

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report..... 10 NOV 1943..... When handed in at Local Office..... 10 NOV 1943..... Port of NEWCASTLE-ON-TYNE
 No. in Survey held at NEWCASTLE-ON-TYNE Date, First Survey 27-7-43 Last Survey 29-10-43
 Reg. Book. 37252 on the "EMPIRE FLAG" Tons { Gross 7024
 Net 4734
 Built at WALKER-ON-TYNE By whom built ARMSTRONG WHITWORTH (SHIP BLD) LTD Yard No. 4 When built 1943
 Owners MINISTRY OF WAR TRANSPORT Port belonging to NEWCASTLE-ON-TYNE
 Electrical Installation fitted by SUNDERLAND FORGE & ENGINEERING CO. LTD. Contract No. 44 When fitted 1943
 Is vessel fitted for carrying Petroleum in bulk..... Is vessel equipped with D.F. YES E.S.D. YES Gy.C. YES 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 DC Power DC 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 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..... Have certificates of
 test for machines under 100 kw. been supplied YES and the results found as per rule YES Are the lubricating arrangements and the construction
 of the generators as per rule YES Position of Generators 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 ENGINE ROOM AFT BULKHEAD
 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....., 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 350 AMPERE D.P.
AUTOMATIC FREE HANDLE MAGNETIC BLOW OUT CIRCUIT BREAKERS WITH O/L TRIP. REVERSE CURRENT
TRIP WITH LAGS. 300 AMPERE TRIPPLE POLE CHANGE OVER KNIFE SWITCHES
 and for each outgoing circuit DOUBLE POLE Q.B. KNIFE SWITCH AND DOUBLE POLE FUSE
DOUBLE POLE, DOUBLE THROW Q.B. SWITCH AND DOUBLE POLE FUSE
 Are compartments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard 3
 ammeters 3 voltmeters..... synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the
 equaliser connection YES Earth Testing, state means provided EARTH LAMPS CONNECTED TO E THROUGH 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 50%, are the reversed current
 protection devices connected on the pole opposite to the equaliser connection YES, have they been tested under working conditions, and at what current
 did they operate 15% 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 4.4 V., are the ends of all cables having a sectional area of 0.01
 square inch and above provided with soldering sockets YES Are paper insulated and varnished cambric insulated cables sealed at the ends YES

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Foundation

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.

P. PRO THE SUNDERLAND FORGE & ENGINEERING CO., LTD.

Electrical Engineers.

Date 30-10-1943

A. J. Gurney

COMPASSES.

Minimum distance between electric generators or motors and standard compass 58 FEET

Minimum distance between electric generators or motors and steering compass 50 FEET

The nearest cables to the compasses are as follows:—

A cable carrying 1/4 Ampères ^{INSIDE} feet from standard compass feet from steering compass.

A cable carrying 1/4 Ampères feet from standard compass 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.

SIR W. G. ARMSTRONG & CO. (Shipbuilders) Ltd.

Builder's Signature.

Date 30-10-43

GENERAL MANAGER

Is this installation a duplicate of a previous case NO If so, state name of vessel —

Plans. Are approved plans forwarded herewith — If not, state date of approval 9-4-43

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

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, to comply with the Societies Rules, and in accordance with the Approved Plans.

Materials used are of good quality and the workmanship is satisfactory. On completion the Insulation Resistance was tested and found good, and the Generators and motors operated satisfactorily under normal working conditions.

In my opinion, the equipment, as installed, is suitable for a classed vessel.

Noted

19/11/43

Total Capacity of Generators 99 Kilowatts.

The amount of Fee ... £ 32 : 8 :
SPECIFICATION 8 2
40 : 10 :
Travelling Expenses (if any) £ :

When applied for 112 NOV 1943
When received.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 30 NOV 1943

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