

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

26 APR 1948

Recorded at London Office

Date of writing Report 21st March 1948 When handed in at Local Office 19 Port of Amsterdam
 No. in Survey held at Amsterdam Date, First Survey 30th Jan Last Survey 10th March 1948
 Reg. Book. (Number of Volls 19)
 on the ice breaker "SWAROZYC" Tons {Gross 712
 Net
 Built at Amsterdam By whom built Messrs. Amsterdamsche Droogdok Maatschappij Yard No. 83 When built 1948
 Owners Polish import and export Coy for machines and tools "Polimac" Port belonging to SZCZECIN
 Electrical Installation fitted by Messrs Sterel & Wechgeleer Contract No. When fitted 1948
 Is vessel fitted for carrying Petroleum in bulk no Is vessel equipped with D.F. — E.S.D. yes Gy.C. — Sub.Sig. —

Have plans been submitted and approved yes System of Distribution two-wire-system Voltage of supply for Lighting 110V
 Heating — Power — Direct or Alternating Current, Lighting D.C. Power — If Alternating Current state periodicity — Prime Movers,
 has the governing been tested and found as per Rule when full 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 no are shunt field regulators provided yes Is the compound winding connected to the negative or positive pole
negative Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing none 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 in engine room starboard 1st platform
 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 glad iron switchgear unit in engine room
starboard fitted to fore bulkhead
 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 porcelain insulators for busbars 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 yes 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 no plan Description of Main Switchgear for each generator and arrangement of equaliser switches double pole knife switch and double fuse links

 and for each outgoing circuit double pole rotary switches and d.p. fuses

 Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 1
 ammeters 1 voltmeters — synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the
 equaliser connection — Earth Testing, state means provided earth lamps
 Switches, Circuit Breakers and Fuses, are they as per Rule yes are the fuses an approved type normal continental
 per Rule yes If circuit breakers are provided for the generators, at what overload current did they open when tested — are the reversed current
 protection devices connected on the pole opposite to the equaliser connection — have they been tested under working conditions, and at what current
 did they operate — Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule yes
 Cables, are they insulated and protected as per the appropriate Tables of the Rules yes 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 less than 6% are the ends of all cables having a sectional area of 0.04
 square inch and above provided with soldering sockets yes Are paper insulated and varnished cambric insulated cables sealed at the ends —

with insulating compound..... or waterproof insulating tape..... 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 yes, are cables laid under machines or floorplates none, if so, are they adequately protected..... Are cables in machinery spaces, galleys, laundries, etc., lead covered yes or run in conduit..... State how the cables are supported and protected.....

LCBNA cables clipped to galv tray or clipped to iron work in machinery spaces; LC cables clipped to woodgrounds - or surfaces in accommodations

Are all lead sheaths, armouring and conduits effectually bonded and earthed yes Refrigerated chambers, are the cables and fittings as per Rule..... Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands yes, where unarmoured cables pass through beams, etc., are the holes effectively bushed yes and with what material lead bushes Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule yes Emergency Supply, state position none and method of control.....

Navigation Lamps, are they separately wired yes controlled by separate double pole switches yes and fuses yes Are the switches and fuses in a position accessible only to the officers on watch yes, is an automatic indicator fitted yes Secondary Batteries, are they constructed and fitted as per Rule....., are they adequately ventilated..... what is the battery capacity in ampere hours.....

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof yes Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present no, if so, how are they protected.....

and where are the controlling switches fitted....., are all fittings suitably ventilated....., are all fittings and accessories constructed and installed as per Rule yes Searchlight Lamps, No. of none, whether fixed or portable....., are their fittings as per Rule..... Heating and Cooking, is the general construction as per Rule.....

are the frames effectually earthed....., are heaters in the accommodation of the convection type..... Motors, are all motors constructed and installed as per Rule..... and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil....., if situated near unprotected combustible material state minimum distance from same horizontally..... and vertically..... Are motors coupled to oil fuel transfer and unit pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment..... Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing..... Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule.....

Control Gear and Resistances, are they constructed and fitted as per Rule..... steel masts Lightning Conductors, where required are they fitted as per Rule..... Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with....., are all fuses of the cartridge type..... are they of an approved type..... Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships..... Are the cables lead covered as per Rule..... Spare Gear, if the vessel is for open sea service have spares been provided as per Rule....., are they suitably stored in dry situations yes Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory 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 ...	<u>1</u>	<u>12</u>	<u>110V</u>	<u>100</u>	<u>600</u>	<u>steam-engine</u>	-	-
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	<u>1</u>	<u>1</u>	<u>50</u>	<u>85</u>	<u>99</u>	<u>10</u>	<u>rubber</u>	<u>LCBNA</u>
" " EQUALISER ...								
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR ...								



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MAIN DISTRIBUTION CABLES

[illegible]

LIGHTING AND HEATING, ETC., CABLES

DESCRIPTION	QTY	UNIT PRICE	TOTAL PRICE	AMOUNT PAID	BALANCE DUE	REMARKS
WIRELESS	1	16	15	49	62	Rubber LCBWA
NAVIGATION LIGHTS	1	15	0.35	95	30	" " "
LIGHTING AND HEATING	1	15	6	95	-	" LCBWA
Panel H navigation	1	25	5	155	70	" LCBWA
Lighting Panel "K" bridge	1	10	35	38	70	" " "
" " "V" fore-castle	1	6	25	29	54	" " "

MOTOR CABLES.

[illegible]

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.



Electrical Engineers.

Date 12-3-48

COMPASSES.

Minimum distance between electric generators or motors and standard compass 36 feet

Minimum distance between electric generators or motors and steering compass 30 feet

The nearest cables to the compasses are as follows:—

A cable carrying 0.14 Ampères led into feet from standard compass led into feet from steering compass.

A cable carrying 35 Ampères 12 feet from standard compass 8 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 nihil degrees on any course in the case of the standard compass, and nihil degrees on any course in the case of the steering compass.

Builder's Signature.

Date

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

Plans. Are approved plans forwarded herewith no If not, state date of approval 11-11-47

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith yes

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 fitted under special survey and in accordance with or equivalent to the approved plan and the Secretary's letter. The materials used are of good quality and the workmanship is good; the installed fuses are cartridge fuses, Beusker and fuse bases 2-60 amp and fuse base and fuse links 100 amp. W. Hazemeyer. On completion the equipment was run under working conditions and insulation resistance of all circuits measured and was found satisfactory. I am of opinion that this equipment merits the approval of the Committee.

Note SW 27/5/48

Total Capacity of Generators 12 Kilowatts.

The amount of Fee ... £ 87.7

When applied for, 22-4-1948

Travelling Expenses (if any) £ 15.7

When received, 19

Surveyor to Lloyd's Register of Shipping.

Committee's Minute Fri. 28 MAY 1948

Assigned See F.E. ncky. spl.



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