

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office on 23 NOV 1927
MIDDLESBROUGH.

Date of writing Report 19. 11. 1927 when handed in at Local Office 19. 11. 1927 Port of

No. in Survey held at STOCKTON Date, First Survey 19. 10. 27 Last Survey 9. 11. 1927
Reg. Book. (Number of Visits.....6.....)

40987 Sup. on the S.S. GLOCLIFFE. Tons { Gross 4600.59
Net 2810.14

Built at STOCKTON-ON-TEES. By whom built CRAIG TAYLOR & CO LTD Yard No. 222 When built 1927.

Owners Globe Shipping Co Ltd. Port belonging to Cardiff.

Electric Light Installation fitted by SUNDERLAND FORGE & ENGINEERING CO LTD. Contract No. When fitted 1927.

System of Distribution DOUBLE WIRE. ✓

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 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 NO, is an adjustable regulating resistance fitted in series with each shunt field —

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 MAIN ENGINE ROOM, STARBOARD SIDE, 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 MAIN ENGINE ROOM, ON SIDE OF STORE

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 micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework 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, proportion of omnibus

bars 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 DOUBLE POLE SWITCH

& FUSES FOR MAIN GENERATOR. SINGLE POLE SWITCH & DOUBLE POLE FUSES FOR EACH OUTGOING CIRCUIT.

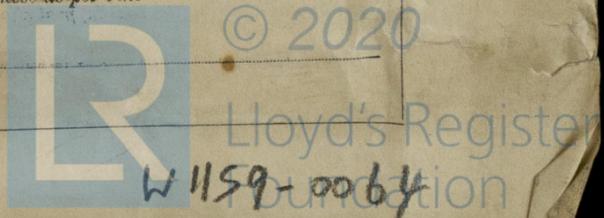
Instruments on main switchboard 1 ammeters 1 voltmeters — synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system EARTH LAMP, SWITCH &

FUSE ON EACH POLE

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.



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

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 4.7

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 JES.

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 JES.

Support and Protection of Cables, state how the cables are supported and protected MAINS & MACHINERY SPACES: - LEAD COVERED ARMOURED & BRAIDED SECURED BY GALV IRON CLIPS. ACCOM: - LEAD COVERED SECURED BY BRASS CLIPS.

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 JES.

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 JES.

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed JES state the material of which the bushes are made LEAD.

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 JES

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven —

Navigation Lamps, are these separately wired JES, controlled by separate switch and separate fuses JES, are the fuses double pole JES, are the switches and fuses grouped in a position accessible only to the officers on watch JES.

has each navigation lamp an automatic indicator as per Rule JES.

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 JES. 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.

| 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 | 8 | 110 | 72.4 | 380 | STEAM ENGINE. | ✓ | ✓ |
| AUXILIARY ... | — | — | — | — | — | — | — | — |
| EMERGENCY ... | — | — | — | — | — | — | — | — |
| ROTARY TRANSFORMER | — | — | — | — | — | — | — | — |

LIGHTING AND HEATING CONDUCTORS.

