

# REPORT ON ELECTRIC FITTINGS

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 10<sup>th</sup> JUNE 1926 When handed in at Local Office 10 Port of HAMBURG

No. in Survey held at 2<sup>nd</sup> Date, First Survey 27<sup>th</sup> April. Last Survey 29<sup>th</sup> June 1926  
Reg. Book.

on the Steel Twin S.S. "URANIA" Tons { Gross 8744  
Net 5026

Built at 2<sup>nd</sup> By whom built FOWALDTSWERKE Yard No. 674 When built 1926

Owners BALTIEN-AMERIK-PETROL-IND. G.m.b.H. Port belonging to DANZIG.

Electric Light Installation fitted by SCHINAG-HAMBURG Contract No. When fitted 1926.

System of Distribution 2 wire - 2 conductor insulated with paper dielectric conductors - except small cables.

Pressure of supply for Lighting 110 volts, Heating 220 volts, Power 220 volts.

Direct or Alternating Current, Lighting Direct Current Power Direct Current

alternating current system, state frequency of periods per second

Is 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

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

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

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

Position of Generators Engine room, 2<sup>nd</sup> - Port & aft - steam driven emerg. gen. in auxiliary eng. room. Bulks deck,

the ventilation in way of the generators satisfactory Yes, are they clear of all inflammable material Yes

situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators

and Yes, are the generators protected from mechanical injury and damage from water, steam or oil Yes

their axes of rotation fore and aft Yes, with the exception of steam driven emergency gen.

Nothing, are the bedplates and frames of the generating plant efficiently earthed Yes, are the prime movers and

of respective generators in metallic contact Yes

Main Switch Boards, where placed Engine room - cylinder platform aft - steam driven emerg. gen. in

aux. engine room. If the generators and main switchboard are not placed in the same compartment, is each generator provided with

one 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

they protected from mechanical injury and damage from water, steam or oil Yes, if situated near unprotected

work or other combustible material, state distance of same horizontally from or vertically above the switchboards

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 sub

stant mica or micamite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework

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 No. See letter, proportion of omnibus

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

In Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches For each generator:

fuse on each pole and a double pole linked switch; For each circuit: A fuse on

each pole and a single-pole change over switch on one pole.

Instruments on main switchboard 8 ammeters 4 voltmeters synchronising device for paralleling purposes.

With Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system 2 Ohm meters

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

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



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W270-0141 (1/2)



**Cables:** Single, twin, concentric, or multicore *single line* for small sections: The German Standard have been applied are the cables insulated and protected as per Tables IV or V of the Rules. *Generally, v.*

**Fall of Pressure,** state maximum between bus bars and any point of the installation under maximum load. *about 3 1/2 lbs*

**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

**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 paper insulated cables*

**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 *armoured cables, clipped, running in troughs - where exposed to mechanical risk, covered by sheet iron.*

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 *watertight joints lower.*

**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 *hard wood.*

**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 *Direct jet with hand starting arrangement in engine room lower deck - steam driven jet in auxiliary engine room.*

**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 where 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 *yes - gas tight fittings - lamps - protected by strong glass covers.* how are the cables led *gas tight tubing*

where are the controlling switches situated *double - pole switches on deck outside the piper.*

**Searchlight Lamps, No. of** *2*, whether fixed or portable *yes*, are their fittings as per Rule *yes*

**Arc Lamps,** other than searchlight lamps, No. of *0*, are their live parts insulated from the frame or case *0*, 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 *0*, if not of this type, state distance of the combustible material horizontally or vertically above the motors *0* and *0*

**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 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 *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.

| DESCRIPTION OF GENERATOR. | No of | RATED AT   |         |       |                | DRIVEN BY                    | WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE. |                      |
|---------------------------|-------|------------|---------|-------|----------------|------------------------------|--|----------------------|
|                           |       | Kilowatts. | Volts.  | Amps. | Revs. per Min. |                              | Fuel Used.                                     | Flash Point of Fuel. |
| MAIN                      | 2     | each 195   | 230     | 850   | 300            | 280 H.P. Diesel Eng. High.   | Diesel oil                                     | 170° F.              |
| AUXILIARY                 | 1     | 25         | 230     | 109   | 225            |                              |  |                      |
| EMERGENCY                 | 1     | 10         | 115     | 87    | 400            |                              |  |                      |
|                           | 1     | 15         | 230     | 65    | 400            | 200 H.P. compound steam eng. |  |                      |
| ROTARY TRANSFORMER        | 1     | 15         | 220/110 | 130   | 1500           | Electric Motor.              |  |                      |

