

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

8 JAN 1928

Date of writing Report 14-1-1928 When handed in at Local Office 19 Port of DUNDEE

No. in Survey held at DUNDEE Date, First Survey 22-9-27 Last Survey 10-1-1928  
Reg. Book. (Number of Visits 12)on the M/V "BRITISH FAITH"  
Built at DUNDEE By whom built CALEDON S & E Co. LD. Yard No. 313 When built 1927  
Tons { Gross 6949  
Net 4183

Owners BRITISH TANKER CO. LD. Port belonging to LONDON.

Electric Light Installation fitted by CALEDON S &amp; E Co. LD. Contract No. 313 When fitted 1927

System of Distribution TWO WIRE ✓

Pressure of supply for Lighting 110 volts, Heating ✓ volts, Power 220 volts.

Direct or Alternating Current, Lighting DIRECT ✓ Power DIRECT ✓

If alternating current system, state frequency of periods per second ✓

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off YES ✓

Generators, do they comply with the requirements regarding rating YES ✓, are they compound wound YES ✓

are they over compounded 5 per cent. YES ✓, if not compound wound state distance between each generator ✓

Where more than one generator is fitted are they arranged to run in parallel YES ✓, is an adjustable regulating resistance fitted in series with each shunt field YES ✓

Are all terminals accessible, clearly marked, and furnished with sockets YES ✓, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched YES ✓ Are the lubricating arrangements of the generators as per Rule YES ✓

Position of Generators ENGINE ROOM STARTING PLATFORM. PORT SIDE. ✓

is the ventilation in way of the generators satisfactory YES ✓, are they clear of all inflammable material YES ✓

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators ✓ and ✓, are the generators protected from mechanical injury and damage from water, steam or oil YES ✓

are their axes of rotation fore and aft YES ✓

Earthing, are the bed plates and frames of the generating plant efficiently earthed YES ✓ are the prime movers and their respective generators in metallic contact YES ✓

Main Switch Boards, where placed ENGINE ROOM STARTING PLATFORM, PORT SIDE.

If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard ✓

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes YES ✓

are they protected from mechanical injury and damage from water, steam or oil YES ✓, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards ✓ and ✓

are they constructed wholly of durable, non-ignitable non-absorbent materials YES ✓, is all insulation of high dielectric strength and of permanently high insulation resistance YES ✓

if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micawile or other non-hygroscopic insulating material, and the slab similarly insulated from its framework YES ✓

and is the frame effectively earthed YES ✓ Are the fittings as per Rule regarding:— spacing or shielding of live parts

YES ✓, accessibility of all parts YES ✓, absence of fuses on back of board YES ✓, proportion of omnibus

bars YES ✓, individual fuses to voltmeter, pilot or earth lamp YES ✓, connections of switches YES ✓

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches TRIPLE POLE

CIRCUIT BREAKER WITH DOUBLE POLE OVERLOAD AND REVERSE CURRENT TRIP

EQUALIZER SWITCH NON-AUTOMATIC AND ARRANGED TO MAKE BEFORE POWER SWITCH.

Instruments on main switchboard 2 ammeters 2 voltmeters ✓ synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system LAMPS

TESTING SET

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules YES ✓

Joint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule YES ✓



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Cables: Single, twin, concentric, or multicore SINGLE are the cables insulated and protected as per Tables IV or V of the Rules YES

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load TWO VOLTS.

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets YES

Paper Insulated Cables. If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound YES

Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage YES

Support and Protection of Cables, state how the cables are supported and protected PROTECTED BY GALVANISED PIPE  
SUPPORTED BY BRASS & GALVANISED CLIPS. CABLES BRAIDED, ARMoured & LEAD COVERED.

If cables are run in wood casings, are the casings and caps secured by screws ✓, are the cap screws of brass ✓, are the cables run in separate grooves ✓. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII YES

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements ✓

Joints in Cables, state if any, and how made, insulated, and protected ✓

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with ~~deck tubes~~ or watertight glands YES

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed YES state the material of which the bushes are made LEAD.

Earthing Connections, state what earthing connections are fitted and their respective sectional areas SWITCHBOARD FRAME TO HULL  
.2 sq. INCH.  
are their connections made as per Rule YES

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule YES

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven ✓

Navigation Lamps, are these separately wired YES, controlled by separate switch and separate fuses YES, are the fuses double pole YES, are the switches and fuses grouped in a position accessible only to the officers on watch YES

has each navigation lamp an automatic indicator as per Rule YES

Secondary Batteries, are they constructed and fitted as per Rule ✓

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and where exposed to drip or condensed moisture, watertight YES  
are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected NO

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected In in Pump Room skylight - Sun light fitting  
Outside of pump room.  
where are the controlling switches situated Out side of pump room.

