

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

24 NOV 1949

Received at London Office.....

Date of writing Report... 25/10... 1949... When handed in at Local Office... 21/10... 1949... Port of... ROTTERDAM

No. in Survey held at... HEUSDEN... Date, First Survey... 13/49... Last Survey... 27/10... 1949
Reg. Book. (Number of Visits... 11...)

on the... MOTOR COASTER, ELIZABETH-B (TANKER) Tons { Gross... 339 -
Net... 215

Built at... HEUSDEN... By whom built... DE HAAN & DERLEMANS... Yard No... 263... When built... 10-49

Owners... NV. GEBR. BROERE... Port belonging to... DORDRECHT

Electrical Installation fitted by... H. L. ROON & CO... Contract No... When fitted... 10-49

Is vessel fitted for carrying Petroleum in bulk... YES... Is vessel equipped with D.F... YES... E.S.D... NO... G.C... NO... Sub.Sig... NO

Have plans been submitted and approved... YES... System of Distribution... two wire insulated system... voltage of supply for Lighting... 24 volts

Heating... Power... 24 volts... Direct or Alternating Current, Lighting... Direct... Power... Direct... 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... YES

Generators, are they compound wound... NO... 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... YES

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 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... YES

Switchboards, where are main switchboards placed... Engine room floor level against forward 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... Anterohm

if of synthetic insulating material is it an Approved Type... YES... 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... Description of Main Switchgear for each generator and arrangement of equaliser switches

Double-pole fuses and double-pole double throw switch in conjunction with single pole circuit breaker with reverse current trip and for each outgoing circuit... Double-pole switch and double pole fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule... YES... Instruments on main switchboard... one

ammeters... one... 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 G.P. switch & G.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... are the reversed current protection devices connected on the pole opposite to the equaliser connection... YES

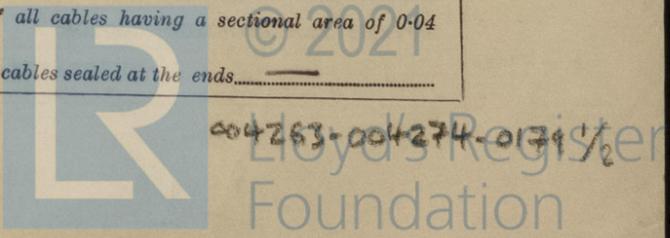
have they been tested under working conditions, and at what current did they operate... 50% of the rating current of the generator

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... YES

state maximum fall of pressure between bus bars and any point under maximum load... 50%... 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... YES



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 covered yes or run in conduit _____ State how the cables are supported and protected. h.c. & M.W.P. cables clipped to surface or tray in machinery space fore-castle and bridge deck and run in heavy gauge conduit between fore-castle and engine-room h.c. cable clipped to wood grounds in accommodation and wheel-house

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 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 _____ 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. yes, are they adequately ventilated. yes what is the battery capacity in ampere hours. 240 amp. hours nickel iron type

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. portable, are their fittings as per Rule. yes 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. yes, are all fuses of the cartridge type. yes are they of an approved type. yes Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships. yes Are the cables lead covered as per Rule. yes 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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	2	24-32	84-63	1000	Aux. diesel engine	diesel oil	above 150° F
	1	2	24-32	84-63	1500/1500	Main shaft		
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 (aux. diesel driven)	2	1	50	84	99	40	N.H.R.	h.c. & M.W.P.
" " EQUALISER								
" " (Main shaft driven)	2	1	50	84	99	125		
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							
lighting 9.F. board placed in accommodation aft	1	10	20	38	75	N.H.R.	h.c. & M.W.P.
" " 9.F. " wheel house and also all supply navigation	1	10	25	38	80		
Navigation lighting 9.F. board placed in wheelhouse	1	4	4	22.5	90		

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	10	25	38	90	N.H.R.	h.c. & M.W.P.
NAVIGATION LIGHTS							
LIGHTING AND HEATING							
Starboard side light	1	1.5	1	9.5	55		
Port " " "	1	1.5	1	9.5	65		
Headlight fore	1	1.5	1	9.5	220		
Starlight	1	1.5	1	9.5	90		
lighting engine room	1	1.5	5	9.5	25		
" " " "	1	1.5	6	9.5	30		
" " forward	1	1.5	3	9.5	220		

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 Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Hydrophor pump fresh water	1	0.5	1	6	19	29	40	N.H.R.	h.c. & M.W.P.
Fan central heating	1	120 W.	1	1.5	5	9.5	75		
Fan range	1	120 W.	1	1.5	5	9.5	100		

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.

N.V. Rotterdamsche Electriciteits Mij.
V.H. H. CROON & CO
 DIR.

Electrical Engineers. Date.....

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 no If so, state name of vessel

Plans. Are approved plans forwarded herewith yes If not, state date of approval 9-5-49

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 the design and the workmanship are good.

On completion the equipment was tried under working conditions and found satisfactory.

This equipment is in my opinion suitable for a classed vessel having the notation "Carrying Petroleum in Bulk having a flash point less than 150°F."

Noted and 21/12/49

Total Capacity of Generators..... 4 Kilowatts.

The amount of Fee £ 75 : { When applied for, 2/11 1949
 Travelling Expenses (if any) £ 38,50 : { When received, 19.....

H. V. D. S. LUIS
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute PHI. 30 DEC 1949

Assigned In amili see H. R. H.

5m.4.38.—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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