

British Patriot

Surveyor's Initials.

Kpt. 13.

No. 75229

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 23 MAR 1950

Date of writing Report 6th MARCH 1950 When handed in at Local Office 20/3/1950 Port of GLASGOW

No. in Reg. Book 35831 on the M.V. 'BRITISH PATRIOT' Survey held at PORT GLASGOW & GREENOCK Date, First Survey 2nd NOVEMBER 1949 Last Survey 27th FEBRUARY 1950 (No. of Visits)

Built at PORT GLASGOW By whom built MESSRS LITHGOWS LTD Yard No. 1042 When built 1950

Owners BRITISH TANKER CO. LTD Port belonging to LONDON.

Installation fitted by MESSRS SUNDERLAND FORGE & ENGINEERING CO. LTD When fitted 1950

Is vessel equipped for carrying Petroleum in bulk. YES Is vessel equipped with D.F. YES E.S.D. YES Gy.C. YES Sub.Sig. YES Radar YES

Plans, have they been submitted and approved. YES System of Distribution Two wire Voltage of Lighting 110

Heating Power 110 D.C. or A.C., Lighting D.C. Power D.C. If A.C. state frequency.

Prime Movers, has the governing been found as per Rule when full load is thrown on and off. YES Are turbine emergency governors fitted with a trip switch. YES Generators, are they compound wound. YES, and level compounded under working conditions. YES, if not compound wound state distance between generators. YES and from switchboard. YES Are the generators arranged to run in parallel. YES, 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. YES Have certificates of test for machines under 100 kw. been supplied. YES and the results found as per Rule. YES

Position of Generators Steam set - On flat Starboard side of Engine room Diesel sets - Port and Starboard sides of Engine room is the ventilation in way of generators satisfactory. YES are they clear of inflammable material and protected from mechanical injury and damage from water, steam and oil. YES Switchboards, where are main switchboards placed. Adjacent to steam driven generators.

are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water, steam and oil. YES, what insulation is used for the panels. Sindanyo, 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. YES Is the construction as per Rule, including locking of screws and nuts. YES Description of Main Switchgear for each generator and arrangement of equaliser switches. 700 Amp. or 300 Amp. Triple pole circuit breaker fitted with overload and reverse current trips.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit. Double pole knife pattern switches with cartridge type fuses.

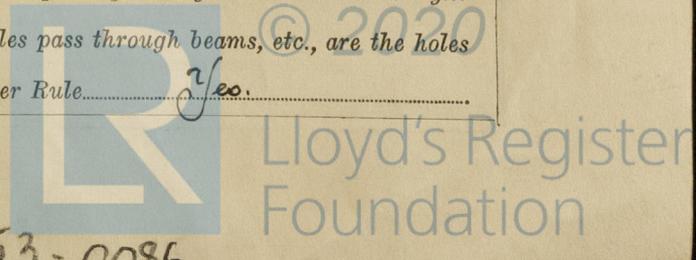
Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. YES Instruments on main switchboard. Three ammeters. Three voltmeters. YES synchronising devices. For compound machines in parallel are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection. YES 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, make of fuses. Siemens '3ed' type, are all fuses labelled. YES If circuit breakers are provided for the generators, at what overload do they operate. 150% Full load, and at what current do the reversed current protective devices operate. 10-15% Full load.

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule. YES

Cables, are they insulated and protected as per Rule. 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. 5.2 Volts, are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets. YES Are all paper insulated and varnished cambric insulated cables sealed at the ends. YES 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 any 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 or of the "HR" type. YES State how the cables are supported or protected. MAINS - L.C.F.B. Cables clipped to galvanized plate with cover plate fitted. MACHINERY SPACE - L.C.F.B. Cables clipped to tray or steelwork. ACCOMMODATION - L.C.B. cable clipped to woodwork.

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



Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes Emergency Supply, state position Yes

Navigation Lamps, are they separately wired Yes controlled by separate double pole switches 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 Is an alternative supply provided Yes

Secondary Batteries, are they constructed and fitted as per Rule Yes, are they adequately ventilated Yes state 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 any 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 Flameproof fittings installed in boiler room space. Pump room fittings comply with Rule Requirements.

and where are the controlling switches fitted In accommodation space Are all fittings suitably ventilated Yes

Searchlight Lamps, No. of 1, whether fixed or portable Yes, are they of the carbon arc or of the filament type 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 and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil Yes

Are motors coupled to oil fuel transfer and 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 sea 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 an Approved Cartridge Type Yes, make of fuse Siemens '3ed' type 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

