

Rpt. 13.

Gr. No. 135

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

JUN 15 1938

Date of writing Report 29-5-1938 When handed in at Local Office

19

Port of Groningen

No. in Survey held at Groningen

Date, First Survey 18-5-38 Last Survey 30-5-1938

Reg. Book.

(Number of Visits 5)

on the steel single screw motor vessel "KINGFISHER"

Tons { Gross 275.74  
Net 92.81

Built at Groningen

By whom built Scheepswerk "Gideon" Yard No. 161

When built 1938/6

Owners The General Steam Navigation Co Ltd Port belonging to LONDON.

Electric Light Installation fitted by Herman Echels Hogenand Contract No.

When fitted 1938.

Is the Vessel fitted for carrying Petroleum in bulk

no

## System of Distribution

Two wire system

Pressure of supply for Lighting

24

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 temperature rise yes, are they compound wound no

are they over compounded 5 per cent. yes, if not compound wound state distance between each generator 13 ft.

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 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

Have certificates for generators under 100 kw. been supplied and approved yes

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 on Port 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 engine room on Port side casing bulkhead.

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

is it of an approved type 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

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 good

yes

absence of fuses on back of board yes

temperature rise of

omnibus bars nihil

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

Double pole quick circuit switch

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

2

ammeters one

voltage

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

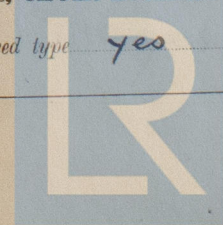
two lamps in series connected to earth

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

Lloyd's Register  
Foundation



current protection devices been tested under working conditions yes are all fuses labelled as per rule 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 all type are the cables insulated and protected as per Tables IV, V, X, XI, XII or XIII 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 less than 2 1/2 **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 laid under machines or floorplates no if so, are they adequately protected ✓

Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit lead covered

**Support and Protection of Cables,** state how the cables are supported and protected galvanised iron clips with brass screws

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 ✓

**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 ✓ 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 yes are they ventilated as per Rule yes

**Fittings,** are all fittings on weather decks, in storerooms 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 ✓ are air heaters constructed and fitted as per Rule ✓

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

**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 ✓ have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing ✓ have certificates for all motors for essential services been supplied and approved ✓ **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 yes **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 flameproof type approved for use in dangerous spaces ✓ **Spare Gear,** if the vessel is for open sea service have spares been supplied as per Rule yes are they suitably stored in dry situations yes

| PARTICULARS OF GENERATING PLANT. |        |            |        |          |                |                       |  |                      |  |
|----------------------------------|--------|------------|--------|----------|----------------|-----------------------|--|----------------------|--|
| DESCRIPTION OF GENERATOR.        | No. of | RATED AT   |        |          |                | DRIVEN BY             | WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE. |                      |  |
|                                  |        | Kilowatts. | Volts. | Amperes. | Revs. per Min. |                       | Fuel Used.                                     | Flash Point of Fuel. |  |
| MAIN ...                         | 1      | 2          | 24-36  | 5.5      | 1200           | belt from main motor  | Diesel oil                                     | above 150° F.        |  |
| AUXILIARY ...                    | 1      | 2          | 24-36  | 5.5      | 1200           | aux. heavy oil engine | Diesel oil                                     | above 150° F.        |  |
| EMERGENCY ...                    |        |            |        |          |                |                       |  |                      |  |
| ROTARY TRANSFORMER               |        |            |        |          |                |                       |  |                      |  |

