. Light*

A.L.
 15/9/24

1m. 3.22—Transfer.
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)