

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 17th OCT 1927 When handed in at Local Office 10 Port of LENINGRAD

No. in Survey held at LENINGRAD Date, First Survey 27th JAN 27 Last Survey 1st AUG 1927
Reg. Book. S/S GREGORY ZINOVIEFF (Number of Visits 14)

on the S/S GREGORY ZINOVIEFF Tons { Gross _____ Net _____
Built at LENINGRAD By whom built BALTIC SHIPBUILDING ENGRS WORKS Yard No. 165 When built 1927

Owners SOVIET MERCANTILE FLEET Port belonging to LENINGRAD

Electric Light Installation fitted by BALTIC SHIPBUILDING ENGRS WORKS Contract No. _____ When fitted 1927

System of Distribution DOUBLE WIRE

Pressure of supply for Lighting 220 VOLTS volts, Heating volts, Power 220 VOLTS volts.

Direct or Alternating Current, Lighting DIRECT CURRENT Power DIRECT CURRENT

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 NOT EFFICIENT

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 3-60 KW YES, is an adjustable regulating resistance fitted in series with each shunt field 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 ENGINE ROOM STAR^o 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 NONE 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 bed-plates 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 ENGINE ROOM

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 NONE 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 micaite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework MICANITE USED ON FITTINGS

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 NONE, proportion of omnibus bars YES

individual fuses to voltmeter, pilot or earth lamp No, connections of switches YES

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches EACH 60 KW GENERATOR HAS TWO SINGLE-POLE FUSES AND DOUBLE-POLE CIRCUIT-BREAKER WITH OVERLOAD & REVERSE TRIPS, EACH GENERATOR IS CONNECTED TO A PAIR OF BUS BARS, FOR CONNECTING EACH PAIR OF BUS BARS IN PARALLEL AND EQUALIZING A TRIPLE-POLE SWITCH IS FITTED

AUX. GENERATOR HAS TWO SINGLE-POLE FUSES AND DOUBLE-POLE SWITCH.

Instruments on main switchboard 7 ammeters 3 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 FRISCH'S SYSTEM

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules YES EXCEPT MAIN SWITCHBOARD FUSES

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



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Cables: Single, twin, concentric, or multicore SINGLE & DOUBLE are the cables insulated and protected as per Tables IV or V of the Rules APPROVED 2/12/26

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load WINDLASS AT 100% OVERLOAD, 10 VOLTS

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 conductor protected from moisture by being suitably sealed with insulating compound SEALED WITH GLAND

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 METAL CLIPS, SHEET IRON PLATING & TUBES WHERE PASSING THROUGH DECKS.

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, if lights are fitted, are the cables and fittings in accordance with the special requirements NONE

Joints in Cables, state if any, and how made, insulated, and protected JOINTS FOR LIGHTING CABLES IN JOINT BOXES. POWER CABLES HAVE NO JOINTS

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 RADIO-120 MM²

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 NONE

Navigation Lamps, are these separately wired YES, controlled by separate switch and separate fuses YES, are the fuses double pole POLE EACH, 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 FOR RADIO ONLY

