

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

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No. in Survey held at Grangemouth Date, First Survey 31.8.1921 Last Survey 12.4.1923
Reg. Book. 5206 of the S.S. BRIARPARK. (Number of Visits 4)

Built at Grangemouth. By whom built Grangemouth Dockyard No. 409 When built 1923
Tons { Gross 1943
Net 1194

Owners The Dunholm Shipping Co. Port belonging to Greenock

Electric Light Installation fitted by Messrs W. C. Martin & Co Glasgow. Contract No. 643 When fitted 1923.

System of Distribution Two Wire

Pressure of supply for Lighting 110 volts, Heating — volts, Power — volts.

Direct or Alternating Current, Lighting Direct Power —

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. —, 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 Are the lubricating arrangements of the generators as per Rule. yes

Position of Generators On the starting platform in Engine Room

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 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 near generator

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, in same compartment

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. 4ft and 4ft

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.

Double pole fuse for generator and double pole fuse & single pole switch for each circuit

Instruments on main switchboard. One ammeters. One 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 & switches provided

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

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY.	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	1	9.0	110	82	350	6 1/2 x 6 Open Type Steam Engine		
AUXILIARY ...								
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. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR...	2	.0750	19	.072	82	30	Vulcanized Rubber.	Armour + St.
	AUXILIARY GENERATOR ...								
	EMERGENCY GENERATOR ...								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS ...								
	ENGINE ROOM ...	2	.01046	7	.052	9.5	10	"	"
	BOILER ROOM ...	2	.003	1	.064	2.3	120	"	"
	Midships & Forward Navigation	2	.0225	7	.064	14.3	160	"	"
	Midships & Aft	2	.01046	7	.052	7.8	30	"	"
		2	.0225	7	.064	14.0	65	"	"
	WIRELESS ...	2	.01046	7	.052	4.5	360	"	"
	SEARCHLIGHT ...								
	MASTHEAD LIGHT...	2	.003	1	.064	1.12	250	"	"
	SIDE LIGHTS ...	2	.003	1	.064	1.12	50	"	Lead
	COMPASS LIGHTS ...	2	.003	1	.064	.56	35	"	"
	POOP LIGHTS ...	2	.01046	7	.052	4.5	250	"	Armour
	CARGO LIGHTS ...	2	.0225	7	.064	12	70	"	"
	ARC LAMPS ...								
	HEATERS ...								

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	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 ...								
	VENTILATING FANS ...								

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

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 and armoured cables supported by galvanised iron clips protected by beams.

If cables are run in wood casings, are the casings and caps secured by screws No casings, are the cap screws of brass yes, are the cables run in separate grooves yes. 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 yes

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 bushes

Earthing Connections, state what earthing connections are fitted and their respective sectional areas None.

are their connections made as per Rule yes

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

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, are separate screens provided for the use of oil and electric side lights yes, are separate oil lanterns provided for the mast head lights and side lights Electric lanterns supplied by us

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 yes

where are the controlling switches situated yes

Searchlight Lamps, No. of None, whether fixed or portable yes, are their fittings as per Rule yes

Arc Lamps, other than searchlight lamps, No. of None, are their live parts insulated from the frame or case yes, are their fittings as per Rule yes

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

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 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

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office yes

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. C. Martin & Co.

Electrical Engineers.

Date *30th April 1923*

COMPASSES.

Distance between electric generators or motors and standard compass *60 ft from generator*

Distance between electric generators or motors and steering compass *56 ft from generator*

The nearest cables to the compasses are as follows:—

A cable carrying *.28* Ampères *6* feet from standard compass *1* feet from steering compass.

A cable carrying *.28* Ampères *1* feet from standard compass *6* 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 *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 THE GRANGEMOUTH DOCKYARD CO., LTD.

Osborne Miller

Builder's Signature.

Date *May 5th 1923*

Is this installation a duplicate of a previous case *Yes*. If so, state name of vessel *S.S. Willow Park.*

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 & found satisfactory. The generator engine had to be overhauled & bearings re-bedded after which it was found to be in good running condition. The workmanship was found to be good and sound.

It is submitted that this vessel is eligible for THE RECORD. Elec. Light. R.A. 1-6-23

Total Capacity of Generators *9* Kilowatts

The amount of Fee ... £ *9 0 0* { When applied for, *1/57 1923*

Travelling Expenses (if any): £ *17/6* { When received, *57 57 23*

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

GLASGOW 29 MAY 1923

Committee's Minute

Assigned *Elec. Light.*

CD

Im. 3.22.—Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

*42.
28.5.23*



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