

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

19 OCT 1931

Received at London Office

Date of writing Report _____ When handed in at Local Office _____ Port of _____

No. in Survey held at Graythorpe Date, First Survey 6 July Last Survey 21 July 1931
Reg. Book. _____ (Number of Visits.....4)

17778 on the 1/2 CITY OF CANBERRA

Tons { Gross 7485
Net 4689

Built at HARTLEPOOL By whom built Messrs Wm Gray & Co Yard No. 985 When built 1927

Owners Ellerman & Bucknall SS Co Ltd Port belonging to Liverpool

Electric Light Installation fitted by Clarke Chapman & Co Ltd Contract No. _____ When fitted _____

Is the Vessel fitted for carrying Petroleum in bulk no

System of Distribution Double wire system

Pressure of supply for Lighting 110 volts, Heating _____, 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 rating 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 yes, is an adjustable regulating resistance fitted in series with each shunt field yes

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 Are the lubricating arrangements of the generators as per Rule yes

Position of Generators Bottom platform - 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 dynamo

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, non-ignitable 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 insulated from the slab

with mica or micaite 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

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

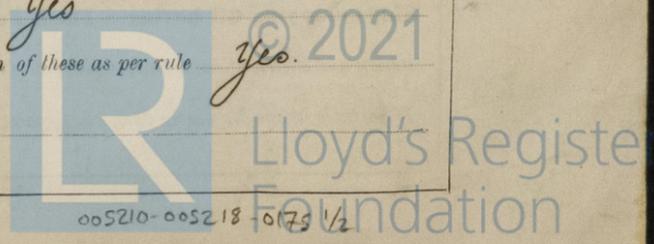
Triple pole circuit breakers for generators with D. P. circuit switches + fuses.

Instruments on main switchboard 2 ammeters 2 voltmeters and _____ 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 coupled to earth through double pole switches + fuses.

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



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 2.9

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 Secured with galvanized clips & screws cables being lead covered, steel wire armoured & braided overall

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 made

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 are their connections made as per Rule

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule are the switches and fuses grouped in a position accessible only to the officers on watch

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven has each navigation lamp an automatic indicator as per Rule

Navigation Lamps, are these separately wired are the fuses double pole, controlled by separate switch and separate fuses are the switches and fuses grouped in a position accessible only to the officers on watch, are the fuses double pole has each navigation lamp an automatic indicator as per Rule

Secondary Batteries, are they constructed and fitted as per Rule 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

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight 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 are their live parts insulated from the frame or case, are their fittings as per Rule 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 axes 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 and fitted as per Rule are these fitted as per Rule

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule 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

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

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	20	110	182	300	Steam engine		
AUXILIARY						single cylinder		
EMERGENCY								
ROTARY TRANSFORMER								

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR	1	.19040	37	.083	182	-	30	pure rubber lead covered	
EQUALISER CONNECTIONS	1	.19040	37	.083	182	-	15	" "	" "
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER									
ENGINE ROOM									
BOILER ROOM									
AUXILIARY SWITCHBOARDS									
ACCOMMODATION									
WIRELESS									
SEARCHLIGHT									
MASTHEAD LIGHT									
SIDE LIGHTS									
COMPASS LIGHTS									
POOP LIGHTS									
CARGO LIGHTS									
ARC LAMPS									
HEATERS									

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS										
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										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS	2	1	.02214	7	.052	40	-	230	Pure Rubber	Lead covered armoured & braided
PILOT LAMPS FOR MOTORS	2	1	.00194	3	.029	54	-	100	" "	" "
Additional Fan Motor for cooling No. 5 chamber	1	12 HP	.075	19	.072	141	82	-	V.C	Hard rubber

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 Clarke, Chapman & Co., Ltd.

W. Taylor Director

Electrical Engineers.

Date Aug 5th 31.

COMPASSES.

Distance between electric generators or motors and standard compass

Distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

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

A cable carrying Ampères feet from standard compass 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

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted

The maximum deviation due to electric currents was found to be degrees on course in the case of the standard compass, and degrees on course in the case of the steering compass.

Builder's Signature. Date

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.)

See Hartlepool report No 17067.

This report contains particulars of the additional dynamo and switch board and the wiring to same and to the refrigerating fan motors.

The additional switch board contains circuit breakers etc for running the whole circuit from either or both dynamos.

This addition to the electrical installation has been fitted under survey and on completion tried on the fans on full working conditions and found satisfactory. The materials & workmanship are good.

Total Capacity of Generators Kilowatts.

The amount of Fee ... £ When applied for, 19

Travelling Expenses (if any) £ When received, 19

Committee's Minute

Assigned

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

Elec. Dept.

P.D. Shelton

Surveyor to Lloyd's Register of Shipping.

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1m, 0.30.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minutes.)