

Rpt. 13.

No. 49108

**REPORT ON ELECTRIC FITTINGS.**

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 8 MAY 1929

Date of writing Report 22.4.1929 When handed in at Local Office 6.5.1929 Port of GLASGOW.

No. in Survey held at GLASGOW.  
Reg. Book.Date, First Survey 19.3.29 Last Survey 15.4.1929  
(Number of Visits 2)

89622. on the S.S. CHAUCER.

Tons { Gross  
Net

Built at PORT GLASGOW. By whom built MESSRS R. DUNCAN &amp; CO Yard No. 389 When built 1929

Owners THE SHAKESPEAR SHIPPING CO. LTD Port belonging to LONDON.

Electric Light Installation fitted by MESSRS TELFORD GRIER &amp; MCKAY LTD Contract No. 389 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 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 *—*, 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 *Starboard Side 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 *on Bulkhead beside 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 *Slate Slab*, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite 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  
*Generator one double pole Switch & Two Single Pole Fuses. Each Lighting Circuit One single pole Switch & two single pole fuses. Each power Circuit one double pole Switch & Two single pole fuses.*

Instruments on main switchboard *one ammeter one voltmeter* — 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  
*Switch Fuse & Lamp in series between each bus bar & Earth.*

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*



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W15-0081 V2



Cables: Single, twin, concentric, or multicore twin 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 5 volts  
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 conductors protected from moisture by being suitably sealed with insulating compound none  
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, valves 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 supported by brass or Galv. Iron clips run on underside of Deck & protected by sheet steel tray where required.  
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 VIII yes  
Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements none  
Joints in Cables, state if any, and how made, insulated, and protected none  
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 —  
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  
Secondary Batteries, are they constructed and fitted as per Rule none  
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  
where are the controlling switches situated —  
Searchlight Lamps, No. of one, whether fixed or portable portable, are their fittings as per Rule yes  
Arc Lamps, other than searchlight lamps, No. of none, 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 axes 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 —  
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 yes  
Lightning Conductors, where lightning conductors are required, are these fitted as per Rule none  
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.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN	one	10	110	91	365	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. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR...	one	100	19	.083	91	14	V.I.R.	LL-Steel Tube
	EQUALISER CONNECTIONS								
	AUXILIARY GENERATOR						8		
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM								
	BOILER ROOM								
	ACCOMMODATION								
	Navigation	one	.0045	7	.029	5	340	V.I.R.	Armd.
	Searchlight	one	.040	19	.052	60	550	V.I.R.	Armd.
	Midship	one	.010	7	.044	18	350	V.I.R.	Armd.
	Lathe	one	.0045	7	.029	15	100	V.I.R.	LC & A.
	Refrigerator	one	.0225	7	.064	45	90	V.I.R.	LC & A.
	Wireless	one	.0045	7	.029	7	330	V.I.R.	Armd.
	Forward	one	.0045	7	.029	3	480	V.I.R.	Armd.
	Aft	one	.0045	7	.029	7	260	V.I.R.	Armd.
	Engine Rooms	one	.0045	7	.029	7	20	V.I.R.	LC & A.
	WIRELESS								
	SEARCHLIGHT								
	MASTHEAD LIGHT...								
	SIDE LIGHTS...								
	COMPASS LIGHTS...								
	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. 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								
	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						67		
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR								
	(a) MOTOR GENERATOR...								
	(b) MAIN MOTOR								
	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.

**TELFORD, GRIER & MACKAY, LTD.**

Electrical Engineers.

Date **2-5-29.**

#### COMPASSES.

Distance between electric generators or motors and standard compass **100 ft.**

Distance between electric generators or motors and steering compass **100 ft.**

The nearest cables to the compasses are as follows:—

A cable carrying **5** Amperes **8** feet from standard compass **5** feet from steering compass.

A cable carrying **1/2** Amperes **one** foot from standard compass **one** foot 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 **hit** degrees on \_\_\_\_\_ course in the case of the standard compass, and **hit** degrees on **any** course in the case of the steering compass.

**Robert Duncan** *By* **John Kelly**

Builder's Signature.

Date **4/5/29**

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*

*JKm*

**10.5.29**

Total Capacity of Generators **10** Kilowatts.

The amount of Fee ... £ **10.0.0** : **at G.R.**

Travelling Expenses (if any) £ : : **25/4/29**

**J. Rankin**  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 7 MAY 1929**

Assigned **Elec. Light**



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*A.B.*  
*6/4/29.*