

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 27 APR 1946

Date of writing Report.....19..... When handed in at Local Office.....19..... Port of.....HULL.....  
 No. in Survey held at.....HULL..... Date, First Survey.....26.9.45..... Last Survey.....17.4.1946.....  
 Reg. Book..... (Number of Vols.....13.....)  
 on the....."EMPIRE NINA"..... A/MS 1154..... Tons { Gross.....296.....  
 Net.....Nil.....  
 Built at.....Selby..... By whom built.....Cochrane & Sons Ltd..... Yard No.....1304..... When built.....1946.....  
 Owners.....Ministry of War Transport..... Port belonging to.....-.....  
 Electrical Installation fitted by.....Wm. Broady & Son Ltd..... Contract No.....-..... When fitted.....1946.....  
 Is vessel fitted for carrying Petroleum in bulk.....No..... Is vessel equipped with D.F.....No..... E.S.D.....No..... Gy.C.....No..... Sub.Sig.....No.....

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.....-..... 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.....-..... Have certificates of  
 test for machines under 100 kw. been supplied.....Supply and the results found as per rule.....-..... Are the lubricating arrangements and the construction  
 of the generators as per rule.....Yes Position of Generators.....Engine room starboard side on platform.....  
 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.....Engine room starboard side near generator.....  
 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....."Syndanyo"....., 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.....Double pole quick  
 break knife switches and double pole fuses.....  
 and for each outgoing circuit.....Double pole quick break knife switches and double pole fuses.....  
 Are compartments containing switchboards composed of fire-resisting material or lined as per Rule.....Yes..... Instruments on main switchboard.....one.....  
 ammeters.....one..... 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.....Lamps coupled to earth via switches and fuses.....  
 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.....-.....  
 state maximum fall of pressure between bus bars and any point under maximum load.....3V..... 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.....-



## GENERATOR CABLES

### MAIN DISTRIBUTION CABLES.

LIGHTING AND HEATING, ETC., CABLES.

MOTOR CABLES

0199 2/2



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.

WM BROADY & SON LTD  
EDDISH STREET,  
HULL.

Electrical Engineers.

Date 15. 3. 46

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass 61'

Minimum distance between electric generators or motors and steering compass 56'

The nearest cables to the compasses are as follows:—

A cable carrying .65 Ampères inside feet from standard compass 5' feet from steering compass.

A cable carrying .05 Ampères 5' feet from standard compass inside 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 Yes

The maximum deviation due to electric currents was found to be Nil degrees on every course in the case of the standard compass, and Nil degrees on every course in the case of the steering compass.

FOR COCHRANE & SONS, LTD

Builder's Signature.

Date

V. Gray

DIRECTOR

Is this installation a duplicate of a previous case Yes If so, state name of vessel "EMPIRE GRETA".

Plans. Are approved plans forwarded herewith No If not, state date of approval 5.4.42.

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

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

The Electrical Equipment of this vessel was installed under special survey and in accordance with the approved plans and with the specification.

The materials used are of good quality and the workmanship is good.

On completion the equipment was operated under working conditions with satisfactory results and the insulation resistance of all circuits and apparatus was measured and found good.

This equipment is in my opinion suitable for a classed vessel.

Noted

Run 6.5.46

Total Capacity of Generators 10 Kilowatts.

The amount of Fee ... £ 10: - Specification 2 10: -

Travelling Expenses (if any) £ : : When received. 19: -

Committee's Minute FRI. 17 MAY 1946

Assigned See F.E. machy rpts.

W. H. Cornwell

Surveyor to Lloyd's Register of Shipping.