

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 28 MAR 1928

Date of writing Report 23.2.1928 When handed in at Local Office 24/3/1928 Port of GLASSGOW.

No. in Survey held at GLASSGOW. Date, First Survey 1.12.27 Last Survey 7.3.28 19
Rep. Book. (Number of Visits... 13)

43269 on the M.V. VICTOLITE Tons { Gross 11410
Net 6711

Built at LINTHOUSE By whom built ALEX. STEPHENSON'S Yard No. 517 When built 1928

Owners MESSRS THE IMPERIAL OIL CO. LTD. Port belonging to VICTORIA. B.C.

Electric Light Installation fitted by MESSRS ALEX. STEPHENSON'S LTD. Contract No. 517 When fitted 1928

System of Distribution Two wire system
Pressure of supply for Lighting 110 volts, Heating Nil, Power 110 volts.

Direct or Alternating Current, Lighting Direct current, Power Direct current.

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. No, 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 Port Side of Engine 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. None and None, 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. Direct Coupled.

Main Switch Boards, where placed On ship's side. Port side 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. Yes, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards. None and None.

are they constructed wholly of durable, non-ignitable non-absorbent materials. Enamelled slate, 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. 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, 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. 2-300 Amp. D.P. switches for each Gen. 3-25 Amp, 9-50 Amp, 1-75 Amp, 1-250 Amp D.P. Change-over switches for circuits, all having D.P. fuses.

Instruments on main switchboard 2 D.P. ammeters, 2 voltmeters Nil, 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. 2 earth testing lamps with 2 D.P. switches (bridges) & 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.



Cables: Single, twin, concentric, or multicore Single 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 2 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 No paper cables 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, valves 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 Clipped to plating, decks & bulkhead and also run in galvanneal tubing, Cable Lead Covered & Armoured.

If cables are run in wood casings, are the casings and caps secured by screws Yes, are the cap 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 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 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 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 None.

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 None.

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 Yes tight guarded, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected Yes tight guarded, how are the cables led Through glands.

where are the controlling switches situated outside these compartments in the fuse boxes, all fuse boxes locked.

Searchlight Lamps, No. of 2, whether fixed or portable Fixed, 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 Totally Enclosed, 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 —.

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 Yes.

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office None.

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE	
		Kilowatts	Volts	Amps.	Revs. per Min.		Fuel Used	Flash Point of Fuel
MAIN	1	30	110	273	500	2 Cyl. 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 Amps.	Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED
				No.	Diameter.				
	MAIN GENERATOR	2	.40640	61	.093	273	38	V.I.R.	2.6. + Armoured
	EQUALISER CONNECTIONS	—							
	AUXILIARY GENERATOR	—							
	EMERGENCY GENERATOR	—							
	ROTARY TRANSFORMER	—							
	AUXILIARY SWITCHBOARDS	—							
	ENGINE ROOM	2	.03960	19	.052	63	88	V.I.R.	" "
	BOILER ROOM	—							
	ACCOMMODATION MARK FOR	2	.03960	19	.052	52.7	76.8	"	" "
	Engrs. Accom.	2	.03960	19	.052	31	160	"	" "
	Cabin etc.	2	.01462	7	.052	36.1	144	"	" "
	Navigation & Gyro.	2	.01462	7	.052	18.9	69.6	"	" "
	Shore connection	2	.302	37	.103	200	170	"	" "
	WIRELESS	2	.00701	7	.036	14	660	"	" "
	SEARCHLIGHT (2)	2	.02214	7	.064	33	696	"	" "
	MASTHEAD LIGHT	2	.00194	5	.029	.9	396	"	" "
	SIDE LIGHTS	2	"	3	.029	.9	120	"	" "
	COMPASS LIGHTS	2	"	3	.029	.9	36	"	" "
	POOP LIGHTS	2	"	3	.029	.9	824	"	" "
	CARGO LIGHTS	2	.01462	7	.052	32.7	160	"	" "
	ARCO LAMPS	—							
	HEATERS	—							

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION	No. of Motors	Effective Area of each Conductor Sq. Ins.	COMPOSITION OF STRAND		Total Maximum Current Amps.	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	—							
	(a) MOTOR GENERATOR	—							
	(b) MAIN MOTOR	—							
	WORKSHOP MOTORS	5	.03960	19	.052	56	224		
	VENTILATING FANS	2	.03960	19	.052	54	152		
	Oil Purifiers	3							
	Domestic Inf.	1	.01462	7	.052	34.7	224		
	Laundry Inf.	2	.03960	19	.052	52.9	204		
	Refrig. Motor	1	.02214	7	.064	4.0	210		
	Oil Lamp	1	.00299	3	.036	6.5	6		



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.

Electrical Engineers.

Date

John Stephen & Sons
Secretary

COMPASSES.

Distance between electric generators or motors and standard compass *250 feet from Gens. Wireless Tel. M. G. 24 feet.*

Distance between electric generators or motors and steering compass *248 feet from Gens. " " " " 20 feet.*

The nearest cables to the compasses are as follows:—

A cable carrying *.09* Ampères *7* feet from standard compass *6* feet from steering compass.

A cable carrying *1* Ampères *12* feet from standard compass *8* feet from steering compass.

A cable carrying *.4* Ampères *6* feet from standard compass *6* 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 *no.* degrees on *any* course in the case of the standard compass, and *no* degrees on *any* course in the case of the steering compass.

ALEXANDER STEPHEN & SONS, LIMITED.

Builder's Signature.

Date *21/3/28*

John Stephen & Sons
Secretary

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. The materials & workmanship were found to be good and sound.*

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

J.P. 14/4/28

Total Capacity of Generators *60* Kilowatts.

The amount of Fee ... *£98.100* When applied for: *22 MAR 1928*

Travelling Expenses (if any) £ : : *134.28* When received: *28 MAR 1928*

J. Shankie
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 27 MAR 1928*

Assigned *Elec. Light.*



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Lloyd's Register Foundation

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24/3/28

Impr. Transfer.
(The Surveys are requested and to a file on later the same for Committee's Minutes)