

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) -1 MAY 1929

Received at London Office.....

Date of writing Report 12.4.29 When handed in at Local Office 29.4.29 Port of GLASGOW.

No. in Survey held at DUMBARTON. Date, First Survey 27.2.29 Last Survey 12.4.29  
 Reg. Book. 89098 on the M.V. AUSTRALIND. (Number of Visits.....6.....)

Built at DUMBARTON. By whom built MESSRS W. DENNY BROS Yard No. 1217 When built 1929.  
 Owners AUSTRALIND. SHIPPING CO LTD. Port belonging to LONDON.

Electric Light Installation fitted by MESSRS W.C. MARTIN & CO Contract No. 1217 When fitted 1929

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 Are the lubricating arrangements of the generators as per Rule yes

Position of Generators Bottom 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 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 Bottom Platform in Engine Room  
 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, and is the 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

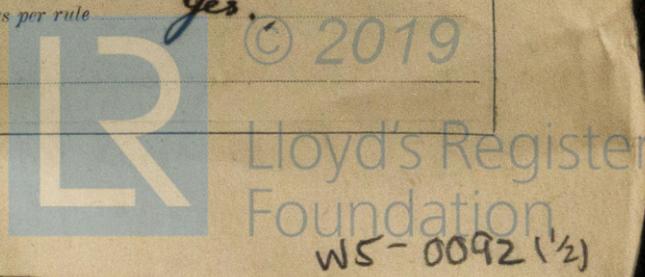
Generators 100 amp D.B. Switches & fuses, 1-75 amp D.B. Change-over Switch & fuses, and 5-50 amp S.P. Switches & D.B. fuses for Circuits

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 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 Single 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 3.3 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 Metal clips & screws protected by sheet iron where necessary

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 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 yes

**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 Connection to Earth Lamps  
.003 sq inch  
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 None

**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 yes

**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 1, whether fixed or portable yes, are their fittings as per Rule yes

**Are Lamps**, other than searchlight lamps, No. of 1, 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

**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

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	2	10	110	90	500	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. Ampères.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	2	.075	19	.072	90	20	Rubber	Lead, Arm & Braided
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER	2	.0225	7	.064	23.2	96	Rubber	Lead Covered
	AUXILIARY SWITCHBOARDS	2	.03	19	.044	30	250	Rubber	Lead Covered
	ENGINE ROOM	2	.007	7	.036	23.5	20	Rubber	Lead Arm & Braided
	BOILER ROOM								
	WIRELESS	2	.0145	7	.052	15	290	Rubber	Lead Covered
	SEARCHLIGHT								
	MASTHEAD LIGHT	2	.002	3	.029	.91	250	Rubber	Lead Covered
	SIDE LIGHTS	2	.002	3	.029	.91	56	Rubber	Lead Covered
	COMPASS LIGHTS	2	.002	3	.029	.23	40	Rubber	Lead Covered
	POOP LIGHTS	2	.0145	7	.052	14	280	Rubber	Lead Covered
	CARGO LIGHTS	2	.0145	7	.052	22.8	96	Rubber	Lead Covered
	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								
	VENTILATING FANS								
	Oil Purifier	1	.01	7	.044	21	150	Rubber	Lead Arm & Braided
	Grinder	1	.007	7	.036	17	25	Rubber	Lead Arm & Braided
	Lathe	1	.007	7	.036	13	40	Rubber	Lead Arm & Braided
	Drill	1	.007	7	.036	9	40	Rubber	Lead Arm & Braided

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.

For W. C. MARTIN & COY. LTD.

*Lawson* Director.

Electrical Engineers.

Date

COMPASSES.

Distance between electric generators or motors and standard compass 80 ft

Distance between electric generators or motors and steering compass 96 ft

The nearest cables to the compasses are as follows :-

A cable carrying 23 Amperes 1 feet from standard compass 24 feet from steering compass.

A cable carrying 23 Amperes 24 feet from standard compass 1 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.

WILLIAM DENNY & BROTHERS Limited

*John Denny* Director

Builder's Signature.

Date 27/4/29.

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 load 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

YRM

6.5.29

a.c.  
29/4/29.

Total Capacity of Generators 20 Kilowatts

The amount of Fee ... £ 17.00

When applied for 19 APR 1929

Travelling Expenses (if any) £

When received 25 APR 1929

27/5/29 C.C.

*J.S. Rankin*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW 30 APR 1929

Assigned

Elec. Light

CW

110,021.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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