

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 29 JUL 1925

Date of writing Report 19 When handed in at Local Office 28 JULY 1925 Port of SUNDERLAND

No. in Survey held at SUNDERLAND Date, First Survey 3rd Oct 24 Last Survey 9th July 1925
Reg. Book. (Number of Visits 6)

on the new steel 5 1/2" QUEENWORTH" Tons { Gross 2065
Net 1163

Built at Sunderland By whom built S. P. Austin & Son Ltd Yard No. 307 When built 1924

Owners R. S. Dalgliesh Ltd Port belonging to Newcastle on Tyne

Electric Light Installation fitted by Sunderland Forge & Engineering Co Ltd Contract No. When fitted 1924

System of Distribution Two wire ✓

Pressure of supply for Lighting 110 ✓ volts, Heating None ✓ volts, Power None volts.

Direct or Alternating Current, Lighting Direct Power None

If alternating current system, state frequency of periods per second not, so fitted

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 not so fitted

Where more than one generator is fitted are they arranged to run in parallel not so fitted, 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 Engine Room Bottom Platform

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 not so situated 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 Close to 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 not so fitted

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 not so situated 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 Double Pole Switch and Fuses for Generator, Single Pole Switches and Double Pole Fuses for outgoing circuits.

Instruments on main switchboard 1 ammeters 1 voltmeters more fitted 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.

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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W210-0106

Insulation of Cables, state type of cables, single or twin Single & twin 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 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 none fitted

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 Armoured & Braided clipped to Beams

If cables are run in wood casings, are the casings and caps secured by screws not so fitted, are the cap screws of brass not so fitted, are the cables run in separate grooves not so fitted. 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 None fitted

Joints in Cables, state if any, and how made, insulated, and protected None made except mechanical ones.

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 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 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 none fitted, 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 fitted, how are the cables led ---

where are the controlling switches situated ---

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

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

Motors, are their working parts readily accessible None fitted, 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 None fitted

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	3.5	110	32	480	Open type Inverted Steam Engine	---	---
AUXILIARY ...	None							
EMERGENCY ...	None							
ROTARY TRANSFORMER	None							

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	.01462	✓	4	.052	32	30 feet	Y. I. R.	LC in Pipe
	AUXILIARY GENERATOR	None								
	EMERGENCY GENERATOR	None								
	ROTARY TRANSFORMER...	None								
	AUXILIARY SWITCHBOARDS	None								
	ENGINE ROOM									
	BOILER ROOM	2	.00701	✓	4	.036	6.7	20	Y. I. R.	Lead Covered. Armoured & Braided
	Engineers Accommodation									
	Navigation	2	.00701	✓	4	.036	6.8	340	Y. I. R.	Armoured & Braided
	Saloon & Forward	2	.00701	✓	4	.036	4.8	355	Y. I. R.	Armoured & Braided
	WIRELESS	2	.01046	✓	4	.044	15	340	Y. I. R.	Armoured & Braided
	SEARCHLIGHT	None								
	MASTHEAD LIGHT... FORE	2	.00194	✓	3	.029	1.0	290	Y. I. R.	Armoured & Braided
	MASTHEAD LIGHT... MAIN	2	.00194	✓	3	.029	1.0	230	Y. I. R.	Armoured & Braided
	SIDE LIGHTS...	2	.00194	✓	3	.029	2.0	50	Y. I. R.	Lead Covered
	COMPASS LIGHTS...	2	.00194	✓	3	.029	.55	15	Y. I. R.	Lead Covered
	POOP LIGHTS	None								
	CARGO LIGHTS	None								
	ARC LAMPS	None								
	HEATERS	None								

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	None							
	MAIN BILGE LINE PUMPS	None							
	GENERAL SERVICE PUMP	None							
	EMERGENCY BILGE PUMP	None							
	SANITARY PUMP	None							
	CIRC. SEA WATER PUMPS	None							
	CIRC. FRESH WATER PUMPS	None							
	AIR COMPRESSOR	None							
	FRESH WATER PUMP	None							
	ENGINE TURNING GEAR	None							
	ENGINE REVERSING GEAR	None							
	LUBRICATING OIL PUMPS	None							
	OIL FUEL TRANSFER PUMP	None							
	WINDLASS	None							
	WINCHES, FORWARD	None							
	WINCHES, AFT	None							
	STEERING GEAR	None							
	WORKSHOP MOTOR	None							
	VENTILATING FANS	None							

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 & ENGINEERING CO. LTD.

M.M. Owen

Electrical Engineers.

Date 14th October 1924

Director.

COMPASSES.

Distance between electric generators or motors and standard compass

Distance between electric generators or motors and steering compass 130 feet

The nearest cables to the compasses are as follows:—

A cable carrying 6.8 Ampères feet from standard compass 10 feet from steering compass.

A cable carrying .55 Ampères feet from standard compass led into 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 0 degrees on each course in the case of the standard

compass, and 0 degrees on each course in the case of the steering compass.

FOR S. P. AUSTIN & SON, LIMITED.

M. P. Austin

Builder's Signature.

Date 22nd July 1925

MANAGING DIRECTOR.

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. The installation has been satisfactorily fixed in the vessel, tested under working conditions and found good.

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

J.W.D.
30/7/25

Total Capacity of Generators 3.5 Kilowatts

The amount of Fee ... £ 5 : : When applied for, 15 Oct 19 24

Travelling Expenses (if any) £ : : When received, 17 Oct 19 24

George Anderson
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Im. 322.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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