

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 4-5-1939 When handed in at Local Office 8-5-1939 Port of Leith  
 No. in Survey held at Burntisland Date, First Survey 24-3-39 Last Survey 1-5-1939  
 Reg. Book. 88228 on the MOTOR VESSEL "GUERNSEY QUEEN."  
 Built at Burntisland By whom built Burntisland S.B. Co. Ltd. Yard No. 228 When built 1939  
 Owners British Channel Islands Shipping Co. Ltd. Port belonging to London  
 Electric Light Installation fitted by Burntisland S.B. Co. Ltd. Contract No. 228 When fitted 1939  
 Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution TWO 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 SHUNT  
 are they over compounded 5 per cent.       , if not compound wound state distance between each generator 20 FEET  
 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 YES  
 Have certificates for generators under 100 kw. been supplied and approved 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 STARBOARD SIDE 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 NONE 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 CASING STARBOARD SIDE  
 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 SINDANYO 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         
 D.P. MAIN SWITCH & FUSES & THE SAME FOR OUTING CIRCUITS ALSO FITTED OVER SPEED TRIP.  
 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        Instruments on main switchboard TWO ammeters ONE  
 voltmeters        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        Switches, Circuit Breakers and Fusible Cut-outs,         
 EARTH LAMPS        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. / / 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 multi-core are the cables insulated and protected as per Tables IV, V, X, XI, XII or XIII of the Rules

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 3% 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 laid under machines or floorplates NO if so, are they adequately protected / /

Are cables in machinery spaces, galleys, lavatories, bathrooms and lavatories lead covered or run in conduit YES

Support and Protection of Cables, state how the cables are supported and protected WIRE ARMoured & SUPPORTED IN CLIPS FIXED WITH SCREWS

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 / /

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 BONDING CLAMPS BOLTED TO EARTH AT EACH

END OF MAIN CABLE RUNS AND AT ONE END OF SUB CIRCUIT 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 NOT 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

has each navigation lamp an automatic indicator as per Rule YES Secondary Batteries, are they constructed and fitted as per Rule YES

are they ventilated 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 NO

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 / /, 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 / /

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 / / 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 / / 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	TWO	2	110	18.2	1000	1.2 KW. GENERATOR N° 2414		
AUXILIARY						DRIVEN BY BELT OFF MAIN		
EMERGENCY						ENGINE SHAFT.		
ROTARY TRANSFORMER						1.2 KW. GENERATOR N° 2413		
						DRIVEN BY LISTER OIL ENGINE N° 31320		

## 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	.007	7	.036		24	40	RUBBER	LC & SWA
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER MOTOR GENERATOR									
ENGINE ROOM	ONE	.003	3	.036	3	12	12	RUBBER	LC & SWA
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
ACCOMMODATION									
MID SHIP	ONE	.007	7	.036	10	22	180	RUBBER	LC & SWA
AFT	ONE	.003	3	.036	5	12	50	RUBBER	LC & SWA
WIRELESS	ONE	.007	7	.036	5	22	200	RUBBER	LC & SWA
SEARCHLIGHT									
MASTHEAD LIGHT	ONE	.002	3	.029	.36	7.8	180	RUBBER	LC & SWA
SIDE LIGHTS	ONE	.002	3	.029	.36	7.8	40	RUBBER	LC
COMPASS LIGHTS	ONE	.002	3	.029	.36	7.8	30	RUBBER	LC
POOP LIGHTS									
CARGO LIGHTS									
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.

FOR THE BURNTISLAND SHIPBUILDING COMPANY LTD.

*J. Leake*

Electrical Engineers.

Date 4<sup>th</sup> May, 1939.

DIRECTOR.

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass 72 FT.

Minimum distance between electric generators or motors and steering compass 70 FT.

The nearest cables to the compasses are as follows:—

A cable carrying 36 Ampères 7" ~~ft~~ from standard compass 7" ~~ft~~ 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. Leake*

Builder's Signature.

Date 4<sup>th</sup> MAY, 1939.

DIRECTOR.

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  
J. J.  
18/5/39

Total Capacity of Generators 4 Kilowatts.

The amount of Fee ... £ 5 : 0 : 0 When applied for, 8-5-39.

Travelling Expenses (if any) £ : ✓ When received, 15-5-39 16/5

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

Committee's Minute FRI 10 MAY 1939

Assigned

See Lth. 26. 1939



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Foundation