

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report... 17-7-1942 When handed in at Local Office..... 19..... Port of Middlesbrough

No. in Survey held at Harberton Hill-on-Sea Date, First Survey... 27-5-42 Last Survey... 15-7-1942  
Reg. Book. 36491 on the S/S "EMPIRE CUIDON" (Number of Visits.....)

Built at Harberton Hill-on-Sea By whom built Furness Shipbuilding Co. Ltd Yard No. 346 When built 1942

Owners The Ministry of War Transport Port belonging to Middlesbrough

Electrical Installation fitted by Furness Shipbuilding Co. Ltd Contract No. 346 When fitted 1942

Is vessel fitted for carrying Petroleum in bulk No Is vessel equipped with D.F. Yes E.S.D. No 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,

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

positive 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 on raised platform starboard side of 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 on raised platform starboard side of engine room

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 "Sindamyp", 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

quick break knife switch and double pole fuse. D.P.C.O. switch fitted

between generator busbars and main outgoing busbars.

and for each outgoing circuit a double pole 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 4.4 V., 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



and where are the controlling switches fitted. yes, are all fittings suitably ventilated. yes,  
are all fittings and accessories constructed and installed as per Rule yes Searchlight Lamps, No. of none fitted, whether fixed or portable. yes  
yes, are their fittings as per Rule. yes Heating and Cooking, is the general construction as per Rule. yes  
are the frames effectually earthed. yes, are heaters in the accommodation of the convection type. yes Motors, are all motors constructed and  
installed as per Rule yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water,  
steam and oil. yes, if situated near unprotected combustible material state minimum distance from same horizontally. yes and vertically. yes Are  
motors coupled to oil fuel transfer and unit pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment. none fitted  
Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing. none fitted Have certificates of test for motors under  
100 BHP intended for essential services been supplied and the results found as per Rule. none fitted Control Gear and Resistances, are they constructed and  
fitted as per Rule. yes Lightning Conductors, where required are they fitted as per Rule. none fitted Ships carrying Oil having a Flash Point  
less than 150° F. Have all the special requirements of the Rules for such ships been complied with. yes, are all fuses of the cartridge type. yes  
are they of an approved type. yes Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such  
ships. yes Are the cables lead covered as per Rule. yes Spare Gear, if the vessel is for open sea service have spares been provided as per  
Rule. yes, are they suitably stored in dry situations. yes Insulation Tests, has the insulation resistance of all circuits and apparatus been tested  
and found satisfactory. yes.

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	15	110	136.5	550	Single by duplex Vertical Steam Engines		
EMERGENCY ... ..								
ROTARY TRANSFORMER								

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (load 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.	Rate.			
MAIN GENERATOR ... No. 1 ...	15	1	34.042	136.5	152	40	2.15	2. L. B. in tang.
" " EQUALIZER ...								
" " No. 2 ...	15	1	34.042	136.5	152	44	"	"
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTE								
GENERATOR ...								

[illegible]

WIRELESS	1	7/064	15	46	470	21A	J.R. 13
NAVIGATION LIGHTS	1	7/044	6	31	464	"	"
LIGHTING AND HEATING		(Alternative Fed from		6/100	Recommendation		DB)
E.S.D. Supply	1	7/036	6	24	260	"	"
Emergency N/T Supply	1	7/044	-	31	150	"	"
Blowing Board Supply	1	7/029	9	15	30	"	"

[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.

*P. S. Glover per can.*

Electrical Engineers.

Date *4-8-1942*

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass *192'*

Minimum distance between electric generators or motors and steering compass *198'*

The nearest cables to the compasses are as follows:—

A cable carrying *1/4* Ampères *7* feet from standard compass *on the* feet from steering compass.

A cable carrying *1/4* 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 *every* course in the case of the

standard compass, and *nil* degrees on *every* course in the case of the steering compass.

*PURNESS SHIPBUILDING CO LTD*

*J. J. Sorenson*

Builder's Signature.

Date *5-18-42*

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

If so, state name of vessel

*S/S "Empire Beaumont"*

Plans. Are approved plans forwarded herewith *yes*

If not, state date of approval

*D and S 18-11-41*

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 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.*

*Noted*

*S/S*

*18/8/42*

Total Capacity of Generators *(2x15) 30* Kilowatts.

The amount of Fee ... *£22 10 0.*  
*Specification* *£ 5 12 6*

When applied for,

*12/8/42*

When received.

*19*

Travelling Expenses (if any) £ : :

*S. D. Wain*  
Surveyor to Lloyd's Register of Shipping.

*TUE 18 AUG 1942*

Committee's Minute

Assigned

*See Indh FE 17307*