

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

20 APR 1942

Received at London Office

Date of writing Report 13th Apr 42 When handed in at Local Office 17 APR 1942 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 3rd Mar Last Survey 14th Apr 1942

Reg. Book. Suppt.

(Number of Vicks 8)

36424 on the S.S. "EMPIRE BARRIE"

Tons { Gross 716.8  
Net 425.3

Built at Sunderland By whom built J. Thompson &amp; Co. Ltd. Yard No. 615 When built 1942

Owners Ministry of War Transport Port belonging to Sunderland

Electrical Installation fitted by The Sunderland Engineering Co. Ltd. Contract No. 615 When fitted 1942

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 Two 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

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

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 starboard side

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

on 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 "Ebonny Laminated" 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 knife

switch and double pole fuse

and for each outgoing circuit Double pole double throw 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 coupled to E through two 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 4.44 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



PARTICULARS OF GENERATING PLANT.								
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ... ..	2	12.5	110	113.5	85	Single cylinder Steam engine		
EMERGENCY ... ..								
ROTARY TRANSFORMER								

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 AMPERES.				
				In the Circuit.	Rule.			
MAIN GENERATORS ... ..	2 x 12.5	1	19/064	113.5	135	60 x 80	V.C.	L.C. in pipe
" " EQUALISER ... ..								
EMERGENCY GENERATOR ... ..								
ROTARY TRANSFORMER: MOTOR ... ..								
" " GENERATOR ... ..								

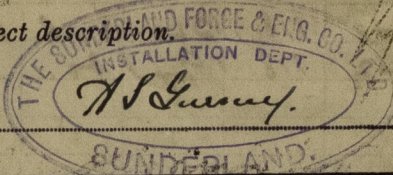
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WIRELESS	NAVIGATION LIGHTS	LIGHTING AND HEATING	1	19064	15	83	380	V.L.R.	In pipe + L.C.
	26 (off saloon t.b.)		1	7/064	6	31	60	00	L.C.
Att. Main Feed			1	7/064	6	31	60	00	00
Offs. Lig. 26	} off saloon 26.		1	7/064	14	31	6	00	00
Feed Cargo 26			1	7/064	20	46	240	00	In pipe
Engrs. Lig. 26	} off Engrs. 26.		1	7/036	12	24	8	00	L.C.
Main Cargo 26			1	7/036	8	24	12	00	00
Offs. Lig. 26			1	7/064	22	46	190	00	In pipe
Engrs. Rev. Lig. 26			1	7/064	10	46	330	00	00
			1	7/044	20	31	30	00	00

[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.



Electrical Engineers

Date 14-7-1942

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass 100 feet

Minimum distance between electric generators or motors and steering compass 196 feet

The nearest cables to the compasses are as follows:-

A cable carrying 14 Ampères on the feet from standard compass 100 feet from steering compass.

A cable carrying 14 Ampères 7 feet from standard compass on the 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 AND ON BEHALF OF THE SURVEYORS AND FORCE & ENG. CO. LTD.

Builder's Signature.

Date 16/4/42.

Is this installation a duplicate of a previous case? Yes If so, state name of vessel "Empire Liberty"

Plans. Are approved plans forwarded herewith? Yes If not, state date of approval 1/8/41: 14/8/41

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

equipment of this vessel has been 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 run under working conditions with satisfactory results and the insulation resistance of all circuits was measured and found good. This equipment is in my opinion suitable for a standard vessel.

Noted  
L.H.  
22/4/42.

Total Capacity of Generators 25 Kilowatts.

The amount of Fee ... £ 25 : - : 16 APR 1942

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

Ganterson

Surveyor to Lloyd's Register of Shipping.

TUE. 28 APR 1942

Committee's Minute

Assigned

See Std. 36 33374



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Lloyd's Register  
Foundation