

Rpt. 13.

No. 25333

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

13 MAR 7

Received at London Office

Date of writing Report 8-3-1937 When handed in at Local Office

Port of Rotterdam

No. in Survey held at Kingston & Yvel.
Reg. Book.

Date, First Survey

10-12-36

Last Survey

5-3-1937

(Number of Visits.....)

on the M.T. Erodon

Tons { Gross
Net

Built at Capelle 9/4 Yssel By whom built Jd Giessen

Yard No. 640

When built 1936-'37

Owners

Port belonging to

Electric Light Installation fitted by N.V. Electrotechn. Bur. Oudehoop Contract No.

When fitted 1936-'37

Is the Vessel fitted for carrying Petroleum in bulk

Yes

System of Distribution Two wire

Pressure of supply for Lighting

110

volts, Heating

volts, Power

110

volts.

Direct or Alternating Current, Lighting

direct current

Power

direct current

If alternating current system, state frequency of periods per second

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off

yes

Generators, do they comply with the requirements regarding temperature rise

yes

are they compound wound

yes

are they over-compounded 5 per cent.

yes

if not compound wound state distance between each generator

Where more than one generator is fitted are they arranged to run in parallel

No

is an adjustable regulating resistance fitted in

series with each shunt field

yes

Have certificates of test results for machines under 100 kw. been submitted and

approved

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

Are all terminals accessible, clearly marked, and furnished with sockets

yes

are they so spaced or shielded that they cannot be accidentally earthed,

short circuited, or touched

yes

Are the lubricating arrangements of the generators as per Rule

yes

Position of Generators in motorroom.

in way of the generators satisfactory

yes

are they clear of all inflammable material

yes

if situated near unprotected

woodwork or other combustible material, state distance of same horizontally from or vertically above the generators

are the generators protected from mechanical injury and damage from water, steam or oil

yes

are their axes of rotation fore and aft

yes

Earthing, are the bedplates and frames of the generating plant efficiently earthed

yes

are the prime movers and their respective generators

in metallic contact

yes

Main Switch Boards, where placed

in motorroom

If the generators and main switchboard are not placed in the same compartment, is each generator provided with

a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes

yes

are they protected from mechanical

injury and damage from water, steam or oil

yes

if situated near unprotected woodwork or other combustible material, state distance of same

horizontally from or vertically above the switchboards

and

are they constructed wholly of durable, non-ignitable non-absorbent

materials

yes

is all insulation of high dielectric strength and of permanently high insulation resistance

yes

is it of an approved type

yes

if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other

non-hygroscopic insulating material, and the slab similarly insulated from its framework

is the non-hygroscopic insulating material of an approved

type

yes

and is the frame effectively earthed

yes

Are the fittings as per Rule regarding:— spacing or shielding of live parts

yes

accessibility of all parts

yes

absence of fuses on back of board

yes

temperature rise of

omnibus bars

yes

individual fuses to voltmeter, pilot or earth lamp

yes

are moving parts of switches alive in the

"off" position

yes

are all screws and nuts securing connections effectively locked

yes

are any fuses fitted on the live side of

switches

No

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

For motordynamo one main double pole circuit breaker and double pole fuses and for the steam dynamo one double pole change over switch and double pole fuses. For each outgoing circuit, a double pole change over switch and double pole fuses.

Are turbine driven generators fitted with emergency trip switch as per rule

Are cupboards or compartments containing switchboards composed of

fire-resisting material or lined with approved material

Instruments on main switchboard

2

ammeters

2

voltage

synchronising device for paralleling purposes.

For compound machines is the ammeter connected on the opposite pole to equaliser connection

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

2 sets earth detector lamp

Switches, Circuit Breakers and Fusible Cut-outs,

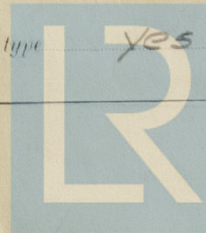
do these comply with the requirements of the Rules

yes

are the fusible cutouts of an approved type

yes

have the reversed



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current protection devices been tested under working conditions _____

Joint Boxes, Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule yes

Cables: Single, twin, concentric, or multicore single and are the cables insulated and protected as per Tables IV, V, X or XI of the Rules yes

If the cables are insulated otherwise than as per Rule, are they of an approved type 2 volt yes

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load yes

Cable Sockets, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets yes

Paper Insulated and Varnished Cambric Insulated Cables, If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound _____, or waterproof insulating tape _____

Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage yes Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit yes

Support and Protection of Cables, state how the cables are supported and protected Supported by metal clips and protected by tubes and armouring.

If cables are run in wood casings, are the casings and caps secured by screws _____, are the cap screws of brass _____, are the cables run in separate grooves _____

If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII yes

Refrigerated Chambers, are the cables and fittings in accordance with the special requirements yes

Joints in Cables, state if any, and how made, insulated, and protected _____

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands yes

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed yes state the material of which the bushes are made Lead

Earthing Connections, state what earthing connections are fitted and their respective sectional areas _____ earthing with 6²

_____ are their connections made as per Rule _____

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule yes Emergency Supply, state position and method of control of the emergency supply and how the generator is driven _____

Navigation Lamps, are these separately wired yes, controlled by separate switch and separate fuses yes, are the fuses double pole yes, are the switches and fuses grouped in a position accessible only to the officers on watch yes

has each navigation lamp an automatic indicator as per Rule yes Secondary Batteries, are they constructed and fitted as per Rule _____

