

7 JUL 1943

Rpt. 13.

No. 5868

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 2nd. June 43 When handed in at Local Office 5th. June 43 Port of Quebec, P.Q.
 No. in Survey held at Lauzon, P.Q. Date, First Survey 19th. Aug. /42 East Survey 29th. May 1943
 Reg. Book. on the Single Screw Steamer "FORT CARILLON" (Number of Visits.....)
 Built at Lauzon, P.Q. By whom built Davie Shipbuilding & Repairing Co. Ltd. Yard No. 542 When built 1943
 Owners Park Steamship Co. Limited Port belonging to -
 Electric Light Installation fitted by Davie Shipbuilding & Rpg. Co. Ltd. Contract No. 542 When fitted 1943
 Is the Vessel fitted for carrying Petroleum in bulk No

Tons { Gross 7129.23
Net 4243.42

System of Distribution 2 wire D.C.

Pressure of supply for Lighting 110 volts, Heating - volts, Power - volts.

Direct or Alternating Current, Lighting Direct Current 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 Yes

are they over compounded 5 per cent. -, 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 Have certificates of test results for machines under 100 kw. been submitted and

approved Yes Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing -

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 Both fitted on stard. side 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 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 Stard. side 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 - and -, are they constructed wholly of durable, non-ignitable non-absorbent

materials Yes, Ebony Asbestos, 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 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, temperature rise of

omnibus bars -, 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 No Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

one 200 amp. quick break double pole single throw switch Two 60 amp. one 30 amp. fused quick

break double pole double throw switches each board, Ford. Board one 200 amp., Aft. Board one

100 amp. quick break double pole double throw switches.

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 4 ammeters 2

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

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 are the fusible cutouts of an approved type Yes have the reversed

current protection devices been tested under working conditions -

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 or XI of the Rules **Yes**

If the cables are insulated otherwise than as per Rule, are they of an approved type - **3 volts.** **Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load**

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.**

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 - 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 in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit** **R.C.D.B. in Conduit**

Support and Protection of Cables, state how the cables are supported and protected **Wiring enclosed in steel conduit throughout vessel and secured by metal clips spaced in accordance with rules. Generator Cables run under floor plates to switchboard in conduit.**

If cables are run in wood casings, are the casings and caps secured by screws - , 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 **No lights fitted**

Joints in Cables, state if any, and how made, insulated, and protected **at Dynamo Lugs, soldered and taped.**

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands **Tubes&Glands** **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

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** **None fitted**

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 on Navigating Bridge**

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 **Batteries only**

used for Alarm Bells, Echo sounder and Wireless

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 -

are all fittings suitably ventilated - , 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 - , are air heaters constructed and fitted as per Rule -

Searchlight Lamps, No. of - , whether fixed or portable **0** , 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 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 -

have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing - **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** - 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 type approved by the Home Office -

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule **Yes**

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	15 each	110	136	575	Vertical steam engine	-	-		
AUXILIARY ...										
EMERGENCY ...										
ROTARY TRANSFORMER	2	12.7 ea.	110	115	1500					
	2	10 "	30	333	1500	Motor Driven				
GENERATOR, LIGHTING AND HEATING CONDUCTORS.										
DESCRIPTION.	No. per Pole.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	Rule.				
MAIN GENERATOR ...	1	.132	19	.094	136	142	30	R.C.D.B.	Conduit	
EQUALISER CONNECTIONS										
AUXILIARY GENERATOR ...										
EMERGENCY GENERATOR										
ROTARY TRANSFORMER	1	.132	19	.094	115	142	30	R.C.D.B.	Conduit	
MOTOR GENERATOR	1	.672	37	.116	333	432	30	R.C.D.B.	De-	
ENGINE ROOM ...	1	.033	7	.077	13	57	50	R.C.D.B.	"	
BOILER ROOM ...										
AUXILIARY SWITCHBOARDS										
1 Sect. Board Aft	1	.104	19	.083	70	121	280	R.C.D.B.	Conduit	
1 " "Aft. "	1	.052	7	.097	59	76	280	R.C.D.B.	"	
Dist. Box										
ACCOMMODATION										
1-6way Bridgehouse	1	.033	7	.077	18	57	160	R.C.D.B.	Conduit	
1-8" Engineers	1	.033	7	.077	23	57	70	"	"	
1-8" Crew	1	.033	7	.077	10	57	360	"	"	
WIRELESS	1	.052	7	.097		76	120	R.C.L.C.	Partly in Conduit	
SEARCHLIGHT										
MASTHEAD LIGHT	1	.003	7	.024	.5	13	400	R.C.D.B.	" " "	
SIDE LIGHTS each	1	.003	7	.024	.5	13	60	R.C.L.C.	run on trays	
COMPASS LIGHTS	1	.003	7	.024	.25	13	20	R.C.L.C.	" " "	
POOP LIGHTS										
CARGO LIGHTS Ford	1	.033	7	.077	14	57	210	R.C.D.B.	Conduit	
Midship	1	.033	7	.077	14	57	100	"	"	
Aft	1	.033	7	.077	14	57	190	"	"	
MOTOR CONDUCTORS.										
DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		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 E.R.	1	1	.003	7	.024	6	13	12	R.C.D.B.	Conduit
Frig.Motor 2HP	1	1	.008	7	.038	14	26	240	"	"
with its circulating pump.										

Area
391 sq. m.
316x.
American
Rating
Low

All Conductors are of annealed copper conforming to British Standard Specification No. 7 (or International Electro-technical Commission Publication No. 28).

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

DAVIE SHIPBUILDING & REPAIRING CO. LTD.

Alex. C. Campbell

NAVAL ARCHITECT

Electrical Engineers.

Date June 4th 1943

COMPASSES.

Distance between electric generators or motors and standard compass

73'-0"

Distance between electric generators or motors and steering compass

65'-0"

The nearest cables to the compasses are as follows:—

A cable carrying 2 Ampères 10 feet from standard compass 7 feet from steering compass.

A cable carrying 3 Ampères 12 feet from standard compass 8 feet from steering compass.

A cable carrying 1 Ampères feet from standard compass 4 feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power

Yes

Eas 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

$\frac{1}{2}^{\circ}$ W

degrees on

S.E.

course in the case of the standard

compass, and

$\frac{1}{2}^{\circ}$ W

degrees on

N

course in the case of the steering compass.

DAVIE SHIPBUILDING & REPAIRING CO. LTD.

Alex. C. Campbell

NAVAL ARCHITECT

Builder's Signature.

Date June 4th 1943

Is this installation a duplicate of a previous case

Yes

If so, state name of vessel

S.S. "FORT TADOUSSAC" &

S.S. "PRINCE ALBERT PARK" etc.

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

The electrical equipment of this vessel has been fitted on board under Special Survey and in accordance with approved plans, tested under full working conditions and found satisfactory. The materials and workmanship are good and sound.

Total Capacity of Generators 30 Kilowatts.

The amount of Fee ...

£ 125⁰⁰

When applied for,

June 12 1943

When received,

19

Travelling Expenses (if any) Included

Committee's Minute

FRI. 16 JUL 1943

Assigned

L. J. L. L.

Surveyor to Lloyd's Register of Shipping.