

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

28 APR 1926

Received at London Office

Date of writing Report 14.4.1926 When handed in at Local Office 26-4-1926 Port of GLASGOW

No. in Survey held at RENFREW Date, First Survey 5th Mar Last Survey 29th Mar 1926
 Reg. Book. 39866 on the DREDGER "LORD WILLINGDON" Tons { Gross 864
 Net

Built at RENFREW By whom built MESSRS W. SIMONS & CO Yard No. 674 When built 1926

Owners THE INDIA OFFICE Port belonging to GLASGOW

Electric Light Installation fitted by MESSRS W.C. MARTIN & CO Contract No. 674 When fitted 1926

System of Distribution Two Wire ✓

Pressure of supply for Lighting 110 ✓ volts, Heating _____ volts, Power 110 ✓ volts.

Direct or Alternating Current, Lighting Direct ✓ Power 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 overload 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

Are all terminals accessible and clearly marked yes, are they so spaced or shielded that they cannot be accidentally earthed, or short circuited yes

Position of Generators On starting platform in Engine Room, are the lubricating arrangements of the generators as per Rule yes

is the ventilation 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 _____ and _____, are the generators protected from mechanical injury and damage from water, steam or oil yes

are their axis 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 Near Generators

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, incombustible non-absorbent materials yes, is all insulation of high dielectric strength and of permanently high insulation resistance yes

if semi-insulating material is used, are all conducting parts connected to one pole insulated from the slab with mica or micanite and the slab similarly insulated from its framework yes

frame effectively earthed yes Are the following fittings as per Rule, viz. — spacing or shielding of live parts

yes, accessibility of all parts yes, absence of fuses on back of board yes, proportion of omnibus bars yes

individual fuses to voltmeter, pilot or earth lamp yes, connections of switches yes

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches Two double pole main switches & fuses for generators, double pole change-over switch and double pole fuse for each circuit

Instruments on main switchboard Two ammeters Two voltmeters _____ synchronising device for paralleling purposes.

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

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules yes

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



Insulation of Cables, state type of cables, single or twin V.I.R are the cables insulated and protected as per Tables III or IV of the Rules yes

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load 2.5 Volts

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.007 square inch and above provided with soldering sockets yes

Paper Insulated Cables. If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound _____

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

Support and Protection of Cables, state how the cables are supported and protected Lead covered cables supported by brass clips protected by beams

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 VI yes

Refrigerated Chambers, if lights are fitted, 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 Positions, 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 None

_____, 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 No Emergency Supply, but an Auxiliary Supply is fitted, with an oil driven generator, both generating sets in Engine Room.

Navigation Lamps, are these separately wired {no electric lamps} fitted, controlled by separate switch and separate fuses _____ are the fuses double pole _____, are the switches and fuses grouped in a position accessible only to the officers on watch _____ has each navigation lamp an automatic indicator as per Rule _____, are separate screens provided for the use of oil and electric side lights _____ are separate oil lanterns provided for the mast head lights and side lights _____

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 None are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected None _____, how are the cables led _____ where are the controlling switches situated _____

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

Arc Lamps, other than searchlight lamps, No. of None, 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 No 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 Now woodwork near if not of this type, state distance of the combustible material horizontally or vertically above the motors 8 ft and 20 ft

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed 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. _____ If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office _____

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	24	110	220	500	Compound Enclosed Engine	Paraffin	
AUXILIARY	1	12	110	110	650	Oil Engine	Paraffin	
EMERGENCY								
ROTARY TRANSFORMER								

LIGHTING AND HEATING CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	2	.300	3X	.103	220	20	V.I.R	Lead
	AUXILIARY GENERATOR	2	.100	19	.083	110	40	"	"
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM <u>Aft</u>	2	.0225	Y	.064	26	10	V.I.R	Lead
	BOILER ROOM <u>Fore</u>	2	.0225	Y	.064	15	200	"	"
	Officers Quarters	2	.0145	Y	.052	10	230	"	"
	WIRELESS								
	SEARCHLIGHT	2	.040	19	.052	60	110	V.I.R	Lead
	MASTHEAD LIGHT								
	SIDE LIGHTS								
	COMPASS LIGHTS								
	POOP LIGHTS								
	CARGO LIGHTS								
	ARC LAMPS								
	HEATERS								

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	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								
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS								
	OIL FUEL TRANSFER PUMP								
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR								
	WORKSHOP MOTOR	1	.040	19	.052	60	220	V.I.R	Lead.
	VENTILATING FANS								

All Conductors are of annealed copper conforming to British Standard Specification No. 7.
 The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.
 The foregoing is a correct description.

W. B. Martineau & Co.

Electrical Engineers.

Date

17 April 1926

COMPASSES.

Distance between electric generators or motors and standard compass

25 ft

Distance between electric generators or motors and steering compass

32 ft

The nearest cables to the compasses are as follows:—

A cable carrying *2* Amperes *20* feet from standard compass *12* feet from steering compass.

A cable carrying *1* Amperes *20* feet from standard compass *12* feet from steering compass.

A cable carrying _____ Amperes _____ 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 *Nil* degrees on *a certain* course in the case of the standard compass, and *Nil* degrees on *the same* course in the case of the steering compass.

FOR Wm. SIMONS & CO., LTD.

[Signature]

Builder's Signature.

Date

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

General Remarks (State quality of workmanship, opinions as to class, &c.)

This installation has been fitted on board under special survey. Tested under full working conditions and found satisfactory. The workmanship was found to be good and sound.

It is submitted that this vessel is eligible for THE RECORD. Elec. light.

[Signature]
29/4/26

Total Capacity of Generators *36* Kilowatts

The amount of Fee ... *194.0.0* When applied for, *20/4/26*

Travelling Expenses (if any) £ : : *11.5.26* When received, *26/4/26*

J. S. Rankin
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 27 APR 1926*

Assigned *Elec. Light.*

a.l.s.
26/4/26

Im. 0.24. - Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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