

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

30 JUL 1928

Received at London Office

Date of writing Report 26th JULY 1928 When handed in at Local Office

19 Port of LENINGRAD

No. in Survey held at LENINGRAD

Date, First Survey 11/1/27

Last Survey 25th JULY 1928

Reg. Book.

(Number of Visits 18)

on the M/S "ALEXEY RYKOFF"

Tons

Gross 3615

Net 2097.

Built at LENINGRAD

By whom built SEVERNEY SHIPBUILDING YARD

Yard No. 299

When built 1928

Owners SOYTORGFLOT

Port belonging to LENINGRAD

Electric Light Installation fitted by SEVERNEY SHIPBUILDING YARD & G.E.T. ELECTRICAL TRUST.

Contract No. 299. When fitted 1928

System of Distribution DOUBLE WIRE SYSTEM

Pressure of supply for Lighting

220

volts, Heating

volts, Power

220

volts.

Direct or Alternating Current, Lighting DIRECT

Power 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 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 TWO 60 KW MACHINES 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

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 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 ENGINE ROOM. EMERGENCY GENERATOR SWITCH BOARD IN DECK HOUSE BESIDE 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 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 micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework STEEL SWITCH BOARD FITTINGS, INSULATED WITH MICANITE

and is the frame effectively earthed YES. Are the fittings as per Rule regarding: — spacing or shielding of live parts MAIN FUSES ON FRONT YES, accessibility of all parts YES, absence of fuses on back of board SMALL FUSES ON BACK, 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 EACH 60 KW GENERATOR HAS

TWO SINGLE POLE FUSES & DOUBLE POLE CIRCUIT BREAKERS WITH OVERLOAD & REVERSE CURRENT TRIPS. FOR EQUALIZING WHEN PARALLEL RUNNING A TRIPLE POLE SWITCH IS FITTED. AUX GENERATOR HAS TWO SINGLE POLE FUSES AND DOUBLE POLE SWITCH.

Instruments on main switchboard

3

ammeters

5

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 SYSTEM.

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules NO, CIRCUIT BREAKERS & FUSES ARE SIMILAR TO THOSE FITTED ON TIMBER CARRYING VESSELS & APPROVED BY LONDON. YES

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



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002816-002824-0017

Cables: Single, twin, concentric, or multicore SINGLE & TWIN are the cables insulated and protected as per Tables IV or V of the Rules APPROVED 13/4/26

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load WINDLASS 576

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 ✓

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, TUBES & SHEET IRON PLATING

If cables are run in wood casings, are the casings and caps secured by screws No, 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 NO LIGHTS IN COLD CHAMBERS

Joints in Cables, state if any, and how made, insulated, and protected ALL POWER CABLES HAVE DIRECT LEADS. LIGHTING CABLES BY JUNCTION 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 OR LEAD ✓

Earthing Connections, state what earthing connections are fitted and their respective sectional areas RADIO 100 sq. in.

, 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 THE EMERGENCY SUPPLY IS CONNECTED TO THE SUB-DISTRIBUTION BOARDS FOR EACH LIGHTING CIRCUIT. GENERATOR IS DRIVEN BY A PARAFFIN MOTOR

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 RADIO ONLY

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 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 ✓

, how are the cables led

where are the controlling switches situated ✓

Searchlight Lamps, No. of TWO, whether fixed or portable FIXED ON BRIDGE, are their fittings as per Rule YES

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 ✓ 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 NONE STEEL MASTS

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	<u>TWO</u>	<u>60</u>	<u>230</u>	<u>273</u>	<u>300</u>	<u>INTERNAL COMBUSTION ENGINE</u>	<u>DIESEL OIL</u>	<u>ABOVE 150° F</u>
AUXILIARY	<u>ONE</u>	<u>16</u>	<u>230</u>	<u>73</u>	<u>630</u>	"	<u>DO DO</u>	<u>DO</u>
EMERGENCY	<u>ONE</u>	<u>10</u>	<u>230</u>	<u>44</u>	<u>630</u>	"	<u>PARAFFIN OIL</u>	
ROTARY TRANSFORMER	<u>FOR RADIO</u>	<u>2</u>	<u>220</u>	<u>7</u>	<u>2500</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>

