

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

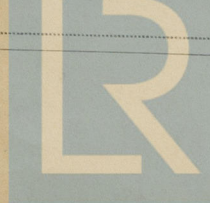
1 FEB 1950

Received at London Office

Date of writing Report 5-1-50 When handed in at Local Office 19 Port of Liverpool
 No. in Survey held at Birkenhead Date, First Survey 27/9/49 Last Survey 22/12/49
 Reg. Book. (No. of Visits 9) Tons { Gross 3640
 Net 4934
35646 on the M.V. "BRITISH TRIUMPH"
 Built at Birkenhead By whom built Cannell Laird & Co. Ltd Yard No. 1199 When built 1949
 Owners British Tankers Co. Ltd Port belonging to London
 Installation fitted by Cannell Laird & Co. Ltd When fitted 1949
 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. No

Plans, have they been submitted and approved Yes System of Distribution Two wire Voltage of Lighting 110
 Heating 110 Power 110 D.C. or A.C., Lighting A.C. Power A.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 — Generators, are they compound wound Yes, and level compounded under working conditions Yes, if not compound wound state distance between generators — and from switchboard — 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 — Have certificates of test for machines under 100 kw. been supplied Yes and the results found as per Rule Yes
 Position of Generators In main 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 In main engine room on special platform.
 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 Shidango. 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 construction as per Rule, including locking of screws and nuts Yes Description of Main Switchgear for each generator and arrangement of equaliser switches Triple pole circuit breakers (one pole equalling) fitted with overload & reverse current A.P.O.
 and the switch and fuse gear (or circuit breakers) for each outgoing circuit Double pole switch and fuses.
 Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 3 ammeters 3 voltmeters — 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 Good lamps.
 Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes make of fuses Simms "Zed", are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate 50% overload, and at what current do the reversed current protective devices operate 10% & 1/2
 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 — state maximum fall of pressure between bus bars and any point under maximum load 4.2. Vols, 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 — Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit Yes or of the "HR" type — State how the cables are supported or protected Mains L.C.A.B. on underside of fore-aft gangway. Circuit wiring L.C.B. or L.C.A.B. supported on bays or clipped to structure. All cables protected as necessary.

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 —



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 80 1/2

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 Flame proof fittings

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

Searchlight Lamps, No. of two only whether fixed or portable —, are they of the carbon arc or of the filament type —

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 None 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 — 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 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 — 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, Zeis 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 Weston location of main transmission and receiver R.S.B. P.B. Coffey

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.	
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN	2	Harland & Wolff Ltd.	75	110	682	500	Oil Engine.	Harland & Wolff Ltd.
	1	Sundstrand Torp Eng. Co.	30	110	272	500	Steam Engine	Sundstrand Torp Eng. Co.
EMERGENCY ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (feet 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	1	41/103	682	738	76	V.C.	L.C.A.B.
" " EQUALISER		1	61/103	—	540	38	"	"
MAIN GENERATOR	30	1	37/083	272	296	50	"	"
" " EQUALISER		1	19/083	—	191	25	"	"
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

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

DESCRIPTION.								
Midship Section Board	51.	1	37/083	200	296	380	V.C.	L.C.A.B.
" " "	"	1	37/083	65	296	380	"	"
Aft " "	52	1	37/083	150	296	80	"	"
Star Connection Board		1	37/083	273	296	80	"	"

