

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 10 DEC 1930

Date of writing Report 10 Dec 1930 When handed in at Local Office — 10 Port of Hong Kong.

No. in Survey held at Hong Kong Date, First Survey 11 Sept Last Survey 30 Oct 1930  
Reg. Book, (Number of Visits 8)on the M.V. "KURIMARU" Tons { Gross 288.27  
Net 167.70

Built at Hong Kong By whom built Hongkong Ship Repair Works and No. 681 When built 1930.

Owners Lever's Pacific Plantation Pty Ltd Port belonging to Tulapi B.S.I.P.

Electric Light Installation fitted by Builders Contract No. — When fitted 1930

Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution Two line.

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 Engine Room bottom platform level.

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 Engine Room bottom platform.

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 micanite 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 D. P. switch with

suitable fuses; D. P. switch then switches &amp; suitable fuses for outgoing circuit.

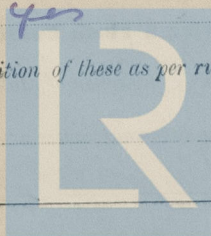
binders which have D. P. side then side fuses.

Instruments on main switchboard two ammeters two 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 two earth lamps.

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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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 1.5 K.O.B.

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 Clipped on surface, sparsely draped  
metal pipes where necessary

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 yes

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 one each at switchboard

, are their connections made as per Rule yes

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 yes

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 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 steel 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

, how are the cables led yes

where are the controlling switches situated yes

Searchlight Lamps, No. of yes, whether fixed or portable yes, are their fittings as per Rule yes

Arc Lamps, other than searchlight lamps, No. of yes, are their live parts insulated from the frame or case yes, are their fittings as per Rule yes

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 yes

, if not of this type, state distance of the combustible material horizontally or vertically above the motors yes and yes

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 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  |       |       |                | DRIVEN BY   | WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE |                     |
|--------------------------|--------|-----------|-------|-------|----------------|-------------|---|---------------------|
|                          |        | Kilowatts | Volts | Amps. | Revs. per Min. |             | Fuel Used                                     | Flash Point of Fuel |
| MAIN                     | 1      | 10        | 110   | 87    | 750            | I.C. Engine | Cude Oil                                      | above 150° F.       |
| AUXILIARY                | 1      | 5         | 110   | 43.5  | 750            | I.C. Engine | Cude Oil                                      | above 150° F.       |
| EMERGENCY                |        |           |       |       |                |             |   |                     |
| ROTARY TRANSFORMER       |        |           |       |       |                |             |   |                     |

Start: auxiliary engine replaced by a "Yeb" Southern Cross Engine 3.64

## GENERATOR, LIGHTING AND HEATING CONDUCTORS.

| 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               |              | 14780                                  | 37                    | .064     | 87                    | 130  | 60  | V.I.R.-lead         | In pipe       |
| EQUALISER CONNECTIONS        |              |  |                       |          |                       |      |   |                     |               |
| AUXILIARY GENERATOR          |              | 10090                                  | 19                    | .083     | 43.5                  | 118  | 30  | V.I.R.-lead         | In pipe       |
| EMERGENCY GENERATOR          |              |  |                       |          |                       |      |   |                     |               |
| ROTARY TRANSFORMER           |              |  |                       |          |                       |      |   |                     |               |
| ENGINE ROOM                  |              | 101046                                 | 7                     | .044     | 4                     | 31   | 12  | V.I.R.-lead         | In pipe       |
| BOILER ROOM                  |              |  |                       |          |                       |      |   |                     |               |
| AUXILIARY SWITCHBOARDS       |              |  |                       |          |                       |      |   |                     |               |
| ACCOMMODATION                |              |  |                       |          |                       |      |   |                     |               |
| Navigation & Shade Deck (36) |              | 02214                                  | 7                     | .064     | 13                    | 46   | 120                                       | V.I.R.-lead covered |               |
| Upper Deck (39)              |              | 02214                                  | 7                     | .064     | 14                    | 46   | 70  | " "                 |               |
| WIRELESS                     |              |  |                       |          |                       |      |   |                     |               |
| SEARCHLIGHT                  |              |  |                       |          |                       |      |   |                     |               |
| MASTHEAD LIGHT               | (2)          | 00322                                  | 1                     | .064     | 4                     | 12.9 | 330                                       | V.I.R.-lead covered |               |
| SIDE LIGHTS                  | (2)          | 00322                                  | 1                     | .064     | 4                     | 12.9 | 124                                       | " "                 |               |
| COMPASS LIGHTS               | (2)          | 00322                                  | 1                     | .064     | 4                     | 12.9 | 62  | " "                 |               |
| POOP LIGHTS                  |              |  |                       |          |                       |      |   |                     |               |
| CARGO LIGHTS (10)            |              | 00322                                  | 1                     | .064     | 2                     | 12.9 | 68  | " "                 |               |
| ARC LAMPS                    |              |  |                       |          |                       |      |   |                     |               |
| HEATERS                      |              |  |                       |          |                       |      |   |                     |               |

