

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

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Date of writing Report 19 When handed in at Local Office 19 Port of Seattle, Washington.

No. in Survey held at Seattle, Washington. Date, First Survey May 15th Last Survey August 27 1934
Reg. Book. (Number of Visits 10)

83647 on the S.S. "WILLIAM LUCKENBACH" ex "Rappahannock" ex "Pommern"

Tons { Gross
Net

Built at Vegesack By whom built Bremer Vulkan Yard No. When built 1913

Owners Luckenbach S.S. Co. Inc. Port belonging to New York

Electric Light Installation fitted by Builders of vessel and part Contract No. When fitted 1913
refitted by Todd D.D. Inc. Seattle. Wash., 1934.

System of Distribution Two wire. ✓

Pressure of supply for Lighting 115 ✓ volts, Heating --- volts, Power 115 ✓ volts.

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

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. See page 3, 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 Dynamo Compartment. Engine Room at Upper Deck.

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 In same compartment with generators

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 ✓, 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 miculate or other non-hygroscopic insulating material, and the slab similarly insulated from its framework --- 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 - 35 K.W. Genrs. are arranged for parallel operation and each has Single Pole Circuit Breaker and single pole Knife Switches in positive and negative leads and equalizer. 1 - 75 K.W. Generator with D.P. breaker and Main Switch for single operation through D.P. D.T. Knife Switches. ✓

Instruments on main switchboard 3 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 In addition to

Earth Lamps potential of either line to ground can be read on voltmeter ✓

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 --- 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 Not over 3% ✓

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 None used

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 By cable straps spaced not more than 14"

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, if lights are fitted, are the cables and fittings in accordance with the special requirements ---

Joints in Cables, state if any, and how made, insulated, and protected All cable joints are made in U.S. Navy Standard Junction Boxes. Splices are soldered and taped with rubber and friction tapes

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 --- state the material of which the bushes are made No unarmoured cable used

Earthing Connections, state where 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

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. General Electric Co. Telltale Panel

Secondary Batteries, are they constructed and fitted as per Rule None

Fittings, are all fittings on weather decks, in storerooms and engine rooms and where exposed to drip or condensed moisture, watertight Yes, are any fittings placed in spaces in which vapors are liable to be stacked in close proximity to them; if so, how are they protected None

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected None

how are the cables led ---

where are the controlling switches situated ---

Searchlight Lamps, No. of One, whether fixed or portable Portable, are their fittings as per Rule Yes

Are 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 ---

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 ---

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office ---

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 ... (3)	1	75	125	600	1200	Steam Turbine (DeLaval)		
AUXILIARY (2)	1	35	125	238	3400	" " (Kerr)		
EMERGENCY (1)	1	35	125	238	3400	" " "		

NOTE:— (Generators 1 & 2 arranged for parallel operation and connecting to one side of 600 Amp. D.P. D.T. Switch. Generator 3 connected to other side, bus bars being fed from centre.

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor, Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current, Amperes.	Approximate Length, (Load and Return), Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR... (3)	2	800000	61	.1140	600	30	Rubber	Conduit
	EQUALISER CONNECTIONS ...	1	250000	37	.0823	250	30	"	"
	AUXILIARY GENERATOR (2)	2	250000	37	.0823	250	30	"	"
	EMERGENCY GENERATOR (1)	2	250000	37	.0823	250	30	"	"
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS ...								
	ENGINE ROOM ...	2	18000	7	.050	35	100	"	"
	BOILER ROOM ...	2	18000	7	.050	35	200	"	"
	ACCOMMODATION ...								
	Bridge Deck ...	2	45710	7	.081	75	250	"	L.A. Cable & Con.
	Mid. Hse. Port. ...	2	198877	61	.057	175	200	"	L.A. Cable
	" " Stbd. ...	2	45710	7	.081	75	200	"	L.A. Cable & Con.
	" " Aft. ...	2	18000	7	.050	35	100	"	Conduit
	Focle ...	2	18000	7	.050	35	600	"	L.A. Cable & Con.
	Poop ...	2	18000	7	.050	35	450	"	Conduit
	Cargo Lights Ford ...	2	45710	7	.081	75	280	"	L.A. Cable & Con.
	" " Aft ...	2	45710	7	.081	75	60	"	Conduit
	WIRELESS ...	2	98864	61	.040	100		"	L.A. Cable
	SEARCHLIGHT ...	2	4107	1	.606	15	50	"	Conduit
	MASTHEAD LIGHT... ..	3	4107	1	.006	15	300	"	Conduit
	SIDE LIGHTS... ..	3	4107	1	.006	15	70	"	Conduit
	COMPASS LIGHTS... ..	2	4107	1	.006	15	40	"	Conduit
	POOP LIGHTS	2	18000	7	.050	35	450	"	Conduit
	CARGO LIGHTS	2	4107	1	.006	15	40	"	Conduit
	ARC LAMPS	---							
	GYRO COMPS	2	30856	19	.040	50	250	"	L.A. Cable

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor, Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current, Amperes.	Approximate Length, (Load 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	1	83680	19	.072	100	160	Rubber	Conduit
	VENTILATING FANS	1	26250	7	.064	50	20	"	"
	Ship's Refrig. Compressors	1	26250	7	.064	50	160	"	"
	Brine Cir.	1	6530	1			160	"	"

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

COMPASSES.

Distance between electric generators or motors and standard compass Approx. 125 Feet

Distance between electric generators or motors and steering compass Approx. 125 Feet

The nearest cables to the compasses are as follows:—

A cable carrying Ampères feet from standard compass feet from steering compass. All Circuits in Brass

A cable carrying Ampères feet from standard compass feet from steering compass. Conduit in the vicinity of Compasses.

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 course in the case of the standard compass, and Nil degrees on course in the case of the steering compass.

Builder's Signature.

Date

Is this installation a duplicate of a previous case --- If so, state name of vessel ---

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

This installation has been fully examined, partly refitted to suit the new conditions at this time and afterwards tested and examined under full load conditions with satisfactory results. The quality of workmanship and materials is good and in my opinion this vessel is eligible to have the Notation "Elec.light" in the Register Book

Noted
L.H.
8/10/34.

Total Capacity of Generators 140 Kilowatts.

The amount of Fee ... \$50.00 : When applied for, Sept 1 34

Travelling Expenses (if any) £ : When received, 22. 2. 35

W. Smith
Surveyor to Lloyd's Register of Shipping.

e's Minute NEW YORK SEP 20 1934

Elec. light



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