

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

19 MAY 1943

Received at London Office.

Date of writing Report 5<sup>th</sup> APRIL 1943 When handed in at Local Office 17.5.43 Port of GLASGOW

No. in Survey held at GLASGOW Date, First Survey 13<sup>th</sup> Feb 1943 Last Survey 29<sup>th</sup> APRIL 1943  
Reg. Book. (Number of Visits 17)

86406 on the EMPIRE MIRANDA Tons {Gross.....  
Net.....}

Built at PORT GLASGOW By whom built MESSRS LITHGOWS LTD Yard No. 983 When built 1943

Owners MINISTRY OF WAR TRANSPORT Port belonging to GREENOCK

Electrical Installation fitted by MESSRS W. MUR, GOODFELLOW & CO LTD Contract No. 983 When fitted 1943

Is vessel fitted for carrying Petroleum in bulk — Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. — Sub.Sig. —

Have plans been submitted and approved Yes System of Distribution Two wire Voltage of supply for Lighting 110

Heating — Power 110 Direct or Alternating Current, Lighting D.C. Power D.C. If Alternating Current state periodicity — Prime Movers, has the governing been tested and found as per Rule when full load is suddenly thrown on and off Yes Are turbine emergency governors fitted with a trip switch as per Rule — Generators, are they compound wound Yes, are they level compounded under working conditions Yes, if not compound wound state distance between generators — and from switchboard — Where more than one generator is fitted are they arranged to run in parallel No, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive pole Positive Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing — Have certificates of test for machines under 100 kw. been supplied Yes and the results found as per rule See remarks Are the lubricating arrangements and the construction of the generators as per rule Yes Position of Generators In engine room, is the ventilation in way of generators satisfactory Yes are they clear of inflammable material Yes, if situated near unprotected combustible material state distance from same horizontally — and vertically —, are the generators protected from mechanical injury and damage from water, steam and oil Yes, are the bedplates and frames earthed Yes and the prime movers and generators in metallic contact Yes Switchboards, where are main switchboards placed In engine room above generators

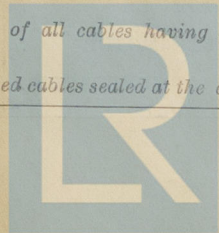
are they in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steam and oil Yes, if situated near unprotected combustible material state distance from same horizontally — and vertically —, what insulation material is used for the panels Sindano, 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 — Is the frame effectually earthed Yes Is the construction as per Rule Yes, including accessibility of parts Yes, absence of fuses on the back of the board Yes, individual fuses to pilot and earth lamps, voltmeters, etc. Yes locking of screws and nuts Yes, labelling of apparatus and fuses Yes, fuses on the "dead" side of switches Yes Description of Main Switchgear for each generator and arrangement of equaliser switches 150 AMP. D.P. Knife pattern switch with fuses

and for each outgoing circuit 60 AMP & 30 AMP S.P. Knife pattern C.O. switches with a fuse in each pole

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule — Instruments on main switchboard 2 ammeters 2 voltmeters — synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the equaliser connection — Earth Testing, state means provided Earth lamps

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an approved type Yes, are all fuses labelled as per Rule Yes If circuit breakers are provided for the generators, at what overload current did they open when tested —, are the reversed current protection devices connected on the pole opposite to the equaliser connection —, have they been tested under working conditions, and at what current did they operate — Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Yes

Cables, are they insulated and protected as per the appropriate Tables of the Rules Yes, if otherwise than as per Rule are they of an approved type W.E. state maximum fall of pressure between bus bars and any point under maximum load LIGHTING 3.1 VOLTS. POWER 3.5 VOLTS. are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Yes Are paper insulated and varnished cambric insulated cables sealed at the ends —



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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.

*W. J. G. Gifford & B. H. H.* Electrical Engineers. Date *12<sup>th</sup> May 1943*  
*G. J. Robertson*

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass *20 FEET*

Minimum distance between electric generators or motors and steering compass *16 FEET*

The nearest cables to the compasses are as follows:—

A cable carrying *14* Amperes *led into* feet from standard compass *led into* feet from steering compass.

A cable carrying *4.5* Amperes *10* feet from standard compass *6* 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 *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.

LITHGOWS LIMITED.

*John M. Gifford* Secretary

Builder's Signature.

Date *12/5/43*

Is this installation a duplicate of a previous case *Yes* If so, state name of vessel *CAPE HOWE*

Plans. Are approved plans forwarded herewith *No* If not, state date of approval *22/6/42*

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

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

*The makers' test certificates for generator N° 110415 supplied by the Admiralty shows temperature rise from the armature in excess of that permitted by the Rules. The makers state that the temperature rise will not exceed 63° if the rating is reduced to 13 kW.*

*It is recommended that the rating of this generator be reduced to 13 kW subject to a satisfactory temperature test being carried out on the generator at this new rating. The name plate altered accordingly and a red line marked on the ammeter at 11.8 amperes.*

*The electrical equipment of this vessel has been fitted on board under special survey in accordance with the requirements of the M.O.W.T., except as stated above, tested under full working conditions and found satisfactory. The materials and workmanship are good.*

Total Capacity of Generators *30* Kilowatts.

The amount of Fee ... £ *22 : 10 : 0* When applied for, *at 9th*  
SPEC. FEE. £ *5* *12/6* When received.  
Travelling Expenses (if any) £ *19/2* *19*

*J. M. Gardiner*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 18 MAY 1943* *N20*

Assigned *See Price Entry May. Report*



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