

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

MAY - 2 1938

Date of writing Report 6/4 1938 When handed in at Local Office ✓ 19 38 Port of Helsingfors
 No. in Survey held at also Date, First Survey 26/1 Last Survey 15/3 19 38
 Reg. Book. 39572 on the M/V "OKSYWIE" (Number of Visits 1.0)
 Tons { Gross 765.86
 Net 341.68
 Built at A b o By whom built O/Y Crichton-Vulcan A/B Yard No. 747 When built 1938
 Owners Zegluga Polska Port belonging to Gdynia
 Electric Light Installation fitted by Finnish Electric Ltd. Gottfr. Stromberg Contract No. ✓ When fitted 1938
 Is the Vessel fitted for carrying Petroleum in bulk No

System of Distribution two core insulated system
 Pressure of supply for Lighting 220 volts, Heating 220 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 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 two in parallel, 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 on larboard side in 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 --- 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
 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 ---, 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 yes, absence of fuses on back of board ---, temperature rise of omnibus bars as per rule, individual fuses to voltmeter, pilot or earth lamp yes, are moving parts of switches alive in the "off" position yes 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
66 kW generator: a double pool automatic circuit breaker with overload and reversed
 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 3 ammeters 3
 voltmeters --- synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection yes
 Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system a voltmeter with ohm scale 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

Current trips and a linked equalized switch type Voigt & Haeffner 350 III KM mörb
 6,5 kW Generator: a double pool switch type Voigt & Haeffner type 60 II Pv and fuses in each pool.
 in each pool. For outgoing circuit: a double pool linked switch and fuses in each pool.

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current protection devices been tested under working conditions ☒ yes are all fuses labeled 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 ☒ single & twin 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 ☐ --- **Pull of Pressure,** state maximum between bus bars and any point of the installation under maximum load ☒ as per rule **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 ☒ yes if so, are they adequately protected ☒ yes lead covered and armoured

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

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

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 ☐ ---

Joints in Cables, state if any, and how made, insulated, and protected ☒ no joints in main cables

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 and 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 ☐ ---

are they ventilated 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 ☐ ---

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 ☒ yes, are air heaters constructed and fitted as per Rule ☒ yes

Searchlight Lamps, No. of one 1000 watt whether fixed or portable ☒ fixed, are their fittings as per Rule ☒ yes

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 ☐ ---

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 ☒ yes

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 fitted 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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN	2	66	230	29,4	600	Diesel engines	Diesel oil		
AUXILIARY	1	6,5	230	28,2	1000	" "			
EMERGENCY									
ROTARY TRANSFORMER									

GENERATOR, LIGHTING AND HEATING CONDUCTORS.									
DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	Rule.			
MAIN GENERATOR	2	95 mm ²	19	2,52	294	300	12 m.	rubber	armour
EQUALISER CONNECTIONS	1	95 "	19	2,52			6 m.	"	
AUXILIARY GENERATOR	1	10 "	7	1,35	28,2	35	22 m.	"	
EMERGENCY GENERATOR									
ROTARY TRANSFORMER } MOTOR GENERATOR	1	4	7	0,86	5	20	4	"	
ENGINE ROOM									
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
ACCOMMODATION Main deck	1	4	7	0,86	5	20	20	"	
Shelter deck	1	4	7	0,86	5	20	28	"	
Poop	1	4	7	0,86	5	20	38	"	
WIRELESS	1	2,5	1	1,78				"	
SEARCHLIGHT	1	2,5	1	1,78	4,5	15	40	"	
MASTHEAD LIGHT	2	1,5	1	1,38	0,2	10	50	"	
SIDE LIGHTS	2	1,5	1	1,38	0,2	10	15	"	
COMPASS LIGHTS	2	1,5	1	1,38	0,2	10	4	"	
POOP LIGHTS	1	1,5	1	1,38	0,2	10	32	"	
CARGO LIGHTS	2	2,5	1	1,78	5	15	30	"	
HEATERS ... oil	1	16	7	1,70	41	50	10	"	

MOTOR CONDUCTORS.										
DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		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	1	1	16mm ²	7	1,70	30,5	50	8	rubber	armour
MAIN BILGE LINE PUMPS	1	1	4	7	0,86	12,8	20	10	"	
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS	1	1	2,5	1	1,78	6,4	15	20	"	
CIRC. FRESH WATER PUMPS	1	1	2,5	1	1,78	6,4	15	20	"	
AIR COMPRESSOR	1	1	10	7	1,35	22	35	10	"	
FRESH WATER PUMP										
ENGINE TURNING GEAR										
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS	1	1	10	7	1,35	28	35	8	"	
OIL FUEL TRANSFER PUMP										
WINDLASS	1	1	35	19	1,53	78	80	56	"	
WINCHES, FORWARD	4	1	25	19	1,30	64	64	8	"	
WINCHES, AFT	2	1	25	19	1,30	64	64	8	"	
STEERING GEAR—										
(a) MOTOR GENERATOR	2	1	10	7	1,35	15	35	60	"	
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS										
Oil purifier	1	1	2,5	1	1,78	6,4	15	8	"	
Fuel oil purifier	1	1	2,5	1	1,78	6,4	15	8	"	
Fire extinguishing	1	1	16	7	1,70	32,5	50	10	"	
Boiler air compr.	1	1	2,5	1	1,78	3,5	15	22	"	

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.

Edmund Hudson Electrical Engineers.

Date *4/10/38*

COMPASSES.

Minimum distance between electric generators or motors and standard compass 10 m.

Minimum distance between electric generators or motors and steering compass 9 m.

The nearest cables to the compasses are as follows:—

A cable carrying 0,2 Ampères 1,5 m feet from standard compass 1,5 m 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 degrees on course in the case of the standard compass, and degrees on course in the case of the steering compass.

Oliver Tylee Builder's Signature.

Date *6/4-38*

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.) *The material and the*

workmanship is good and in accordance with the Rules.

*With
L.Y.
3/5/38.*

Total Capacity of Generators 138,5 Kilowatts.

The amount of Fee ... *London* £ 18 : 3 : 6 : When applied for, *yes* 19.

Travelling Expenses (if any) £ 18 : 3 : 6 : When received, *27/7.8*

Oliver Tylee
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI 6 MAY 1938

Assigned *See above P.B. report*



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