## MOTOR CONDUCTORS.

| 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     | 1             |              | 06000                                  | 19                    | .064     | 32.6                  | 83   | 64  | V.I.R.-lead covered-In pipe |               |
| EMERGENCY BILGE PUMP     |               |              |  |                       |          |                       |      |   |                             |               |
| SANITARY PUMP            |               |              |  |                       |          |                       |      |   |                             |               |
| CIRC. SEA WATER PUMPS    |               |              |  |                       |          |                       |      |   |                             |               |
| CIRC. FRESH WATER PUMPS  |               |              |  |                       |          |                       |      |   |                             |               |
| AIR COMPRESSOR           |               |              |  |                       |          |                       |      |   |                             |               |
| FRESH WATER PUMP & Bilge | 1             |              | 10090                                  | 19                    | .083     | 65                    | 118  | 52  | V.I.R.-lead covered-In pipe |               |
| ENGINE TURNING GEAR      |               |              |  |                       |          |                       |      |   |                             |               |
| ENGINE REVERSING GEAR    |               |              |  |                       |          |                       |      |   |                             |               |
| LUBRICATING OIL PUMPS    |               |              |  |                       |          |                       |      |   |                             |               |
| OIL FUEL TRANSFER PUMP   |               |              |  |                       |          |                       |      |   |                             |               |
| WINDLASS                 | 1             |              | 10090                                  | 19                    | .083     | 80                    | 118  | 184                                       | V.I.R.-lead covered         |               |
| WINCHES, FORWARD         | 1             |              | 10090                                  | 19                    | .083     | 80                    | 118  | 148                                       | " "                         |               |
| WINCHES, AFT             |               |              |  |                       |          |                       |      |   |                             |               |
| STEERING GEAR—           |               |              |  |                       |          |                       |      |   |                             |               |
| (a) MOTOR GENERATOR      |               |              |  |                       |          |                       |      |   |                             |               |
| (b) MAIN MOTOR           |               |              |  |                       |          |                       |      |   |                             |               |
| WORKSHOP MOTOR           |               |              |  |                       |          |                       |      |   |                             |               |
| VENTILATING FANS         |               |              |  |                       |          |                       |      |   |                             |               |



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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.

R. M. Dyer

Electrical Engineers.

Date 15/11/30

#### COMPASSES.

Distance between electric generators or motors and standard compass 50 feet

Distance between electric generators or motors and steering compass 60 feet

The nearest cables to the compasses are as follows:—

A cable carrying 4 Ampères 12 feet from standard compass 16 feet from steering compass.

A cable carrying 7 Ampères 12 feet from standard compass 16 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 —

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.

R. M. Dyer

Builder's Signature.

Date 15/11/30

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 & tested in accordance with the Rule Requirements, & the materials & workmanship are, in my opinion, satisfactory.

It is recommended that the notation "Electric Light" be made in the Register Book.

Elec. Light

R. M. Dyer 15/11/30

(Old set removed & 15th set fitted 12.3.31)

Total Capacity of Generators 15.20 Kilowatts.

The amount of Fee ... £ 464.00

Travelling Expenses (if any) £ —

When applied for,

8/11/30

When received,

8.1.31

S. Siering

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 19 DEC 1930

Assigned

Elec. Lt.



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