

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) 28 FEB 1928

Date of writing Report 27 Feb 28 19 When handed in at Local Office 27 Feb 28 19 Port of Keith

No. in Survey held at Keith Date, First Survey 14 Nov 1927 Last Survey 16 Feb 28 1928

Reg. No. 43266 on the T.S.S. "Wynet Brooke" (Number of Visits 8) (Gross 1669.76)

Built at Keith By whom built Carnegie & Ferguson Ltd Yard No. 264 When built 1928

Owners Sarawak S.S. Co. Port belonging to Huiching

Electric Light Installation fitted by Group Curtis & Co Ltd. Contract No. When fitted 1928

System of Distribution Two wire ✓

Pressure of supply for Lighting 110 ✓ volts, Heating 110 ✓ 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

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 ✓

Position of Generators Engine room Port. ✓

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 beds and frames of the generating plant efficiently earthed Yes ✓, are the prime movers and their respective generators in metallic contact

Main Switch Boards, where placed Aft of 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. —

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 insulating 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

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.

200 Amp. D.P. switch. 2 — 200 S.P. fuses

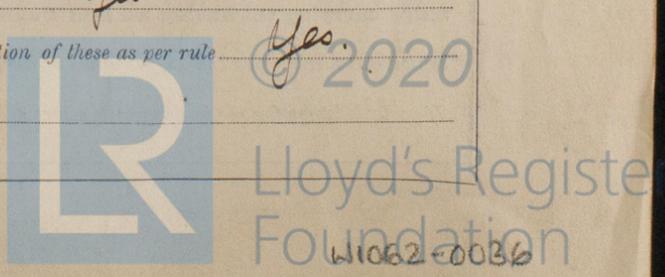
Instruments on main switchboard One ammeters One voltmeters — synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system.

Lamp from each pole to 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 ✓



Cables: Single, twin, concentric, or multicore Single - 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 3 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 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 Lead covered - Brass saddles.
to Lead covered - armoured - Galvanised clips.

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 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 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 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

Secondary Batteries, are they constructed and fitted as per Rule —

Fittings, are all fittings on weather decks, in storerooms and engine rooms and where 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, Protected with L.S. guard and dead-light cover, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected No, 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 —

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 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 —

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			Revs. per Min.	DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.			Fuel Used.	Flash Point of Fuel.
MAIN <u>One</u>	<u>One</u>	<u>20</u>	<u>110</u>	<u>180</u>	<u>300</u>	<u>Single cyl. Enclosed Engine</u>	<u>—</u>	<u>—</u>
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 Ampères.	Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR	2	200	34	0.035	180	35		
	EQUALISER CONNECTIONS								
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	2	0.225	4	0.064	8.5	50	U.S.R.	L.S. Armoured & Braided
	BOILER ROOM	2	0.225	4	0.064	2.8	65	U.S.R.	" Armoured & Braided
	ACCOMMODATION Saloon P.	2	0.30	19	0.044	21	122	U.S.R.	" Armoured & Braided
	" S	2	0.30	19	0.044	21	144	U.S.R.	" Armoured & Braided
	Royal Suite	2	0.225	4	0.064	14	200	U.S.R.	" Armoured & Braided
	Upper Deck.	2	0.225	4	0.064	10	80	U.S.R.	" Armoured & Braided
	WIRELESS	2	0.225	4	0.064	8.5	272	U.S.R.	Lead Covered & Armoured.
	SEARCHLIGHT								
	MASTHEAD LIGHT	2	0.03	3	0.036	1.0	350	U.S.R.	L.S. & Armoured.
	SIDE LIGHTS	2	0.03	3	0.036	1.0	120	U.S.R.	L.S. & Armoured.
	COMPASS LIGHTS	2	0.02	3	0.029	0.5	80	U.S.R.	L.S. & Armoured
	POOP LIGHTS								
	CARGO LIGHTS	2	0.225	4	0.064	16.5	340	U.S.R.	L.S. & Armoured.
	ARC LAMPS								
	HEATERS								

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current am. amp.	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	1	0.225	4	0.064	16.5	100	U.S.R.	Lead Covered & Armoured.
	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	24	0.02	3	0.029	0.5	54	U.S.R.	Lead Covered.
		6	0.02	3	0.029	0.5	80	U.S.R.	Lead Covered.
		5	0.02	3	0.029	0.5	50	U.S.R.	Lead Covered
		13	0.02	3	0.029	0.5	56	U.S.R.	Lead Covered.

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.

Group Curtis & Co. Ltd.

Electrical Engineers.

Date *Feb. 21/28*

per J. Ryan

COMPASSES.

Distance between electric generators or motors and standard compass *10 ft. (Fan Motor)*

Distance between electric generators or motors and steering compass *15 ft. (Fan Motor)*

The nearest cables to the compasses are as follows:—

A cable carrying *6* Amperes *10* feet from standard compass *14 ft.* feet from steering compass.

A cable carrying Amperes feet from standard compass feet 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 degrees on course in the case of the standard compass, and degrees on course in the case of the steering compass.

RAMAGE & FERGUSON, LIMITED

Alex Ferguson

DIRECTOR & SECRETARY

Builder's Signature.

Date *27 Feb 28*

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 in the vessel in accordance with the Rules. The materials and workmanship are good. The installation has been tried under working conditions & found satisfactory.

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

JWD
29/2/28

Total Capacity of Generator *20* Kilowatts.

The amount of Fee ... £ *17 : 10* : *18.50* 19.28

Travelling Expenses (if any) £ : : *21/2/28*

A T THOMAS & Co. Ltd. Swan & Luccombe
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned *Electric light*

Im. 128.—Transfer. (The Surveys are requested not to be on or below the space or Committee's Minute.)



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