Fittings, are all fittings on weather decks, in storeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight yes

are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them: if so, how are they protected _____

Boxes

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected fitted in gastight boxes

ingastight tubes

where are the controlling switches situated in chartroom

are all fittings suitably ventilated yes, are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials yes

Heating and Cooking Appliances, are they constructed and fitted as per Rule _____, are air heaters constructed and fitted as per Rule _____

Searchlight Lamps, No. of 1, whether fixed or portable portable, are their fittings as per Rule yes

Are Lamps, other than searchlight lamps, No. of _____, are their live parts insulated from the frame or case _____, are their fittings as per Rule _____

Motors, are their working parts readily accessible yes, are the coils self-contained and readily removable for replacement yes

are the brushes, brush holders, terminals and lubricating arrangements as per Rule yes, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material yes, are they protected from mechanical injury and damage from water, steam or oil yes are their axes of rotation fore and aft yes, if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type _____

_____, if not of this type, state distance of the combustible material horizontally or vertically above the motors _____ and _____

have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing _____

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule yes

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule yes

Ships carrying Oil having a Flash Point less than 150 F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings yes are all fuses of the fitted cartridge type yes are they of an approved type yes

If portable lamps for use in dangerous spaces are supplied, are they of a self-contained, battery-fed type approved by the Home Office _____

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule yes

PARTICULARS OF GENERATING PLANT.									
DESCRIPTION OF GENERATOR.	No. of	RATED AT			DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.			
		Kilowatts.	Volts.	Amps.		Fuel Used.	Flash Point of Fuel.		
MAIN	1	16	110	145	Steam engine				
AUXILIARY	1	16	110	145	Diesel motor	Diesel oil	above 150°		
EMERGENCY									
ROTARY TRANSFORMER									

GENERATOR, LIGHTING AND HEATING CONDUCTORS.										
DESCRIPTION.	No. per Pole.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		Total Nominal Area per Pole Sq. ins.	No.	Diameter.	Circuit.	Rule.				
MAIN GENERATOR	1	95	19	2.53	145	152	50	rubber	Lead covered and armoured	
EQUALISER CONNECTIONS										
AUXILIARY GENERATOR	1	95	19	2.53	145	152	50			
EMERGENCY GENERATOR										
ROTARY TRANSFORMER										
ENGINE ROOM	1	15	1	1.39	3	7.7	75			
BOILER ROOM										
AUXILIARY SWITCHBOARDS										
motor room	1	10	7	1.35	37	38	50			
Cargo Lights	1	10	7	1.35	12	38	480			
Navigation	1	10	7	1.35	6	38	490			
Fore cable	1	16	7	1.71	13	48	720			
Aft	1	16	7	1.71	36	48	70			
ACCOMMODATION	1	15	7	1.39	15	7.7	90		Lead covered	
salon	1	16	7	1.71	30	48	480		Lead covered and armoured.	
WIRELESS	1	16	7	1.71	15	48	480			
SEARCHLIGHT	1	35	19	1.53	178		850			
MASTHEAD LIGHT	1	1.5	1	1.39	1.5	7.7	360			
SIDE LIGHTS	1	1.5	1	1.39	0.5	7.7	90			
COMPASS LIGHTS	1	1.5	1	1.39	0.2	7.7	60			
POOP LIGHTS	1	1.5	1	1.39	0.5	7.7	620			
CARGO LIGHTS	1	1.5	1	1.39	2	7.7	80			
ARC LAMPS										
HEATERS										

MOTOR CONDUCTORS.										
DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Nominal Area per Pole Sq. ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS										
AIR COMPRESSOR										
FRESH WATER PUMP										
ENGINE TURNING GEAR	1	1	70 ²	19	2.17	104	125	90	rubber	Lead covered and armoured.
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS	1	1	25	1	1.79	18	15	30	rubber	Lead covered and armoured.
Seperator	1	1	4	7	0.86	116	21	90		
Drill	1	1	4	7	0.86	116	21	72		
Lathe	1	1	25	1	1.79	12	15	86		
Grinding mach.	1	1	6	7	1.05	24	28	30		
Triumpump	1	1	25	1	1.79	13.6	15	110		
Aux. switchboard workshop	1	1	35	19	1.53	173.6	78	165		

All Conductors are of annealed copper conforming to British Standard Specification No. 17 (or International Electro-technical Commission Publication No. 28).

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

NV Electrotechn. Bureau A. de Hoop Electrical Engineers.

Date 2 3 37

COMPASSES.

Distance between electric generators or motors and standard compass 200 feet

Distance between electric generators or motors and steering compass 200 feet

The nearest cables to the compasses are as follows:—

A cable carrying 0.2 Ampères 2.1 feet from standard compass 2 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.

W. VAN DER GIESEN & ZONEN'S
SCHEEPWERVEN

W. van der Giesen

Builder's Signature.

Date

Is this installation a duplicate of a previous case Yes If so, state name of vessel Elusa, Eulota.

General Remarks (State quality of workmanship, opinions as to class, &c. This installation has been fitted in accordance with the approved plan, Secretary's Letters and Society's Rules. Material tested as required and workmanship good. The whole has been examined under full working condition and found in order and merits in my opinion the approval of the Committee.

Noted

Y. van

15.3.37

Total Capacity of Generators 32 Kilowatts.

The amount of Fee ... £ 276.00 When applied for, 12.3.37

Travelling Expenses (if any) £ 2.4 37 3/4 When received, 12.3.37

W. van der Giesen
Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 16 MAR 1937

Assigned See other F. E. rpt.



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