Searchlight Lamps, No. of ✓, whether fixed or portable ✓, are their fittings as per Rule ✓

Arc Lamps, other than searchlight lamps, No. of ✓, are their live parts insulated from the frame or case ✓, are their fittings as per Rule ✓

Motors, are their working parts readily accessible YES, are the coils self-contained and readily removable for replacement YES, are the brushes, brush holders, terminals and lubricating arrangements as per Rule YES, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material YES, are they protected from mechanical injury and damage from water, steam or oil YES are their axes of rotation fore and aft WHERE POSSIBLE, if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated forced draught, drip or flame proof type ✓, if not of this type, state distance of the combustible material horizontally or vertically above the motors ✓ and ✓

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule YES

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule YES

Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings YES

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office YES

One removed 7.62 & replaced by 2 steam sets

PARTICULARS OF GENERATING PLANT.									
DESCRIPTION OF GENERATOR.	No. of	RATED AT			Revs. per Min.	DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.		
		Kilowatts.	Volts.	Amps.			Fuel Used.	Flash Point of Fuel.	
MAIN ...	2	66	220	300	360 9.90	DIESEL			
AUXILIARY ...	2	10	110	91	360 9.90	1 Motor & 9 TEAM.			
EMERGENCY ...	2	33 each	220	150	640	Clean Engines	Fitted	7.62	
ROTARY TRANSFORMER									

  

LIGHTING AND HEATING CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
1	MAIN GENERATOR...	2	.2465	37	.093	300	30	PAPER	L.C.A.B.
2	EQUALISER CONNECTIONS	1	.2465	37	.093	✓	15	PAPER	L.C.A.B.
3	AUXILIARY GENERATOR	2	.0709	19	.072	91	20	RUBBER	L.C.A.B.
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
4	ENGINE ROOM	2	.0146	7	.052	30			
	BOILER ROOM								
5	ACCOMMODATION	2	.0396	19	.052	42			
6	After Accommodation	2	.0105	7	.044	21			
7	Navigation	2	.007	7	.036	17			
8	WIRELESS	2	.007	7	.036				
	SEARCHLIGHT								
9	MASTHEAD LIGHT...	2	.0019	3	.029	1			
10	SIDE LIGHTS...	2	.0019	3	.029	1			
11	COMPASS LIGHTS...	2	.0019	3	.029	20			
	POOP LIGHTS								
	CARGO LIGHTS								
	ARC LAMPS								
	HEATERS								

  

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP								
	MAIN BILGE LINE PUMPS								
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP								
	SANITARY PUMP								
	CIRC. SEA WATER PUMPS								
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR								
	FRESH WATER PUMP								
	ENGINE TURNING GEAR								
	ENGINE REVERSING GEAR								
1	LUBRICATING OIL PUMPS	2	.1478	37	.072	130	120	RUBBER	L.C.A.B.
2	OIL FUEL TRANSFER PUMP	1	.0221	7	.064	38	80	RUBBER	L.C.A.B.
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
✓	STEELING GEAR								
	(a) MOTOR GENERATOR...								
	(b) MAIN MOTOR	1	.06	19	.064	75	250	RUBBER	L.C.A.B.
3	WORKSHOP MOTOR	1	.003	3	.036	10	75	RUBBER	L.C.A.B.
	VENTILATING FANS								
4	OIL SEPARATORS	4	.003	3	.036	75	20	RUBBER	L.C.A.B.
5	FUEL PUMPS	1	.003	3	.036	4	60	RUBBER	L.C.A.B.
6	REFRIGERATOR	1	.0221	7	.064	38	200	RUBBER	L.C.A.B.
8	MOTOR GENERATOR	1	.06	19	.064	60	100	RUBBER	L.C.A.B.
9	FAN	1	.007	7	.036	21	120	RUBBER	L.C.A.B.



All Conductors are of annealed copper conforming to British Standard Specification No. 7.

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description of the installation.

*W. G. Gillanders*

Electrical Engineers.

Date 16 Jan 1928.

#### COMPASSES.

Distance between electric generators or motors and standard compass 100 ft.

Distance between electric generators or motors and steering compass 105 ft.

The nearest cables to the compasses are as follows:—

A cable carrying  $\frac{1}{2}$  Ampères 5 feet from standard compass 5 feet from steering compass.

A cable carrying  $\frac{1}{2}$  Ampères 5 feet from standard compass 5 feet from steering compass.

A cable carrying  $\frac{1}{2}$  Ampères 5 feet from standard compass 5 feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power *is*

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted *is*

The maximum deviation due to electric currents was found to be *nil* degrees on *all course* course in the case of the standard compass, and *nil* degrees on *all course* course in the case of the steering compass.

THE CALEDON SHIPBUILDING & ENGINEERING CO. LD.

*W. G. Gillanders*

Builder's Signature.

Date 16 Jan 1928.

GENERAL MANAGER  
SHIPYARD DEPT.

Is this installation a duplicate of a previous case *no* If so, state name of vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, &c.)

*The installation has been fitted on board in an efficient manner in accordance with the Rules.*

*The materials & workmanship are of good description. The installation on completion was found under working conditions & found satisfactory in all respects.*

It is submitted that  
this vessel is eligible for  
THE RECORD. Elec. light.

*W. G. Gillanders*  
19/1/28

Total Capacity of Generators 152 Kilowatts.

The amount of Fee ... £ 34 : 2 : When applied for, 16-1-1928

Travelling Expenses (if any) £ 1 : 1 : When received, 6-2-28

*W. G. Gillanders*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 27 JAN 1928*

Assigned *Elec. Light*

1m.128—0 transfer.  
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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