

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report... 30-4-1943 When handed in at Local Office... 7 May 1943 Port of... Sunderland.

No. in Survey held at... Sunderland Date, First Survey... 24.2.43 Last Survey... 29-4-1943  
Reg. Book. 86375 on the S/S. "EMPIRE DEED" (Number of Visits. (R).....)Built at... Sunderland By whom built... Barham & Sons Ltd Yard No. 295 Tons {Gross... 676.6  
Net... 463.9

Owners... The Ministry of War Transport Port belonging to... Sunderland When built... 1943

Electrical Installation fitted by... Barham &amp; Sons Ltd Contract No. 295 When fitted... 1943

Is vessel fitted for carrying Petroleum in bulk... No Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. No Sub.Sig. No.

Have plans been submitted and approved... Yes System of Distribution... No. wire insulated Voltage of supply for Lighting... 110

Heating... Power... 110 Direct or Alternating Current, Lighting... Yes Power... Yes 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

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 instead of main engine on trussel

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... On engine room bulkhead adjacent to

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... Sunderland, 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... a double-pole

Single throw quick-break Knife switch and double-pole fuse; a double-pole double-throw

quick-break Knife switch for supplying D.C. from either generator,

and for each outgoing circuit... a double-pole, double throw quick-break Knife switch and double-

pole fuse.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule... Yes Instruments on main switchboard... Two

ammeters... Two 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... E. lamps connected to E. Through bus 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... Yes

state maximum fall of pressure between bus bars and any point under maximum load... less than 4.4 V.

square inch and above provided with soldering sockets... Yes Are paper insulated and varnished cambric insulated cables sealed at the ends... No fitted



and found satisfactory... yes...

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ... ..	701.. 15	1	37/072	136	152	14	V.I.R.	L.C.
" " <u>REGULATOR</u> ... ..								
" " ... ..	702.. 15	1	37/072	136	152	14	V.I.R.	L.C.
EMERGENCY GENERATOR ... ..								
ROTARY TRANSFORMER: MOTOR ... ..								
GENERATOR ... ..								

[illegible]



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.

FOR AND ON BEHALF OF  
BARTRAM and SONS LTD

*Grimm & Co.*

Electrical Engineers.

Date. - 3 MAY 1943

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass. 100'

Minimum distance between electric generators or motors and steering compass. 90'

The nearest cables to the compasses are as follows:—

A cable carrying .14 Ampères 7 feet from standard compass on the feet from steering compass.

A cable carrying .14 Ampères on the feet from standard compass 7 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 steering course in the case of the standard compass, and nil degrees on steering course in the case of the steering compass.

FOR AND ON BEHALF OF  
BARTRAM and SONS LTD

Builder's Signature.

Date. - 3 MAY 1943

*Grimm & Co.*

Is this installation a duplicate of a previous case. yes.

If so, state name of vessel

S/S. Empire Bessarab

Plans. Are approved plans forwarded herewith. yes

If not, state date of approval

3-1-42 and 13-1-42.

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 electrical equipment of this vessel has been installed under special survey in accordance with the approved plans and the Ministry of Shipping specification and amendments thereto. The materials used are of good quality and design and the workmanship is good. On completion the equipment was operated under load with satisfactory results and the insulation resistance of each circuit was measured and found good. This equipment is in my opinion suitable for a classed vessel.

*Robert*

*L.L.*

13/5/43

Total Capacity of Generators (2x15) 30 Kilowatts.

The amount of Fee ...

£ 22. 10. 0  
5. 12. 6

When applied for,

1<sup>st</sup> May 1943

Travelling Expenses (if any) £ : :

When received.

.....19.....

Surveyor to Lloyd's Register of Shipping.

*S.D. Jones*

Committee's Minute

TUES. 18 MAY 1943

Assigned

*See fe. made rft*