

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) 24 FEB 7  
Received at London Office

Date of writing Report 22-2-1937 When handed in at Local Office 10 Port of Rotterdam  
 No. in Survey held at Schiedam Date, First Survey 1-12-36 Last Survey 11-2-1937  
 Reg. Book. on the motor tanker "EULIMA" Tons { Gross  
 Net  
 Built at Schiedam By whom built Wilton Tyenwood Yard No. 659 When built 26-37  
 Owners Anglo Saxon Petroleum Co. Port belonging to London.  
 Electric Light Installation fitted by N.T. Electriciteits Wg'g' Coon Contract No. When fitted 26-37  
 Is the Vessel fitted for carrying Petroleum in bulk Yes

System of Distribution Two wire ✓ volts, Heating \_\_\_\_\_ Power \_\_\_\_\_ volts.

Pressure of supply for Lighting 110. ✓ Heating \_\_\_\_\_ Power Direct ✓

Direct or Alternating Current, Lighting Direct ✓

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 ✓, is the ventilation \_\_\_\_\_

Position of Generators in engine room ✓, are they clear of all inflammable material Yes ✓ if situated near unprotected \_\_\_\_\_

in way of the generators satisfactory Yes ✓, are they clear of all inflammable material \_\_\_\_\_ and \_\_\_\_\_, 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 engine room starboard side ✓

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 micaite or other \_\_\_\_\_

non-hygroscopic insulating material, and the slab similarly insulated from its framework \_\_\_\_\_, is the non-hygroscopic insulating material of an approved \_\_\_\_\_

type \_\_\_\_\_, 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 \_\_\_\_\_, individual fuses to voltmeter, pilot or earth lamp Yes ✓, are moving parts of switches alive in the \_\_\_\_\_

"off" position No ✓, 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 \_\_\_\_\_

one generator has a double pole switch and fuses. the other a double pole two way switch and fuses. Are cupboards or compartments containing switchboards composed of \_\_\_\_\_

Are turbine driven generators fitted with emergency trip switch as per rule \_\_\_\_\_ Instruments on main switchboard two ammeters two

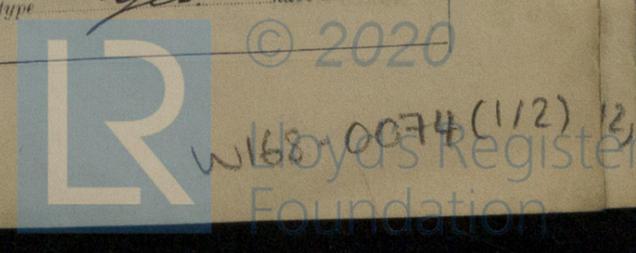
fire-resisting material or lined with approved material \_\_\_\_\_

voltmeters \_\_\_\_\_ 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 \_\_\_\_\_

Pilot lamps ✓ 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 \_\_\_\_\_



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* 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  **Fall of Pressure,** state maximum between bus bars and any point of the installation under maximum load *2 Volts*

**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, lavatories, bathrooms and lavatories lead covered or run in conduit *Yes*

**Support and Protection of Cables,** state how the cables are supported and protected *in engine room on steel plate and on deck in galvanised iron tubes.*

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

**Joints in Cables,** state if any, and how made, insulated, and protected *none*

**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

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 stokeholds 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 *no*

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

how are the cables led

where are the controlling switches situated

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

**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**  whether fixed or portable  are their fittings as per Rule

**Arc 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 *none* **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

**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.	Ampere.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	16	110	145	390	Steam engine		
AUXILIARY	1	16	110	145	390	diesel	diesel oil	above 150°
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	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.	Circuit.	Rule.			
MAIN GENERATOR	1	95	27	1.03	145	152	26	Rubber lead, armoured.	
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR	1	95	27	1.03	145	152	12		
EMERGENCY GENERATOR									
ROTARY TRANSFORMER MOTOR GENERATOR									
ENGINE ROOM									
BOILER ROOM	1	10	7	1.32	35	37	40		
AUXILIARY SWITCHBOARDS									
Navigation	1	16	7	1.32	35	37	170		
Workshop	1	35	19	1.62	80	83	70		
Foreshop	1	16	7	1.62	8	46	300		
Midship	1	16	7	1.62	32	46	154		
Aftership	1	16	7	1.62	25	46	56		
ACCOMMODATION									
WIRELESS	1	16	7	1.62			212		
SEARCHLIGHT	1	35	19	1.62			330		
MASTHEAD LIGHT	1	14	3	0.74	0.5		110		
SIDE LIGHTS	1	14	3	0.74	0.5		25		
COMPASS LIGHTS	1	14	3	0.74	0.5		10		
POOP LIGHTS	1	14	3	0.74	0.5		150		
CARGO LIGHTS									
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	27	1.62	104	130	45		
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	4	7	0.91	16	24	40		

All Conductors are of annealed copper conforming to British Standard Specification No. 7 (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.

N. V. Rotterdamsche Electriciteits Mij.  
W. H. CEDON & CO.

Electrical Engineers.

Date 22 Feb. '37

COMPASSES.

Distance between electric generators or motors and standard compass 300 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 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.

WILTON-FIJENOORD.  
(N.V. WILTON Sijmachinefabriek en Scheepswerf  
(WILTON'S Engineering & Shipway Co.)  
Maatschappij voor Scheeps- en Werktuigbouw  
"FIJENOORD" N.V.)

Builder's Signature.

Date

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

General Remarks (State quality of workmanship, opinions as to class, &c.) This installation has been fitted in accordance with the approved plan, Society's Rules and Secretary's letters. 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

25.2.37

Y.M.

Total Capacity of Generators 32 Kilowatts.

The amount of Fee ... £ 276.00

Travelling Expenses (if any) £

When applied for,

23.2.1937

When received,

15.3.37

J.H. Brouse  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 26 FEB 1937

Assigned Su. omes F. E. report

5500/36. Transfer. The Surveys are requested not to write on or below the space for Committee's Minute.



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