

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

21 OCT 1941

Received at London Office

Date of writing Report.....19..... When handed in at Local Office.....14/10/41..... Port of Lewes - m. - SpsNo. in Survey held at William Walker Date, First Survey 17 March Last Survey 23 Sept 1941  
Reg. Book. Suppl. (Number of Vols. ....10....)35703 on the BRITISH HARMONY Tons {Gross 8453  
Net 4897Built at William Walker By whom built Samuel & Co. Shipyard No. 1696 When built 1941Owners British Tank Co. Ltd. Port belonging to .....Electrical Installation fitted by Campbell, Letchford & Co. Contract No. 1696 When fitted 1941Is vessel fitted for carrying Petroleum in bulk Yes Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub.Sig. YesHave plans been submitted and approved Yes System of Distribution Two wire Voltage of supply for Lighting 110Heating Yes Power 110 Direct or Alternating Current, Lighting Direct Power Direct 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 atrip 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 poleNegative Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing ..... Have certificates oftest for machines under 100 kw. been supplied Yes and the results found as per rule Yes Are the lubricating arrangements and the constructionof the generators as per rule Yes Position of Generators Engine room starboard sideis 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 metalliccontact Yes Switchboards, where are main switchboards placed Engine room starboard sideare they in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steamand oil Yes, if situated near unprotected combustible material state distance from same horizontally ..... and vertically ..... what insulationmaterial is used for the panels Ebonite Insulating, if of synthetic insulating material is it an Approved Type Yes, if ofsemi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule ..... Is the frame effectually earthed YesIs the construction as per Rule Yes, including accessibility of parts Yes, absence of fuses on the back of the board Yes, individual fusesto 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 poleCircuit breakers with overload and no volt tripsand for each outgoing circuit Double pole quick break changeover knife switchesand double pole fusesAre compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard Twoammeters Two voltmeters ..... synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to theequaliser connection ..... Earth Testing, state means provided Each lamp connected to each pin across fusesSwitches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an approved type Yes, are all fuses labelled asper Rule Yes If circuit breakers are provided for the generators, at what overload current did they open when tested 150%, 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 YesCables, 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 .....  
Yesstate maximum fall of pressure between bus bars and any point under maximum load Yes, are the ends of all cables having a sectional area of 0.04square inch and above provided with soldering sockets Yes Are paper insulated and varnished cambric insulated cables sealed at the ends Yes



and found satisfactory. *Yes*



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.

CAMPBELL & ISHERWOOD, LTD.

Electrical Engineers.

Date 27<sup>th</sup> September 1941

#### COMPASSES.

Minimum distance between electric generators ~~or motors~~ and standard compass 210'

Minimum distance between electric generators ~~or motors~~ and steering compass 200'

The nearest cables to the compasses are as follows:—

A cable carrying 14 Ampères <sup>main</sup> feet from standard compass feet from steering compass.

A cable carrying 14 Ampères <sup>main</sup> 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 1/2 degrees on many course in the case of the standard compass, and 1/2 degrees on many course in the case of the steering compass.

Builder's Signature. *Thos Morrison*

Date 30<sup>th</sup> September 1941

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

Plans. Are approved plans forwarded herewith No If not, state date of approval 3-6-41

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 electrical

installation of this vessel was installed under special survey. The workmanship & material used are good. The governing & compounding & regulation of generator sets were tested, the overload & reverse current trips of circuit breakers were tested, & the insulation resistance of each circuit measured & found satisfactory. In my opinion the installation of this vessel is suitable for class.

Noted  
29/10/41

Total Capacity of Generators 60 Kilowatts.

Sld etc

The amount of Fee ... £ 28: 10: 0

When applied for 118 OCT 1941

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

TUE. 11 NOV 1941

Committee's Minute

Assigned See Nwc. 78. 99856

Surveyor to Lloyd's Register of Shipping. *L. B. Brown + W. H. Cornell*



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