

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

21 NOV 1946

Date of writing Report... 29th Oct. 1946

When handed in at Local Office... 6 - 11 - 1946

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at... Walker  
Reg. Book.

Date, First Survey... 15. Jly. 1946

Last Survey... 31st Oct. 1946

(Number of Visits... 13)

85891 on the m.v. "BRITISH EARL"

Tons { Gross... 8573  
Net... 4909

Built at... NEWCASTLE/ON/TYNE

By whom built... Swan Hunter & Wigham

Richardson, Ltd.

Yard No. 1772

When built... 1946

Owners... British Tanker Co. Ltd.,

Port belonging to... London

Electrical Installation fitted by... Campbell & Isherwood Ltd.,

Contract No. - When fitted... 1946

Is vessel fitted for carrying Petroleum in bulk... Yes 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... 2 wire insulated 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... 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... 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... Near 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... Sindanyo, 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... 300 ampere circuit

breaker with under voltage release, overload relays with time lags and reverse current

relay

and for each outgoing circuit... double pole quick break switch with a fuse on each insulated pole

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

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... 400 amps 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... Yes, 30 amp 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... 6 volt 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... Yes

002559 - 002567 - 00585

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Foundation



PARTICULARS OF GENERATING PLANT.

## GENERATOR CABLES.

### MAIN DISTRIBUTION CABLES.

LIGHTING AND HEATING, ETC., CABLES.

MOTOR CABLES.

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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.

CAMPBELL & IGHYWOOD LTD. Electrical Engineers. Date 30.10.46  
MAIN CABLES - LEAD COVERED AND BRAIDED CLIPPED TO STEEL TRAY ALONG FORE AND AFT GANGWAYS.  
LEAD COVERED AND BRAIDED CLIPPED TO STEEL TRAY IN ENGINE ROOM. ACCOMMODATION CABLES - HARD RUBBER CLIPPED

#### COMPASSES AND GROUNDS.

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

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

The nearest cables to the compasses are as follows:

A cable carrying 0.14 Ampères 6 feet from standard compass INSIDE feet from steering compass.

A cable carrying 0.14 Ampères INSIDE feet from standard compass 6 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.

SWAN, HUNTER, & WIGHAM RICHARDS

Builder's Signature.

Date 5 November 1946

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

Plans. Are approved plans forwarded herewith? YES If not, state date of approval

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 EQUIPMENT OF THIS VESSEL HAS BEEN INSTALLED IN ACCORDANCE WITH THE SOCIETY'S RULES AND REGULATIONS AND THE ARRANGEMENTS ARE IN ACCORDANCE WITH OR EQUIVALENT TO THOSE SHOWN ON THE APPROVED PLANS.

THE MATERIALS USED ARE OF GOOD QUALITY AND THE WORKMANSHIP IS SATISFACTORY. ON COMPLETION THE INSULATION RESISTANCE OF ALL CIRCUITS WAS ABOVE RULE REQUIREMENTS AND THE GENERATORS OPERATED ON LOAD AND GOVERNOR TESTS WITH SATISFACTORY RESULTS.

THE ELECTRICAL EQUIPMENT, AS INSTALLED, IS, IN MY OPINION, SUITABLE FOR A CLASSED VESSEL.

N.B. RADAR FITTED.

3 30 110 243 68 STEAM ENGINE

Total Capacity of Generators 90 Kilowatts.

The amount of Fee £ 31 : 10 : 118 NOV 1946

Travelling Expenses (if any) £ : : When received 30

Committee's Minute FRL 13 DEC 1946

Assigned Sir F.B. mch. rpt.

P. Stone

Surveyor to Lloyd's Register of Shipping



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