

REPORT ON ELECTRICAL EQUIPMENT

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report 24.12.1948 When handed in at Local Office 29th December 48 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 8.10.48 Last Survey 16.12.1948
(Number of Visits 11)

Reg. Book. 90120 on the M.V. "BRITISH VENTURE" Tons { Gross 6118.75
Net 3347.56

Built at Sunderland By whom built J. L. Thompson & Sons Ltd Yard No. 656 When built 1948

Owners British Tanker Co Ltd Port belonging to London

Electrical Installation fitted by Sunderland Forge & Engineering Co Ltd Contract No. 656 When fitted 1948

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. —
Radar - Yes

Have plans been submitted and approved Yes System of Distribution Two wire insulated Voltage of supply for Lighting 110

Heating 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 — 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 Port and Starboard, forward on Eng Room

starting platform, 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 on platform above starboard generator,

facing aft and forward of main engine.

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 Sindanyo (Ebony finish), 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 700 Ampere

Triple Pole magnetic Blowout Circuit Breaker with Overload coils, Time lags

and Reverse current protective device.

and for each outgoing circuit Double Pole Single Throw Quick Break Knife Switch and

Double Pole 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 Yes Earth Testing, state means provided Earth lamps coupled to 'E' thro switches & fuses.

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%, are the reversed current

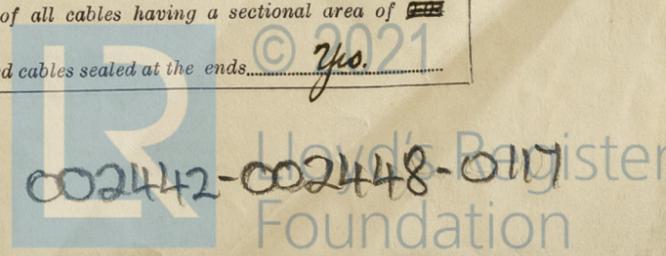
protection devices connected on the pole opposite to the equaliser connection Yes, have they been tested under working conditions, and at what current

did they operate 3% 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 Yes,

state maximum fall of pressure between bus bars and any point under maximum load < 6.6v, are the ends of all cables having a sectional area of 0.01

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. No, 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. Forward mains clipped to solid steel plate secured to catwalk and covered with solid steel plate. Generator mains clipped to solid steel plate. Engine & Boiler Room cables clipped to perforated metal trays. L.C. cables in accommodation clipped to wood grounds.

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 effectively bushed. Yes and with what material. Lead or Fibre. 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. 40 'NIFE'

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. 'Wigan' Flameproof fittings and where are the controlling switches fitted. Officers Quarters in enticesth, 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. 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 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	75	110	682	500	Steam Engine	-	-
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	75	2	37/103	682	770	24	V.b.	Lead covered
" " EQUALISER		1	37/103	341	385	12	V.b.	Lead covered
	75	2	37/103	682	770	48	V.b.	Lead covered
		1	37/103	341	385	24	V.b.	Lead covered
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							
Main switchboard to Alton Con. Box	2	19/083	300	382	30	V.b.	Lead covered armoured & braided
Main switchboard to Engine Room Light Panel	1	19/052	48	104	54	V.b.	Lead covered armoured & braided
Main switchboard to Engine Room Panel	1	19/052	84	104	30	V.b.	Lead covered armoured & braided
Main switchboard to Aft Power Section Panel	1	37/072	205	246	33	V.b.	Lead covered armoured & braided
Main switchboard to Midships Section Panel	2	19/083	268	382	174	V.b.	Lead covered armoured & braided
Main switchboard to Radar & Windlog M.S.P.	2	19/083	70	382	174	V.b.	Lead covered armoured & braided
Main switchboard to Refrig. Comp. Panel	1	7/064	35	75	165	V.b.	Lead covered armoured & braided

