

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

21 JUL 1943

Received at London Office

Date of writing Report. 16th June 1943 When handed in at Local Office. 24. 6. 1943 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey. 30. May '43 Last Survey. 15th June 1943
Reg. Book. 85460 on the M.V. "British Patience" (Number of Visits.....)

Built at Glasgow By whom built. Harland & Wolff Ltd Yard No. 1166G When built. 1943
Owners. British Tanker Co. Ltd. Port belonging to London

Electrical Installation fitted by Harland & Wolff Ltd. Contract No. — When fitted. 1943

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. Two Wires Voltage of supply for Lighting. 110

Heating. — Power. 110 Direct or Alternating Current, Lighting. DC. Power. DC. 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. 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. Sandalwood, 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 Circuit Breaker with overload release.

and for each outgoing circuit. Double Pole Changeover switch and double pole fuses

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. 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. Full load, 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

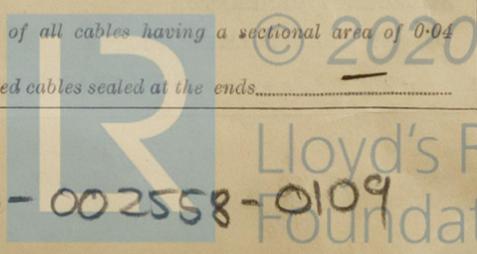
did they operate. — Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule. Yes

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. 4.9V, 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. —

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. *Yes*. Are cables in machinery spaces, galleys, laundries, etc., lead covered. *Yes* or run in conduit. *Yes*. State how the cables are supported and protected. *Main - lead covered around and braided clipped to steel tray in engine room and run in pipes along open deck - accommodation spaces lead covered clipped.*

Are all lead sheaths, armoring and conduits effectually bonded and earthed. *Yes*. Refrigerated chambers, are the cables and fittings as per Rule. *Yes*. 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. *Yes*. Emergency Supply, state position. *Yes* and method of control. *Yes*.

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. *Yes*. Secondary Batteries, are they constructed and fitted as per Rule. *Yes*, are they adequately ventilated. *Yes* what is the battery capacity in ampere hours. *Yes*.

Fittings, are all fittings on weather decks, in stokeholds and engine rooms 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. *By special gastight fittings wired wholly from outside spaces with L.C.A.B. cable and where are the controlling switches fitted. at distribution house remote from spaces*, 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. *portable*, 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. *Yes*. Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing. *Yes*. 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. *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*.

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	30	110	273	550	Steam engines.		
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.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ... FORWARD	30	1	6/093	273	288	40	RUBBER	L.C.A.B.
" " EQUALISER								
" " AFT.	30	1	6/093	273	288	36	"	"
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.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS ...							
VENTILATION FAN D.B. F.I.	1	19/064	78.4	83	180	RUBBER	L.C.A.B.
ENGINE ROOM MOTORS D.B. M.I.	1	19/072	77.2	97	60	"	"
D.G. INSTALLATION.	1	19/083	17.5	118	50	"	"

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS ... MAIN SWITCHBOARD.	1	19/052	30	64	680	RUBBER	L.C.A.B. and L.C.
WIRELESS ... SUB	1	7/064	30	46	120	"	L.C.
LIGHTING AND HEATING ...							
LIGHTING ETC. FORWARD MIDSHIPS	1	19/083	107	118	600	"	L.C.A.B.
" " AFT + POOP	1	19/052	45	64	120	"	"
" " ENGINE + BOILER ROOMS	1	7/064	43	46	60	"	"
DECK PORTABLE CONNECTIONS	1	7/064	33	46	120	"	"
NAVIGATION LIGHTS. MAIN SWITCHBOARD	1	7/064	19	46	600	"	L.C.A.B. and L.C.
" " SUB	1	7/064	19	46	100	"	L.C.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
TURNING GEAR.	1	10	1	19/064	80	83	120	RUBBER	L.C.A.B.
ENGINE ROOM VENT FAN.	1	1.5	1	7/029	12.4	15	150	"	"
AFT. ACCOM. " "	1	4	1	7/022	33	37	130	"	"
MIDSHIP ACCOM. " "	1	4	1	19/052	33	64	120	"	L.C.A.B. and L.C.
WORKSHOP MOTOR	1	3	1	7/044	27.0	31	90	"	L.C.A.B.
FUEL OIL PURIFIER.	1	3	1	7/044	25.1	31	180	"	"
LUB. OIL " "	1	3	1	7/044	25.1	31	100	"	"

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 HARLAND AND WOLFF, LIMITED

Agellen

Electrical Engineers.

Date 21st June 1943.

COMPASSES.

Minimum distance between electric generators or motors and standard compass 15 feet from midship vent fan.

Minimum distance between electric generators or motors and steering compass 20 feet from midship vent fan.

The nearest cables to the compasses are as follows:—

A cable carrying 19 Ampères 5 feet from standard compass 4 feet from steering compass.

A cable carrying 0.1 Ampères led into feet from standard compass 6 feet from steering compass.

A cable carrying 0.1 Ampères 6 feet from standard compass led into 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 Any course in the case of the standard compass, and Nil degrees on Any course in the case of the steering compass.

For HARLAND AND WOLFF, LIMITED

Agellen

Builder's Signature.

Date 21st June 1943.

Is this installation a duplicate of a previous case Yes If so, state name of vessel M.V. BRITISH VIGILANCE.

Plans. Are approved plans forwarded herewith No If not, state date of approval 20th Feb. 1942.

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 fitted on board under special survey, tested under full working conditions and found satisfactory. The materials and workmanship are good.

100	100	100	100	100	100	100	100	100	100
100	100	100	100	100	100	100	100	100	100
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100	100	100	100	100	100	100	100	100	100
100	100	100	100	100	100	100	100	100	100
100	100	100	100	100	100	100	100	100	100

Noted
6/7/43

Total Capacity of Generators 60 Kilowatts.

The amount of Fee ... £ 28 : 10 : When applied for, 29 JUN 1943.

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

R.P. Storie
Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 29 JUN 1943

Assigned

110
21643

5m.4.33.—Transfer. (MADE AND PRINTED IN ENGLAND.)
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

