

REPORT ON ELECTRIC FITTINGS.

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

23 AUG 1930

Date of writing Report 19 When handed in at Local Office 21 AUG 1930 Port of LIVERPOOL

No. in Survey held at Birkenhead Date, First Survey 4th Dec. 1929 Last Survey 31st July 1930 (Number of Visits 7)

Reg. Book. 8076 on the J. S. S. Bloughton Tons { Gross 484 Net

Built at Birkenhead By whom built Cammell Laird & Co. L^{td} Yard No. 941. When built 1930

Owners Birkenhead Corporation Port belonging to Lpool Electric Light Installation fitted by The Sunderland Forge & Eng. Co. L^{td} Contract No. When fitted 1930.

Is the Vessel fitted for carrying Petroleum in bulk no

System of Distribution Double wire distribution Box. Pressure of supply for Lighting 110 volts, Heating volts, Power volts.

Direct or Alternating Current, Lighting direct. 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 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, is an adjustable regulating resistance fitted in series with each shunt field

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 main Engine Room, are they clear of all inflammable material yes

is the ventilation in way of the generators satisfactory yes, are they situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators

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, are the prime movers and

Earthing, are the bedplates and frames of the generating plant efficiently earthed yes

their respective generators in metallic contact yes

Main Switch Boards, where placed main 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, if situated near unprotected

are they protected from mechanical injury and damage from water, steam or oil yes, and

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 micaite 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 Double pole

switch & fuses for Main Generator & Single Pole switches & double pole fuses

for each outgoing circuit.

Instruments on main switchboard One ammeter, One voltmeter, 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 Earth lamp,

switch & fuses on each pole

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, concentric, or multicore Single 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 4.5
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 fitted
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 cables secured with Press Clips
 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 none made
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 _____
 _____, 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 _____
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 _____
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 _____, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected _____, how are the cables led _____, where are the controlling switches situated _____
Searchlight Lamps, No. of _____, whether fixed or portable _____, 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 _____, 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 _____
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 _____
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 _____

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	1	9	110	82	350	Steam Engine			
AUXILIARY									
EMERGENCY									
ROTARY TRANSFORMER									

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT AMPERES.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR	1	.06	19	.064	82	83	30	V. I. R.	Lead covered
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER MOTOR GENERATOR									
ENGINE ROOM									
BOILER ROOM	1	.0045	7	.029	18	18.2	40	V. I. R.	Lead covered
AUXILIARY SWITCHBOARDS									
Smoking Saloon	1	.003	1	.064	5	12.9	210	V. I. R.	do
Navigation	1	.0045	7	.029	8.4	19.2	220	V. I. R.	do
Deck lights	1	.0045	7	.029	13	18.2	220	V. I. R.	do
General Saloon	1	.003	1	.064	8	12.9	40	V. I. R.	do
Ladies Saloon	1	.003	1	.064	4	12.9	120	V. I. R.	do
ACCOMMODATION									
WIRELESS									
SEARCHLIGHT									
MASTHEAD LIGHT	1	.003	1	.064	36	12.9	165	V. I. R.	do
SIDE LIGHTS	1	.002	3	.029	36	7.8	60	V. I. R.	do
COMPASS LIGHTS	1	.002	3	.029	19	7.8	20	V. I. R.	do
POOP LIGHTS									
CARGO LIGHTS									
ARC LAMPS									
HEATERS									

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 Effective 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										

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. pro. THE SUNDERLAND FORGE & ENG. CO. LTD., Electrical Engineers. Date 24.7.30.
Thos Thompson

COMPASSES.

Distance between electric generators or motors and standard compass _____
 Distance between electric generators or motors and steering compass 60 feet
 The nearest cables to the compasses are as follows:—
 A cable carrying 8.7 Ampères _____ feet from standard compass 10 feet from steering compass.
 A cable carrying 1.9 Ampères _____ feet from standard compass Lead into 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 _____ degrees on _____ course in the case of the standard compass, and 7° W degrees on N E x N course in the case of the steering compass.

FOR CAMELL LAIRD & Co., LTD.

Woodward Builder's Signature. Date 1.8.30.
 Commercial Manager & Accountant.

Is this installation a duplicate of a previous case Signals If so, state name of vessel S/S Hamilton (Liv 84534)

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

This Electric Light Installation has been fitted under special Survey, and is in accordance with the Rules. It has been examined under full working conditions, and found satisfactory, and, in my opinion the vessel is eligible to have notation of Elec Light recorded in Register book.

It is submitted that
 this vessel is eligible for
 THE RECORD. *Elec Light*
J. S. Milton
27/8/30

Total Capacity of Generators 9 Kilowatts.

The amount of Fee ... £ 9 00 : When applied for, 21 AUG 1930
 Travelling Expenses (if any) £ : : When received, 2.9.30
Elc

J. S. Milton
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL 22 AUG. 1930

Assigned Elec: Light *JBR*

Im. 11.29.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)