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

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (feet plus return feet).	INSULATION.	PROTECTIVE COVERING.
			In the Circuit.	Rule.	In the Circuit.	Rule.			
Navigation (Main & Alternator)	1	7/029	2	15	120	V.I.R.	L.C.B.		
Bridge Lighting D.B.	1	7/064	18	75	130	V.C.	"		
Capt's Bridge	1	7/064	34	75	100	"	"		
Upper " "	1	7/064	40	75	60	"	"		
Lower " "	1	7/044	15	31	14	V.I.R.	"		
Bridge Deck " Port "	1	7/064	29	75	40	V.C.	"		
" " " Star "	1	7/064	36	75	20	"	"		
Upper " " Port "	1	7/044	24	31	44	V.I.R.	"		
" " " Star "	1	7/044	28	31	24	"	"		
Roop " " Port " "	1	7/044	28	31	70	"	"		
" " " Off " "	1	7/044	9	31	140	"	"		
" " " Star " "	1	7/044	26	31	32	"	"		
Engine Room " Star " "	1	7/044	10	31	40	"	L.C.A.B.		
" " " Port " "	1	7/044	10	31	40	"	"		
" " " Star " "	1	7/044	10	31	80	"	"		
" " " Port " "	1	7/044	10	31	132	"	"		
" " " Power " "	1	7/029	12	15	90	"	L.C.B.		
Battery Charging Board	1	7/029	6	15	36	"	L.C.A.B.		
Emergency Lighting	1	7/029	10	15	30	"	"		
Engine Room Kettle	1	7/044	13.5	31	80	"	"		
Officers "	1	7/044	13.5	31	120	"	L.C.B.		
Washers.	1	7/064	40	75	110	V.C.	"		
Raked.	1	7/064	25	75	130	"	"		
Gyro Compass.	1	3/036	5	10	110	V.I.R.	"		

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
Turning Gear, Motor.	1	10	1	19/052	82	104	150	V.C.	L.C.A.B.
S.W. Pump. Diesel Generator	1	3	1	7/044	26	31	50	V.I.R.	"
Workshop Motor	1	3	1	7/044	26	31	150	"	"
Lub. Oil Pumps	2	2.5	1	7/044	22	31	130	"	"
O.F. " "	1	2.5	1	7/044	22	31	90	"	"
Crane	1	2	1	7/044	18	31	160	"	"
Guides	1	1	1	7/029	9	15	130	"	"
F.D. Fan Motor	1	7	1	7/064	57	75	120	V.C.	"
Eng. Boiler Room Vent Fans.	2	1.5	1	7/029	12	15	180	V.I.R.	"
Boat Winches	4	7.5	1	7/064	65	75	120	V.C.	L.C.B.
Accum. Exhaust Fans.	3	0.2	1	3/029	2	5	120	V.I.R.	L.C.A.B.
" " " "	1	0.25	1	3/029	2.5	5	120	"	L.C.B.
Thermostat Fans	4	2.5	1	7/044	17	31	80	"	"
Refug. Compressor	2	4	1	7/064	35	75	20	V.C.	L.C.A.B.
" Cooling Fan	1	0.25	1	3/029	2.5	5	50	V.I.R.	"
" Pump.	1	1	1	7/029	11	15	140	"	"
Fresh Water Pump	2	0.75	1	7/029	7	15	30	"	"
Air Conditioning Unit Fan	1	0.25	1	3/029	2.5	5	30	"	L.C.B.
" " Compressor.	1	1.5	1	7/044	14	31	20	"	"
Cold Capboard	1	0.5	1	7/029	5	15	24	"	"
Supply Fans.	1	0.5	1	7/029	5	15	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.



Electrical Contractors.

Date

COMPASSES.

Have the compasses been adjusted under working conditions. *Yes.*

FOR AND ON BEHALF OF
CAMMELL LAIRD & CO. LIMITED.

Bydies

Builder's Signature.

Date

12 JAN 1950

TECHNICAL MANAGER
SHIPBUILDING DEPT.

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. *13/4/49*

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 equipment of this vessel has been installed on board under special survey in accordance with the approved plans and the Rules for Electrical Equipment. The installation has been tested under full working conditions, insulation tests carried out and found satisfactory. The materials and workmanship are good.

Noted Ent 16/2/50.

Total Capacity of Generators *180* ✓ Kilowatts.

The amount of Fee ... £ *67* : 0 : 0 When applied for, *24 JAN 1950*

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

L. Haffner

Surveyor to Lloyd's Register of Shipping.

Committee's Minute *LIVERPOOL 31 JAN 1950*

Assigned *See Minute or Liverpool Mchgy Rpt.*