## LIGHTING AND HEATING CONDUCTORS.

| Ref. No. | DESCRIPTION.              | No. of Conductors. | Effective Area of each Conductor. Sq. Ins. | COMPOSITION OF STRAND. |           | Total Maximum Current. Amperes. | Approximate Length. (Lead and Return.) Feet. Ins. | Insulated with | HOW PROTECTED.            |
|----------|---------------------------|--------------------|--|------------------------|-----------|---------------------------------|---|----------------|---------------------------|
|          |                           |                    |  | No.                    | Diameter. |                                 |   |                |                           |
|          | MAIN GENERATOR...         | 2x3                | 6x240                                      | 61                     | 2.35 in.  | 850                             | 58  |                |                           |
|          | EQUALISER CONNECTIONS     |                    |  |                        |           |                                 |   |                |                           |
|          | AUXILIARY GENERATOR       | 2                  | 70   | 19                     | 2.15      | 109                             | 36  |                |                           |
|          | EMERGENCY GENERATOR       | 2-2                | 50-50                                      | 19                     | 1.85      | 87-65                           | 28-31   |                |                           |
|          | ROTARY TRANSFORMER...     | 2                  | 70   | 19                     | 2.15      | 130                             | 66  |                |                           |
|          | AUXILIARY SWITCHBOARDS    |                    |  |                        |           |                                 |   |                |                           |
|          | ENGINE ROOM               |                    |  |                        |           |                                 |   |                |                           |
|          | BOILER ROOM               |                    |  |                        |           |                                 |   |                |                           |
|          | ACCOMMODATION             |                    |  |                        |           |                                 |   |                |                           |
|          | Station No. 1 (Fore ship) | 2                  | 16   | 7                      | 1.7       | 13                              | 260   |                |                           |
|          | " " " " " "               | 2                  | 16   | 7                      | 1.7       | 22                              | 180   |                |                           |
|          | " " " " " "               | 2                  | 16   | 7                      | 1.7       | 58                              | 40  |                |                           |
|          | Motor Station No. 1       | 2                  | 10   | 7                      | 1.35      | 34                              | 76  |                |                           |
|          | " " " " " "               | 2                  | 10   | 7                      | 1.35      | 38                              | 28  | rubber         | lead covered and armoured |
|          | " " " " " "               | 2                  | 16   | 7                      | 1.7       | 48                              | 30  |                |                           |
|          | WIRELESS                  | 2                  | 6  | 1                      | 2.75      | 10                              | 146   |                |                           |
|          | SEARCHLIGHT               | 2                  | 6  | 1                      | 2.75      | 30                              | 138   |                |                           |
|          | MASTHEAD LIGHT...         | 2-2                | 1.5  | 1                      | 1.4       | 1                               | 104-140   |                |                           |
|          | SIDE LIGHTS               | 2                  | 1.5  | 1                      | 1.4       | 1                               | 38  |                |                           |
|          | COMPASS LIGHTS            | 2                  | 1.5  | 1                      | 1.4       | 0.5                             | 12  |                |                           |
|          | POOP LIGHTS               | 2                  | 1.5  | 1                      | 1.4       | 1                               | 30  |                |                           |
|          | CARGO LIGHTS              | 2                  | 2.5  | 1                      | 1.8       | 4                               | 38  |                |                           |
|          | ARC LAMPS                 |                    |  |                        |           |                                 |   |                |                           |
|          | HEATERS                   |                    |  |                        |           |                                 |   |                |                           |

