

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) 17 APR 1950

Recorded at London Office

Date of writing Report 29/3 1950. When handed in at Local Office 1/4 1950. Port of Groningen

No. in Survey held at Martenshoek Date, First Survey 23.1.50 Last Survey 2.3.1950
Reg. Book. (Number of Vols. 8)

on the M.V. "Bergo" Tons (Gross 599.48 Net 369.37)

Built at Martenshoek By whom built Rodewes Scheepswerven Yard No. 277 When built 3/50

Owners Edger Erikson Port belonging to Marhamm

Electrical Installation fitted by Jan Rodewes at Hoogerland Contract No. When fitted 3/50

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

Have plans been submitted and approved yes System of Distribution two wire insulated Voltage of supply for Lighting no

Heating no Power no Direct or Alternating Current, Lighting direct Power direct If Alternating Current state periodicity no 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 no Generators, are they compound wound no, are they level compounded under working conditions no,

if not compound wound state distance between generators no and from switchboard no 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 no

Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing no 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 E.P. floor level 11' 6" 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 no and vertically no, 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 no V. belt connections. Switchboards, where are main switchboards placed E.P. Port side 1' platform above deep water line

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 no and vertically no, what insulation material is used for the panels dead front type switchboard, if of synthetic insulating material is it an Approved Type no, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule no 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 Three pole D.T. switch & D.P. fuses

and for each outgoing circuit D.P. switch & D.P. fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 2 ammeters 1 voltmeters no synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the equaliser connection no Earth Testing, state means provided earth indicating lamps connected to E through D.P. 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 no, are the reversed current protection devices connected on the pole opposite to the equaliser connection no, have they been tested under working conditions, and at what current did they operate no 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 no state maximum fall of pressure between bus bars and any point under maximum load 60%, are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets yes Are paper insulated and varnished cambric insulated cables sealed at the ends no

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 . Are cables in machinery spaces, galleys, laundries, etc., lead coated Yes or run in conduit . State how the cables are supported and protected. Machinery spaces: S.C. & M.W. B. cable clipped to perforated plating large holes. h.l. & M.W. cable & H.P. cable run in conduit Accommodation spaces: h.l. cable clipped to surface in wood grounds.

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. 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 near main switchboard (above deep water line) and method of control D.P. fuses near battery & two automatically operated change over switches 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. Make "Nanta" type 6 to 10 H.L. 54 cells lead battery 190 amp hours/102

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 Yes.

are all fittings and accessories constructed and installed as per Rule Yes. Searchlight Lamps, No. of one, whether fixed or portable partially, 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 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 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 Yes. 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 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.	Serial No. of	RATED AT			DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.		Fuel Used.	Flash Point of Fuel.
MAIN I.	476731	5	110	45.5	Make 800/1650 Higgs Diesel engine	Diesel Oil	above 150°F
II	476732	5	110	45.5	800/1650 Higgs Main shaft		
EMERGENCY							
ROTARY TRANSFORMER							

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) in m.	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 I	5	1	25	46.5	63	28	N.Y.R. h.l. & M.W.B.	
" " EQUALISER								
II	5	1	25	45.5	63	20		
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) in m.	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.			
Supplied from main switchboard							
AUX. SWITCHBOARDS AND SECTION BOARDS							
Q.F.B. navigation lights	1	2.5	2.5	15.5	20	N.Y.R.	h.l. & M.W.B.
Q.F.B. lighting accommodation crew.	1	6	17	29	14		

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return) in m.	INSULATED WITH.	HOW PROTECTED.		
Supplied from main switchboard							
WIRELESS	1	4	10	22.5	14		
NAVIGATION LIGHTS							
LIGHTING AND HEATING							
lighting wheelhouse & alt supply main.	1	2.5	3	16.5	20	N.Y.R.	h.l. & M.W.B.
lighting h.R.	1	2.5	2.5	15.5	20		
lighting fore castle	1	2.5	1	15.5	12		
lighting h.R.	1	2.5	3	15.5	34		
Supplied from Q.F.B. Navigation lighting							
Fore light	1	1.5	0.5	9.5	12	N.Y.R.	h.l. & M.W.B.
Forehead light fore	1	1	0.5	6.3	120		
Forehead light aft	1	1	0.5	6.3	38		
Port side light	1	1	0.5	6.3	24		
Starboard side light	1	1	0.5	6.3	14		
Stem light	1	1	0.5	6.3	34		

MOTOR CABLES.

ALL REFRIGERATOR MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return) in m.	INSULATED WITH.	HOW PROTECTED.
Domestic refrigerator	1	0.3	1	15	3	9.5	24. N.Y.R. h.l. & M.W.B.
Hydrophor pump, fresh water	1	0.75	1	2.5	7.2	15.5	24. N.Y.R. h.l. & M.W.B.
Hydrophor pump, sea water	1	0.75	1	2.5	7.2	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.

Messrs Jan Bodewes Hooijer and

Electrical Engineers.

Date *29/III/50*

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.....

Is this installation a duplicate of a previous case..... *yes* If so, state name of vessel *Bodewes (Koopsvaart) Hard No 276*

Plans. Are approved plans forwarded herewith..... *no* If not, state date of approval *Revised plan submitted 3-4-50*

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 installed under special survey in accordance with the Rules and the approved plans. The materials used are of good quality and design and the workmanship are good.

On completion the equipment have been tried out under full working conditions and found satisfactory.

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

Noted sub 3/5/50.

Total Capacity of Generators..... *10* Kilowatts.

The amount of Fee	<i>£ 175 - -</i>	} When applied for, <i>5</i> .. <i>4</i> .. <i>1950</i>
Travelling Expenses (if any)	<i>£ 48 - -</i>	
		When received. <i>19</i>

Shalk (H.K.D. SLUIS)
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI, 5 MAY 1950*

Assigned *See F.E. mclay rpt.*

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