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 NONE

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected NONE

how are the cables led

where are the controlling switches situated

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

Arc 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 NO

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 NONE and

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

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.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	<u>TWO</u>	<u>60 ENH</u>	<u>220</u>	<u>261</u>	<u>300</u>	<u>COMPOUND STEAM ENGINES</u>		
AUXILIARY	<u>ONE</u>	<u>8</u>	<u>220</u>	<u>261</u>	<u>150</u>	<u>STEAM ENGINE</u>		
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)	<u>4</u>	<u>240 1/2</u>	<u>91</u>	<u>1.89</u>	<u>205</u>	<u>390</u>	<u>20 MET.</u>	<u>LEAD COVERED</u>
	EQUALISER CONNECTIONS		<u>240</u>				<u>10</u>		
	AUXILIARY GENERATOR	<u>2</u>	<u>25 1/2</u>	<u>19</u>	<u>1.3</u>	<u>6.5</u>	<u>54.5</u>	<u>20</u>	
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS	<u>6</u>	<u>6 1/2</u>	<u>7</u>	<u>1.05</u>	<u>3.2</u>	<u>18</u>		<u>LEAD COVERED</u>
	ENGINE ROOM		<u>1 1/2</u>	<u>7</u>	<u>.73</u>	<u>1.3</u>	<u>2.6</u>	<u>88 MET.</u>	
	BOILER ROOM						<u>2.0</u>	<u>36</u>	
	ACCOMMODATION						<u>1.0</u>	<u>8</u>	
	WIRELESS	<u>2</u>	<u>16 1/2</u>	<u>19</u>	<u>1.09</u>	<u>3.2</u>	<u>20</u>	<u>36 MET.</u>	<u>LEAD COVERED</u>
	SEARCHLIGHT								
	MASTHEAD LIGHT	<u>4</u>	<u>1 1/2</u>	<u>7</u>	<u>.73</u>	<u>1.3</u>	<u>.3</u>	<u>125 MET.</u>	
	SIDE LIGHTS	<u>4</u>						<u>30</u>	
	COMPASS LIGHTS	<u>2</u>						<u>7 MET.</u>	
	POOP LIGHTS	<u>2</u>						<u>33</u>	
	CARGO LIGHTS	<u>4</u>						<u>1.6</u>	<u>40</u>
	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								
	SEA WATER PUMPS								
	FRESH WATER PUMPS	<u>1</u>	<u>6 1/2</u>	<u>7</u>	<u>1.05</u>	<u>3.2</u>	<u>12</u>	<u>15 MET.</u>	<u>LEAD COVERED</u>
	AIR COMPRESSOR								
	FRESH WATER PUMP								
	ENGINE TURNING GEAR								
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS								
	OIL FUEL TRANSFER PUMP								
	WINDLASS	<u>1</u>	<u>50 1/2</u>	<u>37</u>	<u>1.31</u>	<u>9.2</u>	<u>150</u>	<u>110 MET.</u>	<u>LEAD COVERED</u>
	WINCHES, FORWARD	<u>4</u>	<u>50 1/2</u>	<u>37</u>	<u>1.31</u>	<u>9.2</u>	<u>150</u>	<u>90 MET.</u>	
	WINCHES, AFT	<u>4</u>							
	STEERING GEAR								
	(a) MOTOR GENERATOR								
	(b) MAIN MOTOR								
	WORKSHOP MOTOR	<u>1</u>	<u>6 1/2</u>	<u>7</u>	<u>1.05</u>	<u>3.2</u>	<u>18</u>	<u>15 MET.</u>	<u>LEAD COVERED</u>
	VENTILATING FANS	<u>12</u>	<u>1 1/2</u>	<u>7</u>	<u>.73</u>	<u>1.3</u>	<u>.5</u>	<u>FROM LIGHTING CIRCUITS.</u>	
	CARGO WINCH	<u>1</u>	<u>25 1/2</u>	<u>19</u>	<u>1.3</u>	<u>6.5</u>	<u>7.5</u>	<u>40 MET.</u>	

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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.

Баранков Electrical Engineers. Date 27/ VIII 27

COMPASSES.

Distance between electric generators or motors and standard compass 70'
 Distance between electric generators or motors and steering compass 84'

The nearest cables to the compasses are as follows:—

A cable carrying 0.15 Amperes 28 feet from standard compass 42 feet from steering compass.
 A cable carrying 0.17 Amperes 2'-4" feet from standard compass 6'-4" feet from steering compass.
 A cable carrying 0.17 Amperes 2'-4" feet from standard compass 6'-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 No

The maximum deviation due to electric currents was found to be + 0.5 degrees on 90° course in the case of the standard compass, and - 2 degrees on 270° course in the case of the steering compass.



Skorshelle Builder's Signature. Date 30/ VIII 27

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.)

This installation has been fitted on board under special survey, the workmanship generally was found to be very good.

The 60 kw. Generators have not been adjusted under full power working conditions on account of the engine governors not operating satisfactory. When the engine governors have been efficiently regulated the circuit breakers are to be adjusted in the presence of a surveyor and a notice fixed to the switch board giving instructions for working the triple-pole switch when the machines are run in parallel. Meanwhile the Owner Representative has been informed that the machines are not to be run in parallel

Total Capacity of Generators 128 Kilowatts.

The amount of Fee	£	:	:	When applied for,
			19.....
Travelling Expenses (if any)	£	:	:	When received,
			19.....

H. M. Crick
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Im. 1.26.—Transfer. (The Surveyors are requested not to write on or back the space for Committee's Minute.)