E.S.D., if fitted state maker Hughes type MS 21 location of transmitter Frame space 37-38 and receiver Frame space 37-38

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and 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	MAKER.	RATED AT				PRIME MOVER.	TYPE.	MAKER.
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.			
MAIN	2	Sunderland Forge & Eng. Co.	75	110	682	500	Diesel	British Polar	
	1		30	110	273	500			Steam
EMERGENCY ROTARY TRANSFORMER									

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	75	2	37/103	682	816	245	V.C.	L.C.B.
" " EQUALISER		1	37/103	-	408	122	V.C.	L.C.B.
" " "	30	2	19/083	273	404	40	V.C.	L.C.B.
" " "		1	19/083	-	202	40	V.C.	L.C.B.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES (to Section Boards, Distribution Fuse Boards, etc.).

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Middle Section board.	1	37/103	244	408	240	V.C.	L.C.F.B.
Wireless and Radar section board.	1	37/103	75	408	240	V.C.	L.C.F.B.
Hft. Crew lighting and Power section board.	1	37/072	192	260	80	V.C.	L.C.F.B.
Engine room lighting section board.	1	7/064	53	80	45	V.C.	L.C.F.B.
Engine room Auxiliary board.	1	19/064	109	143	40	V.C.	L.C.F.B.

LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Wireless	1	7/064	30	80	200	V.C.	L.C.B.
Navigation	1	7/064	30	80	128	V.C.	L.C.B.
Upper Bridge Deck lighting D.B.	1	7/064	24	80	40	V.C.	L.C.B.
Bridge Deck Starboard lighting D.B.	1	7/064	28	80	25	V.C.	L.C.B.
Bridge Deck Midship lighting D.B.	1	7/064	15	31	44	RUBBER	L.C.B.
Hft. Accommodation lighting and Power D.B.	1	7/064	29	80	190	V.C.	L.C.B.
Deck Deck Post lighting D.B.	1	7/064	18	31	45	RUBBER	L.C.B.
Engine room Port lighting D.B.	1	7/064	12	31	60	RUBBER	L.C.F.B.
Engine room Starboard lighting D.B.	1	7/064	12	31	40	RUBBER	L.C.F.B.
Searchlight (Wiring only)	1	19/083	60	202	560	V.C.	L.C.F.B.
Eye Compass	1	7/029	10	15	120	RUBBER	L.C.B.
Radar	1	7/064	45	80	130	V.C.	L.C.B.
Engine room Auxiliary D.B.	1	7/064	28	31	40	RUBBER	L.C.F.B.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Turning gear	1	10	1	7/064	80	80	100	V.C.	L.C.F.B.
Auxiliary Boiler fan	1	7	1	7/064	67	80	180	V.C.	L.C.F.B.
Domestic Refrigerator	2	4	1	7/064	35	80	50	V.C.	L.C.F.B.
Bathe	1	3	1	7/044	26	31	20	RUBBER	L.C.F.B.
Purifiers	2	2.5	1	7/044	22	31	90	RUBBER	L.C.F.B.
Boat Winches	4	7.5	1	7/064	65	80	80	V.C.	L.C.B.
Accommodation Vent Fans	4	2.5	1	7/044	21	31	60	RUBBER	L.C.B.
Engine room Vent Fans	2	1.25	1	7/044	12.4	31	85	RUBBER	L.C.F.B.

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.

Per Pro. J. C. Shanks
 THE SUNDERLAND FORGE & ENGINEERING CO. LTD. Electrical Contractors. Date 10th March 1950.

COMPASSES.

Have the compasses been adjusted under working conditions. Yes

LITHGOWS LIMITED.

J. H. White Director. Builder's Signature. Date 13/3/50

Have the foregoing descriptions and schedules been verified and found correct. Yes

Is this installation a duplicate of a previous case. No. If so, state name of vessel.

Plans. Are approved plans forwarded herewith. No. If not, state date of approval. 5th October 1949

Certificates. Are certificates of test for motors engaged on essential sea 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 installation of this vessel has been fitted on board under Special Survey, tested under working conditions and found satisfactory. The quality of materials and workmanship is good.

Noted - 9.5.17.4.50.

2m. 9. 46. - Transfer. (MADE AND PRINTED IN ENGLAND.)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

Total Capacity of Generators 180 Kilowatts.

The amount of Fee ...	£ <u>67</u> - -	} When applied for,
	74 - 10 :	
Travelling Expenses (if any) £	<u>1</u> : <u>7</u> :	} When received,
		_____ 19

J. M. Gardiner
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW MAR 1950

Assigned SEE ACCOMPANYING MACHINERY REPORT



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