

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office OCT 17 1938

Date of writing Report 30th July 1938 When handed in at Local Office 30th July 1938 Port of Montreal

No. in Survey held at Lauzon, P.Q. Date, First Survey 2nd May Last Survey 14th June 1938
 Reg. Book. (Number of Visits... 5)

on the Steel Screw Steamer "Louis Jolliet" Tons { Gross 950
 Net 678

Built at Lauzon, P.Q. By whom built Davie S.B. & Repairing Yard No. 513 When built 1938

Owners La Traverre de Lévis, Ltée Port belonging to Quebec

Electric Light Installation fitted by Davie S.B. & Repairing Co. Ltd Contract No. 513 When fitted 1938

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 - volts.

Direct or Alternating Current, Lighting D.C. Power -

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 Compound.

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.

approved No Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing None.

Have certificates for generators under 100 kw. been supplied and approved No. - {These units were taken from the Ferries "Colamb" and "Plessis" built in 1910 and no certificates are available.

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 In 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 - and -

are the generators protected from mechanical injury and damage from water, steam or oil Yes, are their axes of rotation fore and aft -

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 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 -

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 micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework -

is the non-hygroscopic insulating material of an approved type - and is the frame effectively earthed - Are the fittings as per Rule regarding: - spacing or shielding of live parts

Yes, accessibility of all parts good, absence of fuses on back of board No, temperature rise of omnibus bars Yes, 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 Yes.

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

Two double pole air circuit breakers with Three pole knife switches for equalising.

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 Yes.

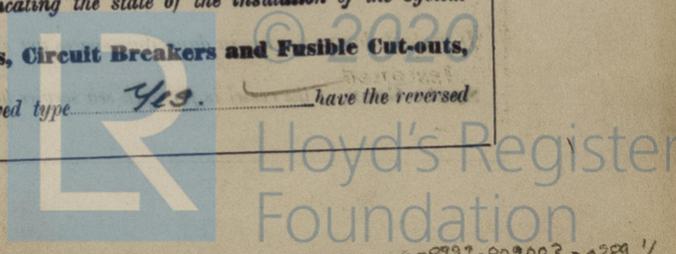
Instruments on main switchboard Yes ammeters 2

voltmeters 2 synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection

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

Two 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 Yes 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 Yes

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 — **Fall of Pressure**, state maximum between bus bars and any point of the installation under maximum load 5 Volts

Cable Sockets, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Yes **Paper Insulated and Varnished Cambric Insulated Cables**, are the cables insulated and protected as per Rule —

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 Yes, 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 Clips and metal straps

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

Refrigerated Chambers, are the cables and fittings in accordance with the special requirements None

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

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 Two Earth lamps, 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 No emergency supply

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 No **Secondary Batteries**, are they constructed and fitted as per Rule None, 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 Wire 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 Watertight Globe and Guarded, how are the cables led —

where are the controlling switches situated Engine Room, are all fittings suitably ventilated Yes, are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials —

Heating and Cooking Appliances, are they constructed and fitted as per Rule None, 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 None Fitted, 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 None **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 filled 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 Special Service, 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.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	10	115	85	Steam Engine	—	—	
AUXILIARY	—	—	—	—	—	—	—	
EMERGENCY	—	—	—	—	—	—	—	
ROTARY TRANSFORMER	—	—	—	—	—	—	—	

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

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	.1026	19	.083	85	118	15' and 20'	Rubber	Conduit & Braided.
EQUALISER CONNECTIONS	—	—	—	—	—	—	—	—	—
AUXILIARY GENERATOR	—	—	—	—	—	—	—	—	—
EMERGENCY GENERATOR	—	—	—	—	—	—	—	—	—
ROTARY TRANSFORMER MOTOR GENERATOR	—	—	—	—	—	—	—	—	—
ENGINE ROOM	—	—	—	—	—	—	—	—	—
BOILER ROOM	—	—	—	—	—	—	—	—	—
AUXILIARY SWITCHBOARDS	—	—	—	—	—	—	—	—	—
1/2 Circuit, Eng. Casings	1	.0206	7	.0612	40	43	60	Rubber	Conduit & Braided
2 "	1	.0032	7	.0242	5	12.9	200	"	"
3 "	1	.0032	7	.0242	5	12.9	180	"	"
4 "	1	.0032	7	.0242	5	12.9	200	"	"
5 "	1	.0032	7	.0242	5	12.9	175	"	"
Accommodation 1/2 circuit	1	.0032	7	.0242	5	12.9	225	"	"
7 "	1	.0032	7	.0242	5	12.9	175	"	"
8 "	1	.0130	7	.0486	25	32.8	60	"	"
9 "	1	.0130	7	.0486	25	32.8	60	"	"
10 "	1	.0032	7	.0242	5	12.9	125	"	"
11 "	1	.0032	7	.0242	5	12.9	100	"	"
12 "	1	.0032	7	.0242	5	12.9	75	"	"
13 "	1	.0032	7	.0242	5	12.9	75	"	"
MASTHEAD LIGHT	1	.0032	7	.0242	1	12.9	25	"	"
SIDE LIGHTS	2	.0032	7	.0242	1	12.9	100	"	"
COMPASS LIGHTS	1	.0032	7	.0242	0.5	12.9	15	"	"
POOP LIGHTS	—	—	—	—	—	—	—	—	—
CARGO LIGHTS Clusters 1/4 Circuit	2	.0032	7	.0242	5	12.9	120	"	"
HEATERS	—	—	—	—	—	—	—	—	—

MOTOR CONDUCTORS.

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	—	—	—	—	—	—	—	—	—	—
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.

DAVIE SHIPBUILDING & REPAIRING COMPANY, Limited,

Per Alex. S. Campbell

Electrical Engineers.

Date 30th July, 1938.

COMPASSES.

Minimum distance between electric generators or motors and standard compass 60 feet.

Minimum distance between electric generators or motors and steering compass -

The nearest cables to the compasses are as follows :-

A cable carrying 4 Ampères to 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 Yes.

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted No.

The maximum deviation due to electric currents was found to be - degrees on - course in the case of the standard compass, and - degrees on - course in the case of the steering compass.

DAVIE SHIPBUILDING & REPAIRING COMPANY, Limited,

per Alex. S. Campbell

Builder's Signature.

Date 30th July, 1938.

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 vessel has been fitted with an electric light installation as above and the workmanship is good. On completion it was tested out under full working conditions and found satisfactory.

Wid
L.J.
20/10/38.

Total Capacity of Generators 20 Kilowatts.

The amount of Fee ... £ 90⁰⁰ : When applied for, 12th Aug. 1938.

Travelling Expenses (if any) £ - : When received, 12.10.38

A. Hislop.
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI 4 NOV 1938

Assigned

See minute on
machinery rpt.

2m. 12.36 - Transfer.
The Surveyors are requested not to write on or delete the space for Committee's Minute.



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