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Rpt. 13.

No. 97503

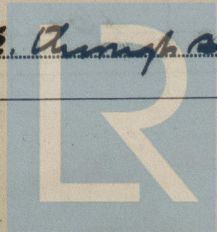
# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report.....19..... When handed in at Local Office.....25/5/39 Port of Newcastle on Tyne  
 No. in Survey held at Newcastle Date, First Survey 26 Aug/1938 Last Survey 24 May 1939  
 Reg. Book. Suppt. (Number of Visits.....25.....)  
89989 on the M.V. "SOBIESKY" Tons { Gross. 11030  
 Net. 6351  
 Built at Newcastle By whom built Swan, Hunter and Wigham Robinson Ltd. Yard No. 1572 When built 1939  
 Owners Sagria America Shipping Co. Ltd. Port belonging to Sagria  
 Electrical Installation fitted by Swan, Hunter & Wigham Robinson Ltd. Contract No. 1572 When fitted 1939  
 Is vessel fitted for carrying Petroleum in bulk No Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub.Sig. No

Have plans been submitted and approved Yes System of Distribution Single wire Voltage of supply for Lighting 220  
 Heating 220 Power 220 Direct Alternating Current, Lighting Yes Power Yes If Alternating Current state frequency..... Prime Movers,  
 has the governing been tested and found efficient when the whole load is suddenly thrown on and off Yes Are turbine emergency governors fitted with a  
 trip switch as per Rule..... Generators, are they compound wound Yes, are they level compounded under working conditions Yes,  
 if not compound wound state distance between generators..... and from switchboard..... Where more than one generator is fitted are they  
 arranged to run in parallel Yes, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive pole  
Positive Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing Yes Have certificates of  
 test for machines under 100 kw. been supplied Yes and the results found as per rule Yes Are the lubricating arrangements and the construction  
 of the generators as per rule Yes Position of Generators Engine room forward end  
 is the ventilation in way of generators satisfactory Yes are they clear of inflammable material Yes, if situated  
 near unprotected combustible material state distance from same horizontally..... and vertically..... are the generators protected from mechanical  
 injury and damage from water, steam and oil Yes, are the bedplates and frames earthed Yes and the prime movers and generators in metallic  
 contact Yes Switchboards, where are main switchboards placed Engine room forward end on  
raised platform above gunwales  
 are they in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steam  
 and oil Yes, if situated near unprotected combustible material state distance from same horizontally..... and vertically....., what insulation  
 material is used for the panels Sheet steel panels - dead  
front type switchboard, if of synthetic insulating material is it an Approved Type....., if of  
 semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule..... Is the frame effectually earthed Yes  
 Is the construction as per Rule Yes, including accessibility of parts....., absence of fuses on the back of the board Yes, individual fuses  
 to pilot and earth lamps, voltmeters, etc. Yes locking of screws and nuts Yes, labelling of apparatus and fuses Yes, fuses on the "dead"  
 side of switches Yes Description of Main Switchgear for each generator and arrangement of equaliser switches Triple pole circuit  
breakers with O/L and R/C trips on main generators one pole used as equaliser;  
double pole knife switch and double pole fuse on emergency generator  
 and for each outgoing circuit Double pole circuit breakers with O/L trips on main circuits;  
double pole rotary switches & double pole fuses on main circuits  
 Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard Three  
 ammeters Three voltmeters..... synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the  
 equaliser connection Yes Earth Testing, state means provided 2 lamps connected to E. through ammeter & fuses



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Switches, Circuit Breakers and Fuses, are they as per Rule Y<sub>2</sub>, are the fuses an approved type Y<sub>2</sub>, are all fuses labelled as per Rule Y<sub>2</sub>, are the reversed current protection devices connected on the pole opposite to the equaliser connection Y<sub>2</sub>, have they been tested under working conditions Y<sub>2</sub>.

Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Y<sub>2</sub>.

Cables, are they insulated and protected as per the appropriate Tables of the Rules Y<sub>2</sub>, if otherwise than as per Rule are they of an approved type —.

state maximum fall of pressure between bus bars and any point under maximum load 500 lbs, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Y<sub>2</sub>.

