

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office... 12th SEPT 1945

Date of writing Report... 12th SEPT. 1945 When handed in at Local Office... 12th SEPT. 1945 Port of DARTMOUTH

No. in Survey held at DARTMOUTH Date, First Survey 3-3-45 Last Survey 24-8-1945 Reg. Book. (Number of Visits 2)

on the SINGLE SCREW BOOM DEFENCE H.M.S. "BARITONE" (J6139) Tons { Gross 625.68 Net 291.99

Built at DARTMOUTH By whom built MESSRS PHILIP & SON Yard No. 1115 When built 1945

Owners THE ADMIRALTY Port belonging to

Electrical Installation fitted by MESSRS PHILIP & SON, LTD Contract No. 1115 When fitted 1945

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

Have plans been submitted and approved YES System of Distribution TWO WIRE Voltage of supply for Lighting 110

Heating 110 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 YES Generators, are they compound wound No, are they level compounded under working conditions No,

if not compound wound state distance between generators 21 FT and from switchboard PORT 15' STAB 6' 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

Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing YES 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 PORT & STAB SIDES OF ENG ROOM AFT AT LEVEL

OF TOP GRATING, 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 AFT ENG ROOM BULKHEAD (STAB SIDE OF CENTRE

LINE AT LEVEL OF TOP GRATING.

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 MICANITE/INSULATED STEEL RODS & FRAMEWORK, if of synthetic insulating material is it an Approved Type, if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule YES 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 D.P. CIRCUIT BREAKERS

and for each outgoing circuit D.P. KNIFE SWITCHES.

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 YES Earth Testing, state means provided TWO 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 5% OVERLOAD 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 35 AMPS. 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 NIL, 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

with insulating compound  or waterproof insulating tape . Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage. **YES**, are cables laid under machines or floorplates. **NO**, if so, are they adequately protected.  Are cables in machinery spaces, galleys, etc., lead covered. **YES** or run in conduit . State how the cables are supported and protected. **CABLE CARRIER PLATE WITH CLIPS, BRASS SCREWS & NUTS.**

**CLIPS FITTED DIRECT TO BULKHEAD BY MEANS OF WELDED STUDS & NUTS.**

Are all lead sheaths, armouring and conduits effectually bonded and earthed. **YES**. Refrigerated chambers, are the cables and fittings as per Rule.

Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands. **YES**, where unarmoured cables pass through beams, etc., are the holes effectually bushed. **YES** and with what material. **LEAD**. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule.  Emergency Supply, state position.

and method of control.

Navigation Lamps, are they separately wired. **YES** controlled by separate double pole switches. **YES** and fuses. **YES**. Are the switches and fuses in a position accessible only to the officers on watch. **YES**, is an automatic indicator fitted. **NO**. Secondary Batteries, are they constructed and fitted as per Rule. , are they adequately ventilated.

what is the battery capacity in ampere hours.

Fittings, are all fittings on weather decks, in stokehold and engine room and wherever exposed to drip or condensed moisture, weatherproof. **YES**. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present. **YES**, if so, how are they protected.

**MAGAZINE FITTINGS WITH CABLES RUN IN CONDUIT AND GUARDED.**

and where are the controlling switches fitted. **OUTSIDE COMPARTMENT**, are all fittings suitably ventilated. **YES**

are all fittings and accessories constructed and installed as per Rule. **YES**. Searchlight Lamps, No. of. **ONE**, whether fixed or portable. **FIXED**

, 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.  and vertically.  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.

Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing.  Have certificates of test for motors under

100 BHP intended for essential services been supplied and the results found as per Rule. **YES**. Control Gear and Resistances, are they constructed and fitted as per Rule. **YES**. Lightning Conductors, where required are they fitted as per Rule. **YES**. 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. , are all fuses of the cartridge type.

are they of an approved type.  Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships.  Are the cables lead covered as per Rule.  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**.

**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.
MAIN	Two	20	110/115	174	400	STEAM ENGINE	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
EMERGENCY							
ROTARY TRANSFORMER							

**GENERATOR CABLES.**

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	No. and Dia. of Strands. Sq. ins.	In the Circuit.	Rule.			
MAIN GENERATOR	20	1	37.083	174	184	33' 15"	RUBBER	LEAD COVERED
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

**MAIN DISTRIBUTION CABLES.**

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel Per Pole.	No. and Dia. of Strands. Sq. ins.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS							
DE GAUSSING	1	7.004	32.7	40	30'	RUBBER	LEAD COVERED
SHORE SUPPLY	1	37.083	100	184	60'	"	"
24" SEARCHLIGHT	1	19.083	75	118	174'	"	"

**LIGHTING AND HEATING, ETC., CABLES.**

WIRELESS	1	7.004	30	40	105'	RUBBER	LEAD COVERED
NAVIGATION LIGHTS	1	7.044	15.7	31	180'	"	"
HEATING FAN HEAT	1	19.064	54	83	156'	"	"
POWER LIGHTING	1	19.064	40	83	18'	"	"
" WEATHER DECK	1	7.044	15	31	15'	"	"
" ENG. & BOILER ROOM	1	7.044	9.1	31	21'	"	"

**MOTOR CABLES.**

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.					
FOR 12" VENT FANS	3	1.25	1	7.029	18	15	540' RUBBER LEAD COVERED.
FOR 7" VENT FANS	2	.55	1	7.044	5	5	20' RUBBER LEAD COVERED.
FOR 5" VENT FAN	1	.18	1	7.044	2	5	20' " " " "
REFRIG. MOTORS	2	.33	1	7.044	3.8	5	40' " " " "

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 PHILIP & SON, LIMITED.

*John J. Bunter*  
MANAGING DIRECTOR

Electrical Engineers.

Date *2<sup>nd</sup> Oct 1945*

COMPASSES.

Minimum distance between electric generators or motors and standard compass *75 FEET*

Minimum distance between electric generators or motors and steering compass *74 FEET*

The nearest cables to the compasses are as follows:—

A cable carrying *.5* Ampères *2* feet from standard compass *2* feet from steering compass.

A cable carrying  Ampères  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 *NIL* degrees on *N.N.W.* course in the case of the standard compass, and  degrees on  course in the case of the steering compass.

FOR PHILIP & SON, LIMITED.

*John J. Bunter*  
MANAGING DIRECTOR

Builder's Signature.

Date *2<sup>nd</sup> Oct 1945*

Is this installation a duplicate of a previous case *YES* If so, state name of vessel *H.M.S. "BARFLANE" CARFOL BARN*

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

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

*THIS INSTALLATION HAS BEEN CARRIED OUT ACCORDING TO THE RULES AND THE REQUIREMENTS OF THE SPECIFICATION. TESTS HAVE BEEN CARRIED OUT AND THE MACHINERY AND FITTINGS EXAMINED UNDER WORKING CONDITIONS.*

*THE MATERIALS AND WORKMANSHIP ARE GOOD AND IN MY OPINION THE INSTALLATION IS ELIGIBLE TO BE CLASSED.*

*Noted*

*Hess 9.10.45*

Total Capacity of Generators *40* Kilowatts.

CLASSIFICATION & SUPERVISOR

The amount of Fee *OF SPECIFIC £50-0-0* When applied for, *25-9-1945* *all*

Travelling Expenses (if any) £  : When received. *19*

*W. W. Griffith*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 9 NOV 1945*

Assigned *See FE machy. spb.*

501,438—Transfer. (MADE AND PRINTED IN ENGLAND.) (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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