

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office OCT 27 1937

Date of writing Report 20th Oct 1937 When handed in at Local Office 21st Oct 1937 Port of Dundee

No. in Survey held at Dundee Date, First Survey 4th Aug. Last Survey 18th Oct 1937
Reg. Book. (Number of Visits 12)

21135 on the s/s "BECKENHAM" Tons { Gross 4636
Net 2400

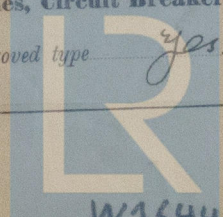
Built at Dundee By whom built Baledon S.B. & E. Cold Yard No. 367 When built 1934

Owners Britain S.S. Co. Ltd. Port belonging to London

Electric Light Installation fitted by Jelford Grier & Mackay & Co. 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** ✓ **Power** 110 volts.
Direct or Alternating Current, Lighting Direct ✓ **Power** Direct ✓
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 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 ✓
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 Main 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 No woodwork 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 On bulkhead in proximity to 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 No woodwork, 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 Sindanyp, 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 yes, 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. Switch + fuses for generator, D.P. Switch + fuses for 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 yes.
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 yes, are the fusible cutouts of an approved type yes, have the reversed



PARTICULARS OF GENERATING PLANT.								
DESCRIPTION OF GENERATOR.	No of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Rovs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	<i>one</i>	<i>15</i>	<i>110</i>	<i>136</i>	<i>750</i>	<i>Steam Engine</i>	-	✓
AUXILIARY								
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.									
DESCRIPTION.	CONDUCTOR		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT AMPERES		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	Gage.			
MAIN GENERATOR	<i>1</i>	<i>.150</i>	<i>34</i>	<i>.042</i>	<i>136</i>	<i>152</i>	<i>72 ft</i>	<i>V.I.R</i>	<i>L.C. in Steel tube</i>
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR...									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER } MOTOR GENERATOR...									
ENGINE ROOM... ..	<i>1</i>	<i>.0100</i>	<i>4</i>	<i>.044</i>	<i>20</i>	<i>31</i>	<i>30 ft</i>	<i>V.I.R</i>	<i>L.C.A + B</i>
BOILER ROOM... ..									
AUXILIARY SWITCHBOARDS									
Barge Section Box	<i>1</i>	<i>.0400</i>	<i>19</i>	<i>.052</i>	<i>55</i>	<i>64</i>	<i>30 ft</i>	<i>V.I.R</i>	<i>L.C.A + B</i>
After Cargo Box	<i>1</i>	<i>.0100</i>	<i>4</i>	<i>.044</i>	<i>22</i>	<i>31</i>	<i>240 ft</i>	"	"
Midships "	<i>1</i>	<i>.0045</i>	<i>4</i>	<i>.029</i>	<i>11</i>	<i>18</i>	<i>90 "</i>	"	"
Fore "	<i>1</i>	<i>.0225</i>	<i>4</i>	<i>.064</i>	<i>22</i>	<i>46</i>	<i>360 "</i>	"	"
ACCOMMODATION									
Saloon	<i>1</i>	<i>.0225</i>	<i>4</i>	<i>.064</i>	<i>32</i>	<i>46</i>	<i>300 ft</i>	<i>V.I.R</i>	<i>L.C.A + B</i>
Midships	<i>1</i>	<i>.0045</i>	<i>4</i>	<i>.029</i>	<i>12</i>	<i>18</i>	<i>120 "</i>	"	"
Aft	<i>1</i>	<i>.0100</i>	<i>4</i>	<i>.044</i>	<i>15</i>	<i>31</i>	<i>360 "</i>	"	"
Holds	<i>1</i>	<i>.0045</i>	<i>4</i>	<i>.029</i>	<i>13</i>	<i>18</i>	<i>120 "</i>	"	"
WIRELESS	<i>1</i>	<i>.0100</i>	<i>4</i>	<i>.044</i>	<i>10</i>	<i>31</i>	<i>330 "</i>	"	"
Stereo Navigation..	<i>1</i>	<i>.0100</i>	<i>4</i>	<i>.044</i>	<i>10</i>	<i>31</i>	<i>360 "</i>	"	"
MASTHEAD LIGHT	<i>1</i>	<i>.002</i>	<i>3</i>	<i>.029</i>	<i>36</i>	<i>7-8</i>	<i>300 "</i>	"	"
SIDE LIGHTS	<i>1</i>	<i>.002</i>	<i>3</i>	<i>.029</i>	<i>36</i>	<i>7-8</i>	<i>80 "</i>	"	"
COMPASS LIGHTS	<i>1</i>	<i>.002</i>	<i>3</i>	<i>.029</i>	<i>36</i>	<i>7-8</i>	<i>30 "</i>	"	"
PoP Lights									
CARGO LIGHTS									
ARC LAMPS									
HEATERS									

MOTOR CONDUCTORS.										
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 Nominal Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Gauge.			
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										

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.

Telford Grier Mackay & Co. Ltd. Electrical Engineers. Date *21/10/37*

COMPASSES.

Distance between electric generators or motors and standard compass *112 ft.*

Distance between electric generators or motors and steering compass *112 ft.*

The nearest cables to the compasses are as follows:—

A cable carrying *10* Amperes *10* feet from standard compass *4* feet from steering compass.

A cable carrying *36* Amperes *one* feet from standard compass *one* feet from steering compass.

A cable carrying _____ Amperes _____ 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 *all* course in the case of the standard compass, and *nil* degrees on *all* course in the case of the steering compass.

FOR AND ON BEHALF OF
THE CALEDON SHIPBUILDING & ENGINEERING CO. LTD.

John H. Houston

Builder's Signature. Date *22/10/1937*

Is this installation a duplicate of a previous case *yes*. If so, state name of vessel *1/2 "Blackheath"*

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

This Installation has been efficiently fitted on board; the wiring has been carried out in accordance with the approved plans, the materials & workmanship being sound & good.

On completion the installation was tried under full load & working conditions, & it was found satisfactory in all respects.

W. L. Y.
29/10/37

Total Capacity of Generators *15* Kilowatts.

The amount of Fee ... £ *15 : 0 : 0* When applied for, *22/10/1937*

Travelling Expenses (if any) £ : : When received, *16/11 1937*

John Houston
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 26 OCT 1937*

Assigned *TRANSMIT TO LONDON*

hy TUE 2 NOV 1937



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