

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 19 AUG 1925

Date of writing Report 24.6.25 When handed in at Local Office 15/8/25 Port of GLASGOW.

No. in Survey held at GLASGOW.

Date, First Survey 18-5-25

Last Survey 27-7-25

1925

Reg. Book.

89643

on the

S. S. LIMERICK

(Number of Visits 7)

Tons { Gross
Net

Built at PORT GLASGOW

By whom built W. HAMILTON & CO

Yard No. 389

When built 1925.

Owners UNION S. S. CO. OF NEW ZEALAND LTD

Port belonging to

LONDON.

Electric Light Installation fitted by MESSRS TROUP CURTISS & CO Contract No. 389 When fitted 1925.

System of Distribution

Two wire. D.C.

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 overload

Yes

, are they compound wound

Yes

are they over compounded 5 per cent.

, 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 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

Platform. Port side of 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

Aft of generators on same platform

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, 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

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

2 S.P. switch fuses on each generator

2 S.P. fuses and one S.P. double throw switch for each outgoing circuit

Instruments on main switchboard

Two

ammeters

Two

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

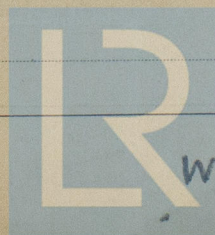
Earth lamp on each pole. Two-way switch and S.P. switch

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.



© 2020

W1197-0032/2

Lloyd's Register
Foundation

Insulation of Cables, state type of cables, single or twin Single are the cables insulated and protected as per Tables III or IV of the Rules Yes
Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 2 Volt
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 Armoured cables with galvanised clips secured to beams or tray with brass screws. Lead covered cable with brass saddles & screws.
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 VI 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 Yes
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 Yes
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 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, 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 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 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 Yes
where are the controlling switches situated Yes
Searchlight Lamps, No. of 1, whether fixed or portable Yes, are their fittings as per Rule Yes
Arc Lamps, other than searchlight lamps, No. of 1, 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 axis 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
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 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. | | | | | | | | | |
|----------------------------------|--------|------------|--------|----------|----------------|----------------------------------|--|----------------------|--|
| 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 | 2 | 25 | 110 | 227 | 350 | Eng. Recip. Single Cylinder Eng. | | | |
| 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. Amperes. | Approximate Length. (Lead and Return.) Feet. | Insulated with | HOW PROTECTED. |
| | | | | No. | Diameter. | | | | |
| | MAIN GENERATOR... | 2 | .3 | 37 | .103 | 227 | 44 | V. J. R. | in Wood Chests |
| | AUXILIARY GENERATOR | | | | | | | | |
| | EMERGENCY GENERATOR | | | | | | | | |
| | ROTARY TRANSFORMER... | | | | | | | | |
| | AUXILIARY SWITCHBOARDS | | | | | | | | |
| | ENGINE ROOM <u>2000wts</u> | 4 | .022 | 7 | .06H | 30 | 40 | V. J. R. | L. C. + A |
| | BOILER ROOM | 2 | .01 | 7 | .04H | 5 | 100 | V. J. R. | L. C. + A |
| | <u>Saloon Accommodation</u> | 2 | .022 | 7 | .06H | 14 | 300 | V. J. R. | L. C. + A |
| | <u>Widship Accommodation</u> | 2 | .022 | 7 | .06H | 15 | 100 | V. J. R. | L. C. + A |
| | <u>After Accommodation</u> | 2 | .022 | 7 | .06H | 6 | 450 | V. J. R. | L. C. + A |
| | <u>Bridge and Navigation</u> | 2 | .01 | 7 | .04H | 7 | 360 | V. J. R. | L. C. + A |
| | <u>Refrigerating E. R.</u> | 2 | .01 | 7 | .04H | 6 | 100 | V. J. R. | L. C. + A |
| | WIRELESS | 2 | .022 | 7 | .06H | 15 | 340 | V. J. R. | L. C. + A |
| | SEARCHLIGHT | | | | | | | | |
| | MASTHEAD LIGHT... | 4 | .002 | 3 | .029 | 2 | 400 | V. J. R. | L. C. + A |
| | SIDE LIGHTS... | 4 | .002 | 3 | .029 | 2 | 150 | V. J. R. | L. C. |
| | COMPASS LIGHTS... | 4 | .002 | 3 | .029 | 4 | 50 | V. J. R. | L. C. |
| | POOP LIGHTS | 2 | .002 | 3 | .029 | 1 | 450 | V. J. R. | L. C. + A |
| | CARGO LIGHTS <u>2000wts</u> | 4 | .075 | 19 | .07H | 110 | 400 | V. J. R. | L. C. + A |
| | 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. | 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 | 1 | .022 | 7 | .06H | 21 | 50 | V. J. R. | L. C. + A |
| | VENTILATING FANS | | | | | | | | |
| | <u>Oil Transfer Motors</u> | 2 | .01H | 7 | .052 | 15 | 60 | V. J. R. | L. C. + A |
| | <u>" " "</u> | 1 | .01H | 7 | .052 | 15 | 60 | V. J. R. | L. C. + 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 TROUP, CURTIS & CO. LTD.

J. Ryan.

Electrical Engineers.

Date July 14th 1925

COMPASSES.

Distance between electric generators or motors and standard compass

124 feet

Distance between electric generators or motors and steering compass

120 feet

The nearest cables to the compasses are as follows:—

A cable carrying 5 Amperes 7 feet from standard compass 6 feet from steering compass.

A cable carrying 5 Amperes 8 feet from standard compass 6 feet from steering compass.

A cable carrying 5 Amperes 7 feet from standard compass 6 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 1/2 degrees on course in the case of the standard compass, and 1/2 degrees on course in the case of the steering compass.

For WILLIAM HAMILTON & CO. LIMITED

James B. Hamilton.

Builder's Signature.

Date 12/8/25.

Is this installation a duplicate of a previous case 10. 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.

J. S. Rankin

20/8/25.

Total Capacity of Generators 50 Kilowatts

The amount of Fee ...

£ 34.10.0

When applied for,

at 1/2

Travelling Expenses (if any) £

When received,

27/6/25

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW 18 AUG 1925

Assigned

Elec. Light.

gls



© 2020

Lloyd's Register Foundation