

Rpt. 13.

No. 83093

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) Received at London Office 8 AUG 1928

Date of writing Report 19 When handed in at Local Office 1.8.28 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle. Date, First Survey 1st March Last Survey 20th July 1928 (Number of Visits 10)

Reg. Book, Supp. 66228. on the M.V. "British Honour" Tons { Gross 6950 Net 4080

Built at Newcastle. By whom built Palmer Cold. Yard No. 970 When built 1928

Owners British Tankers Cold. Port belonging to London

Electric Light Installation fitted by Palmer Cold. Contract No. 970 When fitted 1928.

System of Distribution Double wire 110 volts, Heating — volts, Power 110 volts.

Pressure of supply for Lighting 110 volts, Heating — Power Direct

Direct or Alternating Current, Lighting 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 Yes, 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.

Position of Generators Engine room starboard side, are they clear of all inflammable material Yes

is the ventilation in way of the generators satisfactory 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, are the prime movers and Earthing, are the bedplates and frames of the generating plant efficiently earthed Yes

their respective generators in metallic contact Yes.

Main Switch Boards, where placed Engine room starboard side

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, 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 mica-ite and the slab similarly insulated from its framework —, 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

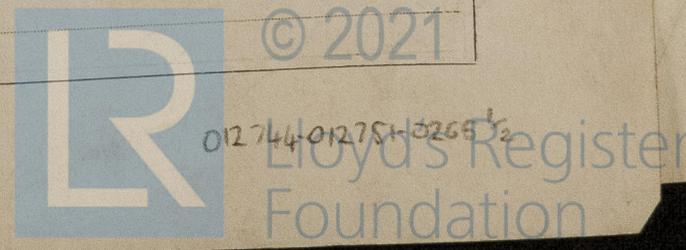
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches 3-pole circuit breaker fitted to each main generator, with overload & reverse current coils. Double pole switch fuses on each outgoing circuit

Instruments on main switchboard 5 ammeters 4 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 coupled to earth through switches & fuses.

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 *Shots on lightning, 60 on power*

**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 *blepped to special plating in engine room. Main cables carried along fore shaft gangway.*

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 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 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 *Emergency lights fitted in engine room + fed by a battery so arranged that they are on automatically on failure of main supply.*

**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 *Yes fitted with glass shades + heavy metal guards.*

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected *Yes in pump room entrance, protected with stout glass bowl to be opened only from the outside*, how are the cables led in a galvanised iron pipe outside

where are the controlling switches situated *in acc<sup>n</sup> passage outside saloon.*

**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 *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 except steering gear*

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 *—* and *—*

**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			Revs. per Min.	DRIVEN BY.	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.			Fuel Used.	Flash Point of Fuel.
MAIN	2	65	110	590	300	Dielsel engine		
AUXILIARY	1	10	110	91	310	Single cylinder steam engine		
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. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR (2 per pole)	4	.7435	91	.103	590	186	paper	lead covered arm braided
	EQUALISER	1	.7435	91	.103	590	186	do	do
	EMERGENCY GENERATOR	2	.1009	19	.083	91	96	Y. I. R.	do
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	2	.01046	7	.044	23.7	39	do	do
	BOILER ROOM	2	.0396	19	.052	30.0	360	do	do
	Acc <sup>n</sup> aft	2	.0396	19	.052	30.0	360	do	do
	do midships	2	.1009	19	.083	56.8	570	do	do
	WIRELESS	2	.01046	7	.044	13.5	675	do	do
	SEARCHLIGHT					.9	490	do	do
	MASTHEAD LIGHT	2	.00194	3	.029	.9	114	do	lead covered
	SIDE LIGHTS	2	.00194	3	.029	.25	20	do	do
	COMPASS LIGHTS	2	.00194	3	.029	.9	820	do	lead covered arm braided
	STEER LIGHTS	2	.00194	3	.029	.9	820	do	do
	CARGO LIGHTS	2	.003	70	.0076	3.0	70	do	Specialty arm braided
	ARC LAMPS								
	HEATERS								

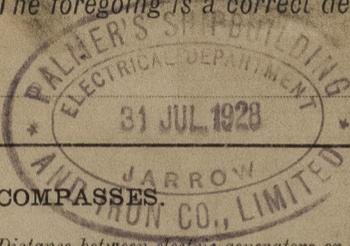
MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP								
	MAIN BILGE LINE PUMPS								
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP	1	.0396	19	.052	64.5	228	paper	lead covered arm braided
	SANITARY PUMP	2	.1009	19	.083	196	250	do	do
	CIRC. SEA WATER PUMPS								
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR								
	FRESH WATER PUMP								
	ENGINE TURNING GEAR								
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS	2	.0396	19	.052	96	270	do	do
	OIL FUEL TRANSFER PUMP	1	.02214	7	.064	50	126	do	do
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR	1	.1009	19	.083	184	224	do	do
	WORKSHOP MOTOR	1	.02214	7	.064	23.5	150	Y. I. R.	do
	VENTILATING FANS								
	Refrigerator	1	.0396	19	.052	86	228	paper	do
	Forced draught fan	1	.02214	7	.064	47	132	do	do
	Overhead crane	1	.02214	7	.064	53.5	213	Y. I. R.	do
	Oil fuel separator	1	.00455	7	.029	10.3	220	do	do
	Lub oil separator	1	.00455	7	.029	10.3	110	do	do
	do do do	1	.00455	7	.029	11.6	110	do	do
	A.F. service pump	1	.00455	7	.029	9.8	110	do	do

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.



*W. J. Pomeroy*

Electrical Engineers.

Date *3/1/28*

COMPASSES.

Distance between electric generators or motors and standard compass *212 feet.*

Distance between electric generators or motors and steering compass *205 feet.*

The nearest cables to the compasses are as follows:—

A cable carrying *.28* Ampères *on the* feet from standard compass *7* feet from steering compass.

A cable carrying *.28* Ampères *7* feet from standard compass *on the* 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 *all* course in the case of the standard compass, and *nil* degrees on *all* course in the case of the steering compass.

PALMER'S SHIPBUILDING

*George S. Williamson* Builder's Signature.

Date

SHIPYARD 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.)

*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*

*W. T. Badger*

Total Capacity of Generators *140* Kilowatts

The amount of Fee ... £ *33 : 10* When applied for, *27 AUG 1928*

Travelling Expenses (if any) £ : : When received, *29.8.28*

*W. T. Badger*

Surveyor to Lloyd's Register of Shipping.

TUES. 14 AUG 1928

Committee's Minute

Assigned *Elec light*

Im. 9. 2. 1.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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