

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

-8 SEP 1925

Received at London Office

Date of writing Report 10 When handed in at Local Office 7/9/10 25 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle.

Date, First Survey 26th May Last Survey 31st July 19 25

Reg. Book.

(Number of Visits... 114)

36724 on the Waipahi

Tons { Gross 1720
Net 1080

Built at Newcastle

By whom built Horthumberland S.B.C. Yard No. 388 When built 1925

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

Electric Light Installation fitted by Campbell Ischerwood & Co. Contract No. 388. When fitted 1925

System of Distribution

Double wire

Pressure of supply for Lighting 220 volts, Heating — volts, Power 220 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. 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 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 port + 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 — and —, are the generators protected from mechanical injury and damage from water, steam or oil —

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 Power switchboard on port side, lighting switchboard on aft bulkhead 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

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 For power tripole pole circuit

breakers fitted with overload, no volt + reverse current release, on each dynamo, Single pole switch + double pole fuses on each outgoing circuit. For lighting D.P.C.O.S on dynamo mains + S.P. switches + D.P. fuses on outgoing circuits

Instruments on main switchboard 4 ammeters 4 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 to earth

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

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

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. Cables run in steel channel bed, covered by steel covers secured by means of studs & nuts. ✓

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 no ✓

Joints in Cables, state if any, and how made, insulated, and protected none made ✓

Watertight Glands and Deck Tubes, *are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands*

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 _____

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 *no*

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected no

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 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 or vertic

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 yes ✓

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 bo:

. 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.....

[illegible]

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.

CAMPBELL & ISHERWOOD, LTD

PER

John Muir

Electrical Engineers.

Date *31st Aug 1925*

COMPASSES.

Distance between electric generators or motors and standard compass

100 feet

Distance between electric generators or motors and steering compass

96 feet

The nearest cables to the compasses are as follows:—

A cable carrying *.5* Ampères *on the* ~~main~~ standard compass *.7* feet from steering compass.

A cable carrying *.5* Ampères *7* feet from standard compass *on the* ~~main~~ steering compass.

A cable carrying *5.4* Ampères *4.6* feet from standard compass *7* 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 *no*

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

FOR THE NORTHUMBERLAND SHIPBUILDING CO. LTD.

R. Murray Jellicoe

Builder's Signature.

Date *2nd Sept 1925*

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. _____)

The above installation is in accordance with the Society's Rules. The vessel is eligible in my opinion for notation elec light, wireless

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

W.T. Badger
11/9/25

Total Capacity of Generators *190* Kilowatts

The amount of Fee ... *£36* : — { When applied for, *30/7/1925*

Travelling Expenses (if any) £ : : { When received, *11/8/1925*

W.T. Badger

Surveyor to Lloyd's Register of Shipping.

Committee's Minute _____

Assigned _____

Im. 9.22.—Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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Foundation