

Rpt. 13.

No. 50417

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

7 MAY 1930

Date of writing Report 29.4.30 When handed in at Local Office 5.5.30 Port of GLASGOW
 No. in Survey held at GREENOCK Date, First Survey 21.2.30 Last Survey 25.4.1930
 Reg. Book. 49069 on the S.S. DALFRAM. (Number of Visits 9)
 Tons: Gross 4558
 Built at GREENOCK. By whom built MESSRS SCOTT'S SB&CO Yard No. 546 When built 1930
 Owners THE UNITED STEAM NAV. CO. LTD Port belonging to NEWCASTLE
 Electric Light Installation fitted by MESSRS SCOTT'S S. B&CO LTD Contract No. S46 When fitted 1930
 Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution TWO WIRE.

Pressure of supply for Lighting 110 volts, Heating NIL volts, 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 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. No

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 IN ENGINE ROOM. STARTING PLATFORM. PORT.

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 IN ENGINE ROOM NEAR 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

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 SLAB OF SINDANYO

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

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 GENERATOR D.P.

SWITCH & D.P. FUSES. OUT GOING CIRCUITS. S.P. SWITCH & D.P. FUSES.

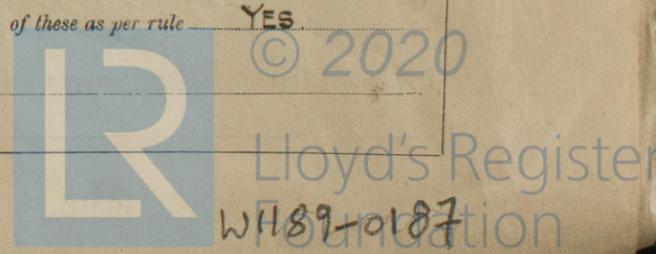
Instruments on main switchboard 1 ammeters 1 voltmeters 1 synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system TWO EARTH LAMPS

WITH SWITCH BETWEEN POSITIVE & NEGATIVE TO EARTH.

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



17 MAY 1930

Cables: Single, twin, concentric, or multicore TWIN & SINGLE are the cables insulated and protected as per Tables IV or V of the Rules **IV**

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load **3.0 VOLTS**

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

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**

LEAD COVERED & ARMoured ARMoured & BRAIDED LEAD COVERED

Support and Protection of Cables, state how the cables are supported and protected **CLIPPED TO SHEET IRON TRAY & TO WOOD**

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 **YES**

Joints in Cables, state if any, and how made, insulated, and protected **NO JOINTS**

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 **CABLES EARTHED BY CLIPS TO STEEL WORK**

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

where are the controlling switches situated

Searchlight Lamps, No. of **✓**, whether fixed or portable **✓**, are their fittings as per Rule **✓**

Are 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 **YES**, are the coils self-contained and readily removable for replacement **YES**

are the brushes, brush holders, terminals and lubricating arrangements as per Rule **YES**, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material **YES**

are they protected from mechanical injury and damage from water, steam or oil **YES** are their axes of rotation fore and aft **YES**

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 **YES**

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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	1	10	110	91	500	6" x 5" STROKE STEAM ENGINE.		
AUXILIARY ...								
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

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	.075	19	.072	76	97	24	RUBBER	LEAD
EQUALISER CONNECTIONS ...									
AUXILIARY GENERATOR ...									
EMERGENCY GENERATOR ...									
ROTARY TRANSFORMER MOTOR GENERATOR ...									
ENGINE ROOM ...	1	.007	7	.036	8.8	24	3	RUBBER	LEAD & ARMoured
BOILER ROOM ...	1	.007	7	.036	3.5	24	27	RUBBER	LEAD & ARMoured
AUXILIARY SWITCHBOARDS ...									
ACCOMMODATION ...									
SALOON	1	.007	7	.036	8.2	24	150	RUBBER	LEAD & ARMoured ARMoured & BRAIDED
ENGINEERS	1	.007	7	.036	12.5	24	42	RUBBER	LEAD & ARMoured
AFT.	1	.007	7	.036	4.7	24	207	RUBBER	LEAD & ARMoured
WIRELESS ...	1	.007	7	.036	7.8	24	231	RUBBER	ARMoured & BRAIDED LEAD, ARMoured & BRAIDED LEAD & ARMoured
SEARCHLIGHT ...	1	.003	3	.036	.72	12	460	RUBBER	LEAD, LEAD & ARMoured ARMoured & BRAIDED
MASTHEAD LIGHT ...	1	.003	3	.036	.72	12	60	RUBBER	LEAD COVERED
SIDE LIGHTS ...	1	.003	3	.036	.09	12	24	RUBBER	LEAD COVERED
POOP LIGHTS ...									
CARGO LIGHTS ...	1	.007	7	.036	19	24	462	RUBBER	ARMoured & BRAIDED
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 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 ...										
REFRIG.	1	2	.01	7	.044	22	31	240	RUBBER	LEAD & ARMoured ARMoured & BRAIDED

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.

SCOTT'S SHIPBUILDING & ENGINEERING COMPANY, LIMITED
Al. G. W.
 ELECTRICAL MANAGER

Electrical Engineers.

Date *May 2nd 1930*

COMPASSES.

Distance between electric generators or motors and standard compass

Distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying *.09* Ampères *IN* feet from standard compass *IN* feet from steering compass.

A cable carrying *.72* Ampères *10* feet from standard compass *6* feet from steering compass.

A cable carrying *8.2* Ampères *20* feet from standard compass *16* 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.

SCOTT'S SHIPBUILDING & ENGINEERING COMPANY, LIMITED.

A. H. Hutchison
 Director

Builder's Signature.

Date *2/5/30*

Is this installation a duplicate of a previous case *Y.* If so, state name of vessel *SS. Baberay.*

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

has been fitted on board under special survey. Tested under full working conditions and found satisfactory. The materials and workmanship were found to be good and sound.

It is submitted that this vessel is eligible for THE RECORD.

Elec. Light
J. S. Rankin
8/5/30

Total Capacity of Generators *10* Kilowatts.

The amount of Fee £ *10.0.0* { When applied for, *at 10/6.*

Travelling Expenses (if any) £ *10.6.* { When received, *19.5.30*

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

Committee's Minute *GLASGOW 6 MAY 1930*

Assigned *Elec. Light*

A. G.
5/5/30

Im. 1228.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)