| GENERATOR, LIGHTING AND HEATING CONDUCTORS. |               |                                      |     |                        |          |                                 |     |  |                |                     |
|---|---------------|--------------------------------------|-----|------------------------|----------|---------------------------------|-----|--|----------------|---------------------|
| DESCRIPTION.                                | No. per Pole. | CONDUCTORS.                          |     | COMPOSITION OF STRAND. |          | TOTAL MAXIMUM CURRENT. AMPERES. |     | Approximate Length. (Lead and Return.) Feet. | Insulated with | HOW PROTECTED.      |
|   |               | Total Nominal Area per Pole Sq. Ins. | No. | Diameter.              | Circuit. | Rule.                           |     |  |                |                     |
| MAIN GENERATOR ...                          | 1             | 25                                   | 19  | 1.3                    | 55       | 64                              | 27  | 764  | rubber         | lead and steel wire |
| EQUALISER CONNECTIONS ...                   |               |                                      |     |                        |          |                                 |     |  |                |                     |
| AUXILIARY GENERATOR ...                     | 1             | 25                                   | 19  | 1.3                    | 55       | 64                              | 33  |  | rubber         | "                   |
| EMERGENCY GENERATOR ...                     |               |                                      |     |                        |          |                                 |     |  |                |                     |
| ROTARY TRANSFORMER } MOTOR GENERATOR...     |               |                                      |     |                        |          |                                 |     |  |                |                     |
| ENGINE ROOM. }                              | 1             | 2½                                   | 7   | 0.68                   | 3        | 12.9                            | 80  |  | rubber         | lead and steel wire |
| BOILER ROOM. }                              | 1             | 2½                                   | 7   | 0.68                   | 3        | 12.9                            | 120 |  | "              | "                   |
| AUXILIARY SWITCHBOARDS ...                  | 1             | 10                                   | 7   | 1.35                   | 15       | 34                              | 34  |  | "              | "                   |
|   | 1             | 2½                                   | 7   | 0.68                   | 6        | 12.9                            | 100 |  | "              | "                   |
| ACCOMMODATION ...                           | 1             | 2½                                   | 7   | 0.68                   | 4        | 12.9                            | 46  |  | rubber         | lead                |
|   | 1             | 2½                                   | 7   | 0.68                   | 2.5      | 12.9                            | 80  |  | "              | "                   |
|   | 1             | 2½                                   | 7   | 0.68                   | 3        | 12.9                            | 100 |  | "              | "                   |
|   | 1             | 2½                                   | 7   | 0.68                   | 3        | 12.9                            | 100 |  | "              | "                   |
|   | 1             | 2½                                   | 7   | 0.68                   | 2        | 12.9                            | 220 |  | "              | lead and steel wire |
| WIRELESS ...                                |               |                                      |     |                        |          |                                 |     |  |                |                     |
| SEARCHLIGHT ...                             | 1             | 2½                                   | 7   | 0.68                   | 1.25     | 12.9                            | 55  |  | rubber         | rubber              |
| MASTHEAD LIGHT ...                          | 1             | 1½                                   | 1   | 1.38                   | 1.5      | 7.8                             | 250 |  | rubber         | lead and steel wire |
| SIDE LIGHTS ...                             | 1             | 1½                                   | 1   | 1.38                   | 1.5      | 7.8                             | 36  |  | "              | "                   |
| COMPASS LIGHTS ...                          | 1             | 1½                                   | 1   | 1.38                   | 1.5      | 7.8                             | 20  |  | "              | "                   |
| POOP LIGHTS ...                             | 1             | 1½                                   | 1   | 1.38                   | 1.5      | 7.8                             | 250 |  | "              | "                   |
| CARGO LIGHTS ...                            | 1             | 4                                    | 7   | 0.85                   | 3        | 18.2                            | 230 |  | "              | "                   |
| 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.                     | 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 ...       |                |               |                                      |                        |           |                                 |       |  |                |                |



© 2019

Lloyd's Register Foundation



The Electrical Equipment is installed in accordance with the approved plans.  
All Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.  
The foregoing is a correct description.

30 Mei 1938

Electrical Engineers.

Date 30-5-38

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass 7.11.

Minimum distance between electric generators or motors and steering compass 9.51.

The nearest cables to the compasses are as follows:—

A cable carrying 0.115 Ampères 1.5 feet from standard compass 1.5 feet from steering compass.

A cable carrying 1.5 Ampères 5 feet from standard compass 5 feet from steering compass.

A cable carrying 1.4 Ampères 4 feet from standard compass 4 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 nihil degrees on every course in the case of the standard compass, and nihil degrees on every course in the case of the steering compass.

J. KOSTER Hzn.  
Scheepwerf „GIDEON“

Builder's Signature.

Date 31-5-38

Is this installation a duplicate of a previous case No If so, state name of vessel

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

This installation have been fitted in accordance to the Society's Rules, approved plans and Secretary's letters and was found in a good working condition, when tried and may merit in our opinion the Committee's approval.

Wid  
L.J.  
23/6/38

Total Capacity of Generators 4 Kilowatts.

The amount of Fee ...

£60

When applied for,

19.

Travelling Expenses (if any) £

When received.

2/9/38

Committee's Minute

Assigned

FRI. 24 JUN 1938

See Gro. 7.6.23

Willems

J. H. Hehrman

Surveyor to Lloyd's Register of Shipping.