

W. 132

Rpt. 13.

No. 10404

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) 1 JUL 1930
Received at London Office

Date of writing Report 19 When handed in at Local Office 30-6-30 Port of Belfast.

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

42355 on the M. V. "Silvercypress" Tons { Gross
Net

Built at Belfast. By whom built Harland & Wolff. Yard No. 882. When built 1930.

Owners Stanley & John Thompson. Port belonging to London

Electric Light Installation fitted by Harland & Wolff. Contract No. 882. When fitted 1930.

System of Distribution Two wire direct current, ring main for heating, lighting & power.
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.

Position of Generators Obtain motor room, part of starboard. Are the lubricating arrangements of the generators as per Rule? Yes.

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 On Platform at aft end of motor 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

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? 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 D. P. Over load and reverse current circuit breaker, and triple pole switch with equalizer blade arranged to close first & open last.

Instruments on main switchboard 7 ammeters 5 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 by double pole 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, ~~triple~~, 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. 6.5 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 yes.

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 Lead covered & braided cables clipped to perforated plating; lead covered armoured & braided cables protected by sheet metal covers in holds.

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 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 ship, are earthed with connectors equivalent to working conductor. All armoured cables earthed by bonding glands & clips, 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 One 6 K.W. 220 Volt. D.C. generator, driven by paraffin engine, and fitted in engineers store at end of surtch board platform.

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.

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.

how are the cables led yes.

where are the controlling switches situated yes.

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 — 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 yes.

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.

DESCRIPTION OF GENERATOR	No. of	RATED AT			DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE	
		Kilowatts	Volts	Ampères		Fuel Used	Flash Point of Fuel
MAIN	4	100	220	455	300	Diesel Engine	Fuel Oil
AUXILIARY	1	6	220	27.5	1000	Paraffin Engine	Paraffin
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, Ampères	Approximate Length, (Lead and Return), Feet	Insulated with	HOW PROTECTED
				No.	Diameter.				
	MAIN GENERATOR	1	0.5	61	0.103	455	100	VARNISHED CAMBRIC	Lead Covered
	EQUALISER CONNECTIONS	1	0.5	61	0.103	—	50	"	Do
	AUXILIARY GENERATOR	1	0.01	7	0.004	27.5	60	RUBBER	Do
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM								
	BOILER ROOM								
	ACCOMMODATION								
	LIGHTING RM. PANELS	1	0.03	19	0.044	56	1200	Rubber	Lead Covered, Armoured & Braided
	HEATING RM. PANELS	1	0.075	19	0.072	137	830	Varnished Cambric	Do
	FORD WINGH RM. PANEL	1	0.25	37	0.093	411	1100	Do	Do
	MIDSHIP " " "	1	0.15	37	0.072	274	200	Do	Do
	HEAT " " "	1	0.15	37	0.072	274	600	Do	Do
	WINDLASS " " "	1	0.25	37	0.093	228	460	Do	Do
	REFRIG. M/CY. PANEL	1	0.5	61	0.103	639	70	Do	Lead Covered
	WIRELESS	1	0.007	7	0.036	15	100	Rubber	Lead Covered
	SEARCHLIGHT	1	0.04	19	0.052	53	75	Do	Lead Do
	MASTHEAD LIGHT	1	0.002	3	0.029	0.18	624	Do	Armoured & Braided
	SIDE LIGHTS	1	0.002	3	0.029	0.18	75	Do	Do
	COMPASS LIGHTS	1	0.002	3	0.029	0.14	60	Do	Lead Covered
	POOP LIGHTS	1	0.002	3	0.029	2.3	150	Do	Lead Covered, Armoured & Braided
	CARGO LIGHTS	1	0.002	3	0.029	2.27	80	Do	Do
	ARC LAMPS								
	HEATERS	1	0.003	3	0.036	5.45	60	Rubber	Lead Covered

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION	No. of Motors	Effective Area of each Conductor, Sq. Ins.	COMPOSITION OF STRAND		Total Maximum Current, Ampères	Approximate Length, (Lead and Return), Feet	Insulated with	HOW PROTECTED
				No.	Diameter.				
	BALLAST PUMP	1	0.15	37	0.072	144	220	Rubber	Lead Covered
	MAIN BILGE LINE PUMPS	1	0.04	19	0.052	53	120	Do	Do
	GENERAL SERVICE PUMP	1	0.045	7	0.052	53	350	Do	Do
	EMERGENCY BILGE PUMP	—							
	SANITARY PUMP	—							
	CIRC. SEA WATER PUMPS	2	0.10	19	0.083	102	210	Do	Do
	CIRC. FRESH WATER PUMPS	1							
	AIR COMPRESSOR	1	0.75	91	0.103	560	240	Varnished Cambric	Do
	FRESH WATER PUMP	—							
	ENGINE TURNING GEAR	2	0.0225	7	0.064	42	70	Rubber	Do
	ENGINE REVERSING GEAR	—							
	LUBRICATING OIL PUMPS	2	0.15	37	0.072	134	90	Do	Do
	OIL FUEL TRANSFER PUMP	1	0.045	7	0.052	53	300	Do	Do
	WINDLASS	1	0.15	37	0.072	248	100	Varnished Cambric	Lead Covered, Armoured & Braided
	WINGHES, FORWARD	6	0.075	19	0.072	137	150	Do	Do
	WINGHES, AFT	5	0.075	19	0.072	137	90	Do	Do
	WINGHES MIDSHIP STEERING GEAR	2	0.075	19	0.072	137	120	Do	Do
	(a) MOTOR GENERATOR	—							
	(b) MAIN MOTOR	2	0.075	19	0.072	89	660	Rubber	Do
	WORKSHOP MOTOR	—							
	VENTILATING FANS	2	0.003	3	0.036	11	180	Do	Lead Covered
	LATHE	1	0.002	3	0.029	5.4	40	Do	Do
	DRILL	1	0.003	3	0.036	8.4	60	Do	Do
	GRINDSTONE	1	0.003	3	0.036	9	60	Do	Do

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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

28/6/30

COMPASSES.

Distance between electric generators or motors and standard compass

132 Feet

Distance between electric generators or motors and steering compass

130 Feet

The nearest cables to the compasses are as follows:—

A cable carrying 3.65 Ampères 7 feet from standard compass 7 feet from steering compass.

A cable carrying 6.45 Ampères 15 feet from standard compass 13 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

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 Nil course in the case of the steering compass.



Builder's Signature.

Date

28/6/30

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 under special survey and in accordance with the rules. The materials and workmanship are sound and good. Trials under full working conditions were satisfactory. In my opinion the vessel is eligible for notation "Electric light".

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

4/7/30

Total Capacity of Generators 406 Kilowatts.

The amount of Fee ... £ 41 : 13 : 30 - 6 - 19 30
Travelling Expenses (if any) £ : : 14 7 - 19 30

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

Committee's Minute

Assigned

Elec. Lt.

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