

Rpt. 13.

No. 14142

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

5 JUL 1930

Received at London Office

Date of writing Report 10.5.1930 When handed in at Local Office 4th July 1930 Port of MIDDLESBROUGH.No. in Survey held at Haverton Hill on Ties Date, First Survey 21.3.30 Last Survey 9/4/1930
Reg. Book. (Number of Visits.....5.....)42369 Sup on the S. S. DemosileTons { Gross 1918
Net 1684Built at Haverton Hill on Ties By whom built Furness Shipbuilding Co Ltd Yard No. 171 When built 1930Owners Imperial Oil Ltd Port belonging to MontrealElectric Light Installation fitted by Furness Shipbuilding Co Ltd Contract No. 171 When fitted 1930**System of Distribution**Double WirePressure of supply for Lighting 110 volts, Heating 110 volts, Power 110 volts.Direct or Alternating Current, Lighting Direct Power Direct

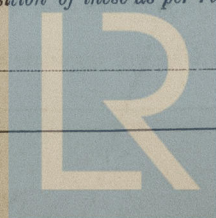
If alternating current system, state frequency of periods per second

Has the **Automatic Governor** been tested and found efficient when the whole load is suddenly thrown on or off yesGenerators, do they comply with the requirements regarding rating yes, are they compound wound yesare they over compounded 5 per cent. level, if not compound wound state distance between each generatorWhere 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 yesAre 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 yesAre the lubricating arrangements of the generators as per Rule yes**Position of Generators**Starboard side of Engine Roomis 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 yes, are the generators protected from mechanical injury and damage from water, steam or oil yesare their axes of rotation fore and aft yesEarthing, are the bedplates and frames of the generating plant efficiently earthed yes are the prime movers and their respective generators in metallic contact yesMain Switch Boards, where placed Starboard side of Engine RoomIf 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 yesSwitchboards, are they placed in accessible positions, free from inflammable gases and acid fumes yesare 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 yesare they constructed wholly of durable, non-ignitable non-absorbent materials yes, is all insulation of high dielectric strength and of permanently high insulation resistance yesif 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 yesand is the frame effectively earthed yes Are the fittings as per Rule regarding:— spacing or shielding of live partsyes, accessibility of all parts yes, absence of fuses on back of board yes, proportion of omnibus bars yesindividual fuses to voltmeter, pilot or earth lamp yes, connections of switches yesMain Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches Triple pole circuitBreaker for each generator, double pole switch & fuses for each outgoing circuitInstruments on main switchboard 2 ammeters 2 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

2. 10 watt lamps in series & middle point earthedSwitches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules yesJoint 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 Single & Twin are the cables insulated and protected as per Tables IV or V of the Rules. IV

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 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 & armoured cables are supported on cable platings by means of galv iron clips. Lead covered cables supported by brass clips & screws.
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, are 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 Porcelain connections in W/J. 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 Generator .04
Switchboard .04
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 yes

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 where 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
In pump Rooms, special gas-tight fittings
in A.G. galv piping
where are the controlling switches situated Outside pump Room entrances

Searchlight Lamps, No. of One, 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 —, 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 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.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN	1	10	110	91.0	500	Sunderland Turbine			
EMERGENCY	1	5	110	45.5	550	Steam Engines			
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.				
ENG. E. 184 DYN. E. 675	MAIN GENERATOR...	2	.0400	19	.027	91	45	V. C	L.C.A. & B.
	EQUALISER CONNECTIONS	1	.0225	7	.064	—	45		
ENG. E. 195 DYN. E. 705	MAIN GENERATOR	1	.0225	7	.064	45.5	30		
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	2	.0100	7	.044	15.7	40	V. I. R	L.C.A. & B.
	BOILER ROOM	2	.0100	7	.044	20.4	70		
	ACCOMMODATION	2	.0400	19	.052	21.4	300		
	" Forward & Midship	2	.0400	19	.052	21.4	300		
	Navigation	2	.0100	7	.044	2.63	350		
	Telephones	4	.0020	3	.029	—	400		
	Helm Indicator	4	.0020	3	.029	—	520		
	WIRELESS Mains Only	2	.0100	7	.044	—	340	V. I. R	L.C.A. & B.
	SEARCHLIGHT	2	.0020	3	.029	4.5	80		
	MASTHEAD LIGHT	2	.0020	3	.029	3.6	80		
	SIDE LIGHTS	2	.0020	3	.029	3.6	80		
	COMPASS LIGHTS	2	.0020	3	.029	1	40		
	STEERING LIGHTS	2	.0020	3	.029	1	40		
	CARGO LIGHTS	2	.0020	3	.029	7.8	100		
	ARC LAMPS								
	HEATERS								

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current in 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 MOTOR								
	VENTILATING FANS								
	Refrig Machinery	1	.0100	7	.044	12.0	180	V. I. R	L.C.A. & B.
	Whistle	1	.0020	3	.029	12.0	140	V. I. R	L.C.A. & B.

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.

P. S. Glover
Electrical Engineers
HARNESS SHIPBUILDING CO. LIMITED

Date *8th May 1930*

COMPASSES.

Distance between electric generators or motors and standard compass *160'*

Distance between electric generators or motors and steering compass *155'*

The nearest cables to the compasses are as follows:—

A cable carrying *.09* Ampères *3* feet from standard compass *3* 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 *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.

HARNESS SHIPBUILDING CO. LIMITED,

J. M. Glover

Builder's Signature.

Date *8th May 1930*

Director.

Is this installation a duplicate of a previous case *42* If so, state name of vessel *"Acadialite"*

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

The material and workmanship are good.

This electric light installation has been fitted under special survey in accordance with the Rules and tested under working conditions with satisfactory results. In our opinion it is suitable for a vessel classed with this Society.

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

(S)
10/7/30

Total Capacity of Generators *16* Kilowatts.

The amount of Fee ... £ *15-0-0* { When applied for, *17-4-1930*
Travelling Expenses (if any) £ : : { When received, *7-5-1930*

A. J. MacArthur & W. T. Badger
Surveyors to Lloyd's Register of Shipping.

Committee's Minute

Assigned *Elec. Lt.*



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