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. Wires	Diameter				
	MAIN GENERATOR...	1	0.450	8 1/2	24	1.24	273 ✓	70	VUL. RUBBER LEAD COVERED
	EQUALISER CONNECTIONS	1	0.200	37 1/2	0.85		✓	5	" "
	AUXILIARY GENERATOR	1	0.76	19 1/8	0.67	73	✓	50	" "
	EMERGENCY GENERATOR	1	0.038	7 1/4	0.34	44	✓	265	" "
	ROTARY TRANSFORMER	1	0.006	7 1/8	0.57	8.7	✓	250	" "
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	1	0.004	7 1/8	0.27	5	✓	200	" "
	BOILER ROOM								
	ACCOMMODATION	1	0.038	7 1/8	0.5	60.0	✓	200	" "
	III CLASS ACCOMMODATION	1	0.0016	7 1/8	0.23	2.0	✓	150	" "
	REAR LIGHTING CIRCUIT	1	0.016	7 1/8	0.4	10.0	✓	250	" "
				</					

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. Wires	Diameter INCHES OVERLEAD				
	BALLAST PUMP								
	MAIN BILGE LINE PUMPS	2	0.475	6 1/2	1.375	300 ✓	120	VUL. RUBBER	LEAD COVERED
	GENERAL SERVICE PUMP	✓							
	EMERGENCY BILGE PUMP	✓							
	SANITARY PUMP	✓							
	CIRC. SEA WATER PUMPS	✓							
	CIRC. FRESH WATER PUMPS	✓							
	AIR COMPRESSOR	1	0.475	6 1/2	1.375	330 ✓	165	"	"
	SEA WATER PUMP	1	0.009	7 1/8	0.670	13 ✓	110	"	"
	FRESH WATER PUMP								
	ENGINE TURNING GEAR	1	0.015	7 1/8	0.430	30 ✓	165	"	"
	ENGINE REVERSING GEAR	✓							
	SWAPLES PLANT	4	0.009	7 1/8	0.670	20 ✓	200	"	"
	LUBRICATING OIL PUMPS								
	TANK DISTRIBUTING BOX	✓							
	OIL FUEL TRANSFER PUMP								
	WINDLASS	1	0.076	19 1/8	0.670	84 ✓	465	"	"
	WINCHES, FORWARD	4	0.370	6 1/2	1.120	225 ✓	260	"	"
	WINCHES, AFT	5	0.460	6 1/2	1.375	225 ✓	450	"	"
	STEERING GEAR—								
	(a) MOTOR GENERATOR	✓							
	(b) MAIN MOTOR	1	0.038	7 1/8	0.550	44 ✓	530	"	"
	WORKSHOP MOTOR	1	0.009	7 1/8	0.670	17 ✓	135	"	"
	VENTILATING FANS	2	0.009	7 1/8	0.670	17 ✓	250	"	"
	EMER. AIR COMPRESSOR	1	0.038	7 1/8	0.550	40 ✓	165	"	"
	REFRIGERATING PLANT	70.88	0.660	6 1/2	2.11	370 ✓	200	"	"
	DO COMPRESSOR	1	0.145	9 1/2	0.700	145 ✓	10	"	"
	DO DO	1	DO	DO	DO	DO ✓	15	"	"
	DO BRINE PUMP	1	0.088	7 1/8	0.340	30 ✓	10	"	"
	DO DO DO	1	DO	DO	DO	DO ✓	10	"	"
	DO SEA WATER PUMP	1	DO	DO	DO	DO ✓	30	"	"

70.88
80.990

RUBBER INSULATED
CABLES ARMED BY LEADEN SHEATH 8 1/2 INCH

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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.

J. Kontorowich

Electrical Engineers.

Date *25/7/28.*

COMPASSES.

Distance between electric generators or motors and standard compass *53 FT.*

Distance between electric generators or motors and steering compass *43 FT.*

The nearest cables to the compasses are as follows:—

A cable carrying *0.1* Amperes *10* feet from standard compass *3* feet from steering compass.

A cable carrying *10* Amperes *10* feet from standard compass *17* feet from steering compass.

A cable carrying _____ Amperes _____ 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 NO EFFECT*

The maximum deviation due to electric currents was found to be *NIL* degrees on _____ course in the case of the standard compass, and _____ degrees on _____ course in the case of the steering compass.



A. Shoransky

Builder's Signature.

Date *18. VII. 28*

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 the vessel under special survey, the workmanship generally was found to be very good. Both 60 kw. machines have been examined under full load running conditions and governors found to be working satisfactorily, circuit breakers also examined and reverse current ^{trips} tried and found in working order.

Notice giving instructions for the circuit breakers & triple pole switch working as requested by London Office will be fitted on switch board on vessels return to Leningrad.

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

Elec Light

20th. 18/28.

Total Capacity of Generators *146* Kilowatts.

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

A. M. Crinick

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

WED. 8 AUG 1928

FRI. 4 JAN 1929

Assigned

Elec Light



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