

Rpt. 13.

No. 46042

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 17 NOV 1926

Date of writing Report 9. 10. 1926 When handed in at Local Office 15. 11. 1926 Port of GLASSGOW.

No. in Survey held at GLASSGOW.  
Reg. Book.Date, First Survey 30<sup>th</sup> Sept. Last Survey 21<sup>st</sup> Oct. 1926  
(Number of Visits 6)

89661. on the

"S.S. KAHANDI"

Tons { Gross 207  
Net

Built at DUBLIN.

By whom built THE DUBLIN DOCK<sup>YD</sup> Yard No. 121

When built 1926

Owners THE WANGANDI HARBOUR B<sup>D</sup> Port belonging to WELLINGTON.Electric Light Installation fitted by MESSRS TELFORD GRIER & MACKAY L<sup>TD</sup> Contract No. 121 When fitted 1926.

n of Distribution Two Wire

ure of supply for Lighting 110 volts, Heating — volts, Power 110 volts.

or Alternating Current, Lighting Direct Power Direct

nating current system, state frequency of periods per second —

Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off yes

ators, do they comply with the requirements regarding overload yes, are they compound wound yes

y over compounded 5 per cent. yes, if not compound wound state distance between each generator —

more than one generator is fitted are they arranged to run in parallel —, is an adjustable regulating resistance fitted in

with each shunt field yes

terminals accessible and clearly marked yes, are they so spaced or shielded that they cannot be accidentally earthed,

t circuited yes Are the lubricating arrangements of the generators as per Rule yes

on of Generators Port &amp; Stbd. Forward End of Engine Room

ventilation in way of the generators satisfactory yes, are they clear of all inflammable material yes

ated 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

ir axis of rotation fore and aft yes

ing, are the bedplates and frames of the generating plant efficiently earthed yes are the prime movers and

spective generators in metallic contact yes

Switch Boards, where placed on Bulkhead near Port Engine

If the generators and main switchboard are not placed in the same compartment, is each generator provided with

at each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard

boards, are they placed in accessible positions, free from inflammable gases and acid fumes yes

protected from mechanical injury and damage from water, steam or oil yes, if situated near unprotected

rk or other combustible material, state distance of same horizontally from or vertically above the switchboards — and —

constructed wholly of durable, incombustible non-absorbent materials yes, is all insulation of high dielectric strength and of

ntly high insulation resistance Slate Slab, if semi-insulating material is used, are all conducting parts connected to one pole

d from the slab with mica or micanite and the slab similarly insulated from its framework yes, and is the

ectively 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

yes, individual fuses to voltmeter, pilot or earth lamp yes, connections of switches yes

witchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches Each Dynamo

own Ammeter &amp; feeds the lights through a Main Throw over Switch

Sw. &amp; fuses for Power can only be fed from large Machine

lighting Circuit has D.P. Sw. &amp; fuses. Voltmeter has two way D.P. Switch

ents on main switchboard Two ammeters one voltmeter — synchronising device for paralleling purposes.

esting, state what means are provided at the main switchboard for indicating the state of the insulation of the system

ch, fuse &amp; lamp in Series between each Bus Bar &amp; Earth

s, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules yes

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 *twinned* 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 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 *—*

**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 *Supported by Galv. Iron Clips with Sheet Steel Tray protection where necessary*

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 *yes*

**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 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 *—*

**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 *protected by well glass with strong Guard*

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 *one*, whether fixed or portable *fixed*, are their fittings as per Rule *yes*

**Are 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 *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 *—*

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 GENERATOR...	one	8	110	73	500	Enclosed Steam Engine			
MAIN & PUMP AUXILIARY...	one	15	110		500	do do do			
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	.06	19	.064	73	30	V.I.R.	LC & Tubed
	MAIN & PUMP AUXILIARY GENERATOR	one	.2	37	.083	136	90	V.I.R.	LC & A.
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS...								
	ENGINE ROOM								
	BOILER ROOM								
	Navigation	one	.0045	7	.029	8	144	V.I.R.	A & B.
	Forward	one	.0045	7	.029	13	110	V.I.R.	A & B.
	Searchlight	one	.0225	7	.064	45	150	V.I.R.	A & B.
	Amidships	one	.0045	7	.029	4	30	V.I.R.	LCA & B.
	Wireless	one	.0045	7	.029	14	132	V.I.R.	A & B.
	Aft	one	.0045	7	.029	9	60	V.I.R.	LCA & B.
	Engine Room	one	.0045	7	.029	6	20	V.I.R.	LCA & B.
	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								
	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.

TELFORD, GRIER & MACKAY, LTD.

Electrical Engineers.

Date 4/11/26

#### COMPASSES.

Distance between electric generators or motors and standard compass 53 feet

Distance between electric generators or motors and steering compass 30 feet

The nearest cables to the compasses are as follows:—

A cable carrying 8 Ampères 8 feet from standard compass 3 feet from steering compass.

A cable carrying 1/2 Ampères one foot from standard compass one foot from steering compass.

A cable carrying Ampères 0.5 feet from standard compass 8 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 any course in the case of the standard

compass, and nil degrees on any course in the case of the steering compass.

The Dublin Dockyard Co.

Builder's Signature.

Date 8/11/26

GENERAL 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.)

This installation has been fitted on board under special survey. Tested under full working conditions and found satisfactory in every way. The workmanship was found to be good and sound.

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

Blue Light

22/11/26.

Total Capacity of Generators 23 Kilowatts

The amount of Fee ...

£ 10.0.0

When applied for,

5/11/26.

Travelling Expenses (if any) £

10.6.

When received,

7.12.26.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW 16 NOV 1926

Assigned

Elec. Light.



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