

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

9-MAY 1949

Received at London Office.....

Date of writing Report..... 14-4-1949 When handed in at Local Office..... 19..... Port of..... Groningen.

No. in Survey held at..... Martenshoek Date, First Survey..... 28-12-48 Last Survey..... 14-4-1949  
Reg. Book..... (Number of Vols..... 11.....)

..... on the..... M.V. "HADA" Tons { Gross..... 459.51  
Net..... 270.91

Built at..... Martenshoek By whom built..... Bodewes' Scheepswerven Yard No..... 373 When built..... 1949.

Owners..... Mr. J. Sint. Port belonging to..... Dordrecht

Electrical Installation fitted by..... Messrs. Jan. Bodewes, Hoogezand. Contract No..... When fitted..... 1949.

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

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Have plans been submitted and approved..... yes System of Distribution..... two wire with direct current. Voltage of supply for Lighting..... 110 V.

Heating..... - Power..... 110 V Direct or Alternating Current, Lighting..... direct Power..... direct 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..... yes, except shaft driven generator see appr. plan.

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 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..... 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..... Engineer room floor level  
....., 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..... no V-bulb. connection Switchboards, where are main switchboards placed..... at the top engineer room

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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..... dead front type, 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..... yes Description of Main Switchgear for each generator and arrangement of equaliser switches..... double-pole  
..... double throw switch & double pole fuses.

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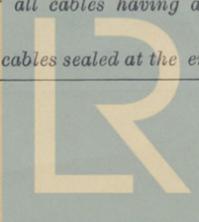
and for each outgoing circuit..... double-pole switch and double pole fuses.

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Are compartments containing switchboards composed of fire-resisting material or lined as per Rule..... - Instruments on main switchboard..... two  
ammeters..... two 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..... earth lamps connected to "E" through d.p. switch  
and fuses.

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..... 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..... 6 1/2, 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... no, if so, are they adequately protected... yes, except generator cables, these are of H.R. type.

Are cables in machinery spaces, galleys, laundries, etc., lead covered... or run in conduit... State how the cables are supported and protected. Machinery spaces: L.C. and metal wire braided cable and H.R. cable clipped to sheet iron ground plates or surface. Wheelhouse: H.R. type cable clipped to wood grounds. Accommodation spaces: L.C. cable clipped to wood grounds.

Are all lead sheaths, armouring and conduits effectually bonded and earthed... yes. Refrigerated chambers, are the cables and fittings as per Rule... yes.

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 effectually bushed... yes and with what material... lead. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule... yes. Emergency Supply, state position... main battery placed on boatdeck and method of control... automatically operated switch placed on main switchboard.

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... yes, are they adequately ventilated... yes. what is the battery capacity in ampere hours... 190 Ampere hours/ 110 V.

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... no.

and where are the controlling switches fitted... are all fittings suitably ventilated... yes, are all fittings and accessories constructed and installed as per Rule... yes. Searchlight Lamps, No. of... one, whether fixed or portable... portable, are their fittings as per Rule... yes. Heating and Cooking, is the general construction as per Rule... no, are the frames effectually earthed... no, are heaters in the accommodation of the convection type... no. Motors, are all motors constructed and installed as per Rule... yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil... yes, if situated near unprotected combustible material state minimum distance from same horizontally... no and vertically... no. 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... yes. Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing... no. Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule... yes. Control Gear and Resistances, are they constructed and fitted as per Rule... yes. Lightning Conductors, where required are they fitted as per Rule... no. 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... no, are all fuses of the cartridge type... no are they of an approved type... no. Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships... no. Are the cables lead covered as per Rule... no. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule... yes, 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.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	6½	115	57	1500	Aux. diesel engine	diesel oil above 150° F.	
	1	3	110	26.1	650-1300	Main 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 Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	6½	1	25	57	63	17	V.I.R.	H.R.
" " EQUALISER	3	1	10	26.1	38	32	"	"
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 Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS	1	6	10	29	1	V.I.R.	L.C. and metal wire braided.
Lighting distribution board in accommodation aft.							

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	No.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
			In the Circuit.	Rule.			
WIRELESS	1	1½	6	9.5	18	V.I.R.	L.C. and metal wire braided.
NAVIGATION LIGHTS	1	1½	3	9.5	20	"	" " " "
LIGHTING AND HEATING							
Lighting wheelhouse	1	1½	1.5	9.5	20	"	" " " "
" fore-castle	1	1½	2	9.5	80	"	" " " "
" engine room	1	1½	3	9.5	26	"	" " " "
" " "	1	1½	3	9.5	22	"	" " " "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
				In the Circuit.	Rule.			
Oil transfer pump	1	0.05	1	2½	4	15.5	10	V.I.R. L.C. and metal wire braided.
Drinking water pump	1	0.05	1	2½	4	15.5	15	" " " "

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.

*Jan Bodewes*



Electrical Engineers. Date 4-5-49.

COMPASSES.

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

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

The nearest cables to the compasses are as follows:—

A cable carrying ..... Ampères ..... feet from standard compass ..... 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 .....

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted .....

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.

Builder's Signature. Date 4-5-49.

**BODEWES' SCHEEPSWERVEN**

*[Handwritten signature]*

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

Plans. Are approved plans forwarded herewith..... yes ..... If not, state date of approval.....

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 constructed and installed under special survey in accordance with the Rules and the approved plan.

Materials used are of good quality and design and the workmanship is good. The plant has been tested out by me under full working conditions and I am satisfied that everything works smoothly.

This equipment is in my opinion suitable for a classed vessel.

*Noted and 31/5/49*

Total Capacity of Generators..... 9 1/2 ..... Kilowatts.

The amount of Fee ... .. £1. 75.--: 27-4-.....1949.  
 Travelling Expenses (if any) £1. 47.--: .....19.....

*[Handwritten signature]* (H.V.O. 54415)  
 Surveyor to Lloyd's Register of Shipping.

FRI. 3 JUN 1949

Committee's Minute .....

Assigned..... *Su F.E. Welch, opt.*.....

5m.4.30.—Transfer. (MADE AND PRINTED IN ENGLAND.)  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

