

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 15 SEP 1949

Date of writing Report 16<sup>th</sup> Aug. 1949 When handed in at Local Office 12. 9. 1949 Port of Glasgow  
 No. in Survey held at Dundee Date, First Survey 22<sup>nd</sup> June 49 Last Survey 12<sup>th</sup> Aug. 1949  
 Reg. Book. (No. of Visits 6)

on the S.S. "PINELAND" Tons { Gross 2459 Net 1403  
 Built at Dundee By whom built Caledon S.E. Co. Yard No. 472 When built 8/49  
 Owners The Cunie Line Ltd. Port belonging to Leith  
 Installation fitted by Selford, Grier, Mackay & Co. Ltd. When fitted 8/49  
 Is vessel equipped for carrying Petroleum in bulk No Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. No Sub.Sig. No Radar No

Plans, have they been submitted and approved. Yes System of Distribution Two cond. insul. Voltage of Lighting 220  
 Heating 220 Power 220 D.C. or A.C., Lighting. Yes Power. Yes If A.C. state frequency. Yes  
 Prime Movers, has the governing been found as per Rule when full load is thrown on and off. Yes Are turbine emergency governors fitted  
 with a trip switch. Yes Generators, are they compound wound. Yes, and level compounded under working conditions. Yes  
 if not compound wound state distance between generators. Yes and from switchboard. Yes Are the generators arranged to run  
 in parallel. Yes, are shunt field regulators provided. Yes Is the compound winding connected to the negative or positive pole  
 negative Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing. Yes Have certificates of  
 test for machines under 100 kw. been supplied. Yes and the results found as per Rule. Yes  
 Position of Generators Engine room bottom platform, Harbour side.  
 is the ventilation in way of generators satisfactory. Yes are they clear of inflammable material and protected from mechanical injury and  
 damage from water, steam and oil. Yes Switchboards, where are main switchboards placed.  
 Immediately aft of generating sets.  
 are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water,  
 steam and oil. Yes, what insulation is used for the panels. Enamelled Lincrolyt, if of synthetic insulating  
 material is it an Approved Type. Yes, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as  
 per Rule. Yes Is the construction as per Rule, including locking of screws and nuts. Yes Description of Main Switchgear  
 for each generator and arrangement of equaliser switches. Double pole, air break, free handle circuit  
 Breaker with interlocked equaliser switch.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit. Double pole switches & fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. Yes Instruments on main switchboard 2  
 ammeters 2 voltmeters. Yes synchronising devices. For compound machines in parallel are the ammeters and reversed current  
 protection devices connected on the pole opposite to the equaliser connection. Yes Earth Testing, state means provided.  
 Lamps permanently connected  
 Switches, Circuit Breakers and Fuses, are they as per Rule. Yes, are the fuses an Approved Type. Yes  
 make of fuses. Bussell & Munro, are all fuses labelled. Yes If circuit breakers are provided for the generators, at what  
 overload do they operate. 170%, and at what current do the reversed current protective devices operate. 20%  
 Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule. Yes  
 Cables, are they insulated and protected as per Rule. Yes, if otherwise than as per Rule are they of an Approved Type. Yes  
 state maximum fall of pressure between bus bars and any point under maximum load. 3.2 m/s, are the ends of all cables having a sectional  
 area of 0.01 square inch and above provided with soldering sockets. Yes Are all paper insulated and varnished cambric insulated  
 cables sealed at the ends. Yes Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil,  
 high temperatures or risk of mechanical damage. Yes, are any cables laid under machines or floorplates. Yes, if so, are they  
 adequately protected. Yes Are cables in machinery spaces, galleys, laundries, etc., lead covered. Yes or run in conduit. Yes  
 or of the "HR" type. Yes State how the cables are supported or protected. Clipped to solid or perforated  
 steel tray, structural steel work or woodwork & protected as found  
 necessary

