

Rpt. 13.

No. 42370

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 22.1.23 When handed in at Local Office 22.1.23 Port of Glasgow Received at London Office WED. JAN. 24 1923

No. in Survey held at GLASGOW. Date, First Survey 8th Nov. Last Survey 9th Dec 1922
Reg. Book. 59628 on the "S.S. FAMAKA" (Number of Visits.....)

Built at LINTHOUSE By whom built A. STEPHEN & SON LTD Yard No. 498 When built 1922
Tons { Gross 5400
Net

Owners KHEDIVIAL MAIL S.S. CO LTD. Port belonging to LONDON.

Electric Light Installation fitted by MESSRS A. STEPHEN & SON LTD Contract No. 498 When fitted 1922

System of Distribution TWO WIRE, DIRECT ✓
Pressure of supply for Lighting 100 ✓ volts, Heating 100 ✓ volts, Power 100 ✓ 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 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 IN ENGINE ROOM, STARB^d 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 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 IN ENGINE RM. BESIDE GENERATORS

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, ON PLATFORM FOR SWITCH-BOARD ONLY, 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 SLATE, is all insulation of high dielectric strength and of permanently high insulation resistance —

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 NONE, 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

1- 600 AMP. D.P. OVERLOAD CIRCUIT BREAKER FOR EACH GENERATOR.

THE MACHINES ARE NOT RUN IN PARALLEL AND NO EQUALIZING SWITCHES FITTED

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 LAMPS

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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Insulation of Cables, state type of cables, single or twin BOTH 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 VOLTS
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 NONE FITTED

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 V.I.R. RUN IN WOOD CASINGS, ALSO LEAD COVERED ARMOURED AND BRAIDED, RUN ON UNDER SIDE OF DECKS AND BULKHEADS AND SECURED WITH BRASS OR GALVANIZED IRON SADDLES

If cables are run in wood casings, are the casings and caps secured by screws YES, are the caps 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 NONE

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 FIBRE VULCANISED

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 THE GENERATOR (DRIVEN BY A PARAFFIN ENGINE) AND THE SWITCH BOARD IS SITUATED ON THE BOAT DECK

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 YES (FIVE FITTINGS IN ALL)
THESE ARE PROTECTED BY HEAVY IRON GUARDS

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
 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 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 WHEREVER POSSIBLE
 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 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 —

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	60	100	600	400	COMPOUND STEAM ENGINE		
AUXILIARY								
EMERGENCY	1	16	100	160	1100	INTERNAL COMBUSTION	PARAFFIN	
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	0.935	2 @ 61	103	600	38	VIR	LEAD COVERED
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR	2	0.964	37	0.935	160	36	VIR	LEAD COVERED
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	2	0.221	7	0.064	17.7	46	VIR	LEAD COVERED ARM & BRAIDED
	BOILER ROOM	2	0.104	7	0.044	9.8	140	VIR	LEAD COVERED ARM & BRAIDED
	1 st CLASS PASSENGERS	2	1.009	19	0.935	88.95	160	VIR	STEEL TUBING & WOOD CASING
	2 nd CLASS PASSENGERS	2	0.221	7	0.064	24.55	96	VIR	STEEL TUBING & WOOD CASING
	OFFICERS & ENGINEERS	2	0.221	7	0.064	16.35	170	VIR	STEEL TUBING & WOOD CASING
	CREW	2	0.221	7	0.064	14.	90	VIR	LEAD COVERED ARM & BRAIDED
	SERVICE	2	0.221	7	0.064	9.	85	VIR	STEEL TUBING & WOOD CASING
	EMERGENCY (SUPPLY FROM MAIN SW. B.)	2	0.964	37	0.935	160	210	VIR	STEEL TUBING & WOOD CASING
	WIRELESS	2	0.221	7	0.064	15.	150	VIR	STEEL TUBING & WOOD CASING
	SEARCHLIGHT								
	MASTHEAD LIGHT	2	0.029	3	0.036	1.2	330	VIR	LEAD COVERED ARM & BRAIDED
	SIDE LIGHTS	2	0.0194	3	0.029	1.2	96	VIR	LEAD COVERED
	COMPASS LIGHTS	2	0.0194	3	0.029	4	64	VIR	LEAD COVERED
	POOP LIGHTS								
	CARGO LIGHTS	2	0.221	7	0.064	39.2	96	VIR	LEAD COVERED ARM & BRAIDED
	ARC LAMPS								
	HEATERS	2	0.221	7	0.064	24.9	240	VIR	STEEL TUBING & WOOD CASING

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	1	1.009	19	0.935	90	198	VIR	STEEL TUBING
	SANITARY PUMP								
	CIRC. SEA WATER PUMPS								
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR								
	FRESH WATER PUMP								
	ENGINE TURNING GEAR	1	0.221	7	0.064	33	70	VIR	LEAD COVERED ARM & BRAIDED
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS								
	OIL FUEL TRANSFER PUMP								
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR								
	WORKSHOP MOTOR	1	0.0701	7	0.036	14.	86	VIR	LEAD COVERED ARM & BRAIDED
	VENTILATING FANS	1	0.221	7	0.064	25.5	140	VIR	LEAD COVERED ARM & BRAIDED
	VENTILATING FANS	1	0.221	7	0.064	20.	40	VIR	LEAD COVERED ARM & BRAIDED
	VENTILATING FANS	1	0.221	7	0.064	20.	150	VIR	LEAD COVERED ARM & BRAIDED
	OIL FUEL PUMP	1	0.0701	7	0.036	10.4	240	VIR	LEAD COVERED ARM & BRAIDED
	OIL PURIFYING MOTOR	1	0.0701	7	0.036	8.5	48	VIR	LEAD COVERED ARM & BRAIDED
	W.T. DOORS	3	0.060	19	0.064	51.	176	VIR	LEAD COVERED & WOOD CASING

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.

ALEXANDER STEPHEN & SONS, LIMITED.

Alex. MacLellan Electrical Engineers.
 Director.

Date 17th Jan'y 1923

COMPASSES.

Distance between electric generators or motors and standard compass 50 FEET FROM THE NEAREST (WIRELESS 1/2 K.W. SET)

Distance between electric generators or motors and steering compass 50 FEET FROM THE NEAREST (WIRELESS 1/2 K.W. SET)

The nearest cables to the compasses are as follows:—

A cable carrying 2 Ampères 1.5 feet from standard compass 1.5 feet from steering compass.

A cable carrying 7.4 Ampères 16 feet from standard compass 16 feet from steering compass.

A cable carrying 30 Ampères 78 feet from standard compass 70 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 ANY course in the case of the standard compass, and NIL degrees on ANY course in the case of the steering compass.

FOR
 ALEXANDER STEPHEN & SONS, LIMITED.

Alex. MacLellan Builder's Signature.
 Director.

Date 17th Jan'y 1923

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 on board under special survey. Tested under full working conditions & found satisfactory in every way. The workman ship was found to be of a high standard.

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

J.W.D.
 27/1/23

Total Capacity of Generators 136. Kilowatts

The amount of Fee ... £ 33 : 6/ : When applied for, 18.12.22

Travelling Expenses (if any): £ : : When received, 22.12.22

J.P. Ransin
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 23 JAN 1923

Assigned Elec. Light.

H.C.
 20/1/23

Im. 3.22.—Transfer.
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)