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	7/064	10	75	75	V.b.	Lead covered & braided
NAVIGATION LIGHTS	1	7/064	19	75	60	V.b.	Lead covered & braided
LIGHTING AND HEATING	All from source of supply from D2						
Midships Section Panel to Capt. Accom. D2	1	7/044	12	42	75	V.b.	Lead covered & braided
Midships Section Panel to Officers Accom. D3	1	7/064	25	75	45	V.b.	Lead covered & braided
Midships Section Panel to Eng. Accom. D4	1	7/064	19.6	75	36	V.b.	Lead covered & braided
Midships Section Panel to Eng. Accom. D5	1	7/044	17	42	12	V.b.	Lead covered & braided
Aft Power Section Panel to Pop Deck (P) D6	1	7/036	21.8	28	63	V.b.	Lead covered & braided
Aft Power Section Panel to Pop Deck (S) D7	1	7/044	23.4	42	39	V.b.	Lead covered & braided
Aft Power Section Panel to Upper Deck (P) D8	1	7/036	17.5	28	78	V.b.	Lead covered & braided
Aft Power Section Panel to Upper Deck (S) D9	1	7/044	23.5	42	54	V.b.	Lead covered & braided
Eng. Room Light Panel to Eng. Room D10	1	7/044	21.7	42	66	V.b.	Lead covered armoured & braided
Eng. Room Light Panel to Eng. Room D11	1	7/044	26.7	42	42	V.b.	Lead covered armoured & braided
Midships Section Panel to Gange Light D12	1	7/044	14	42	22	V.b.	Lead covered & braided
Gange Light D12 to Forecastle Light D13	1	7/036	3	28	204	V.b.	Lead covered armoured & braided
Midships Section Panel to Main Deck Proj.	1	19/052	40	104	330	V.c.	Lead covered armoured & braided
Aft Power Section Panel to Charging Bd.	1	7/036	5	28	135	V.b.	Lead covered & braided

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Fuel Spraying Pump.	1	1.5	1	7/044	14	42	42	V.b. Lead covered armoured & braided
Oil Purifier	2	3.0	1	7/044	26	42	60/60	V.b. Lead covered armoured & braided
Engine Room Vent. Fan.	1	1.5	1	7/036	14	28	45	V.b. Lead covered armoured & braided
Alarm	1	3	1	7/044	26	42	54	V.b. Lead covered armoured & braided
Refrig. Compressor	2	4	1	7/064	35	75	50/50	V.b. Lead covered & braided
Boat Winch (Aft)	2	7.5	1	19/052	61	104	42/3	V.b. Lead covered & braided
Thermolink Vent. (Aft)	2	3.0	1	7/044	26	42	24/24	V.b. Lead covered & braided
Supply Fan	1	1.5	1	7/036	14	28	75	V.b. Lead covered & braided
Boat Winch (Midships)	2	7.5	1	19/052	61	104	51/36	V.b. Lead covered & braided
Thermolink Vent. (Midships)	2	3.0	1	7/044	26	42	27/27	V.b. Lead covered & braided
Air Conditioning Plant	1	1.5	1	7/036	14	28	15	V.b. Lead covered & braided
Echo Sounder Supply	1	-	1	7/036	10	28	285	V.b. Lead covered & braided
Gyro Compass Supply	1	-	1	7/036	10	28	75	V.b. Lead covered & braided
Radar Supply	1	-	1	7/064	55	75	21	V.b. Lead covered & braided
Workshop Heater	1	4.0	1	7/064	35	75	18	V.b. Lead covered armoured & braided
Grinder	1	2.0	1	7/036	18	28	18	V.b. Lead covered armoured & braided
Galley Exhaust Fans	2	0.2	1	3/036	3	10	11/26	V.b. Lead covered & braided
Galley Blowers	1	0.25	1	3/036	3.2	10	105	V.b. Lead covered & braided
Exhaust Fan	1	0.5	1	7/036	5.7	28	48	V.b. Lead covered & braided
Pantry Exhaust Fan	1	0.2	1	3/036	2.5	10	75	V.b. Lead covered & braided

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.

Sunderland Forge Eng Co Ltd
J. V. Curney

Electrical Engineers.

Date *28-12-1948*

COMPASSES.

Minimum distance between electric generators or motors and standard compass..... *25 ft.*

Minimum distance between electric generators or motors and steering compass..... *22 ft.*

The nearest cables to the compasses are as follows:—

A cable carrying *0.14* Ampères *inside* ~~feet from~~ standard compass *8* feet from steering compass.

A cable carrying *0.14* Ampères *8* feet from standard compass *inside* ~~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 *any* course in the case of the standard compass, and *nil* degrees on *any* course in the case of the steering compass.

JOSEPH L. THOMPSON & SONS, LIMITED.

Builder's Signature.

Date *29-12-48*

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 *11.5.1948.*

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

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 under special survey and the arrangements are in accordance with or equivalent to those shown on the approved plans and the Rules for Electrical Equipment.

The materials used are of good quality and the workmanship is good.

On completion the equipment was operated under working conditions, the protective devices of the circuit breakers were adjusted and operated and the insulation resistance of all circuits measured and found good.

This installation is in my opinion suitable for a closed vessel intended for the carriage of petroleum in bulk.

Special Notation :- *D.F., E.S.D., Gyro C, & Radar.*

Noted. See 18/1/49.

Total Capacity of Generators *150* Kilowatts.

The amount of Fee £ *62 : 10* : When applied for, *DEC. 30. 1948.*

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

W. Hills
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 21 JAN 1949*

Assigned *In minute see J.E. Rpt*

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.)



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