

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 9/9/1935 When handed in at Local Office 9/9/1935 Port of Leith 12 SEP 1935

No. in Survey held at Burntisland Date, First Survey 13/6/35 Last Survey 3/9/1935
 Reg. Book. 87010 on the S/S AURETTA (Number of Visits... 8)

Built at BURNTISLAND By whom built THE BURNTISLAND SHIPBUILDING CO. LTD. Yard No. 186 When built 1935

Owners CALPEAN SHIPPING CO. LTD. Port belonging to GIBRALTAR

Electric Light Installation fitted by THE BURNTISLAND SHIPBUILDING CO. LTD. Contract No. _____ When fitted 1935

Is the Vessel fitted for carrying Petroleum in bulk No

System of Distribution TWO WIRE LEAD & RETURN.

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

Direct or Alternating Current, Lighting DIRECT Power DIRECT

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 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 _____

are their axes of rotation fore and aft YES, 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 BOLTED DIRECT TO EARTH. 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 NOT NEAR and WOODWORK

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 SINDANYO PANEL

and is the frame effectively earthed BOLTED DIRECT TO EARTH. 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

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 I D.P. 100 MAIN SWITCH.

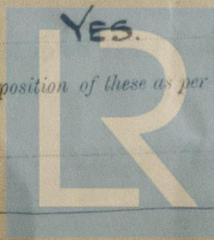
1 S.P. 30 AMP SWITCH FOR EACH OUTGOING CIRCUIT.

Instruments on main switchboard ONE ammeter ONE voltmeter _____ 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, 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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Cables: Single, twin, concentric, or multicore 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 **3 VOLTS**

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 _____

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 **METAL CLIPS SECURED WITH SCREWS.**

MACHINERY SPACE & DAMP SITUATIONS, L.C. & W.A. ACCOM L.C. THROUGHOUT, OTHER PLACES WIRE ARMoured.
If cables are run in wood casings, are the casings and caps secured by screws _____, 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 VIII **YES**

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements **NO LIGHTS FITTED**

Joints in Cables, state if any, and how made, insulated, and protected **NO JOINTS IN MAIN CABLES.**

SUBSIDIARY CABLES JOINED WITH STANDARD 15 AMP. JUNCTION 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 **SWITCHBOARD FRAME & DYNAMO SEAT BOLTED DIRECT TO EARTH, AND BRASS BONDING CLIPS FOR EARTHING METALLIC SHEATHING OF ALL CABLES**, are their connections made as per Rule **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 _____

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 _____

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

Are 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 **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 **TOTALLY ENCLOSED**, 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 and fitted as per Rule **YES.**

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule **NONE.**

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 | 73 | 600 | STEAM ENGINE | | |
| AUXILIARY | | | | | | | | |
| EMERGENCY | | | | | | | | |
| ROTARY TRANSFORMER | | | | | | | | |

