

No. 16196^D

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report... 22 Nov. 1946 When handed in at Local Office..... 19..... Port of Amsterdam

Survey held at Amsterdam Date, First Survey 10th Sept Last Survey 5th Nov. 1946
(Number of Visits..... 4.....)

Reg. Book. 2877 on the S/S "AARDENBURG" (ex "Stahleek") Tons { Gross 1663
Net 907

built at Bremen By whom built A.G. "WESER" Yard No. When built 1923

owners Kon. Ned. Stoomboot Mij. Port belonging to Amsterdam

Electrical Installation ~~made~~ ^{OVERHAULED} by N.V. Groeneveld 't d Pol & Co Contract No. When fitted

Is vessel fitted for carrying Petroleum in bulk no Is vessel equipped with D.F. yes E.S.D. yes Gy.C. no Sub.Sig. no

Have plans been submitted and approved System of Distribution double wire Voltage of supply for Lighting 110V

Lighting Power 110V Direct or Alternating Current, Lighting DC Power DC If Alternating Current state periodicity Prime Movers,

as 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

rip switch as per Rule Generators, are they compound wound yes, are they level compounded under working conditions

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 are shunt field regulators provided yes Is the compound winding connected to the negative or positive pole

Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing Have certificates of

test for machines under 100 kw. been supplied and the results found as per rule Are the lubricating arrangements and the construction

of the generators as per rule yes Position of Generators in Engine room at Starboard side

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 in Engine room at Starboard side

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 marble, 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 yes 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 Description of Main Switchgear for each generator and arrangement of equaliser switches.....

double pole circuit breaker

and for each outgoing circuit..... double pole circuit breakers

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

Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an approved type yes, are all fuses labelled as

per Rule yes If circuit breakers are provided for the generators, at what overload current did they open when tested are the reversed current

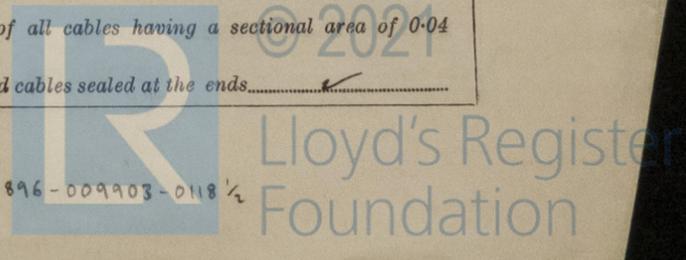
protection devices connected on the pole opposite to the equaliser connection have they been tested under working conditions, and at what current

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 if otherwise than as per Rule are they of an approved type yes,

state maximum fall of pressure between bus bars and any point under maximum load 2 volt, 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



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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 are cables laid under machines or floorplates if so, are they adequately protected Are cables in machinery spaces, galleys, laundries, etc., lead covered or run in conduit State how the cables are supported and protected steel plate cable-runs and fixed with galvanized iron clips and brass screws.

Are all lead sheaths, armouring and conduits effectually bonded and earthed 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 where unarmoured cables pass through beams, etc., are the holes effectively bushed and with what material lead Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Emergency Supply, state position and method of control

Navigation Lamps, are they separately wired controlled by separate double pole switches and fuses Are the switches and fuses in a position accessible only to the officers on watch is an automatic indicator fitted 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 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

and where are the controlling switches fitted are all fittings suitably ventilated

are all fittings and accessories constructed and installed as per Rule Searchlight Lamps, No. of 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 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 Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Rev. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	5	110	43.5	510	Steam engine		
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 For Poles.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	5	1	10 mm ²	43.5	40	12 m	rubber	steel wire
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel For Poles.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS ...							
in top of engine room	1	4 mm ²	15	20	18 m	rubber	steel wire
after ship	1	4 "	5	20	70 "	"	"
midship	1	4 "	10	20	28 "	"	"
fore ship	1	2 1/2 "	3	15	80 "	"	"

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel For Poles.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
WIRELESS	1	4 mm ²	12	20	32 m	rubber	steel wire
NAVIGATION LIGHTS	1	4 "	7	20	40 "	"	"
LIGHTING AND HEATING							
stern light	1	1 1/2 "	0.3	10	70 "	"	"
Port light	1	1 1/2 "	0.3	10	12 "	"	"
Starb. light	1	1 1/2 "	0.3	10	10 "	"	"
Top light forward	1	1 1/2 "	0.3	10	35 "	"	"
Top light aft	1	1 1/2 "	0.3	10	40 "	"	"
Compass light	1	1 1/2 "	0.1	10	10 "	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
			No. in Parallel For Poles.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
refrigerator	1	0.5	1	1 1/2 mm ²	4	10	8 m	rubber	steel wire

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.....

COMPASSES.

Minimum distance between electric generators or motors and standard compass..... 24 m

Minimum distance between electric generators or motors and steering compass..... 20 m

The nearest cables to the compasses are as follows:—

A cable carrying 0.3 Ampères 6 m feet from standard compass 3 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 nihil degrees on every course in the case of the standard compass, and nihil degrees on every 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..... one If not, state date of approval..... ✓

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

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.).....

The electric equipment has been fitted under special survey of the firm Lloyd's. The whole installation examined and found or made in order; cables, fittings etc renewed where necessary and afterwards megger tested with satisfactory results. Noted the absence of a second supply to the navigation lights from an alternative circuit which will be made at the vessel's return of her present voyage. This installation merits in my opinion the approval of the Committee.

Total Capacity of Generators..... 5 Kilowatts.

The amount of Fee ... £ 40.- : When applied for, 26-11-1946
 Travelling Expenses (if any) £ : When received, 19

[Signature]
 Surveyor to Lloyd's Register of Shipping.

FRI. 28 FEB 1947

Committee's Minute.....

Assigned..... See F.F. mch. rpt.

501,458—Transfer. (MADE AND PRINTED IN ENGLAND.)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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