| Ref. No. | DESCRIPTION. | No. of Conductors. | Effective Area of each Conductor. Sq. Ins. | COMPOSITION OF STRAND. | | Total Maximum Current. Amperes. | Approximate Length. (Lead and Return.) Feet. | Insulated with | HOW PROTECTED. | |
|----------|----------------------------------|--------------------|--|------------------------|-----------|---------------------------------|--|----------------|----------------|----------------------------------|
| | | | | No. | Diameter. | | | | | |
| | MAIN GENERATOR... | 2 | .06000 | ✓ | 19 | .064 | 72.4 | 23. | V.I.R. | LEAD COVERED ARMOURED & BRAIDED. |
| | EQUALISER CONNECTIONS | — | — | — | — | — | — | — | — | — |
| | AUXILIARY GENERATOR | — | — | — | — | — | — | — | — | — |
| | EMERGENCY GENERATOR | — | — | — | — | — | — | — | — | — |
| | ROTARY TRANSFORMER... | — | — | — | — | — | — | — | — | — |
| | AUXILIARY SWITCHBOARDS | — | — | — | — | — | — | — | — | — |
| | ENGINE ROOM ... | 2 | .00701 | ✓ | 7 | .036 | 5.13 | 30 | V.I.R. | LEAD COVERED ARMOURED & BRAIDED. |
| | BOILER ROOM ... | — | — | — | — | — | — | — | — | — |
| | ACCOMMODATION - SALOON & FORWARD | 2 | .02214 | ✓ | 7 | .064 | 11.06 | 304 | V.I.R. | LEAD COVERED ARMOURED & BRAIDED. |
| | " ENGINEERS & AFT. | 2 | .02214 | ✓ | 7 | .064 | 18.03 | 120 | V.I.R. | LEAD COVERED ARMOURED & BRAIDED. |
| | NAVIGATION. | 2 | .00701 | ✓ | 7 | .036 | 6.83 | 360 | V.I.R. | LEAD COVERED ARMOURED & BRAIDED. |
| | WIRELESS ... | 2 | .02214 | ✓ | 7 | .064 | 25 | 344 | V.I.R. | LEAD COVERED ARMOURED & BRAIDED. |
| | SEARCHLIGHT | — | — | — | — | — | — | — | — | — |
| | MASTHEAD LIGHT... | 2 | .00194 | ✓ | 3 | .029 | .9 | 560 | V.I.R. | LEAD COVERED ARMOURED & BRAIDED. |
| | SIDE LIGHTS ... | 2 | .00194 | ✓ | 3 | .029 | .9 | 104 | V.I.R. | LEAD COVERED. |
| | COMPASS LIGHTS ... | 2 | .00194 | ✓ | 3 | .029 | .2 | 36 | V.I.R. | LEAD COVERED. |
| | POOP LIGHTS ... | 2 | .00701 | ✓ | 7 | .036 | 6.55 | 368 | V.I.R. | LEAD COVERED ARMOURED & BRAIDED. |
| | CARGO LIGHTS ... | 2 | .00299 | ✓ | 3 | .036 | 5.5 | 208 | V.I.R. | LEAD COVERED ARMOURED & BRAIDED. |
| | ARC LAMPS ... | — | — | — | — | — | — | — | — | — |
| | HEATERS ... | — | — | — | — | — | — | — | — | — |

MOTOR CONDUCTORS.

| Ref. No. | DESCRIPTION. | No. of Motors. | Effective Area of each Conductor. Sq. Ins. | COMPOSITION OF STRAND. | | Total Maximum Current. Amperes. | Approximate Length. (Lead and Return.) Feet. | Insulated with | HOW PROTECTED. |
|----------|---------------------------|----------------|--|------------------------|-----------|---------------------------------|--|----------------|----------------|
| | | | | No. | Diameter. | | | | |
| | 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 ... | — | — | — | — | — | — | — | — |

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.pro THE SUNDERLAND FORGE AND ENGINEERING CO. LTD.

A. Haffew

Electrical Engineers.

Date 15.11.27.

COMPASSES.

Distance between electric generators or motors and standard compass 120 FEET

Distance between electric generators or motors and steering compass 112 FEET

The nearest cables to the compasses are as follows:—

A cable carrying 6.83 Ampères 8 feet from standard compass 8 feet from steering compass.

A cable carrying 2 Ampères 8 feet from standard compass LED INTO feet from steering compass.

A cable carrying 2 Ampères LED INTO feet from standard compass 8 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 each course in the case of the standard compass, and nil degrees on each course in the case of the steering compass.

For CRAIG, TAYLOR & CO. LIMITED,

A. Taylor

Director.

Builder's Signature.

Date 21 Nov. 1927

Is this installation a duplicate of a previous case If so, state name of vessel

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

The materials and workmanship are good. This electric light installation has been fitted aboard under special survey in accordance with the Rules and is, in my opinion, suitable for a vessel classed with this Society.

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

J.W.D.
26/11/27

Total Capacity of Generators 8. Kilowatts.

The amount of Fee ... £ 8-0-0

When applied for, 11.11.19.27

Travelling Expenses (if any) £ :

When received, 15.11.19.27

A. J. Mau

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Elec light