

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

21 JUN 1930

Received at London Office

Date of writing Report _____ When handed in at Local Office _____ 19 _____ Port of Belfast

No. in Survey held at Belfast Date, First Survey 1st May Last Survey 11th June 1930
 Reg. Book. _____ (Number of Visits 7)

H0783 on the Ch. V "Pinnisfallen" Tons { Gross _____
 Net _____

Built at Belfast By whom built Harland & Wolff Ltd Yard No. 870 When built 1930

Owners City of Cork Steam Packet Co. Port belonging to Cork

Electric Light Installation fitted by Harland & Wolff Ltd Contract No. 870 When fitted 1930

System of Distribution Two wire direct current system

Pressure of supply for Lighting 220 volts, Heating 220 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 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

Are the lubricating arrangements of the generators as per Rule yes

Position of Generators Auxiliary Motor Room, Ford of Chain Motor 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 axes 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 In Auxiliary Motor Room on Platform above Generator

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, 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 slab with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework _____

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

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 D.P. Overload & Reverse Current Circuit Breaker with Time Limits and Interlocked Equalizer Switch

Instruments on main switchboard 4 ammeters 2 voltmeters arranged _____ 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

connected to Bus - Bars with D.P. Switch & Fuses

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



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Cables: Single, twin, concentric, or multicore *Yes* are the cables insulated and protected as per Tables IV or V of the Rules *Yes*

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load *9.5 Volts*

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 *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 *Hard Rubber Waterproof Cables clipped to Perforated Sheet Steel Plating & protected by Sheet Metal Covering in Hold*
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 *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 *All joints are made in properly constructed Junction Boxes*

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 *Lead*

Earthing Connections, state what earthing connections are fitted and their respective sectional areas *All Metal Portable Fittings fitted to Steelwork of Ships are earthed with Connector Equivalent to Working Conductor*, 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 *J.S.M.W. Generator driven by Paraffin Engine on Boat Deck & 160 Amp 220 Volt Storage Battery in Ford Funnel, Controlled by Switch Board in Emergency Dynamic 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 *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 *Guard Hold Fittings, Placed Between Beams* are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected

Lead Served, Armoured & Braided Cables Clipped to Beams. where are the controlling switches situated *Grouped in Switch & Fuse Boxes, & situated outside the spaces.* how are the cables led

Searchlight Lamps, No. of *1*, whether fixed or portable *Portable*, are their fittings as per Rule *Yes*

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 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 *Yes* 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 and fitted 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 *—*

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.

Table with columns: DESCRIPTION OF GENERATOR, No. of, Kilowatts, Volts, Amperes, Revs. per Min., DRIVEN BY, WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE, Fuel Used, Flash Point of Fuel. Rows include MAIN, AUXILIARY, EMERGENCY, and ROTARY TRANSFORMER.

LIGHTING AND HEATING CONDUCTORS.

Table with columns: Ref. No., DESCRIPTION, No. of Conductors, Effective Area of each Conductor, COMPOSITION OF STRAND, Total Maximum Current, Approximate Length, Insulated with, HOW PROTECTED. Rows include MAIN GENERATOR, EQUALISER CONNECTIONS, AUXILIARY GENERATOR, EMERGENCY GENERATOR, ROTARY TRANSFORMER, AUXILIARY SWITCHBOARDS, ENGINE ROOM, BOILER ROOM, ACCOMMODATION, MAIN GENERATORS, EQUALIZER CONNECTIONS, MASTERBOARD, WIRELESS, SEARCHLIGHT, MASTHEAD LIGHT, SIDE LIGHTS, COMPASS LIGHTS, POOP LIGHTS, CARGO LIGHTS, ARC LAMPS, HEATERS.

MOTOR CONDUCTORS.

Table with columns: Ref. No., DESCRIPTION, No. of Motors, Effective Area of each Conductor, COMPOSITION OF STRAND, Total Maximum Current, Approximate Length, Insulated with, HOW PROTECTED. Rows include 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 CRANE, CRANE FORWARD, CRANE AFT, STEERING GEAR, (a) MOTOR GENERATOR, (b) MAIN MOTOR, 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.



Electrical Engineers.

Date 16 June 1930

COMPASSES.

Distance between electric generators or motors and standard compass 22 feet
 Distance between electric generators or motors and steering compass 20 feet

The nearest cables to the compasses are as follows:—

A cable carrying 16 Ampères 12 feet from standard compass 8 feet from steering compass.
 A cable carrying 6.5 Ampères 9 feet from standard compass 6 feet from steering compass.
 A cable carrying 17 Ampères 22 feet from standard compass 20 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 *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.



Builder's Signature.

Date

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.)

This installation has been fitted in accordance with the rules. It has been tried out under working conditions and the tests have proved satisfactory. In my opinion the vessel is now eligible for notation "Electric Light."

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

R
 24/6/30

Total Capacity of Generators 447 1/2 Kilowatts.

1m. 127.—Transfer. (The Surveys are requested not to write on or below the space for Committee's Minute.)

The amount of Fee ... £ ~~42~~ 13/9
 See attached letter
 Travelling Expenses (if any) £ : :
 When applied for, 17th June 1930
 When received, 14.8.1930

R Lee Amess
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI 4 JUL 1930*

Assigned *Elec Light*