Are paper insulated and varnished cambric insulated cables sealed at the exposed ends Y<sub>2</sub> with insulating compound — or waterproof insulating tape Y<sub>2</sub>.

Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage Y<sub>2</sub>, are cables laid under machines or floorplates Y<sub>2</sub>, if so, are they adequately protected —.

Are cables in machinery spaces, galleys, laundries, etc., lead covered Y<sub>2</sub> or run in conduit —.

State how the cables are supported and protected L.C.A. cables clipped on top of E. surface in machinery spaces and on deck; L.C.A. cables clipped to underside of "C" bulk in main cable run; L.C. cables clipped to surface, wood grinders or behind ceilings in access.

Are all lead sheaths, armouring and conduits effectually bonded and earthed Y<sub>2</sub>.

Refrigerated chambers, are the cables and fittings as per Rule Y<sub>2</sub>.

Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands Y<sub>2</sub>, where unarmoured cables pass through beams, etc., are the holes effectually bushed Y<sub>2</sub> and with what material Lead.

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Y<sub>2</sub>.

Emergency Supply, state position "D" bulk aft.

and method of control D.P.C.B. switch on emergency board between emergency generator & main board.

Navigation Lamps, are they separately wired Y<sub>2</sub> controlled by separate double pole switches Y<sub>2</sub> and fuses Y<sub>2</sub>.

Are the switches and fuses in a position accessible only to the officers on watch Y<sub>2</sub> is an automatic indicator fitted Y<sub>2</sub>.

Secondary Batteries, are they constructed and fitted as per Rule Y<sub>2</sub>, are they adequately ventilated Y<sub>2</sub>.

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Y<sub>2</sub>.

Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present —, if so, how are they protected —.

## PARTICULARS OF GENERATING PLANT

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 ... ..	3	450	220	2045	275	Diesel Engines	Fuel Oil	above 150°F
EMERGENCY ...	1	46	220	209	1100	Diesel Engine	Fuel Oil	above 150°F
ROTARY TRANSFORMER								

## GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ... ..	3x450	3	127/093	2045	3x815	36	V.C.	L.C.A.
" " EQUALISER ... ..		2	91/093	—	2x624	18	V.C.	L.C.A.
EMERGENCY GENERATOR ... ..	1x46	1	37/083	209	296	40	V.C.	L.C.A.
ROTARY TRANSFORMER: MOTOR ... ..								
" " GENERATOR ... ..								

MAIN DISTRIBUTION CABLES.

[illegible]

LIGHTING AND HEATING, ETC., CABLES.

[illegible]

MOTOR CABLES.

[illegible]



CLOSURE  
No 72  
JUN 1939

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.  
All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.  
The foregoing is a correct description.

For  
SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.

Electrical Engineers.

Date 24<sup>th</sup> May 1939.

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass 116 feet

Minimum distance between electric generators or motors and steering compass 110 feet

The nearest cables to the compasses are as follows:—

A cable carrying .14 Ampères on the feet from standard compass 12 feet from steering compass.

A cable carrying .14 Ampères 12 feet from standard compass on the 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 *any* course in the case of the standard compass, and *nil* degrees on *any* course in the case of the steering compass.

*For*  
*SWAN, HUNTER & WIGHAM RICHARDSON, LTD.*  
*Thos Morrison* Builder's Signature.

Date 25<sup>th</sup> May 1939.

Is this installation a duplicate of a previous case *No* If so, state name of vessel

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.) *The electrical equipment of this vessel has been installed under special survey. The materials used are of good quality and the workmanship is good. On completion the equipment was run under working conditions, the governing, compounding, regulation and paralleling of the main generators and the governing, compounding and regulation of the emergency generator were tested, the operation of the overload and reverse current trips of the main circuit breakers was tested and the preferential tripping proved. The insulation resistance of all circuits was measured. The electrical equipment is in my opinion suitable for a classed vessel.*

*Noted*  
*LL*  
*30/5/39*

Total Capacity of Generators 1396 Kilowatts.

The amount of Fee ... £ 79:18:26  
When applied for, 26 MAY 1939  
Travelling Expenses (if any) £ 3:2:10  
When received, 6 JUN 1939

*Santerson*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

WED 31 MAY 1939

Assigned

*See Nwc. 76. 97503*



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