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

| DESCRIPTION. | CONDUCTORS. | | COMPOSITION OF STRAND. | | TOTAL MAXIMUM CURRENT. AMPERES. | | Approximate Length (Lead and Return.) Feet. | Insulated with | HOW PROTECTED. |
|------------------------------------|---------------|--|------------------------|-----------|---------------------------------|-------|---|----------------|----------------|
| | No. per Pole. | Total Effective Area per Pole Sq. Ins. | No. | Diameter. | In Circuit. | Rate. | | | |
| MAIN GENERATOR | ONE | .750 | 19 | .072 | 70.7 | 97 | 50 | RUBBER | L.C. & W.A. |
| EQUALISE CONNECTIONS | | | | | | | | | |
| AUXILIARY GENERATOR | | | | | | | | | |
| EMERGENCY GENERATOR | | | | | | | | | |
| ROTARY TRANSFORMER MOTOR GENERATOR | ONE | .0070 | 7 | .036 | 8 | 24 | 20 | RUBBER | L.C. & W.A. |
| ENGINE ROOM | ONE | .0070 | 7 | .036 | 8 | 24 | 20 | RUBBER | L.C. & W.A. |
| BOILER ROOM | | | | | | | | | |
| AUXILIARY SWITCHBOARDS | | | | | | | | | |
| CARGO CLUSTERS | ONE | .0070 | 7 | .036 | 6.8 | 24 | 180 | RUBBER | W.A. |
| NAVIGATION | ONE | .0045 | 7 | .029 | 3 | 18.2 | 280 | RUBBER | W.A. |
| ACCOMMODATION CREWS | ONE | .0070 | 7 | .036 | 4.2 | 24 | 420 | RUBBER | W.A. |
| MIDSHIP ACCOM. | ONE | .0070 | 7 | .036 | 15.1 | 24 | 180 | RUBBER | L.C. & W.A. |
| WIRELESS | ONE | .0070 | 7 | .036 | 15 | 24 | 300 | | |
| SEARCHLIGHT | | | | | | | | | |
| MASTHEAD LIGHT | ONE | .0020 | 3 | .029 | .36 | 7.8 | 240 | RUBBER | A & TUBING |
| SIDE LIGHTS | ONE | .0020 | 3 | .029 | .36 | 7.8 | 60 | RUBBER | L.C. |
| COMPASS LIGHTS | ONE | .0020 | 3 | .029 | .36 | 7.8 | 20 | RUBBER | L.C. |
| POOP LIGHTS | | | | | | | | | |
| CARGO LIGHTS | | | | | | | | | |
| ARC LAMPS | | | | | | | | | |
| HEATERS | | | | | | | | | |

MOTOR CONDUCTORS.

| DESCRIPTION. | No. of Motors. | CONDUCTORS. | | COMPOSITION OF STRAND. | | TOTAL MAXIMUM CURRENT. AMPERES. | | Approximate Length (Lead and Return.) Feet. | Insulated with | HOW PROTECTED. |
|-------------------------|----------------|---------------|--|------------------------|-----------|---------------------------------|-------|---|----------------|----------------|
| | | No. Per Pole. | Total Effective Area per Pole Sq. Ins. | No. | Diameter. | In Circuit. | Rate. | | | |
| 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— | | | | | | | | | | |
| (a) MOTOR GENERATOR | | | | | | | | | | |
| (b) MAIN MOTOR | | | | | | | | | | |
| WORKSHOP MOTOR | ONE | ONE | .0070 | 7 | .036 | 13.5 | 24 | 30 | RUBBER | L.C. & W.A. |
| VENTILATING FANS | | | | | | | | | | |
| REFRIGERATING | ONE | ONE | .0030 | 3 | .036 | 5.1 | 12 | 160 | RUBBER | L.C. & W.A. |

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.
FOR THE BURNTISLAND SHIPBUILDING COMPANY LTD.

[Signature] MANAGING DIRECTOR

Electrical Engineers.

Date *Sept 5th 1935*

COMPASSES.

Distance between electric generators or motors and standard compass **72 FEET.**

Distance between electric generators or motors and steering compass **66 FEET.**

The nearest cables to the compasses are as follows:—

A cable carrying **.18** Ampères **7"** ~~ft~~ from standard compass _____ feet from steering compass.

A cable carrying **.18** Ampères **7"** ~~ft~~ from standard compass _____ 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 **ANY** course in the case of the standard

compass, and **NIL** degrees on **ANY** course in the case of the steering compass.

FOR THE BURNTISLAND SHIPBUILDING COMPANY LTD.

[Signature] MANAGING DIRECTOR

Builder's Signature.

Date *Sept 5th 1935*

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*

efficiently fitted on board in accordance with the rules

The materials & workmanship are sound & good & the installation was found satisfactory under full load & working conditions

*Noted
J.H.
13.9.35*

Total Capacity of Generators **8** Kilowatts.

The amount of Fee ... £ **8 : 0 : 0** When applied for, **11-9-35**

Travelling Expenses (if any) £ **✓** : **2-11-35** When received, **4/11**

[Signature]
Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUE. 24 SEP 1935**

Assigned *See minute on
H. Rpt.*

Im. 11.20. - Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minutes.)



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