

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 26.8.29 When handed in at Local Office 7.9.29 Port of GLASGOW.

No. in Survey held at GREENOCK. Date, First Survey 6.6.29 Last Survey 26.8.1929
 Reg. Book. 14981. on the S.S. BAHADUR. (Number of Visits 10)

Built at PORT GLASGOW By whom built MESSRS LITHGOW & LTD Yard No. 823 When built 1929
 Owners MESSRS ASIATIC STEAM CO LTD Port belonging to LONDON. Tons {Gross 5024
 Net

Electric Light Installation fitted by THE SUNDERLAND FORGE & ENG CO Contract No. 823 When fitted 1929.

System of Distribution DOUBLE WIRE. Pressure of supply for Lighting 110. volts, Heating — 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 JES.

Generators, do they comply with the requirements regarding rating JES., are they compound wound JES.

are they over compounded 5 per cent. JES., if not compound wound state distance between each generator —

Where more than one generator is fitted are they arranged to run in parallel 1 GENERATOR, is an adjustable regulating resistance fitted in series with each shunt field —

Are all terminals accessible, clearly marked, and furnished with sockets JES., are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched JES.

Are the lubricating arrangements of the generators as per Rule JES.

Position of Generators THRUST RECESS. is the ventilation in way of the generators satisfactory JES., are they clear of all inflammable material JES.

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 JES.

are their axes of rotation fore and aft JES.

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

Main Switch Boards, where placed THRUST RECESS.

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 JES.

are they protected from mechanical injury and damage from water, steam or oil JES., 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 JES., is all insulation of high dielectric strength and of permanently high insulation resistance JES.

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 JES.

and is the frame effectively earthed JES. Are the fittings as per Rule regarding:— spacing or shielding of live parts JES.

accessibility of all parts JES., absence of fuses on back of board JES., proportion of omnibus bars JES.

individual fuses to voltmeter, pilot or earth lamp JES., connections of switches JES.

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches DOUBLE POLE SWITCH

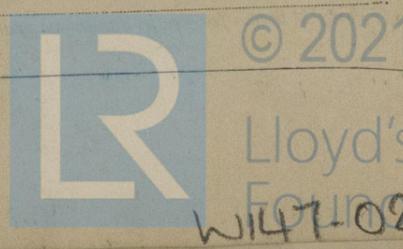
AND FUSES FOR GENERATOR. DOUBLE POLE SWITCH & FUSES FOR EACH OUTGOING CIRCUIT.

Instruments on main switchboard 1 ammeters 1 voltmeters — 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 EARTH LAMPS, SWITCHES AND FUSES.

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules JES.

Joint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule JES.



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Lloyd's Register

Foundations

W1471-020202 020

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

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 50

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 conductors 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.

Support and Protection of Cables, state how the cables are supported and protected. LEAD COVERED & BRAIDED CABLES IN ENGINE ROOM SUPPORTED BY GAL IRON CLIPS, LEAD COVERED & BRAIDED CABLES IN ACCOMM SUPPORTED BY BRASS CLIPS.

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements.

Joints in Cables, state if any, and how made, insulated, and protected. NONE MADE.

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. FIBRE.

Earthing Connections, state what earthing connections are fitted and their respective sectional areas. are their connections made as per Rule.

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.

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.

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 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.

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. If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office.

PARTICULARS OF GENERATING PLANT.

Table with columns: DESCRIPTION OF GENERATOR, No of, Kilowatts, Volts, Amperes, Revs per Min., DRIVEN BY, WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE. Fuel Used, Flash Point of Fuel.

LIGHTING AND HEATING CONDUCTORS.

Table with columns: Ref. No., DESCRIPTION, No. of Conductors, Effective Area of each Conductor, Sq. Ins., COMPOSITION OF STRAND, Total Maximum Current, Amperes, Approximate Length, Insulated with, HOW PROTECTED.

MOTOR CONDUCTORS.

Table with columns: Ref. No., DESCRIPTION, No. of Motors, Effective Area of each Conductor, Sq. Ins., COMPOSITION OF STRAND, Total Maximum Current, Amperes, Approximate Length, Insulated with, HOW PROTECTED.

To C-A

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.

p.p. The Sunderland Dock & Shipbuilding Co. Ltd.
R. H. Faugh

Electrical Engineers.

Date 31/8/29

COMPASSES.

Distance between electric generators ~~or motors~~ and standard compass 160 FEET.

Distance between electric generators ~~or motors~~ and steering compass 152 FEET.

The nearest cables to the compasses are as follows:—

A cable carrying 6.8 Ampères 12 feet from standard compass 8 feet from steering compass.

A cable carrying 1/8 Ampères 2 feet from standard compass 2 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.

LITHGOWS LIMITED.

John McFueary Secretary

Builder's Signature.

Date 4/9/29

Is this installation a duplicate of a previous case *yes*. If so, state name of vessel *S.S. Subadar.*

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

This installation has been fitted on board under special survey. Tested in our 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 *REG. NO. 12345*.

Elec. Light
J. Rankin
18/9/29

a.l.
2/9/29

Total Capacity of Generators *12.* Kilowatts.

The amount of Fee ... £ *12.0.0.* : When applied for, *Perk 5/9/29*
Travelling Expenses (if any) £ : : When received, *5.9.29*

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

Committee's Minute *GLASGOW* 10 SEP 1929

Assigned *Elec. Light*

Im. 2.28.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)