

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

25 MAY 1927

NEWCASTLE-ON-TYNE

Date of writing Report

19

When handed in at Local Office

19

Port of

No. in Survey held at

Sunderland.

Date, First Survey

7/4/27

Last Survey

27/5/1927

Reg. Book, Supp.

88015

on the

Anglo Australian.

(Number of Visits)

Tons

Gross 5456

Net 3332

Built at

Sunderland.

By whom built

Short Bros Ltd.

Yard No.

424

When built

1927

Owners

Nitrate Producers S.S. Co. Ltd.

Port belonging to

London

Electric Light Installation fitted by

Sunderland Forge & Eng. Co. Ltd.

Contract No.

474.

When fitted

1927.

System of Distribution

Double 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

1 Generator

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

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

Main 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

Main 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

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

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 micaite 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 Switch & Fuses on Main Generator. Double Pole Fuses & Single Pole Switch on each outgoing circuit.

Instruments on main switchboard

1

ammeters

1

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

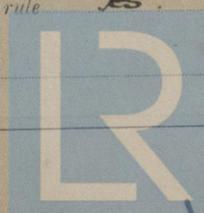
Lamp Switch & Fuse on each Pole.

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



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**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 5

**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 Armoured & Braided  
Cables supported by - brass clips

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 Fitted

**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 —  
—, 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 None Fitted

**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 —  
 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 —

**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 —, are the coils self-contained and readily removable for replacement —  
 are the brushes, brush holders, terminals and lubricating arrangements as per Rule —, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material —  
 are they protected from mechanical injury and damage from water, steam or oil — are their axis of rotation fore and aft —  
 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 —

**Control Gear and Resistances**, are the generator field and motor speed regulators, starters and controllers constructed as per Rule —

**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 —  
 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	10	110	91	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	91	30	V.I.R.	L.C.
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	2	.0045	7	.029	5.58	30	do	Lead Covered Armoured & Braided
	BOILER ROOM	2	.01	7	.044	6.6	352	do	do
	Navigation	2	.01	7	.044	13.2	272	do	do
	Midship Accom	2	.01	7	.044	17.0	112	do	do
	Engrs. Accom	2	.01	7	.044			do	do
	WIRELESS	2	.0225	7	.064	14	320	do	do
	SEARCHLIGHT								
	MASTHEAD LIGHT	2	.0015	1	.044	.9	560	do	do
	SIDE LIGHTS	2	.0015	1	.044	.9	96	do	Lead Covered & Braided
	COMPASS LIGHTS	2	.0015	1	.044	.2	32	do	do
	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								
	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.

The Sunderland Forge & Engineering Co. Ltd. Electrical Engineers. Date 12th May 1927.

COMPASSES.

Distance between electric generators or motors and standard compass 124 feet  
 Distance between electric generators or motors and steering compass 120 feet  
 The nearest cables to the compasses are as follows :-  
 A cable carrying 6.6 Amperes 6 feet from standard compass feet from steering compass.  
 A cable carrying 2 Amperes 2 feet from standard compass 2 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 no degrees on any course in the case of the standard compass, and no degrees on any course in the case of the steering compass. J.P. Wilson

FOR SHORT BROTHERS, LIMITED.

W. Short  
 DIRECTOR

Builder's Signature. Date 19. 5. 27

Is this installation a duplicate of a previous case — If so, state name of vessel —

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

The above installation is in accordance with the Society's Rules. The vessel is eligible in my opinion for notation elec light, wireless

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

J.W.D.  
 27/5/27

Total Capacity of Generators 10 Kilowatts

The amount of Fee ... £ 10 : : Newcastle etc  
 Travelling Expenses (if any) £ :

When applied for, 3/ May 19 27  
 When received, 1/6/27

W.T. Badger  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned Elec. Light.

In 1924—T transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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