

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

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Date of writing Report 5th July 1938 when handed in at Local Office 10 Port of HAMBURG
Date, First Survey 16th May Last Survey 21st June 1938
(Number of Visits 6)

No. in Survey held at Hamburg - Harburg
Reg. Book. GOLDFINDER Tons { Gross _____ Net _____
on the Single Seven Motor Vessel

Built at Hamburg - Harburg By whom built G. Reusch Lun. K. G. Yard No. 636 When built 1938
Port belonging to Fremdhjem

Owners R/S Nortrade Contract No. _____ When fitted 1938
Electric Light Installation fitted by Heinrich G. Hammer

Is the Vessel fitted for carrying Petroleum in bulk no

System of Distribution single pole - hull return volts, Power _____ volts.
Pressure of supply for Lighting 110 volts, Heating 110 Power _____

Direct or Alternating Current, Lighting 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
approved _____ Have certificates of test results for machines under 100 kw. been submitted and _____

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

Position of Generators engine room, Port side, are the lubricating arrangements of the generators as per Rule yes, is the ventilation in way of the generators satisfactory yes, are they clear of all inflammable material yes and _____ if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators _____

are the generators protected from mechanical injury and damage from water, steam or oil yes, are their axes of rotation fore and aft yes, are the prime movers and their respective generators Earthing, are the bedplates and frames of the generating plant efficiently earthed yes
in metallic contact yes Main Switch Boards, where placed engine room, Port side above 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 _____, 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 _____

is it of an approved type _____, 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 _____, 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

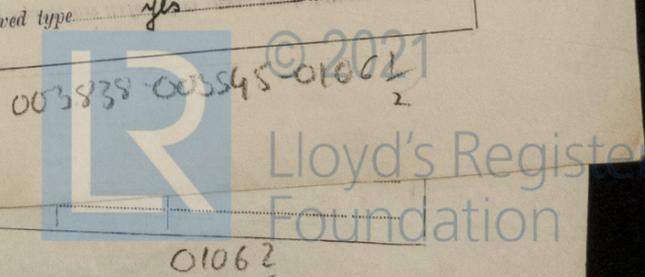
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches For the generators a single pole fuse and a single pole switch on the insulated pole. For each outgoing circuit a 1000 AMP. AUTOMATIC circuit breaker or a single pole fuse.

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 yes Instruments on main switchboard _____ ammeters _____

voltmeters _____ 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 _____ Switches, Circuit Breakers and Fusible Cut-outs, _____ have the reversed _____

do these comply with the requirements of the Rules yes are the fusible cutouts of an approved type yes



current protection devices been tested under working conditions are all fuses labelled as per rule

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

Cables: Single, ~~twisted~~ or multicore are the cables insulated and protected as per Tables IV, V, X, XI, XII or XIII of the Rules generally

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 2 volts Cable Sockets, are the ends of all cables having a sectional

area of 0.04 square inch and above provided with soldering sockets 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 are cables laid under machines or floorplates if so, are they adequately protected in steel tubes

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 lead covered and armoured cables supported by clips

on deck when exposed to risk of damage protected by tubes If cables are run in wood casings, are the casings and caps secured by screws

separate grooves If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII

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 joint boxes

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the

holes efficiently bushed state the material of which the bushes are made wood

Earthing Connections, state what earthing connections are fitted and their respective sectional areas each conductor to the ship's structure

of the same area as the corresponding conductor of the are their connections made as per Rule

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule Emergency Supply, state

position and method of control of the emergency supply and how the generator is driven

Navigation Lamps, are these separately wired controlled by separate switch and separate fuses are the fuses double pole

are the switches and fuses grouped in a position accessible only to the officers on watch in wheel house

has each navigation lamp an automatic indicator as per Rule Secondary Batteries, are they constructed and fitted as per Rule

are they ventilated as per Rule A small 12 volt battery has been fitted for supplying current to ignition coils in

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight

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 are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials

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 whether fixed or portable 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

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 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 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 are they suitably stored in dry situations

PARTICULARS OF GENERATING PLANT.

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

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

Table with columns: DESCRIPTION, CONDUCTORS (No. per Pole, Total Nominal Area per Pole), COMPOSITION OF STRAND (No., Diameter), TOTAL MAXIMUM CURRENT (Amps, Rule), Approximate Length (Lead and Return), Insulated with, HOW PROTECTED.

MOTOR CONDUCTORS.

Table with columns: DESCRIPTION, No. of Motors, CONDUCTORS (No. per Pole, Total Nominal Area per Pole), COMPOSITION OF STRAND (No., Diameter), TOTAL MAXIMUM CURRENT (Amps, Rule), Approximate Length (Lead and Return), Insulated with, HOW PROTECTED.

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.



Heinrich G. Homeyer

Electrical Engineers.

Date *30 June 38.*

COMPASSES.

Minimum distance between electric generators ~~and~~ and standard compass *about 7 metres*

Minimum distance between electric generators ~~and~~ and steering compass *about 7 metres*

The nearest cables to the compasses are as follows:—

A cable carrying *0.14* Ampères *close to* ~~feet from~~ standard compass *close to* ~~feet from~~ steering compass.

A cable carrying _____ Ampères _____ feet from standard compass _____ 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 _____ course in the case of the standard compass, and *nil* degrees on _____ course in the case of the steering compass.

G. Renck jun.
Kommanditgesellschaft

Renck

Builder's Signature.

Date *5th July 1938*

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, &c. *Material and workmanship of this*)

Electrical Installation *are* of good quality. As the conductors used are of the German Standard, the Society's Rules regarding ~~to~~ conductors have been applied generally.

The installation has been fitted under Special Survey in accordance with the approved plans and instructions thereto and otherwise in compliance with the requirements of the Rules.

As during outfit the Owner ordered a fresh water heater and a small battery supplying current to ignition coils in main motor, a new plan showing the installation as actually fitted on board has been prepared and a copy of same is attached herewith.

The electric installation is eligible in my opinion to be classed.

*noted J.G.J.
13.7.38*

Total Capacity of Generators *3* Kilowatts.

The amount of Fee ... *RM: 60-100* When applied for, ... 19.

Travelling Expenses (if any) £ : : *28.12.38 28/12* When received.

H. Röhrs

Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 15 JUL 1938*

Assigned *See above & report*

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

? Minimum fee 100 RM



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