

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

30 OCT 1925

Date of writing Report 29 Oct 25 When handed in at Local Office 29 Oct 25 Port of WEST HARTLEPOOL

No. in Survey held at West Hartlepool Date, First Survey 23 July 1925 Last Survey 9th Sept 1925
Reg. Book. 39658 on the S.S. KIWITEA (Number of Visits 8)

Tons { Gross 2343.
Net 1166.

Built at Southport By whom built Messrs W. Gray & Co Yard No. 975 When built 1925

Owners Union S. S. Co of New Zealand Port belonging to Wellington N. Z.

Electric Light Installation fitted by Messrs Claude Chapman & Co Contract No. 975 When fitted 1925

System of Distribution Double wire system

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 Engine room starboard

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 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 - 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 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 switch

fuses in dynamo mains, Double pole switched fuses in each outgoing

circuit

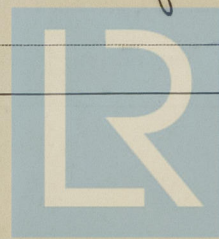
Instruments on main switchboard 1 ammeters 1 voltmeters - synchronising device for paralleling purposes.

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

coupled to earth through switches & fuses.

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



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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 ~~and~~ of the Rules Yes

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 3.5 V

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 in galvanized iron pipes along hatch coamings, lead covered in accommodation

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 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 True made

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 -

-, 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 True fitted

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 -

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 -, 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 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 -

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. | 10 | 110 | 90 | 300 | Single cylinder 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. Amperes. | Approximate Length. (Lead and Return.) Feet. | Insulated with | HOW PROTECTED. |
| | | | | No. | Diameter. | | | | |
| 1. | MAIN GENERATOR... | 2 | .07592 | 19 | .072 | 90 | 30 | Pure rubber | Lead covered |
| | AUXILIARY GENERATOR ... | | | | | | | | |
| | EMERGENCY GENERATOR ... | | | | | | | | |
| | ROTARY TRANSFORMER... | | | | | | | | |
| | AUXILIARY SWITCHBOARDS ... | | | | | | | | |
| 2. | ENGINE ROOM ... | 2 | .01046 | 7 | .044 | 13.7 | 40 | " " | Lead covered |
| | BOILER ROOM ... | | | | | | | | |
| 3. | Salon & forward | 2 | .02214 | 7 | .064 | 19.3 | 260 | " " | Lead covered |
| 4. | alc | 2 | .00701 | 7 | .030 | 9.5 | 65 | " " | Lead covered |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| 5. | WIRELESS ... | 2 | .01046 | 7 | .044 | 25 | 270 | Pure rubber | Lead covered |
| | SEARCHLIGHT ... | | | | | | | | |
| 6. | MASTHEAD LIGHT... | 2 | .00152 | 1 | .044 | 1.1 | 180 | " " | In iron pipes |
| 7. | SIDE LIGHTS ... | 2 | .00152 | 1 | .044 | 1.1 | 24 | " " | Lead covered |
| 8. | COMPASS LIGHTS ... | 2 | .00152 | 1 | .044 | .51 | 12 | " " | " |
| 9. | Deck LIGHTS ... | 2 | .00152 | 1 | .044 | 1.1 | 280 | " " | Lead covered |
| 10. | CARGO LIGHTS ... | 2 | .00455 | 168 | .38 | 2.5 | 100 | " " | Braid & compounded |
| | 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 ... | | | | | | | | |
| | 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.

For Clarke, Chapman & Co., Ltd.

W. W. W. W. W.

Electrical Engineers.

Date Oct. 22. 1925

COMPASSES.

Distance between electric generators or motors and standard compass 130 ft

Distance between electric generators or motors and steering compass..... 124 "

The nearest cables to the compasses are as follows :—

A cable carrying .5 Amperes 12 feet from standard compass 6 feet from steering compass.

A cable carrying .5 Amperes 6 feet from standard compass 12 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.....

The maximum deviation due to electric currents was found to be Nil degrees on all course in the case of the standard compass, and Nil degrees on all course in the case of the steering compass.

FOR WILLIAM GRAY & Co., LIMITED.

A. M. Glashan Director

Builder's Signature.

Date 26/10/25

Is this installation a duplicate of a previous case yes If so, state name of vessel Kartige

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

This installation has been fitted under Survey.
The materials and workmanship are good.
On completion it was tried under full working
conditions and found satisfactory.

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

5/11/25

Total Capacity of Generators.....10. Kilowatts

The amount of Fee £ 10 : 0 : 17 Sept 93.

Travelling Expenses (if any) £ : : 19 Sept 19 25

R. D. Shilston
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned