

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

9 JAN 1939

Received at London Office

Date of writing Report 28-12-1938 When handed in at Local Office 9 JAN 1939 Port of LONDON

No. in Survey held at GREENHITHE Date, First Survey 19-12-38 Last Survey 19 Dec 1938
Reg. Book. 50912 on the M.V. FRED EVERARD. (Number of Visits.....)

Tons { Gross 190
Net 150

Built at Gt. YARMOUTH By whom built Fellows & Co. Ltd. Yard No. When built 1926-10

Owners F. T. Everard & Sons Port belonging to LONDON.

Electric Light Installation fitted by F.T. Everard & Sons. Contract No. When fitted

Is the Vessel fitted for carrying Petroleum in bulk NO

System of Distribution TWO-WIRE - DIRECT CURRENT

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 temperature rise 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 ✓, is an adjustable regulating resistance fitted in series with each shunt field Yes

Have certificates of test results for machines under 100 kw. been submitted and approved To be submitted

Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing ✓

Have certificates for generators under 100 kw. been supplied and approved To be submitted

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 Port side of engine room, forward end. ✓, 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 After end of engine room

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 ✓, 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

is it of an approved type Yes, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micaite or other

non-hygroscopic insulating material, and the slab similarly insulated from its framework Yes, is the non-hygroscopic insulating material of an approved

type Yes, 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, temperature rise of

omnibus bars ✓, individual fuses to voltmeter, pilot or earth lamp Yes, are moving parts of switches alive in the

"off" position No are all screws and nuts securing connections effectively locked Yes are any fuses fitted on the live side of

switches No Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

Double pole switches & fuses. Two single pole circuit breaker for branch circuit

Are turbine driven generators fitted with emergency trip switch as per rule ✓ Are cupboards or compartments containing switchboards composed of

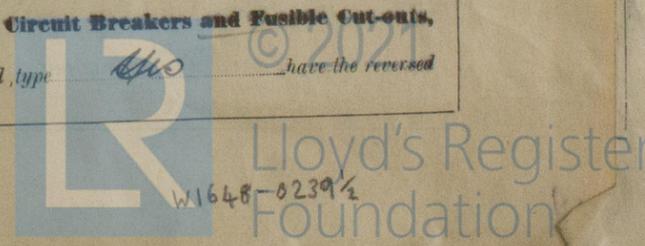
fire-resisting material or lined with approved material ✓ Instruments on main switchboard ONE ammeters ONE

voltmeters ✓ synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection

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

Earth lamps. ✓ Switches, Circuit Breakers and Fusible Cut-outs,

do these comply with the requirements of the Rules Yes are the fusible cutouts of an approved type Yes have the reversed



current protection devices been tested under working conditions are all fuses labelled as per rule Yes

Joint Boxes, Section and Distribution Boards. is the construction, protection, insulation, material, and position of these as per rule

Cables: Single, twin, concentric, or multicore SINGLE are the cables insulated and protected as per Tables IV, V, X, XI, XII or XIII of the Rules Yes

If the cables are insulated otherwise than as per Rule, are they of an approved type 2.5V **Fall of Pressure,** state maximum between bus bars and any point of the installation under maximum load

Cable Sockets, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets **Paper Insulated and Varnished Cambric Insulated Cables.**

If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound or waterproof insulating tape **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 are cables laid under machines or floorplates No if so, are they adequately protected

Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit Yes

Support and Protection of Cables, state how the cables are supported and protected Run in conduit

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

Refrigerated Chambers, are the cables and fittings in accordance with the special requirements

Joints in Cables, state if any, and how made, insulated, and protected

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 are their connections made as per Rule

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule **Emergency Supply,** state position and method of control of the emergency supply and how the generator is driven

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 has each navigation lamp an automatic indicator as per Rule **Secondary Batteries,** are they constructed and fitted as per Rule are they ventilated as per Rule

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 are all fittings suitably ventilated are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials Yes

Heating and Cooking Appliances, are they constructed and fitted as per Rule are air heaters constructed and fitted as per Rule

Searchlight Lamps, No. of whether fixed or portable 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 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 and have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing have certificates for all motors for essential services been supplied and approved

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted 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 are all fuses of the fitted cartridge type are they of an approved type

If portable lamps for use in dangerous spaces are supplied, are they of a self-contained, battery-fed flameproof type approved for use in dangerous spaces

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule are they suitably stored in dry situations

PARTICULARS OF GENERATING PLANT.							
DESCRIPTION OF GENERATOR.	No. of	RATED AT			DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.		Rev. per Min.	Fuel Used.
MAIN	1	10	110	91	Hewbury Diesel		
AUXILIARY							
EMERGENCY							
ROTARY TRANSFORMER							

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	Rule.			
MAIN GENERATOR	1	.075	19	.072	91	97	16	V.I.R.	Conduit
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER MOTOR GENERATOR									
ENGINE ROOM	1	.002	3	.029	1.5	7.8		V.I.R.	Conduit.
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
ACCOMMODATION									
WIRELESS									
SEARCHLIGHT									
MASTHEAD LIGHT									
SIDE LIGHTS									
COMPASS LIGHTS									
POOP LIGHTS									
CARGO LIGHTS									
HEATERS									

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
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	1	1	0.03	19	.022		56	140	V.I.R.	Conduit
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS										

The Electrical Equipment is installed in accordance with the approved plans.

All Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

J. T. EVERARD & SONS LTD.

J. T. Everard

Electrical Engineers.

Date *Dec 31st 1938.*

COMPASSES.

Minimum distance between electric generators or motors and standard compass *✓*

Minimum distance between electric generators or motors and steering compass *20'*

The nearest cables to the compasses are as follows:—

A cable carrying *✓* Ampères *✓* feet from standard compass *✓* 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 *✓*

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 *✓* degrees on *✓* course in the case of the steering compass.

Builder's Signature.

Date

Is this installation a duplicate of a previous case *✓* If so, state name of vessel

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

The electrical installation of this vessel was carried out in accordance with the approved plans and the requirements of the Rules for Electrical Equipment. It was examined and tested under working conditions and found satisfactory. In my opinion the vessel is eligible to have the notation 'electric light'.

*W. H. Bowen
L.S.
3/2/39.*

Total Capacity of Generators *10* Kilowatts.

The amount of Fee £ *5* : - : *6/11/39*

Travelling Expenses (if any) £ : : *2/4.19.39*

W. H. Bowen

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 7 FEB 1939

Assigned

*See Lm. Apt
106790*

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



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