## MOTOR CONDUCTORS.

| Ref. No. | DESCRIPTION.              | No. of Motors. | Effective Area of each Conductor. Sq. Ins. | COMPOSITION OF STRAND. |           | Total Maximum Current. Amperes. | Approximate Length. (Lead and Return.) Feet. Ins. | Insulated with | HOW PROTECTED.            |
|----------|---------------------------|----------------|--|------------------------|-----------|---------------------------------|---|----------------|---------------------------|
|          |                           |                |  | No.                    | Diameter. |                                 |   |                |                           |
|          | BALLAST PUMP              | 1              | 35   | 19                     | 1.55      | 67                              | 64  |                |                           |
|          | MAIN BILGE LINE PUMPS     | 1              | 6  | 1                      | 2.75      | 31                              | 78  |                |                           |
|          | CHIEF ENGINE SERVICE PUMP | 1              | 2.5  | 1                      | 1.8       | 4.6                             | 72  |                |                           |
|          | EMERGENCY BILGE PUMP      | 1              | 70   | 19                     | 2.15      | 109                             | 72  |                |                           |
|          | SANITARY PUMP             | 2              | 50   | 19                     | 1.85      | 90                              | 76  |                |                           |
|          | CIRC. SEA WATER PUMPS     | 1              | 35   | 19                     | 1.55      | 76                              | 60  |                |                           |
|          | CIRC. FRESH WATER PUMPS   | 1              | 2x240                                      | 2x61                   | 2x25      | 5x5                             | 38  |                |                           |
|          | AIR COMPRESSOR            | 1              | 2.5  | 1                      | 1.8       | 8                               | 68  |                |                           |
|          | FRESH WATER PUMP          | 2              | 4  | 1                      | 2.25      | 21                              | 34  |                |                           |
|          | ENGINE TURNING GEAR       | 1              | 2.5  | 1                      | 1.8       | 11                              | 33  |                |                           |
|          | ENGINE REVERSING GEAR     | 1              | 2.5  | 1                      | 1.8       | 11                              | 33  |                |                           |
|          | LUBRICATING OIL PUMPS     | 1              | 6  | 1                      | 2.75      | 30                              | 16  | rubber         | lead covered and armoured |
|          | OIL FUEL TRANSFER PUMP    |                |  |                        |           |                                 |   |                |                           |
|          | WINDLASS                  |                |  |                        |           |                                 |   |                |                           |
|          | WINCHES, FORWARD          |                |  |                        |           |                                 |   |                |                           |
|          | WINCHES, AFT              |                |  |                        |           |                                 |   |                |                           |
|          | STEERING GEAR             |                |  |                        |           |                                 |   |                |                           |
|          | (a) MOTOR GENERATOR       | 2              | 95   | 19                     | 2.5       | 160                             | 64  |                |                           |
|          | (b) MAIN MOTOR            | 2              | 120  | 27                     | 2.25      | 180                             | 60  |                |                           |
|          | WORKSHOP MOTOR            | 1              | 4  | 1                      | 2.25      | 20                              | 16  |                |                           |
|          | VENTILATING FANS          | 1              | 2.5  | 1                      | 1.8       | 4.5                             | 14  |                |                           |
|          | Drainage Pump             | 2              | 2x240                                      | 2x61                   | 2x25      | 5x5                             | 28  |                |                           |
|          | Heavy Sump Pump           | 2              | 2.5  | 1                      | 1.8       | 4.5                             | 6   |                |                           |
|          | " " " " " "               | 2              | 2.5  | 1                      | 1.8       | 16                              | 15  |                |                           |
|          | " " " " " "               | 2              | 2.5  | 1                      | 1.8       | 4.6                             | 14  |                |                           |
|          | Compressor Refriger.      | 1              | 6  | 1                      | 2.75      | 31                              | 26  |                |                           |
|          | Drilling Machine          | 1              | 2.5  | 1                      | 1.8       | 7                               | 6   |                |                           |
|          | Crane                     | 1              | 2.5  | 1                      | 1.8       | 11                              | 8   |                |                           |
|          | Sanitary Cold Water Line  | 2              | 2.5  | 1                      | 1.8       | 4.5                             | 38-42   |                |                           |



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.

**Schinag**  
Schiffs-Installation Aktiengesellschaft  
Zweig Niederlassung Hamburg  
*W. H. H. H.*

Electrical Engineers.

Date 30/6/26

#### COMPASSES.

Distance between electric generators or motors and standard compass

68 m.

Distance between electric generators or motors and steering compass

68 m.

The nearest cables to the compasses are as follows:—

A cable carrying 0.5 Amperes close to feet from standard compass close to feet from steering compass.

A cable carrying " Amperes " feet from standard compass " feet from steering compass.

A cable carrying " Amperes " feet from standard compass " feet from steering compass.

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

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 " course in the case of the standard compass, and nil degrees on " course in the case of the steering compass.

**HOWALDTSWERKE**

*W. H. H. H.*

Builder's Signature.

Date 30/6/26

This installation a duplicate of a previous case Yes If so, state name of vessel

*THALIA*

Remarks (State quality of workmanship, opinions as to class, &c.)

*Workmanship and material of this*

*Installation are of good quality. As the conductors used are of the "New Standards" the Society's Rules respecting conductors have been applied exactly. The Installation has been built & fitted under Special Sur. in accordance with the approved plan, the Secretary's Letter and otherwise in conformity with the requirements of the Rules and is eligible in my opinion for record "ELECT. LIGHT"*

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

Total Capacity of Generators 440. Kilowatts.

The amount of Fee ... £ 42. 10. :

When applied for,  
1.7.1926

Travelling Expenses (if any) £ — : — :

When received,  
19.7.26 R.B.H.  
*SEC*

*Friedrich Hill*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 16 JUL 1926

Assigned

*Elec Light*

Im. 1.26—Transfer.  
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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