

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 16-4-1938 When handed in at Local Office 16-4-1938 Port of Leith Received at London Office APR 19 1938

No. in Survey held at Burntisland Date, First Survey 7-3-38 Last Survey 11-4-1938
 Reg. Book. 39710 on the S.S. "PORTSEA" (Number of Voids 6)

Built at Burntisland By whom built Burntisland S.B. Co. Ltd. Yard No. 218 Tons { Gross 1582.59
 Net 942.99
 Owners Sea Steamship Co. Ltd. Port belonging to Hull When built 1938

Electric Light Installation fitted by Burntisland S.B. Co. Ltd. Contract No. 218 When fitted 1938

Is the Vessel fitted for carrying Petroleum in bulk No

System of Distribution 2 WIRE LEAD & RETURN.

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 temperature rise 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 _____ 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 ENGINE ROOM. STARBOARD SIDE., 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 ENGINE ROOM BESIDE GENERATOR.

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 _____

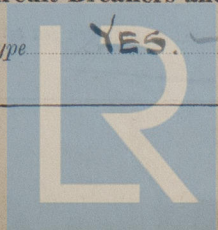
Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes YES., are they protected from mechanical injury and damage from water, steam or oil YES., if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or 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., 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 SINOANYO PANEL is the non-hygroscopic insulating material of an approved type 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., 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 No

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches 1 D. POLE 60 AMP. MAIN SWITCH & FUSES AND 5. POLE SWITCHES & D. POLE FUSES FOR OUTGOING CIRCUITS

Are turbine driven generators fitted with emergency trip switch as per rule _____ Are cupboards or compartments containing switchboards composed of re-resisting material or lined with approved material _____ Instruments on main switchboard ONE ammeters _____

Voltmeters ONE 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, _____ 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, ~~conductor~~ or multiple 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

Fall of Pressure, state maximum between bus bars and

any point of the installation under maximum load

4 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.

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

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

YES

Support and Protection of Cables, state how the cables are supported and protected

ARMoured & LEAD COVERED, AS REQUIRED

SUPPORTED WITH CLIPS FIXED WITH SCREWS.

If cables are run in wood casings, are the casings and caps secured by screws

separate grooves

YES

Refrigerated Chambers, are the cables and fittings in accordance with the special requirements

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

NONE.

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

EARTH BONDING CLIPS AT

EACH END OF EACH RUN OF CABLES.

, 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

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

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

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

are all fittings suitably ventilated

YES

, are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials

YES

Heating and Cooking Appliances, are they constructed and fitted as per Rule

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 brushes, brush holders, terminals and lubricating arrangements as per Rule

inflammable gases cannot accumulate and clear of all inflammable material

water, steam or oil

are their axes of rotation fore and aft

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

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

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

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	ONE	514	110	54.5		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	ONE	.0400	19	.052	49.5	64	40	RUBBER	L.C. & S.W.A.
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER									
ENGINE ROOM	ONE	.0070	7	.036	10	22	60	RUBBER	L.C. & S.W.A.
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
NAVIGATION	ONE	.003	3	.036	3.5	12		RUBBER	L.C. & S.W.A.
ACCOMMODATION	ONE	.007	7	.036	8	22	150	RUBBER	L.C. & S.W.A.
CREWS	ONE	.007	7	.036	5	22	300	RUBBER	L.C. & S.W.A.
CARGO LIGHTS	ONE	.007	7	.036	14		150		
WIRELESS	ONE	.0070	7	.036	9	22	180	RUBBER	L.C. & S.W.A.
SEARCHLIGHT									
MASTHEAD LIGHT	ONE	.002	3	.029	36	6.8	360	RUBBER	L.C. & S.W.A.
SIDE LIGHTS	ONE	.002	3	.029	36	6.8	180	RUBBER	L.C.
COMPASS LIGHTS	ONE	.002	3	.029	36	6.8	90	RUBBER	L.C.
POOP LIGHTS									
CARGO LIGHTS									
ARC LAMPS									
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										



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Lloyd's Register

50256-0093(2/2)

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.

FOR THE BURNTISLAND SHIPBUILDING COMPANY LTD.

J. J. Leake

DIRECTOR.

Electrical Engineers.

Date 15th April, 1938.

COMPASSES.

Distance between electric generators or motors and standard compass 50'-0"

Distance between electric generators or motors and steering compass.

The nearest cables to the compasses are as follows:—

A cable carrying 36 Ampères 7" 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 Yes.

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

FOR THE BURNTISLAND SHIPBUILDING COMPANY LTD.

J. J. Leake

DIRECTOR.

Builder's Signature.

Date 15th April, 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 installation has been efficiently fitted on board in accordance with the Rules.

The materials and workmanship are sound and good, and the installation was found satisfactory under full load and working conditions.

Noted

20/4/38.

Total Capacity of Generators 6 Kilowatts.

The amount of Fee ... £ 6 : 0 : 0

When applied for, 18-4-1938.

Travelling Expenses (if any) £ :

When received.

23-4-1938

£25.4

J. J. Campbell
Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 26 APR 1938

Assigned See F.E. mch report