

REPORT ON ELECTRIC FITTINGS.

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

21 NOV 1928

Date of writing Report 3. 11. 28 When handed in at Local Office 19. 11. 28 Port of GLASGOW.

No. in Survey held at ARDROSSAN. Date, First Survey 27. 9. 28 Last Survey 14. 11. 1928 (Number of Visits... 6)

Reg. Book. 92012. on the M.V. SIGRID. Tons: Gross 1216.19 Net 494.14

Built at ARDROSSAN. By whom built THE ARDROSSAN DS YDC? Yard No. 340 When built 1928.

Owners A/B. OLTJEKTRANSPORT O/Y. Port belonging to HELSINGFORS. Contract No. 340 When fitted 1928

Electric Light Installation fitted by THE SUNDERLAND FORGE & ENG. CO

System of Distribution DOUBLE WIRE. No. volts, Heating Power No. volts.

Pressure of supply for Lighting DIRECT. Power DIRECT.

Direct or Alternating Current, Lighting If alternating current system, state frequency of periods per second Yes.

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 rating Yes, are they compound wound

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 1 GENERATOR, is an adjustable regulating resistance fitted in series with each shunt field

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.

Position of Generators 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

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators Yes.

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. Are the prime movers and

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

their respective generators in metallic contact ENGINE ROOM.

Main Switch Boards, where placed 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 Yes.

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

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

with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework Yes.

and is the frame effectively earthed Yes. Are the fittings as per Rule regarding: - spacing or shielding of live parts

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

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

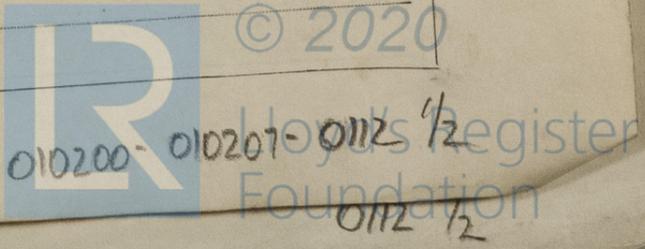
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches. DOUBLE POLE SWITCH & 'ZED' TYPE FUSES FOR GENERATOR LEACH OUTGOING CIRCUIT.

Instruments on main switchboard ammeters 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 LAMP SWITCH & FUSE.

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

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



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Cables: Single, twin, concentric, or multicore. SINGLE are the cables insulated and protected as per Tables IV or V of the Rules. Yes.

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load. 50 volts.

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 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 ARMOURD Y-BRAIDED CABLES. RUN IN GAS-TIGHT GALVANISED IRON PIPE.

If cables are run in wood casings, are the casings and caps secured by screws. Yes. 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 VIII. 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 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. 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. Yes.

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. Yes.

Fittings, are all fittings on weather decks, in alocholds 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. Yes.

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

SPECIAL C.I. GAS-TIGHT PUMP ROOM FITTINGS. THROUGH GALVANISED IRON PIPES OUTSIDE PUMP ROOM. how are the cables led. CHART ROOM.

where are the controlling switches situated. CHART ROOM.

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

Arc Lamps, other than searchlight lamps, No. of 0, 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 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. Yes. if not of this type, state distance of the combustible material horizontally or vertically above the motors. Yes.

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.

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

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No of	RATED AT			Revs. per Min.	DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.			Fuel Used.	Flash Point of Fuel.
MAIN	1	6	110	54.6	600.	Kromhout Motor. & also by a Steam Engine	Gas Oil	above 150°F
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. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	2	.04	19	.032	54.6	30.	RUBBER.	L.C.A.B.
	EQUALISER CONNECTIONS								
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	2	.007	7	.036	19.1	30.	"	"
	BOILER ROOM								
	ACCOMMODATION	2	.007	7	.036	8	75	"	"
	NAVIGATION	2	.04	19	.032	AR. 55.	300.	"	"
	WIRELESS	2	.007	7	.036		75	"	"
	SEARCHLIGHT CONNECTIONS	2	.04	19	.032	40.0	20	"	L.C.A.B.
	MASTHEAD LIGHT	2	.002	3	.029	55	260	"	L.C.A.B.
	SIDE LIGHTS	2	.002	3	.029	55	120	"	L.C.A.B.
	COMPASS LIGHTS								
	PORT 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								
	(a) MOTOR GENERATOR						0.0.2		
	(b) MAIN MOTOR								
	WORKSHOP MOTOR						0.0.1		
	VENTILATING FANS								
	OIL PURIFIER	1	.003	3	.036	11.5	30	RUBBER.	L.C.A.B.

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.

p.pro. THE SUNDERLAND FORGE & ENG. CO. LTD.,

Electrical Engineers.

Date 9.11.28.

COMPASSES.

Distance between electric generators or motors and standard compass 25 feet

Distance between electric generators or motors and steering compass 120

The nearest cables to the compasses are as follows:—

A cable carrying 4.64 Ampères 9 feet from standard compass 6 feet from steering compass.

A cable carrying .2 Ampères 2 feet from standard compass 2 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 any course in the case of the standard compass, and nil degrees on any course in the case of the steering compass.

FOR ADDRESSAL DOCKWARD, LIMITED.

W. H. H. Builder's Signature.

Builder's Signature.

Date 13th November 1928.

GENERAL MANAGER

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 materials and workmanship were found to be good and sound.

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

Signature

Total Capacity of Generators 6 Kilowatts.

The amount of Fee ... £ 6.0.0 : 29 OCT 1928

Travelling Expenses (if any) £ 1.0.0 : 12 NOV 1928

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

Committee's Minute GLASGOW 20 NOV 1928

Assigned Elec. Light.

1m.1.27.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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