

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

JUN 10 1937

Received at London Office

Date of writing Report 10 When handed in at Local Office 8-6-1937 Port of Aberdeen  
 No. in Survey held at Aberdeen Date, First Survey \_\_\_\_\_ Last Survey 3<sup>rd</sup> June 1937  
 Reg. Book. \_\_\_\_\_ (Number of Visions 5)  
 on the G WENT HILLS Tons { Gross 868  
 Net 456  
 Built at Aberdeen By whom built J. Lewis & Son Ltd Yard No. 142 When built 1934  
 Owners Mar. Mordey Son & Co. Ltd Port belonging to Newport, Mon.  
 Electric Light Installation fitted by J. Lewis & Son Ltd. Contract No. \_\_\_\_\_ When fitted 1934  
 Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution Two wire ✓

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. 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 \_\_\_\_\_ ✓, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched \_\_\_\_\_ ✓

Are the lubricating arrangements of the generators as per Rule \_\_\_\_\_ ✓

Position of Generators On flat, under deck, star side of Engine room (Aft) ✓, is the ventilation in way of the generators satisfactory Yes ✓ are they clear of all inflammable material \_\_\_\_\_ ✓ 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 \_\_\_\_\_ ✓, are their axes of rotation fore and aft \_\_\_\_\_ ✓

Earthing, are the bedplates and frames of the generating plant efficiently earthed \_\_\_\_\_ ✓ are the prime movers and their respective generators in metallic contact \_\_\_\_\_ ✓

Main Switch Boards, where placed Aft bulkhead near dynamo ✓

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 \_\_\_\_\_ ✓, are they protected from mechanical injury and damage from water, steam or oil \_\_\_\_\_ ✓, 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 \_\_\_\_\_ ✓, is all insulation of high dielectric strength and of permanently high insulation resistance \_\_\_\_\_ ✓, is it of an approved type \_\_\_\_\_ ✓, 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 \_\_\_\_\_ ✓. Are the fittings as per Rule regarding:— spacing or shielding of live parts \_\_\_\_\_ ✓, accessibility of all parts \_\_\_\_\_ ✓, absence of fuses on back of board \_\_\_\_\_ ✓, temperature rise of omnibus bars \_\_\_\_\_ ✓, individual fuses to voltmeter, pilot or earth lamp \_\_\_\_\_ ✓, are moving parts of switches alive in the "off" position \_\_\_\_\_ ✓ are all screws and nuts securing connections effectively locked \_\_\_\_\_ ✓ are any fuses fitted on the live side of switches \_\_\_\_\_ ✓

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches \_\_\_\_\_

DP Switch & fuses to Generator. SP switch + DP fuses to each outgoing circuit. ✓

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 \_\_\_\_\_ ✓

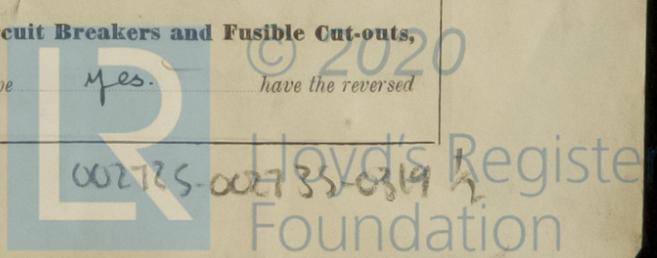
Instruments on main switchboard One ammeters One \_\_\_\_\_

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 \_\_\_\_\_

Earth lamps ✓

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules \_\_\_\_\_ ✓ are the fusible cutouts of an approved type \_\_\_\_\_ ✓ 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 twin 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 2 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  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 L.C. & A.

**Support and Protection of Cables**, state how the cables are supported and protected clipped to underside of decks and to bulkheads

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 through earth lamps

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

**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

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 None , are air heaters constructed and fitted as per Rule

**Searchlight Lamps**, No. of None , whether fixed or portable , are their fittings as per Rule

**Arc Lamps**, other than searchlight lamps, No. of None , are their live parts insulated from the frame or case , are their fittings as per Rule

**Motors**, are their working parts readily accessible None , 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  **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 None  **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.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	5	110	45	430	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.	Circuits.	Rate.			
MAIN GENERATOR	1	.0225	4	.064	32	46	18	V.I.R.	Gal. Iron tube.
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER MOTOR GENERATOR									
ENGINE ROOM <sup>BOILER ROOMS</sup> C. R. C. V. T. S.	1	.0040	4	.036	3	24	30	V.I.R.	L.C. A.B.B.
BOILER ROOM	1	"	"	"	1.5	"	50	"	"
AUXILIARY SWITCHBOARDS									
FOCUS & DECK	1	.003	3	.036	4.0	12	340	"	"
ACCOMMODATION	"	"	"	"	"	"	240	"	"
NAVIGATION	"	"	"	"	9.75	"	260	"	"
ENGINE ROOM	"	"	"	"	9.2	"	18	"	"
ACCOMMODATION									
AMIDSHIPS	1	.004	4	.036	6	24	140	"	"
FOCUS	"	.002	3	"	4.5	12	200	"	"
DECK	"	"	"	"	4.0	"	40	"	"
WIRELESS	1	.004	4	.036	10.0	24	40	"	L.C.
SEARCHLIGHT									
MASTHEAD LIGHT	1	.002	3	.029	4.5	4.8	40	"	L.C. A.B.B.
SIDE LIGHTS	1	"	"	"	"	"	40	"	L.C. A.B.B.
COMPASS LIGHTS	1	"	"	"	.5	"	20	"	"
POOP LIGHTS									
CARGO LIGHTS	1	.002	3	.029	1.5	4.8	40	"	L.C. A.B.B.
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 Circuits.	Rate.			
BALLAST PUMP		11.1	3.12	4	.036	32	46	18		
MAIN BILGE LINE PUMPS		10.2	3.12	4	.036	32	46	18		
GENERAL SERVICE PUMP		10.1	3.12	4	.036	32	46	18		
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										

1861. 97. February 20. March 2. 10. 29. April 7. 22. 29. May 2. 5. 7. 11. 14. 15. 18. 22. June 2. 8. 28. 11. 36.

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.

**JOHN LEWIS & SONS Ltd.**

*C. Wilby* Electrical Engineers.

Date 7<sup>th</sup> June 1937

**COMPASSES.**

Distance between electric generators or motors and standard compass

Distance between electric generators or motors and steering compass 120 feet

The nearest cables to the compasses are as follows:—

A cable carrying .5 Ampères  feet from standard compass 3 feet from steering compass.

A cable carrying 2.75 Ampères  feet from standard compass 3 feet from steering compass.

A cable carrying .25 Ampères  feet from standard compass to 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

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.

**JOHN LEWIS & SONS Ltd.**

*C. Wilby* Builder's Signature.  
**SHIPYARD MANAGER**

Date 7<sup>th</sup> June 1937

Is this installation a duplicate of a previous case Yes If so, state name of vessel "Glenгарiff" ABNTP 18650.

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

installation has been fitted on board under special survey, tried under working conditions & found satisfactory.

The materials & workmanship are good.

This installation is eligible in my opinion, to be classed in the Register Book, and to have notation of 'Electric Light'

*Noted  
J.F.  
10/6/37*

Total Capacity of Generators 5 Kilowatts.

The amount of Fee ... £ 5 : 0 : { When applied for, 8.6.1937  
Travelling Expenses (if any) £  : : { When received, 6.8.1937

*J. D. Davy*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI 11 JUN 1937

Assigned

See Abn. 26.18998

2m.534.—Transfer.  
The Surveyors are requested not to write on or below the space for Committee's Minutes.



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