

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

23 SEP 1942

Received at London Office

Date of writing Report.....19..... When handed in at Local Office.....19..... Port of Liverpool

No. in Survey held at Birkenhead Date, First Survey..... Last Survey 18/8/42 19.....
Reg. Book. (Number of Visits.....)

70751 on the M.V. "BRITISH TRADITION" Tons { Gross.....
Net.....

Built at Birkenhead By whom built Cammell Laird Co. Ltd Yard No. 1067 When built 1942

Owners British Tankers Co. Ltd. Port belonging to London

Electrical Installation fitted by The Sunderland Forge & Eng. Co. Ltd Contract No. 1067 When fitted 1942

Is vessel fitted for carrying Petroleum in bulk Yes Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. - Sub.Sig. Yes

Have plans been submitted and approved Yes System of Distribution Two wire 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 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 Are the lubricating arrangements and the construction

of the generators as per rule Yes Position of Generators In Engine Room Starb. side forward.

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 Engine Room near generator.

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 Sidamp., 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 switch

and fuses.

and for each outgoing circuit Double pole change-over switch + D.P. fuses.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 2

ammeters 2 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 Good 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 -, are the reversed current

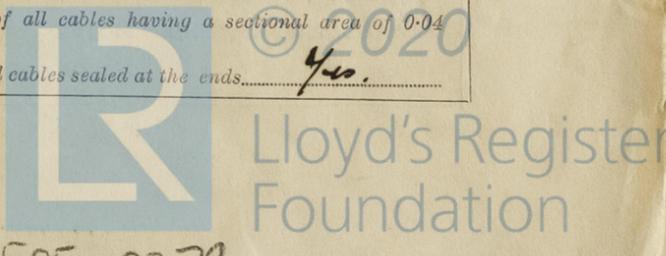
protection devices connected on the pole opposite to the equaliser connection -, have they been tested under working conditions, and at what current

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 3.5V, 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.



with insulating compound — or waterproof insulating tape 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 cables laid under machines or floorplates ho, if so, are they adequately protected. — Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit. — State how the cables are supported and protected. Main cables on deck L.C.A. in galvanized iron pipes. Machinery spaces, L.C.A. & L.C.B. clipped to steel beams etc., Accommodation L.C.B. clipped.

Are all lead sheaths, armouring 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. — 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. 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. 90 ampere hours.

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. Yes Yes of Pump Rooms & other-vents spaces. Flame proof fittings in accordance with Rules.

and where are the controlling switches fitted. in accommodation. are all fittings suitably ventilated. Yes are all fittings and accessories constructed and installed as per Rule. Yes Searchlight Lamps, No. of — whether fixed or portable. — are their fittings as per Rule. — Heating and Cooking, is the general construction as per Rule. — are the frames effectually earthed. — are heaters in the accommodation of the convection type. — 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. 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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	30	110	273	600	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	30	1	37/063	273	296	60	V.C.	L.C.A.B.
" " 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.	Sectional Area or No. and Dia. of Strands, Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS ...							
Headship Section Board	1	37/072	53.3	246	600	V.C.	L.C.A. in pipe
" " " (Attention petty)	1	37/072	53.3	246	600	V.C.	"
Aft Section Board	1	19/083	92.6	191	90	"	L.C.A.B.
Shore Connection	1	37/083	273	296	100	"	"
Engine Room Lighting Section Board	1	7/064	48	75	30	"	L.C.A.
" " " " " "	1	7/064	61	75	30	"	"
Projector Connection Box.	1	7/064	60	75	900	"	L.C.A. in pipe

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	7/064	35	75	105	V.C.	L.C.B.
NAVIGATION LIGHTS	D.B. 1.	7/036	1.5	24	132	Rubber	"
LIGHTING AND HEATING	B.D. 90. D.B. 2.	7/044	15	31	120	"	"
Upper Bridge Lighting.	D.B. 3	7/036	13	24	90	"	"
Bridge Deck Lighting.	Post. D.B. 4	7/064	16	75	30	V.C.	"
" " " "	Stair. D.B. 5	7/064	18	75	90	"	"
Large Lighting Headship.	D.B. 6	7/036	11	24	30	Rubber	"
Engine Room Lighting.	Post. D.B. 7	7/044	9	31	120	"	L.C.A.B.
" " " "	Stair. D.B. 8.	7/044	9	31	80	"	"
" " " "	(2nd Deck) Post. D.B. 9	7/044	9	31	160	"	"
" " " "	(2nd Deck) Stair. D.B. 10	7/044	9	31	60	"	"
Pump Deck Lighting.	Post. D.B. 11	7/044	18	31	105	"	L.C.B.
" " " "	Stair. D.B. 12.	7/044	7	31	80	"	"
Aft Lighting.	Upper Deck Post. D.B. 13	7/044	12	31	110	"	"
" " " "	Stair. D.B. 14.	7/044	11	31	80	"	"
Large Lighting (Aft).	D.B. 15.	7/044	6	31	60	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
Turning Gear Motor	1	10	1	19/072	80	162	120	V.C.	L.C.A.B.
Oil Pumps	2	2	1	7/044	17.8	31	60/90	Rubber	"
Engine Room Vent Fan	1	1.5	1	7/029	14	15	120	"	"
Workshop Motor	1	3	1	7/044	25	31	150	"	"
Accommodation Vent Fan (Aft)	1	4	1	7/064	33	75	105	V.C.	L.C.B.
" " " (Headship)	1	4	1	7/064	33	75	132	V.C.	"

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 THE SUNDERLAND FORGE & ENG. Co., LTD.

J. Williams

Electrical Engineers.

Date

8th Sept 1942

COMPASSES.

Minimum distance between electric generators ~~motors~~ and standard compass.....

215 ft

Minimum distance between electric generators ~~motors~~ and steering compass.....

208 ft

The nearest cables to the compasses are as follows:—

A cable carrying *1.5* Ampères *14* feet from standard compass *10* feet from steering compass.

A cable carrying *.1* Ampères *edit* feet from standard compass *8* feet from steering compass.

A cable carrying *.1* Ampères *8* feet from standard compass *edit* 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.

J. Williams

Builder's Signature

Date

17. 9. 42

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

21/11/40 and 12/9/41

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 the vessel has been fitted on board under special survey, and in accordance with the approved plans. The installation has been tested under full working conditions and found satisfactory. The materials and workmanship are good.

Noted

J. G.

29/9/42

Total Capacity of Generators *60* Kilowatts.

The amount of Fee ... £ *28 : 10 : 0* When applied for, *198 SEP 1942*

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

A. Braggins + H. Lundy
Surveyors to Lloyd's Register of Shipping.

Committee's Minute *LIVERPOOL 22 SEP 1942*

Assigned *See Minute on Machinery F.E. R.H.*

5m. 4. 30.—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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