

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) Received at London Office 8 - MAR 1926

Date of writing Report 22 Feb 1926 When handed in at Local Office 6326 19 Port of **HAMBURG**

To in Survey held at **Kiel** Date, First Survey 30 December 1925 Last Survey 21 January 1926  
Reg. Book No. 44 on the **Steel Twin Sc. Motor T. MONTROLITE** Tons { Gross 11209 Net 6668

Built at **Kiel** By whom built **FRIED. TRUPP. GERMANY** Yard No. **480** When built **1926**

Owners **IMPERIAL OIL CO.** Port belonging to **TORONTO**

Electric Light Installation fitted by **FRIED. TRUPP. GERMANY** Contract No. When fitted **1926**

System of Distribution **2 wire - 2 conductor insulated with separate conductors, except small cables** volts, Heating **110** volts, Power **220** volts.

Pressure of supply for Lighting **110** volts, Heating **220** volts, Power **Direct Current**

Direct or Alternating Current, Lighting **Direct Current**

If alternating current system, state frequency of periods per second **Yes**

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 **Yes**, 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, short circuited, or touched **Yes**

Position of Generators **Engine room, steam driven emergency set in intermediate of 2nd intermediate room**, are the lubricating arrangements of the generators as per Rule **Yes**

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 **Yes**

and **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**, with the exception of steam driven emergency set **Yes** are the prime movers and their respective generators in metallic contact **Yes**

Earthling, are the brackets and frames of the generating plant efficiently earthed **Yes**

Main Switch Boards, where placed **Engine room forward on elevated platform emergency set close to oil**

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 **Yes**

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 **Yes**

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**

with mica or micaite or other non-hygroscopic insulating material, and the slab similarly insulated from the slab 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**

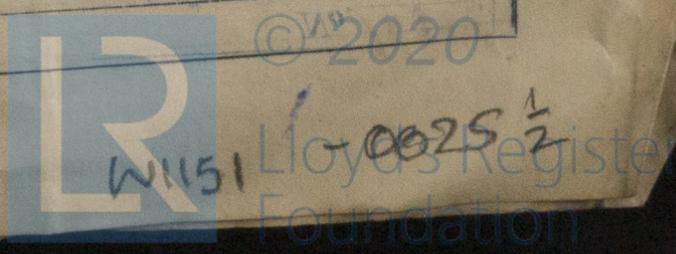
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches **For each generator: 4 double pole circuit breakers with overload and reversed current trips, interlocked by equalizer switch. For each outgoing circuit: 4 fuses on each pole and a single pole switch on one pole**

Instruments on main switchboard **4 ammeters 1 voltmeter** synchronising device for paralleling purposes **ammeters and pump**

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

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**



The Common Standards have been applied

Cables: Single, twin, concentric, or multicore... are the cables insulated and protected as per Tables IV or V of the Rules. Generally...  
Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load about 5% for power, 3% for light.  
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. *no 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 and in troughs*

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. *yes*

Joints in Cables, state if any, and how made, insulated, and protected. *water gas tight joint box.*

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. state the material of which the bushes are made.

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

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. *small diesel driven on main starting arrangement dynamo in engine room main deck. 1 steam driven in shelter deck separate compartment.*

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

Secondary Batteries, are they constructed and fitted as per Rule.

Fittings, are all fittings on weather decks, in storerooms and engine rooms and where exposed to drip or condensed moisture, watertight, 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 light fittings, lamps protected by frosted glass bowls, how are the cables led gas light tubing*

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

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

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, 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, fixed 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 axes 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.

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

Lighting Conductors, where lighting conductors are required, are these fitted as per Rule. *Lead mats.*

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.

Table with columns: DESCRIPTION OF GENERATOR, No of, Kilowatts, Volts, Amperes, Revs. per Min., DRIVEN BY, FUEL USED, Flash Point of Fuel.

LIGHTING AND HEATING CONDUCTORS.

Table with columns: Ref. No., DESCRIPTION, No. of Conductors, Effective Area of each Conductor, COMPOSITION OF STRANDS, Total Maximum Current, Approximate Length, Insulated with, HOW PROTECTED.

MOTOR CONDUCTORS.

Table with columns: Ref. No., DESCRIPTION, No. of Motors, Effective Area of each Conductor, COMPOSITION OF STRANDS, Total Maximum Current, Approximate Length, 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 signers are the Electrical Engineers. Date 23/2/26.

**COMPASSES.**

Distance between electric generators or motors and standard compass } about 15 m.  
 Distance between electric generators or motors and steering compass }

The nearest cables to the compasses are as follows:—

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

A cable carrying " Ampères " feet 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 will

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.

**FRIED. KRUPP  
 GERMANIAWERFT  
 Aktiengesellschaft**

Builder's Signature. Date 23/2/26

*[Handwritten Signature]*

Is this installation a duplicate of a previous case yes If so, state name of vessel TELEPHONE 'ONTARIO' LITE

General Remarks (State quality of workmanship, opinions as to class, &c. Workmanship and material of this electric)

*Installation are of good quality. As the conductors used are of the "German Standard" the Society's Rules respecting conductors have been applied generally. The installation has been fitted in accordance with the approved plan, the primary letters and other wire in conformity with the requirements of the Rules under Special Survey and is eligible in my opinion for record of "ELECT. LIGHT."*

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

*[Handwritten Signature]*  
 9/3/26

Total Capacity of Generators 286 Kilowatts.

The amount of Fee ...	£ 38 : 13	When applied for,	17 <sup>th</sup> Feb. 1926.
Travelling Expenses (if any) £	:	When received,	12/3/1926

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

Committee's Minute FRI. 19 MAR 1926

Assigned Elec Light

Jan. 1, 1926.—Transfer.  
 (The Surveys are requested not to write on or below the space for Committee's Minute.)

