

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.

Date of writing Report _____ 19 ____ When handed in at Local Office _____ 19 ____ Port of Seattle, Washington

No. in Survey held at Seattle, Washington Date, First Survey 25th July Last Survey 21st Sept. 19 51
 Reg. Book. _____ (Number of Visits 30)

08568 on the SS. "KAISANIEMI" (ex "EMPIRE CONSEQUENCE") Tons { Gross 2887
 Net 1919

Built at Lubeck By whom built Attenseult Steel Works Yard No. 396 When built 1940

Owners Etela-Suomen, Laiva, O.Y. Port belonging to Helsinki, Finland

Electric Light Installation fitted by x Contract No. x When fitted x

Is the Vessel fitted for carrying Petroleum in bulk No

System of Distribution Single Wiring SystemPressure of supply for Lighting 110 volts, Heating None volts, Power 110 volts,Direct or Alternating Current, Lighting Direct Power DirectIf alternating current system, state frequency of periods per second xHas the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off ing valve. No governor on engine.Generators, do they comply with the requirements regarding temperature rise German Standards, are they compound wound Yesare they over compounded 5 per cent. x, if not compound wound state distance between each generator xWhere more than one generator is fitted are they arranged to run in parallel No, is an adjustable regulating resistance fitted inseries with each shunt field Yes Have certificates of test results for machines under 100 kw. been submitted andapproved x Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing xAre 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 YesPosition of Generators In engine room #1 center, #2 starboard, is the ventilationin way of the generators satisfactory Yes are they clear of all inflammable material Yes if situated near unprotectedwoodwork or other combustible material, state distance of same horizontally from or vertically above the generators None and xare the generators protected from mechanical injury and damage from water, steam or oil Yes, are their axes of rotation fore and aft YesEarthing, are the bedplates and frames of the generating plant efficiently earthed Yes are the prime movers and their respective generatorsin metallic contact Yes Main Switch Boards, where placed Engine room starboard side

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 xSwitchboards, are they placed in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanicalinjury and damage from water, steam or oil Yes, if situated near unprotected woodwork or other combustible material, state distance of samehorizontally from or vertically above the switchboards x and x, are they constructed wholly of durable, non-ignitable non-absorbentmaterials Yes, is all insulation of high dielectric strength and of permanently high insulation resistance Yesis it of an approved type x, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or othernon-hygroscopic insulating material, and the slab similarly insulated from its framework x, is the non-hygroscopic insulating material of an approvedtype x, and is the frame effectively earthed Yes Are the fittings as per Rule regarding:—spacing or shielding of live partsYes, accessibility of all parts Satisfactory, absence of fuses on back of board None, temperature rise ofomnibus bars 60° F., individual fuses to voltmeter, pilot or earth lamp x, 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 ofswitches No Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switchesEach generator single pole switch with fuse on insulated pole, outgoing circuits, single pole switch and fuse on insulated pole.Are turbine driven generators fitted with emergency trip switch as per rule x Are cupboards or compartments containing switchboards composed offire-resisting material or lined with approved material Yes Instruments on main switchboard two ammeters two volt-meters x synchronizing device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equalizer connectionx Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the systemNone Switches, Circuit Breakers and Fusible Cut-outs,do these comply with the requirements of the Rules German Standards are the fusible cutouts of an approved type German Stan- have the reversed

dards

current protection devices been tested under working conditions..... ☒ Joint Boxes, Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per Rule..... German Standards

Cables: Single, twin, concentric, or multicore..... Single Core are the cables insulated and protected as per Tables IV, V, X or XI of the Rules..... Yes

If the cables are insulated otherwise than as per Rule, are they of an approved type..... Yes Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load..... None 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 in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit..... head covered

Support and Protection of Cables, state how the cables are supported and protected..... Channels and clips

If cables are run in wood casings, are the casings and caps secured by screws..... Yes, are the cap screws of brass..... Yes, are the cables run in separate grooves..... No 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..... Yes

Joints in Cables, state if any, and how made, insulated, and protected..... in watertight connection boxes

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..... Brass

Earthing Connections, state what earthing connections are fitted and their respective sectional areas..... Generators earthed to steel foundation, stranded copper, sectional area 0.1 sq.in. Lighting, etc. grounded to fixtures

....., are their connections made as per Rule..... Yes

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..... Emergency circuits connected to change over circuits on emergency switchboard. Steam and Gear driven Generators

Navigation Lamps, are these separately wired..... Yes controlled by separate switch and separate fuses..... Yes, are the fuses double pole..... No are the switches and fuses grouped in a position accessible only to the officers on watch..... Yes, in pilot house

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..... No

....., 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..... None, are air heaters constructed and fitted as per Rule.....

Searchlight Lamps, No. of..... None, whether fixed or portable..... --, are their fittings as per Rule..... --

Are Lamps, other than searchlight lamps, No. of..... None, 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..... Yes if not of this type, state distance of the combustible material horizontally or vertically above the motors..... X and X

have machines of over 100 BPH been inspected by the Surveyors during manufacture and testing..... ☒ Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule..... German Standard 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 type approved by the Home Office..... No

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule..... Yes

[illegible]

All Conductors are of annealed copper conforming to British Standard Specification No. 7 (or International Electro-technical Commission Publication No. 28).

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

Electrical Engineers.

Date.....

COMPASSES.

Distance between electric generators or motors and standard compass..... Approx. 150 feet

Distance between electric generators or motors and steering compass..... " " "

The nearest cables to the compasses are as follows:—

A cable carrying X Ampères X feet from standard compass..... X feet from steering compass.

A cable carrying X Ampères X feet from standard compass..... X feet from steering compass.

A cable carrying X Ampères X feet from standard compass..... X 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.

Builder's Signature.

Date.....

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

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

The Electrical Installation is stated to have been constructed and installed under supervision and to the requirements of the Germanischer Lloyd Surveyors and has now been examined throughout, repaired as per Rule Requirements, tested, and the materials and workmanship are considered satisfactory.

(NOTE) Cable sizes for each generator has now been increased to 120 sq. m.m. with new approved cable as specified.

Refrigerating Equipment and compressor motor have been disconnected and not in use. Vessel now fitted with Freon System for ship stores only.

(NOTE) This report has been completed as far as practicable. (No complete drawings or a one-line diagram of the electrical installation being available, the previous Owner's intention was to install the three wire direct current system, for which the two 50 KW Steam Generators are now stowed on board the vessel, for use if desired by the new present Owners.)

Total Capacity of Generators..... 35 Kilowatts.

The amount of Fee \$ See Rpt. :

When applied for,
26 Sept. 51
When received,
19

(SIGNED)

James F. Robertson
Surveyor to Lloyd's Register of Shipping.

Traveling Expenses (if any) £ :

Committee's Minute.....

Assigned.....