Are all lead sheaths, armoring and conduits effectually bonded and earthed. Yes Are all cables passing through decks and watertight  
 bulkheads provided with deck tubes or watertight glands. Yes, where unarmoured cables pass through beams, etc., are the holes  
 effectively bushed. Yes Refrigerated chambers, are the cables and fittings as per Rule. Yes (ships' stores only)



Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory..... *Yes*

| PARTICULARS OF GENERATING PLANT. |        |                    |                          |        |          |                | PRIME MOVER.   |                    |
|----------------------------------|--------|--------------------|--------------------------|--------|----------|----------------|----------------|--------------------|
| DESCRIPTION OF GENERATOR.        | No. of | MAKER.             | RATED AT                 |        |          |                | TYPE.          | MAKER.             |
|                                  |        |                    | Kilowatts per Generator. | Volts. | Ampères. | Revs. per Min. |                |                    |
| MAIN ...                         | 2      | S. Forge & Co. Ltd | 25                       | 220    | 113.5    | 600            | S.C. Mann eng. | S. Forge & Co. Ltd |
| EMERGENCY ...                    |        |                    |                          |        |          |                |                |                    |
| ROTARY                           |        |                    |                          |        |          |                |                |                    |
| TRANSFORMER                      |        |                    |                          |        |          |                |                |                    |

| GENERATOR CABLES.          |            |                           |  |                             |       |   |             |                      |
|----------------------------|------------|---------------------------|--|-----------------------------|-------|---|-------------|----------------------|
| DESCRIPTION.               | KILOWATTS. | CONDUCTORS.               |  | MAXIMUM CURRENT IN AMPERES. |       | APPROX. LENGTH (lead plus return feet). | INSULATION. | PROTECTIVE COVERING. |
|                            |            | No. in Parallel per Pole. | Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm. | In the Circuit.             | Rule. |   |             |                      |
| MAIN GENERATOR ... ..      | 25         | 1                         | 19/064   | 114 ✓                       | 143   | 39                                      | VC          | LC+A                 |
| " " EQUALISER ... ..       | -          | 1                         | 19/044   | -                           | 92    | 19.5                                    | "           | "                    |
|                            |            |                           |  |                             |       |   |             |                      |
|                            |            |                           |  |                             |       |   |             |                      |
|                            |            |                           |  |                             |       |   |             |                      |
|                            |            |                           |  |                             |       |   |             |                      |
| EMERGENCY GENERATOR ... .. | ✓          |                           |  |                             |       |   |             |                      |
| ROTARY TRANSFORMER: MOTOR  | ✓          |                           |  |                             |       |   |             |                      |
| " " GENERATOR...           | ✓          |                           |  |                             |       |   |             |                      |

[illegible][illegible][illegible]



The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.

All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.

The foregoing is a correct description. TELFORD, GRIER, MACKAY & CO, LTD,

*G. H. Ferguson*

DIRECTOR

Electrical Contractors.

Date *17<sup>th</sup> Aug. 49.*

COMPASSES.

FOR AND ON BEHALF OF

THE CALEDON SHIPBUILDING & ENGINEERING CO. LTD.

Have the compasses been adjusted under working conditions.

*Yes*

*G. H. Ferguson*

Builder's Signature.

Date *19<sup>th</sup> Aug. 49.*

Have the foregoing descriptions and schedules been verified and found correct.

*Yes*

Is this installation a duplicate of a previous case.

*Yes*

If so, state name of vessel.

*SS "WOODLAND"*

Plans. Are approved plans forwarded herewith.

*No*

If not, state date of approval.

*5/11/48*

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith.

*Yes*

General Remarks. (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

*This installation has been fitted under special survey,  
tested under working conditions & found satisfactory.  
The materials & workmanship are good.*

*Note sent 10/10/49*

Total Capacity of Generators

*50*

Kilowatts.

The amount of Fee ... £ *47* : *10*

When applied for,

*AT DUNDEE*

When received,

*19*

Travelling Expenses (if any) £

*S. B. Johnson*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

*GLASGOW*

*14 SEP 1949*

Assigned

*SEE ACCOMPANYING MACHINERY REPORT*